FCC RF Test Report

APPLICANT	:	HTC Corporation
EQUIPMENT	:	Smartphone
MODEL NAME	:	CDMA_HTI13
FCC ID	:	NM8CDMAHTI13
STANDARD	:	FCC Part 15 Subpart E
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure TX

The product was received on Feb. 03, 2012 and completely tested on Apr. 06, 2012. 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

Jones Tsai / Manager

Testing Laboratory 1190

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

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR220352C	Rev. 01	Initial issue of report	Apr. 03, 2012
FR220352C	Rev. 02	Update report for revising Peak Excursion Ratio test data.	Apr. 06, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	A9.2	26dB Bandwidth	-	Pass	-
3.2	15.407(a)	A9.2	Maximum Conducted Output Power	≤ 17, 24, 30 dBm (depend on band)	Pass	-
3.3	15.407(a)	A9.2	Power Spectral Density	≤ 4, 11, 17 dBm (depend on band)	Pass	-
3.4	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 10.40 dB at 1.254 MHz
3.5	15.407(b)	A9.3	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 0.12 dB at 5350.000 MHz
3.6	15.407(b)	A9.3	Peak Excursion Ratio	≤ 13dB	Pass	-
3.7	15.407(c)	A9.5	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.8	15.407(g)	A9.5	Frequency Stability	Within Operation Band	Pass	-
3.9	15.203 & 15.407(a)	A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

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

1.2 Manufacturer

HTC Corporation
1F., No. 6-3, Baoqiang Rd., Xindian City, Taipei, Taiwan

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Smartphone
Model Name	CDMA_HTI13
FCC ID	NM8CDMAHTI13
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 : 13.39 dBm / 0.0218 W 802.11n (BW 20MHz) : 13.44 dBm / 0.0221 W 802.11n (BW 40MHz) : 13.36 dBm / 0.0217 W **<5250 MHz ~ 5350 MHz>** 802.11a : 13.62 dBm / 0.0230 W 802.11n (BW 20MHz) : 13.57 dBm / 0.0228 W 802.11n (BW 40MHz) : 13.84 dBm / 0.0242 W **<5470 MHz ~ 5725 MHz>** 802.11a : 13.87 dBm / 0.0244 W 802.11n (BW 20MHz) : 13.36 dBm / 0.0217 W 802.11n (BW 40MHz) : 13.16 dBm / 0.0207 W
Antenna Type	**<5150 MHz ~ 5250 MHz>** PIFA Antenna with gain -1.15 dBi **<5250 MHz ~ 5350 MHz>** PIFA Antenna with gain -1.29 dBi **<5470 MHz ~ 5725 MHz>** PIFA Antenna with gain -1.00 dBi
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

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

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	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 KDB 789033 D01 General UNII Test Procedures v01r01
- ANSI C63.4-2003
- IC RSS-210 Issued 8
- IC RSS-Gen Issue 3

Remark:

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

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	P20G	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Sony Ericsson	MW600	PY70DA2029	N/A	N/A

2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency Channel

802.11a Carrier Frequency Channel							
Channel	**Freq. (MHz)**	**Channel**	**Freq. (MHz)**	**Channel**	**Freq. (MHz)**	**Channel**	**Freq. (MHz)**
36	5180	**44**	5220	**48**	5240	**52**	5260
60	5300	**64**	5320	**100**	5500	**116**	5580
140	5700	-	-	-	-	-	-

802.11n (BW 20MHz) Carrier Frequency Channel							
Channel	**Freq. (MHz)**	**Channel**	**Freq. (MHz)**	**Channel**	**Freq. (MHz)**	**Channel**	**Freq. (MHz)**
36	5180	**44**	5220	**48**	5240	**52**	5260
60	5300	**64**	5320	**100**	5500	**116**	5580
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	**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:

Band	5GHz 802.11a RF Power (dBm) (Duty cycle 100%)								
Channel	36	44	48	52	60	64	100	116	140
Frequency (MHz)	5180	5220	5240	5260	5300	5320	5500	5580	5700
Power	13.39	13.26	13.23	13.41	13.29	13.62	**13.87**	13.29	11.19

Band	5GHz 802.11 n (BW 20MHz) RF Power (dBm) (Duty cycle 100%)								
Channel	36	44	48	52	60	64	100	116	140
Frequency (MHz)	5180	5220	5240	5260	5300	5320	5500	5580	5700
Power	13.40	13.44	13.27	13.04	13.07	**13.57**	13.36	13.04	10.53

Band	5GHz 802.11 n (BW 40MHz) RF Power (dBm) (Duty cycle 81.42%)						
Channel	38	46	54	62	102	118	134
Frequency (MHz)	5190	5230	5270	5310	5510	5590	5670
Power	13.14	13.36	13.50	**13.84**	13.16	12.96	11.17

Remark:

1. All the test data for each data rate were verified, but only the worst case was reported.
2. The data rates of WLAN 802.11a/n were set in 6Mbps for 802.11a, 6.5Mbps for 802.11n (BW 20MHz), and 13.5Mbps for 802.11n (BW 40MHz) for all the test cases due to the highest RF output power.
3. The EUT is programmed to transmit signal continuously for all testing.

2.3 Test Mode

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

Pre-scanned tests, X, Y, Z in three orthogonal panels, were conducted to determine the final configuration from all possible combinations.

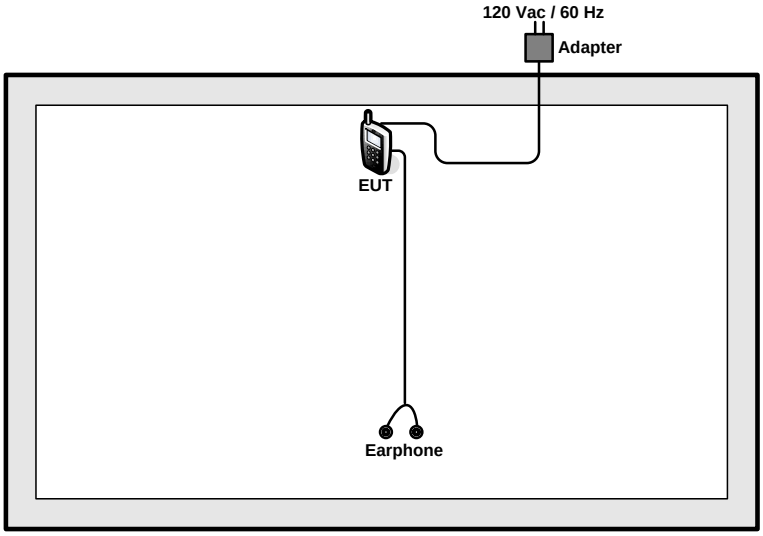
The following tables are showing the test modes as the worst cases (X plane) and recorded in this report.

Test Cases	
Test Item	**802.11a (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) ■ Mode 19: 802.11n_CH38_5190 MHz (BW 40M) ■ Mode 20: 802.11n_CH46_5230 MHz (BW 40M) ■ Mode 21: 802.11n_CH54_5270 MHz (BW 40M) ■ Mode 22: 802.11n_CH62_5310 MHz (BW 40M) ■ Mode 23: 802.11n_CH102_5510 MHz (BW 40M) ■ Mode 24: 802.11n_CH118_5590 MHz (BW 40M) ■ Mode 25: 802.11n_CH134_5670 MHz (BW 40M)

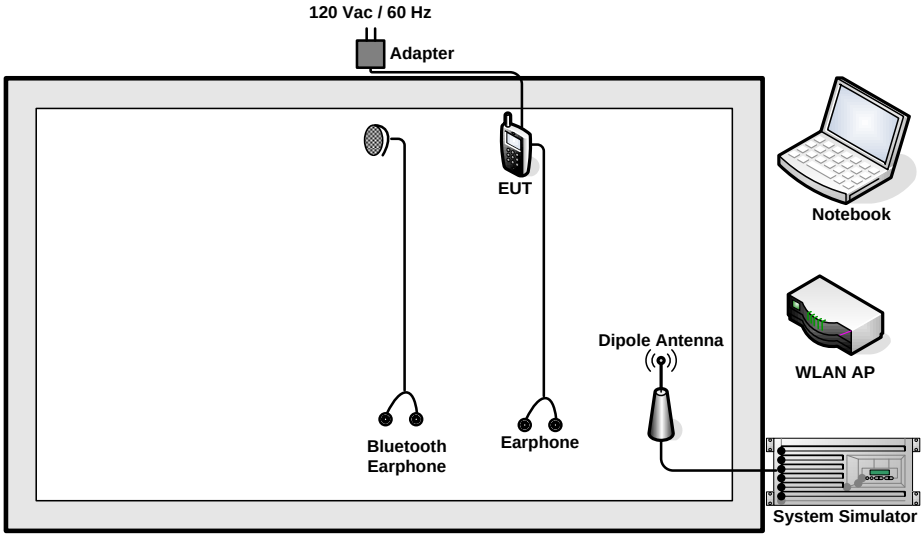
Radiated TCs	■ Mode 1: 802.11a_CH36_5180 MHz ■ Mode 2: 802.11a_CH44_5220 MHz ■ Mode 3: 802.11a_CH48_5240 MHz ■ Mode 4: 802.11a_CH52_5260 MHz ■ Mode 5: 802.11a_CH60_5300 MHz ■ Mode 6: 802.11a_CH64_5320 MHz ■ Mode 7: 802.11a_CH100_5500 MHz ■ Mode 8: 802.11a_CH116_5580 MHz ■ Mode 9: 802.11a_CH140_5700 MHz ■ 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) ■ Mode 19: 802.11n_CH38_5190 MHz (BW 40M) ■ Mode 20: 802.11n_CH46_5230 MHz (BW 40M) ■ Mode 21: 802.11n_CH54_5270 MHz (BW 40M) ■ Mode 22: 802.11n_CH62_5310 MHz (BW 40M) ■ Mode 23: 802.11n_CH102_5510 MHz (BW 40M) ■ Mode 24: 802.11n_CH118_5590 MHz (BW 40M) ■ Mode 25: 802.11n_CH134_5670 MHz (BW 40M)
AC Conducted Emission	Mode 1 ： GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC On + Earphone + Battery 1 + USB Cable (Charging from Adapter) For Sample 1
Remark: All the cases of Radiation Emission were only for Sample 1 and Battery 1.	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 RF Utility

The programmed RF utility “HTC SSD Test Tool ==> WiFi Router” ==> “QRCT.exe ==> WLAN test” 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

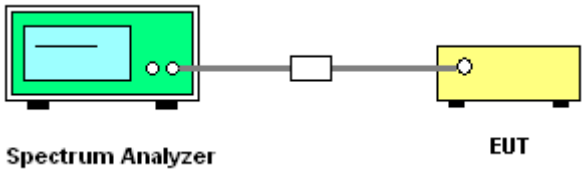
3.1.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.2 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r01.
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

3.1.3 Test Setup

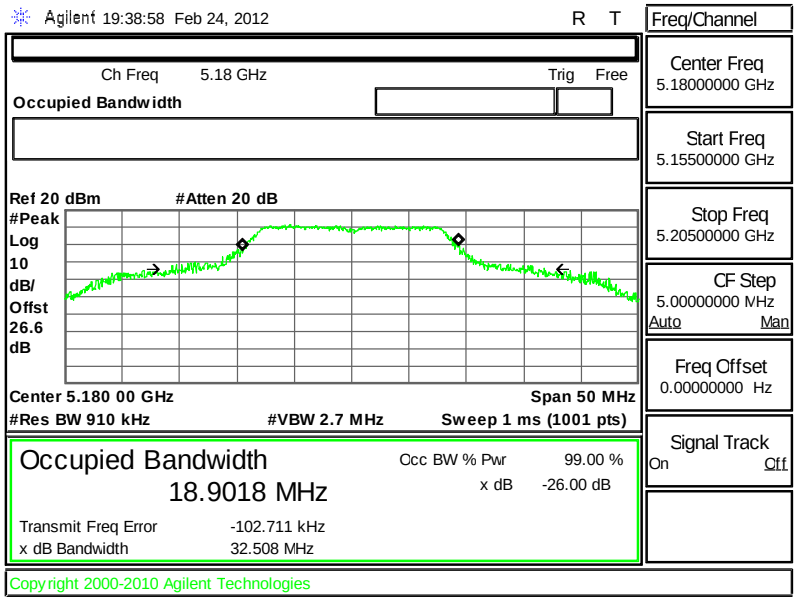


3.1.4 Test Result of 26dB Bandwidth Plots

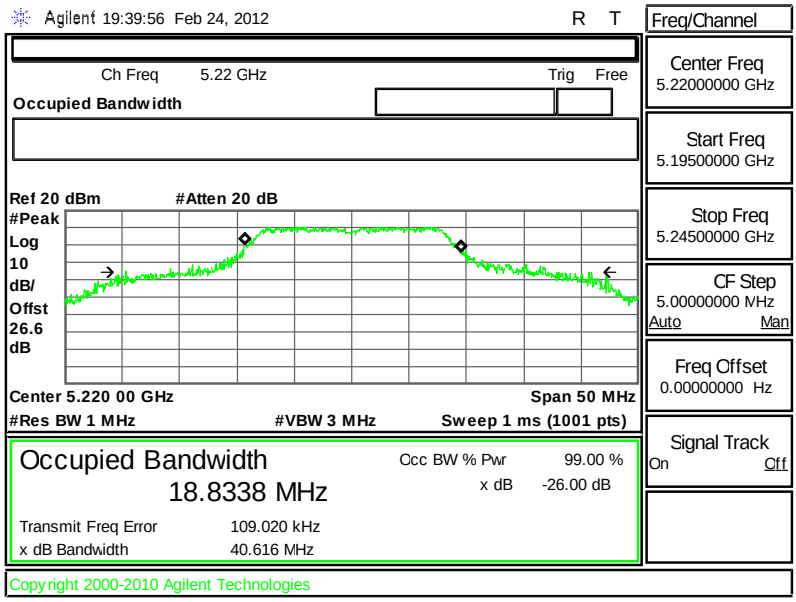
Test Mode :	Mode 1~9	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)	Pass/Fail
36	5180	32.508	N/A
44	5220	40.616	N/A
48	5240	40.905	N/A
52	5260	33.338	N/A
60	5300	36.987	N/A
64	5320	39.270	N/A
100	5500	41.858	N/A
116	5580	38.975	N/A
140	5700	25.422	N/A

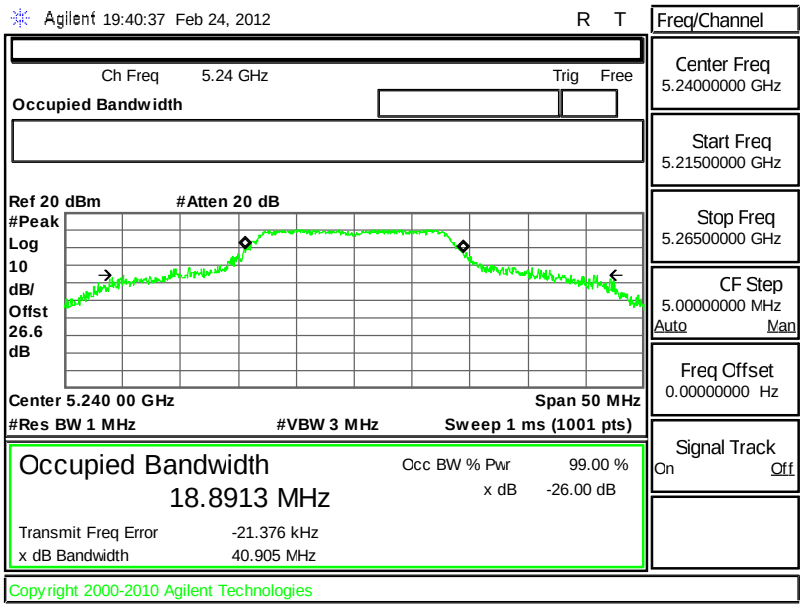
26 dB Bandwidth Plot on 802.11a Channel 36



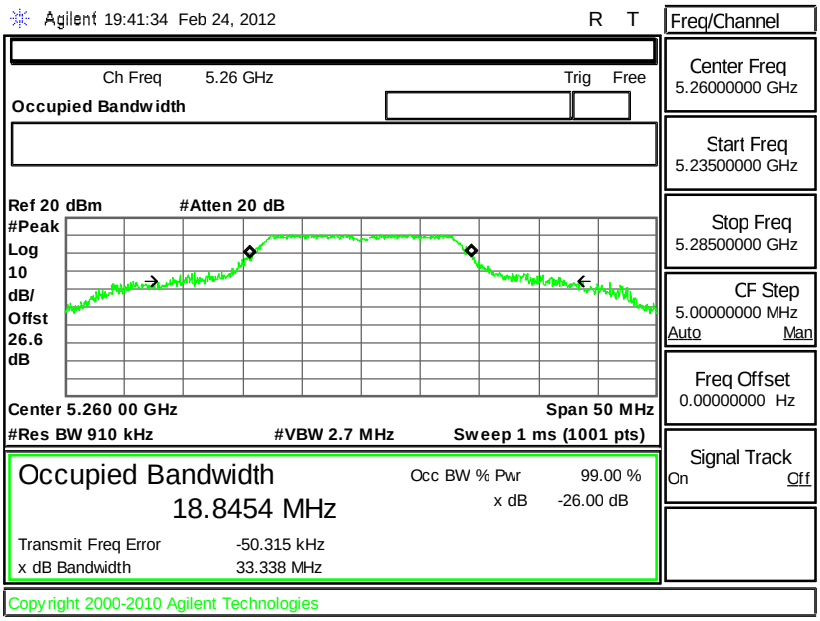
26 dB Bandwidth Plot on 802.11a Channel 44



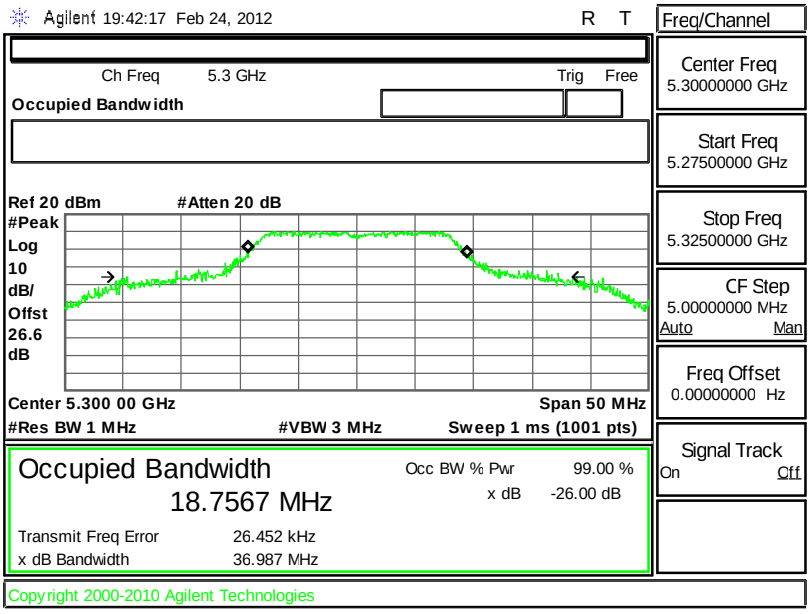
26 dB Bandwidth Plot on 802.11a Channel 48



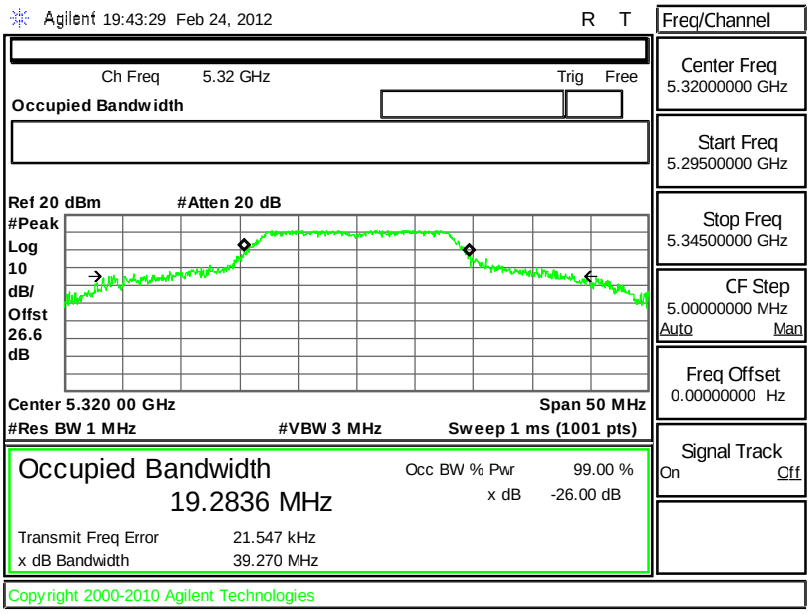
26 dB Bandwidth Plot on 802.11a Channel 52



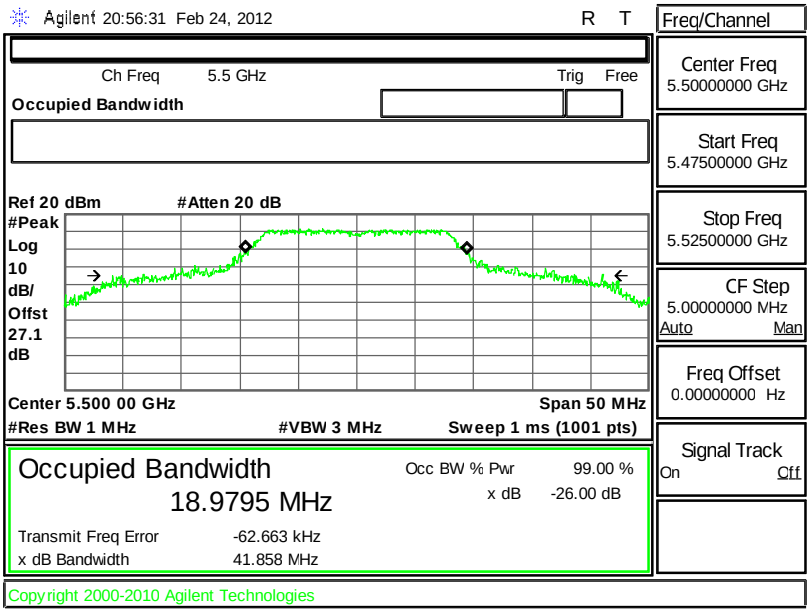
26 dB Bandwidth Plot on 802.11a Channel 60



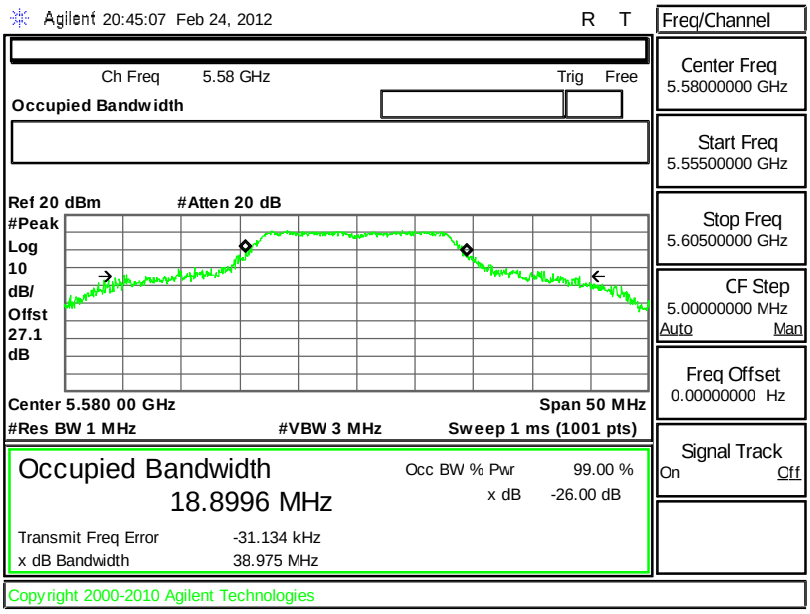
26 dB Bandwidth Plot on 802.11a Channel 64



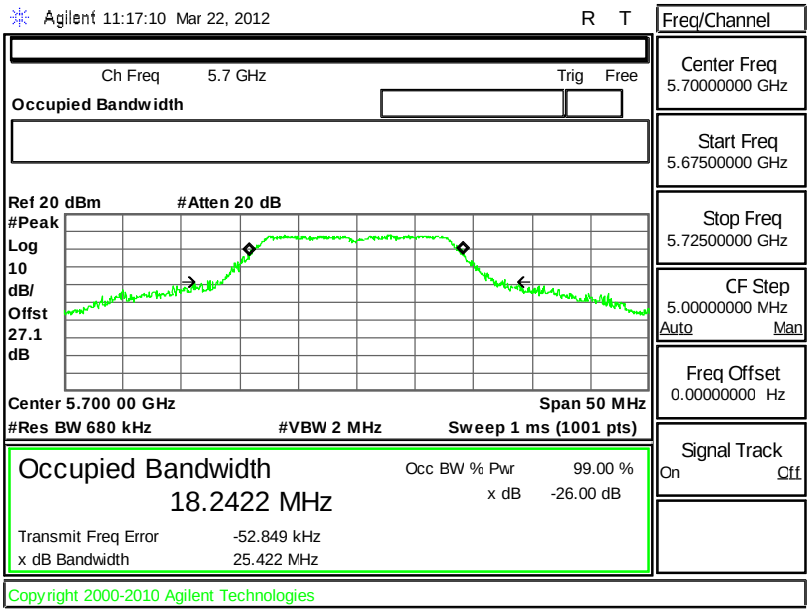
26 dB Bandwidth Plot on 802.11a Channel 100



26 dB Bandwidth Plot on 802.11a Channel 116



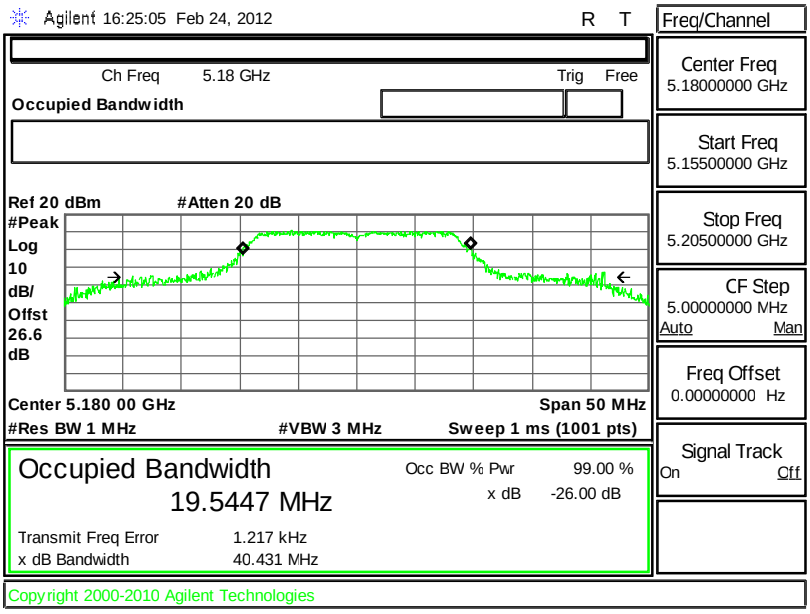
26 dB Bandwidth Plot on 802.11a Channel 140



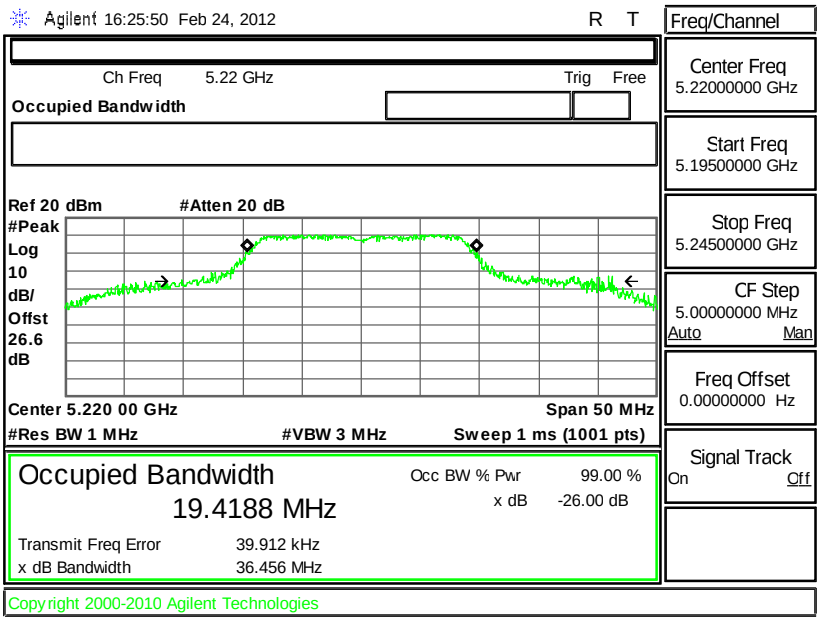
Test Mode :	Mode 10~18	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 26dB Bandwidth (MHz)	Pass/Fail
36	5180	40.431	N/A
44	5220	36.456	N/A
48	5240	38.727	N/A
52	5260	39.972	N/A
60	5300	40.025	N/A
64	5320	43.479	N/A
100	5500	41.535	N/A
116	5580	41.644	N/A
140	5700	23.880	N/A

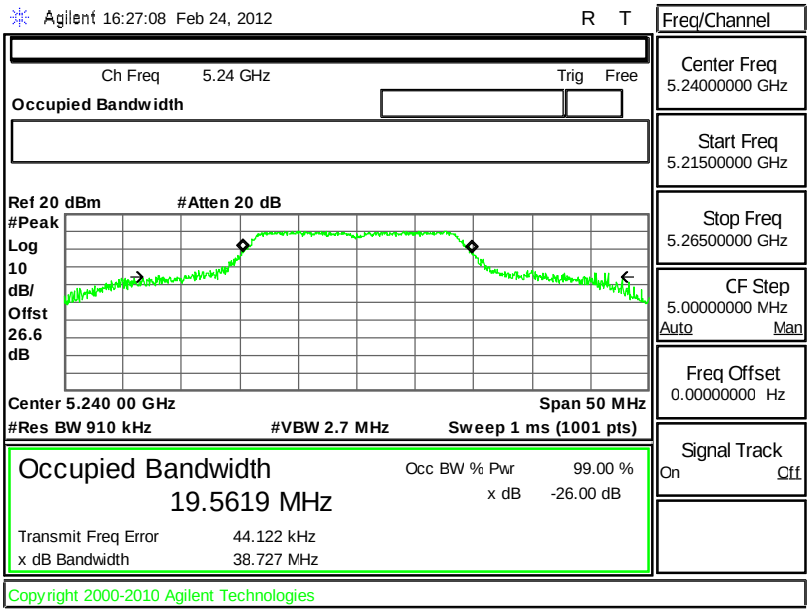
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 36



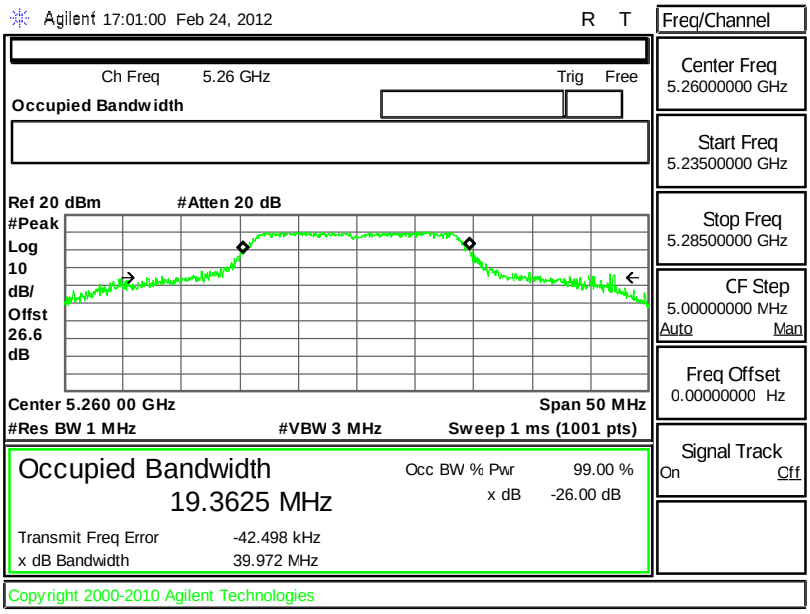
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 44



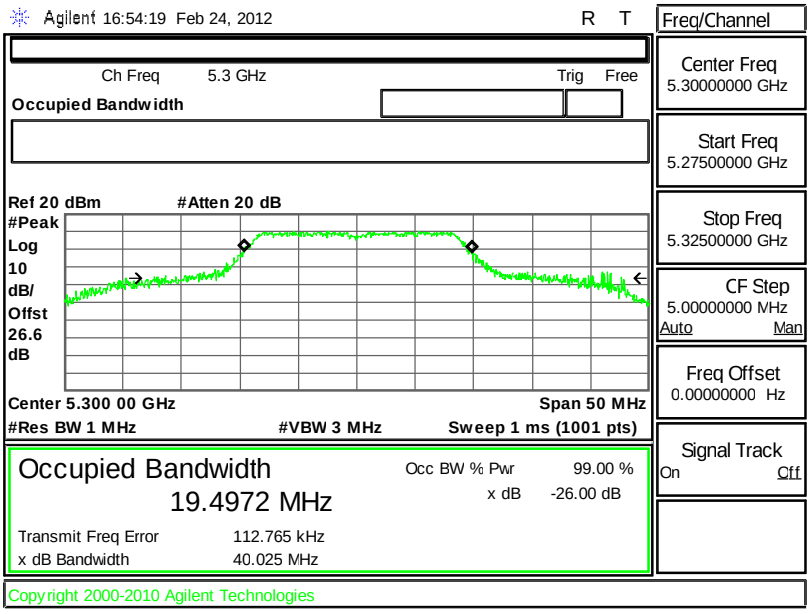
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 48



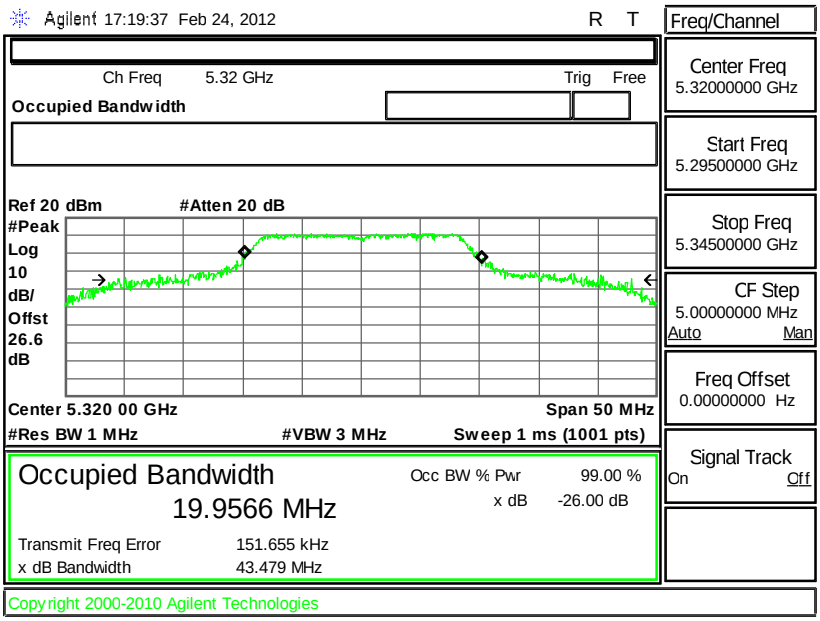
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52



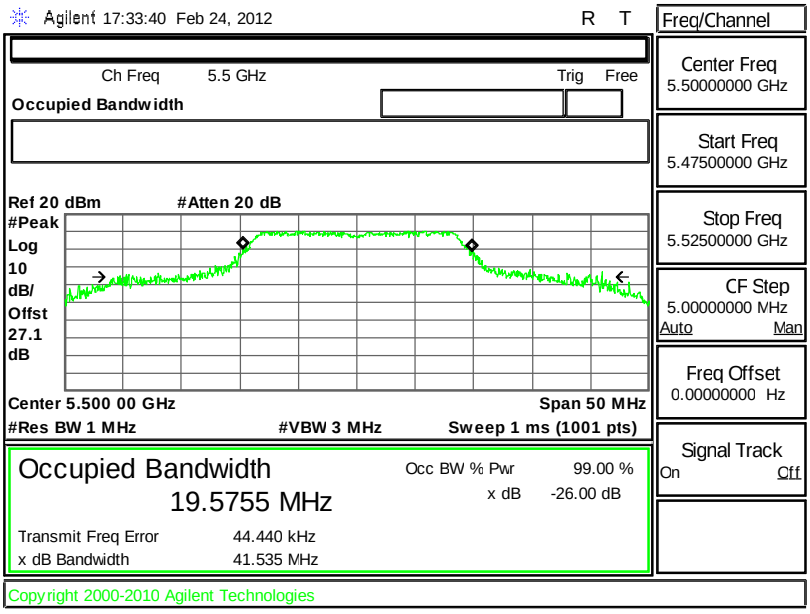
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60



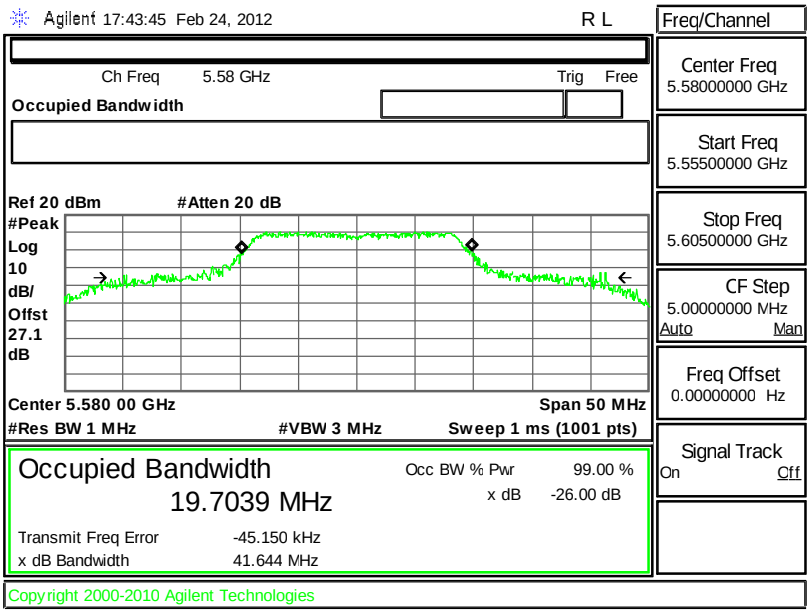
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64



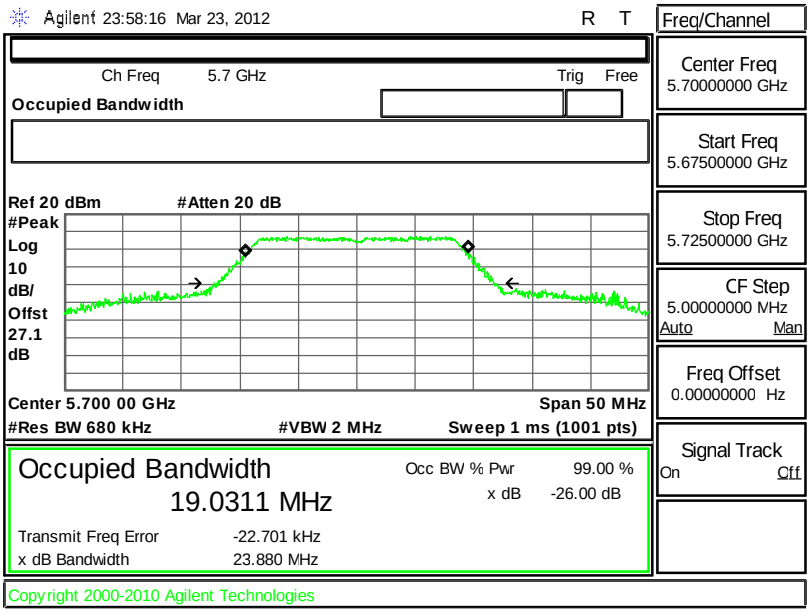
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100



26 dB Bandwidth Plot on 802.11a Channel 116



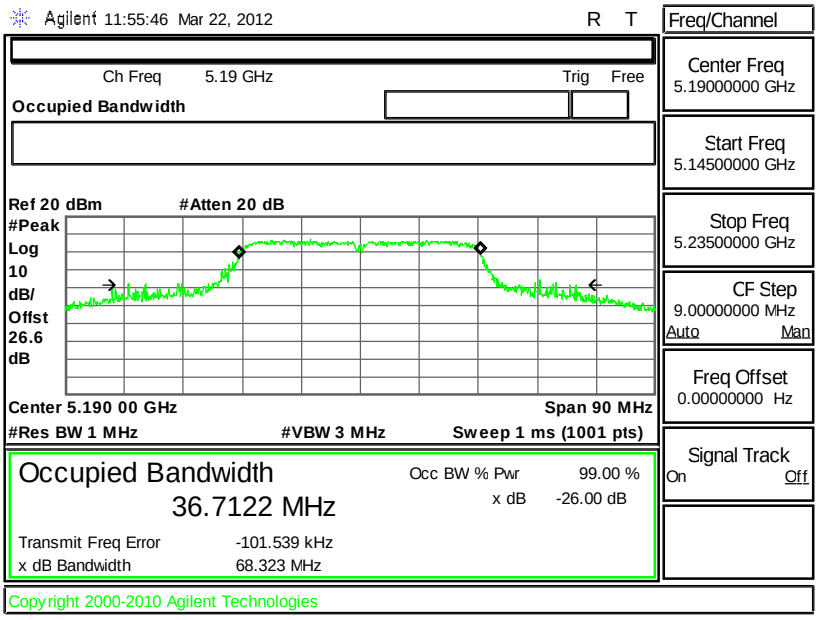
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140



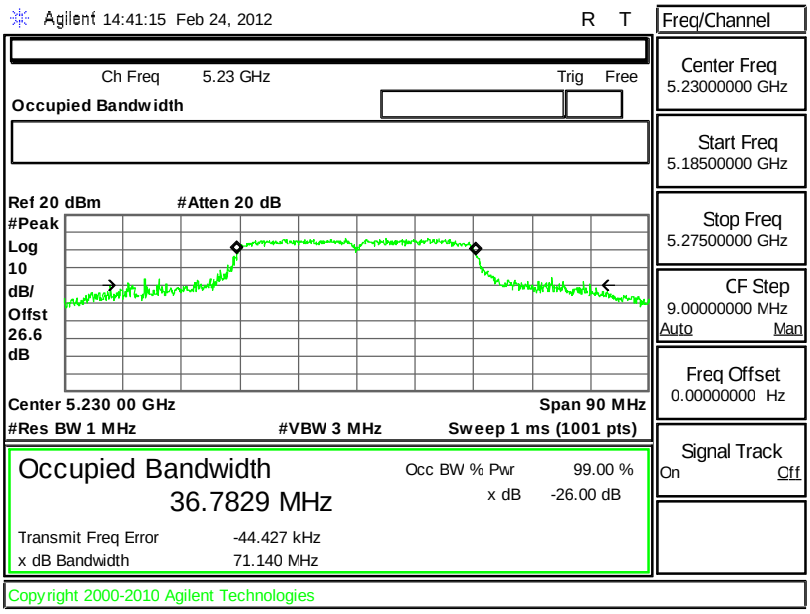
Test Mode :	Mode 19~25	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 26dB Bandwidth (MHz)	Pass/Fail
38	5190	68.323	N/A
46	5230	71.140	N/A
54	5270	73.312	N/A
62	5310	68.079	N/A
102	5510	65.564	N/A
118	5590	73.046	N/A
134	5670	49.568	N/A

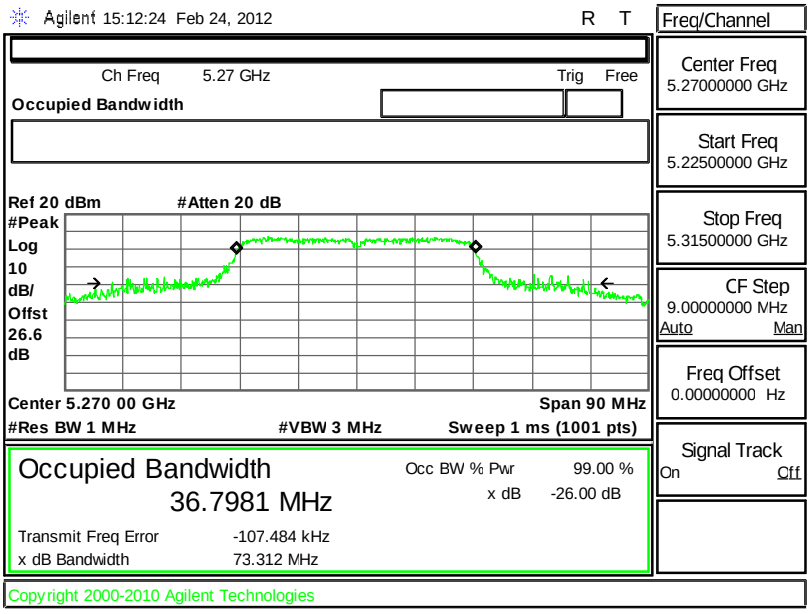
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 38



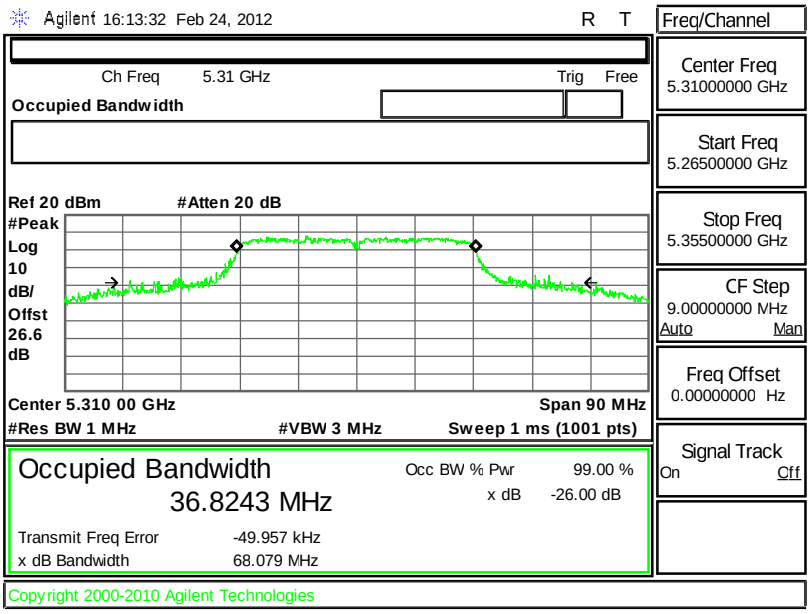
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 46



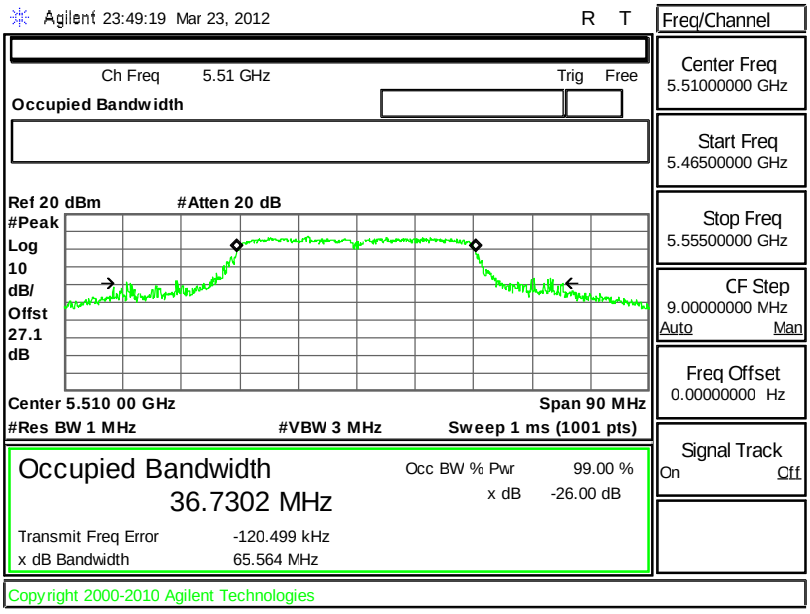
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54



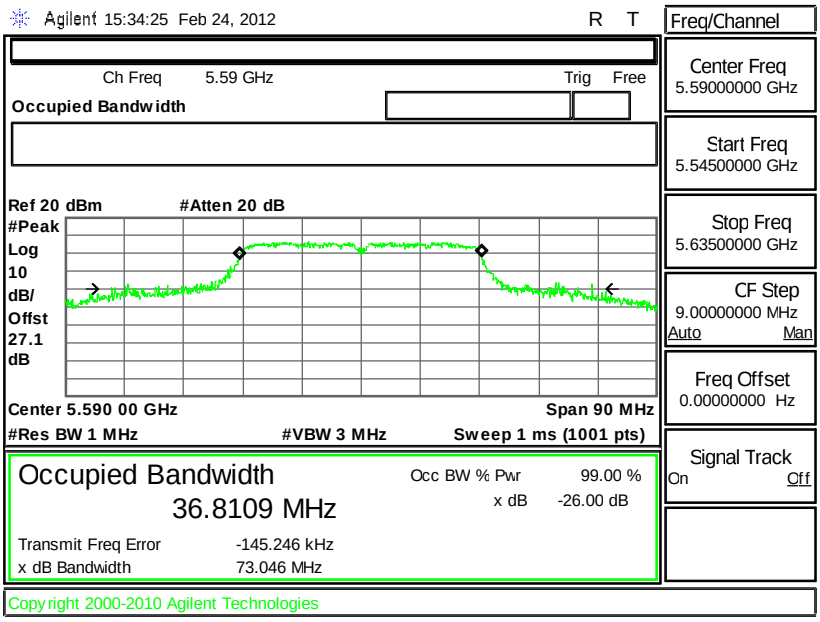
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62



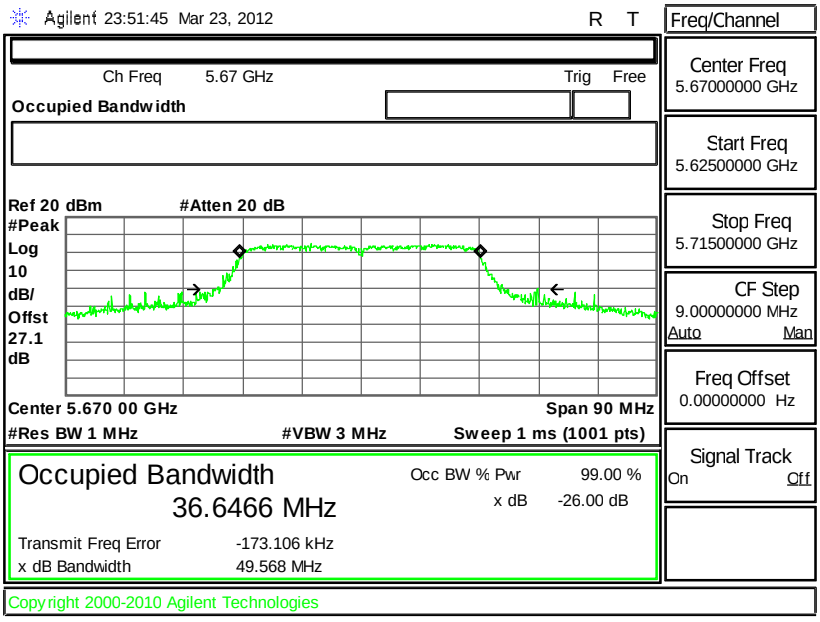
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102



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



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



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

The duty cycle of WLAN 802.11a/n were 100 % for 802.11a and 100 % for 802.11n (BW 20MHz) and 81.42 % for 802.11n (BW 40MHz).

1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r01.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = sample
   - Do not use sweep triggering.
   - Trace average at least 100 traces in power averaging mode.
   - Compute power by integrating the spectrum across the 26 dB EBW of the signal using the spectrum analyzer's band power measurement function with band limits set equal to the EBW band edges. If the spectrum analyzer does not have a band power function, sum the spectrum levels at 1 MHz intervals extending across the 26 dB EBW of the spectrum.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the

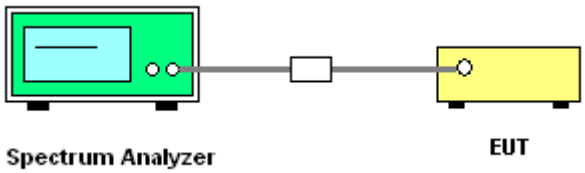
average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable, as below example,

For 802.11a Channel 36, the final power in test report is 10.41 dBm which is the reading of spectrum analyzer with offset cable loss (0.5 dB), and attenuator loss (25.6 dB).

3. Measure the power and record it.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

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

Channel	Frequency (MHz)	Measured Power Output (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	13.39	17	Pass
44	5220	13.26	17	Pass
48	5240	13.23	17	Pass
52	5260	13.41	24	Pass
60	5300	13.29	24	Pass
64	5320	13.62	24	Pass
100	5500	13.87	24	Pass
116	5580	13.29	24	Pass
140	5700	11.19	24	Pass

Note:

1. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW).
2. 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 dBm + 10log (26dB BW).

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

Channel	Frequency (MHz)	Measured Power Output (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	13.40	17	Pass
44	5220	13.44	17	Pass
48	5240	13.27	17	Pass
52	5260	13.04	24	Pass
60	5300	13.07	24	Pass
64	5320	13.57	24	Pass
100	5500	13.36	24	Pass
116	5580	13.04	24	Pass
140	5700	10.53	24	Pass

Note:

1. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW).
2. 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 dBm + 10log (26dB BW).

Test Mode :	Mode 19~25	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

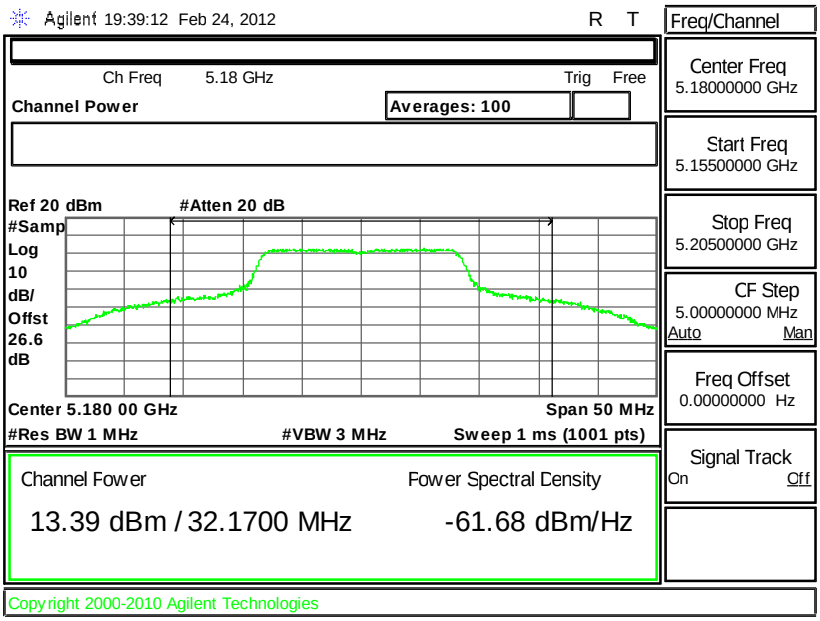
Channel	Frequency (MHz)	Measured Power Output (dBm)	Max. Limits (dBm)	Pass/Fail
38	5190	13.14	17	Pass
46	5230	13.36	17	Pass
54	5270	13.50	24	Pass
62	5310	13.84	24	Pass
102	5510	13.16	24	Pass
118	5590	12.96	24	Pass
134	5670	11.17	24	Pass

Note:

1. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW).
2. 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 dBm + 10log (26dB BW).
3. Measured Power Output (dBm)=Spectrum Measured Power Output+10 log(1/x), where x is the duty cycle.

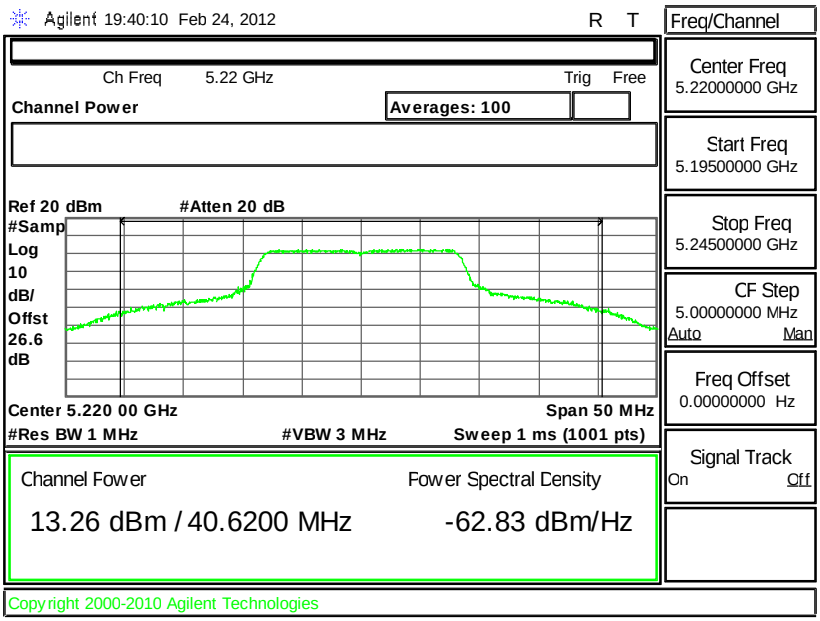
3.2.6 Test Result of Power Output Plots

Output Power Plot on 802.11a Channel 36

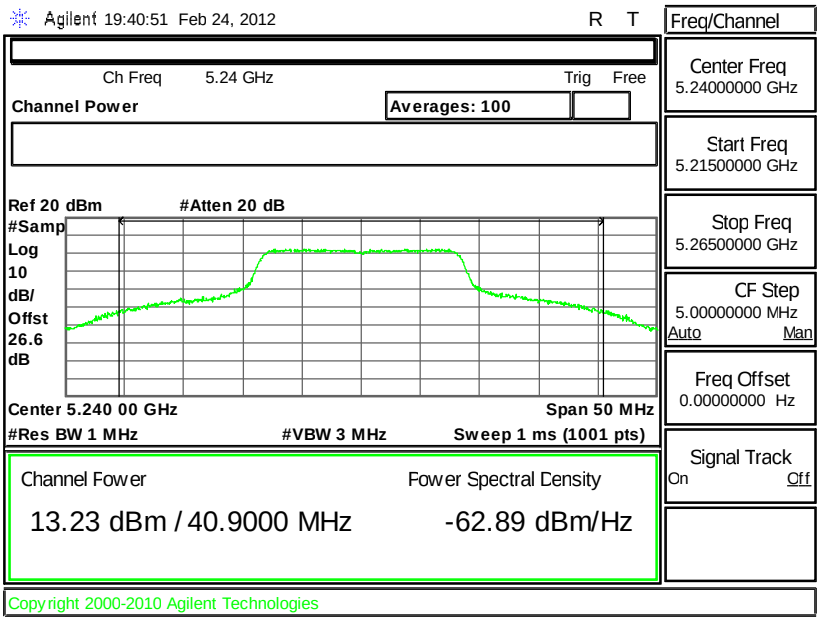


Total path loss 26.6 dB (cable loss: 1.4dB, attenuator: 25.2dB)

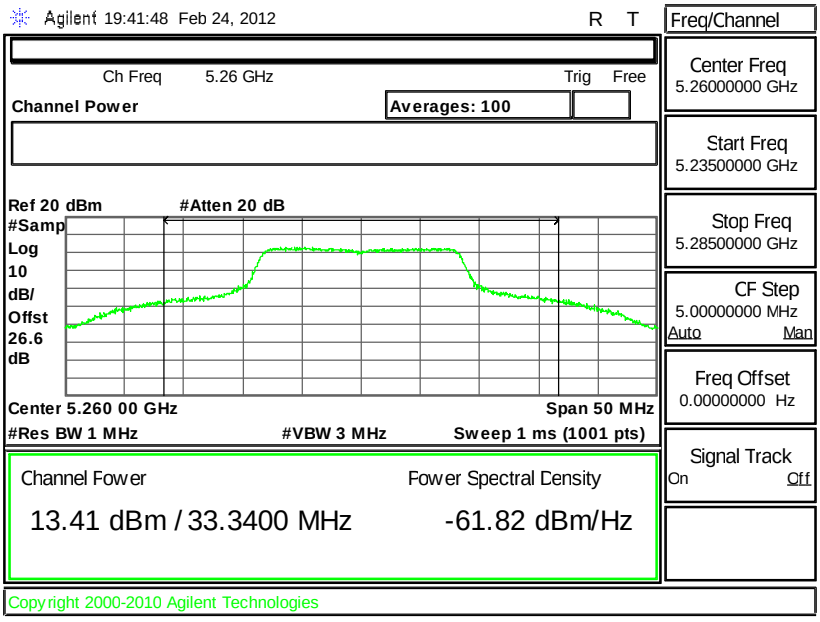
Output Power Plot on 802.11a Channel 44



Output Power Plot on 802.11a Channel 48

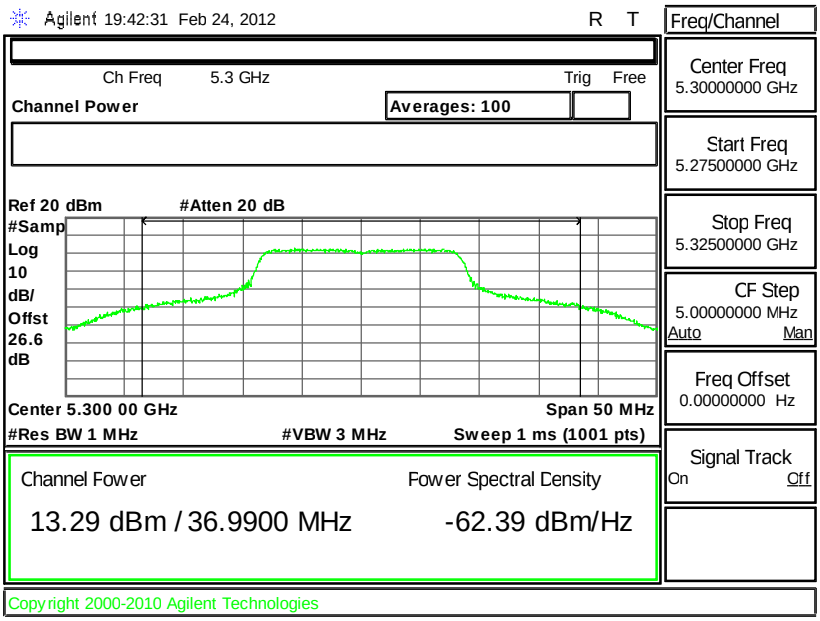


Output Power Plot on 802.11a Channel 52

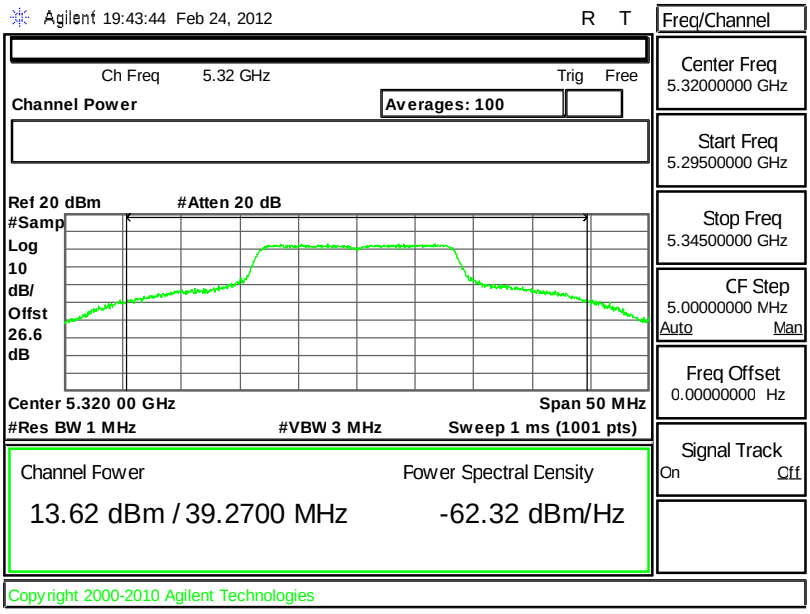


Total path loss 26.6 dB (cable loss: 1.4dB, attenuator: 25.2dB)

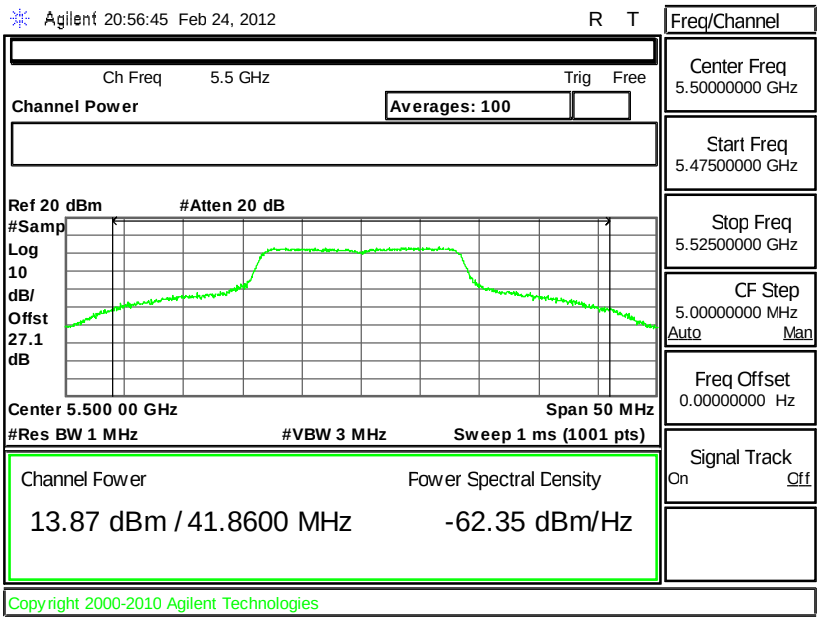
Output Power Plot on 802.11a Channel 60



Output Power Plot on 802.11a Channel 64

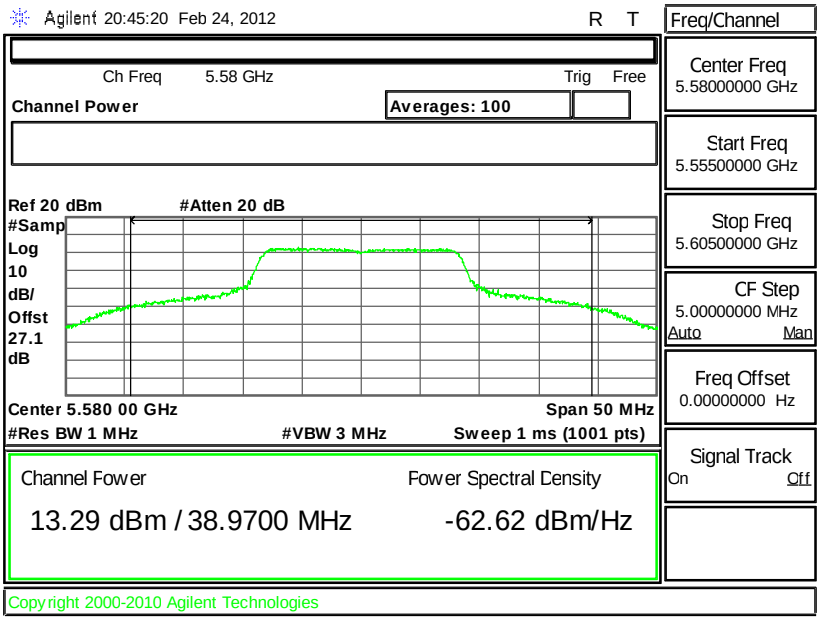


Output Power Plot on 802.11a Channel 100

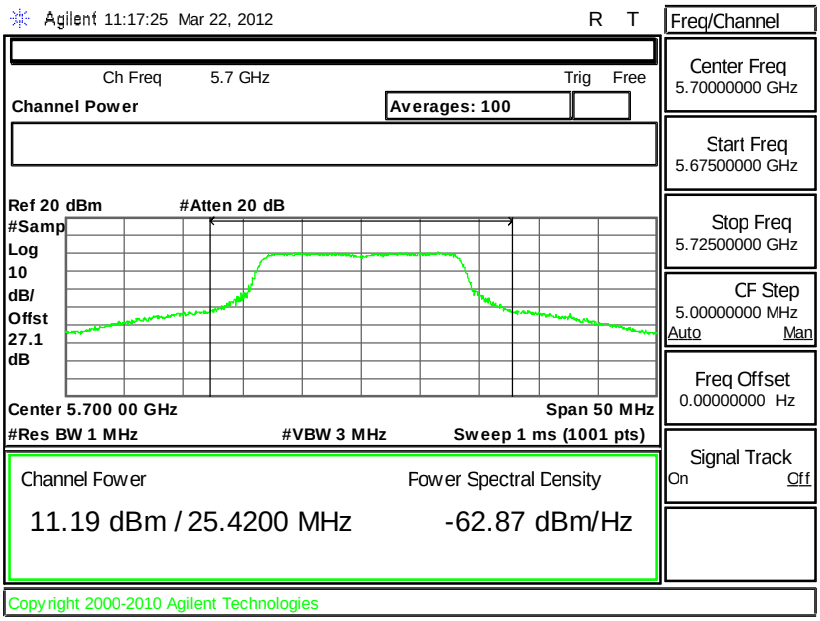


Total path loss 27.1 dB (cable loss: 1.5dB, attenuator: 25.6dB)

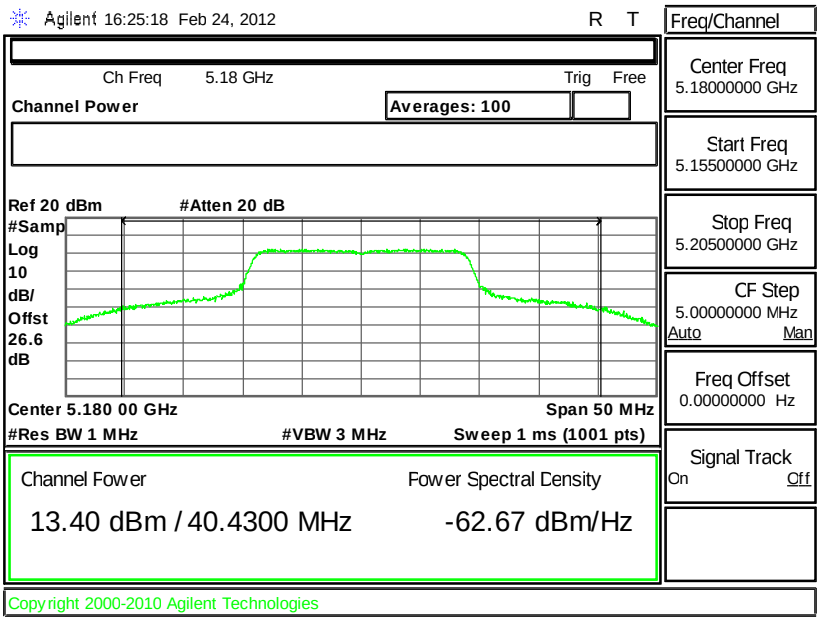
Output Power Plot on 802.11a Channel 116



Output Power Plot on 802.11a Channel 140

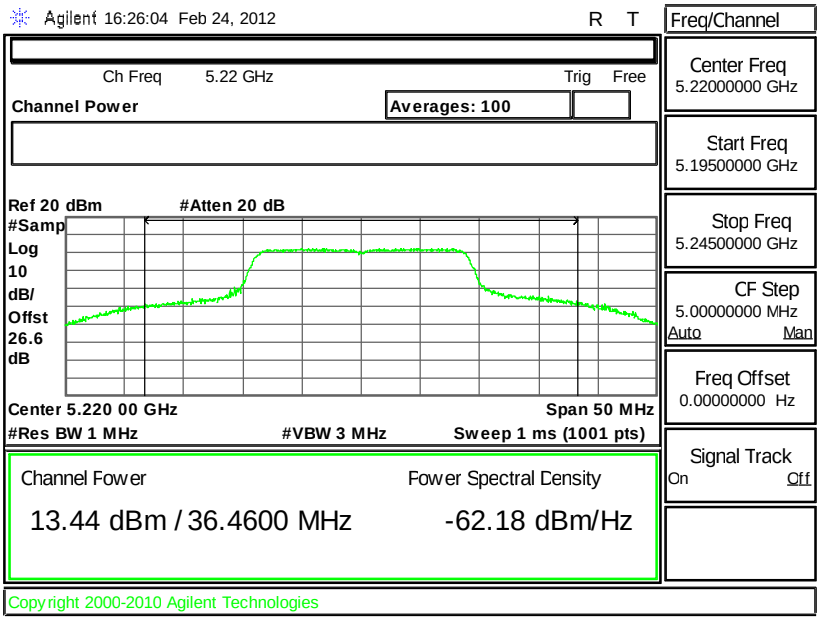


Output Power Plot on 802.11n (BW 20MHz) Channel 36

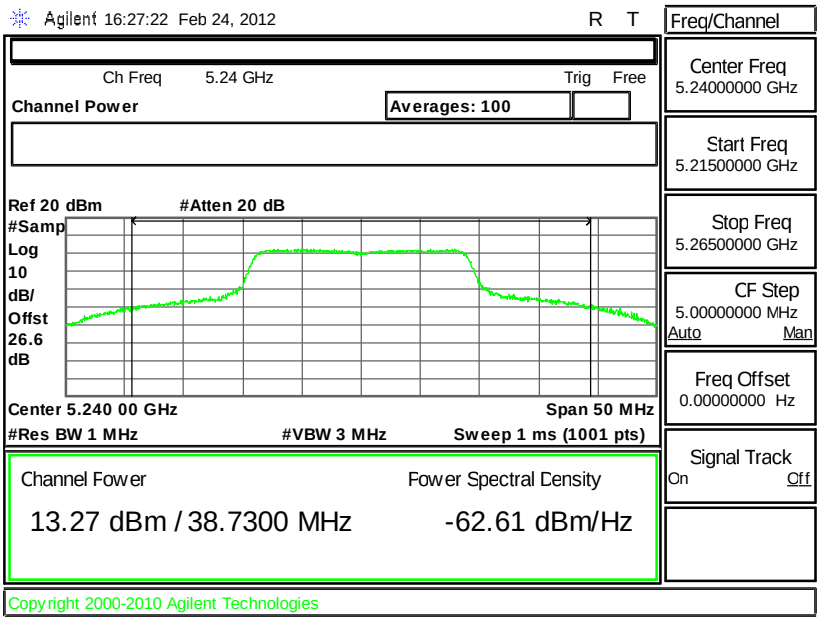


Total path loss 26.6 dB (cable loss: 1.4dB, attenuator: 25.2dB)

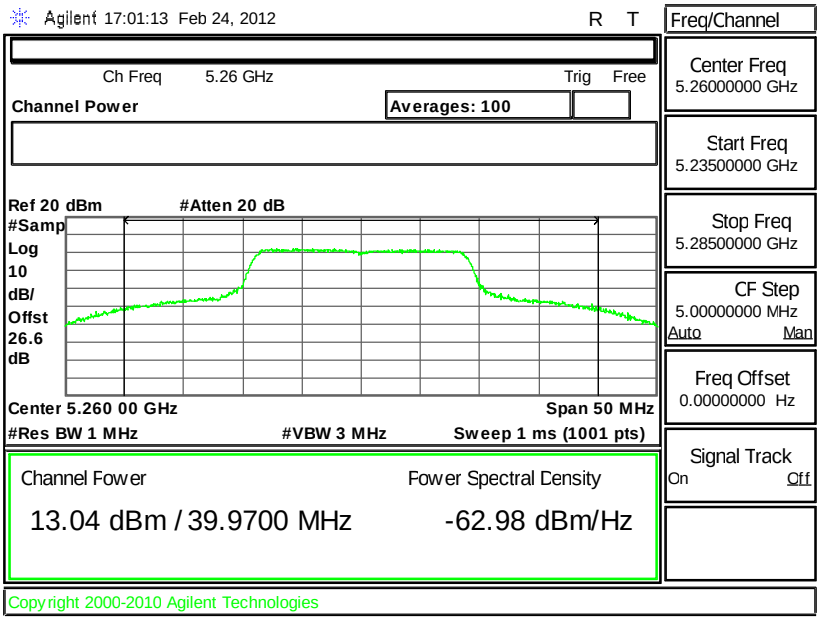
Output Power Plot on 802.11n (BW 20MHz) Channel 44



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

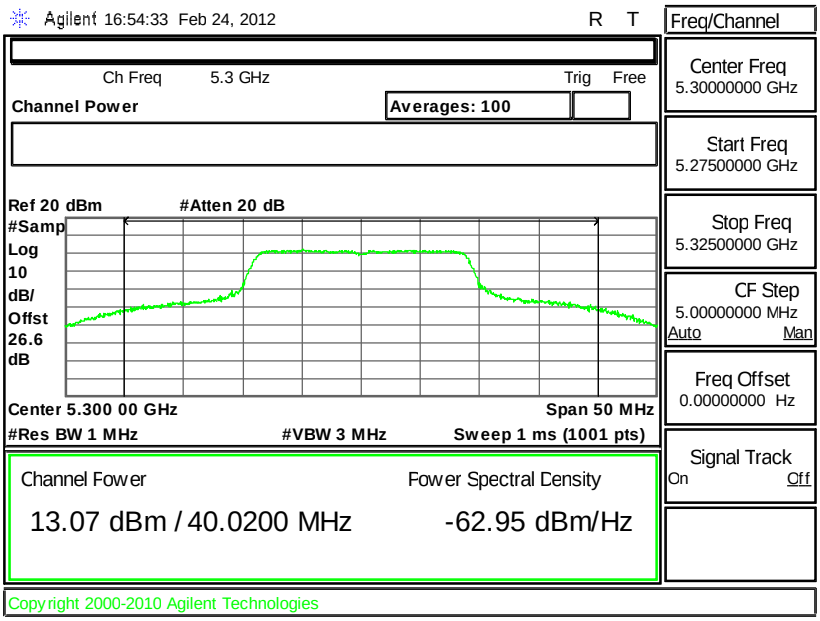


Output Power Plot on 802.11n (BW 20MHz) Channel 52

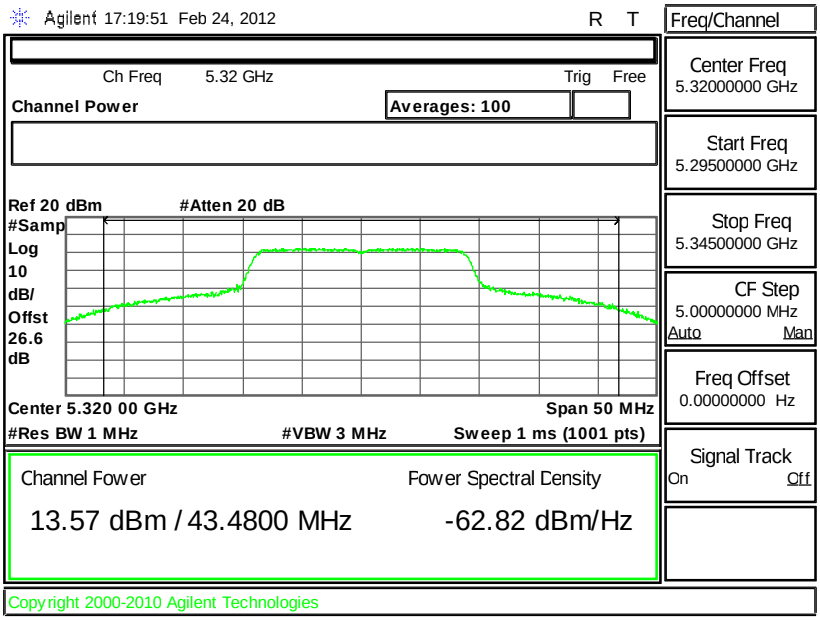


Total path loss 26.6 dB (cable loss: 1.4dB, attenuator: 25.2dB)

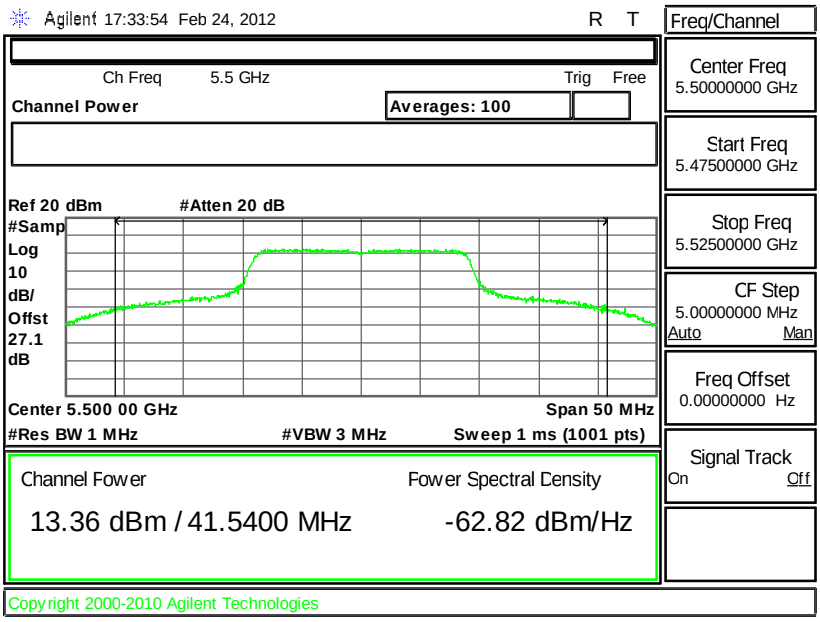
Output Power Plot on 802.11n (BW 20MHz) Channel 60



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

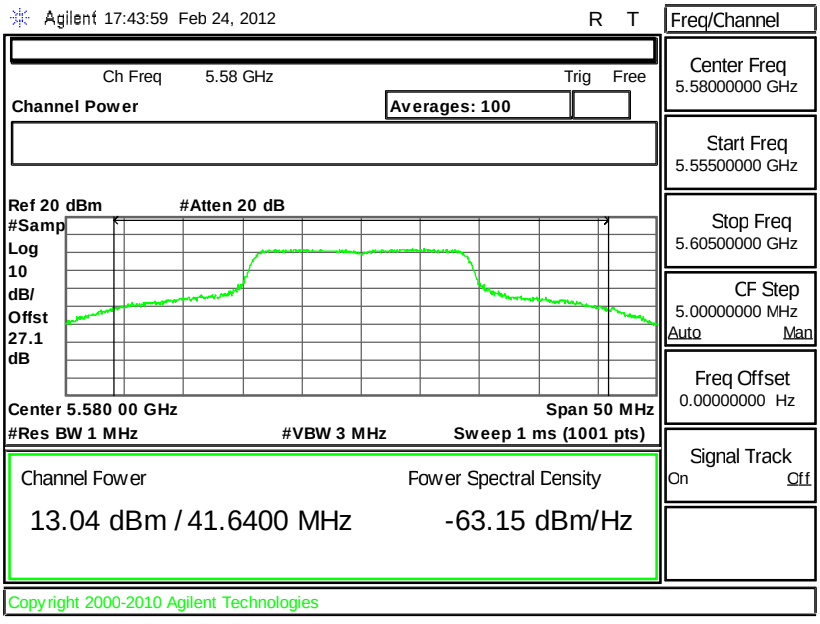


Output Power Plot on 802.11n (BW 20MHz) Channel 100

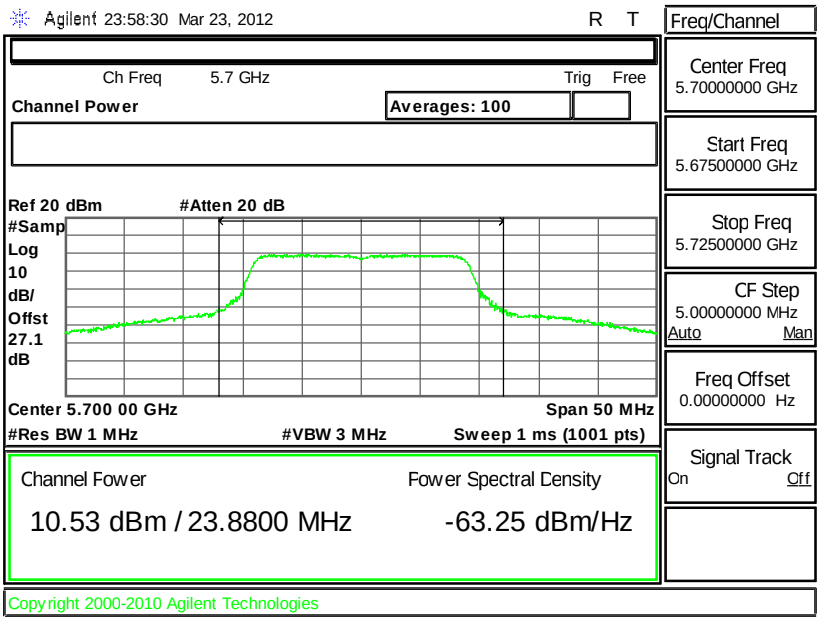


Total path loss 27.1 dB (cable loss: 1.5dB, attenuator: 25.6dB)

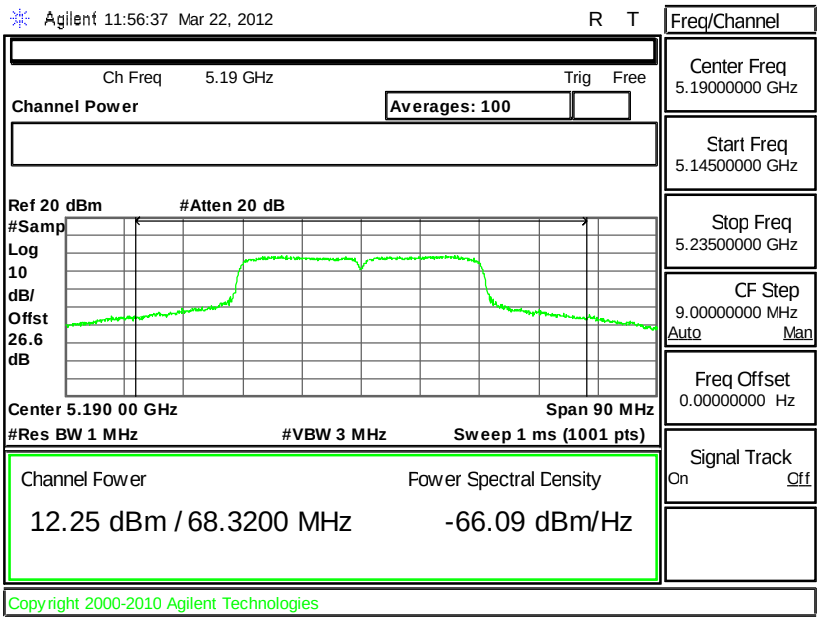
Output Power Plot on 802.11n (BW 20MHz) Channel 116



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

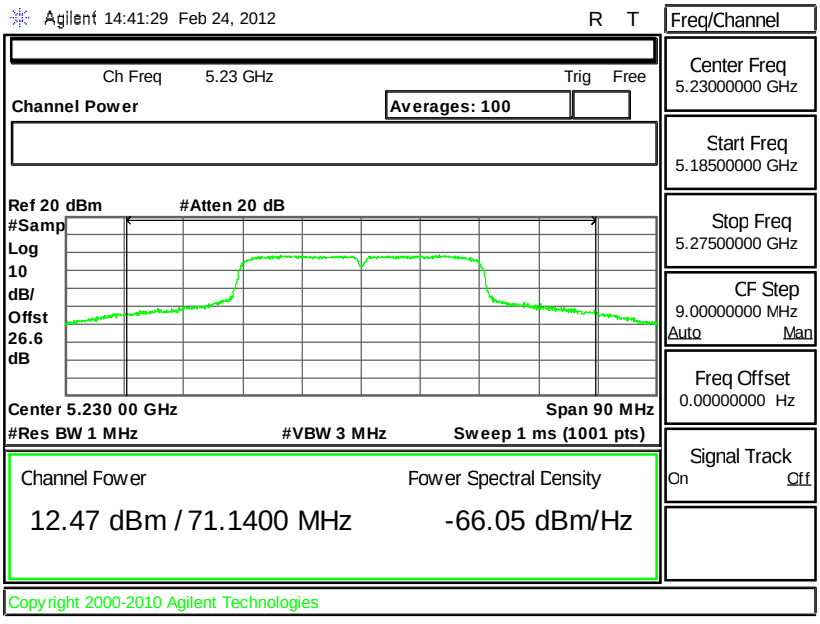


Output Power Plot on 802.11n (BW 40MHz) Channel 38

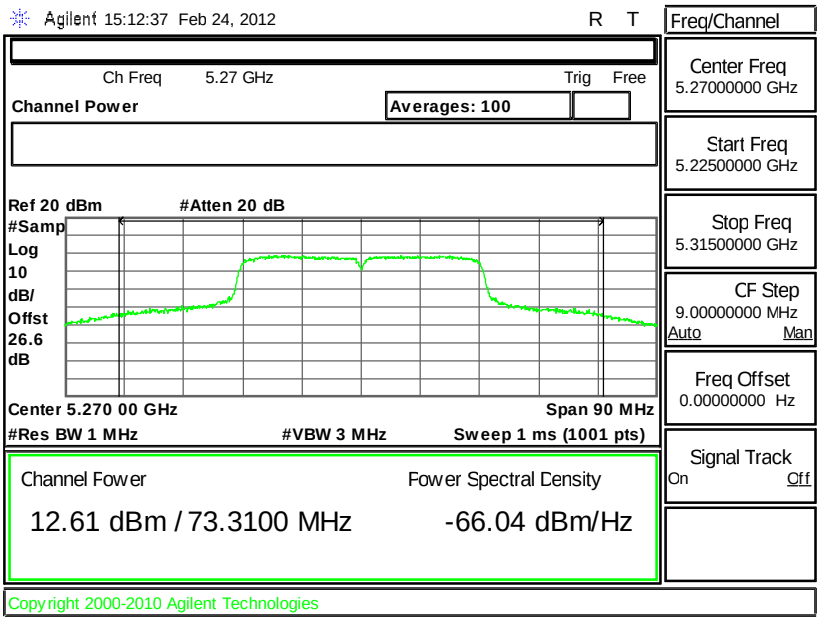


Total path loss 26.6 dB (cable loss: 1.4B, attenuator: 25.2dB)

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

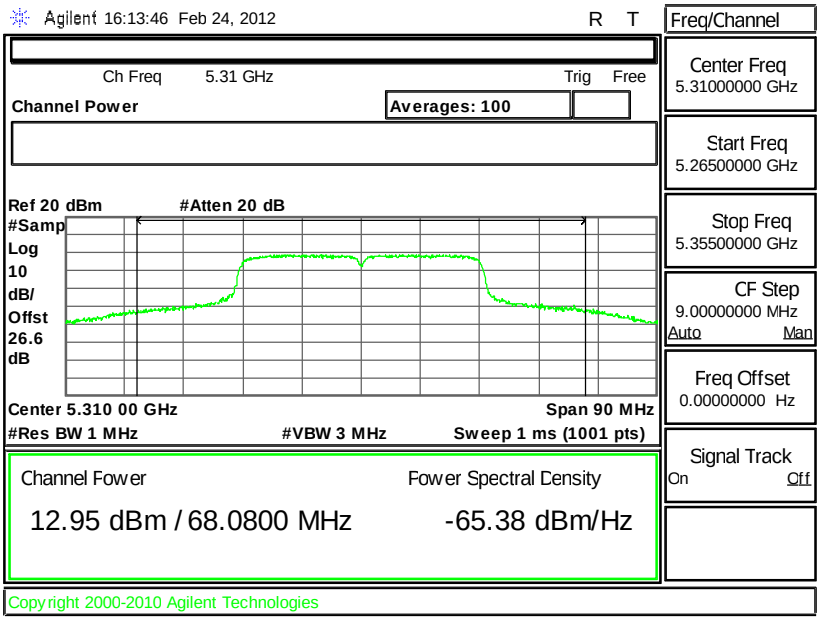


Output Power Plot on 802.11n (BW 40MHz) Channel 54

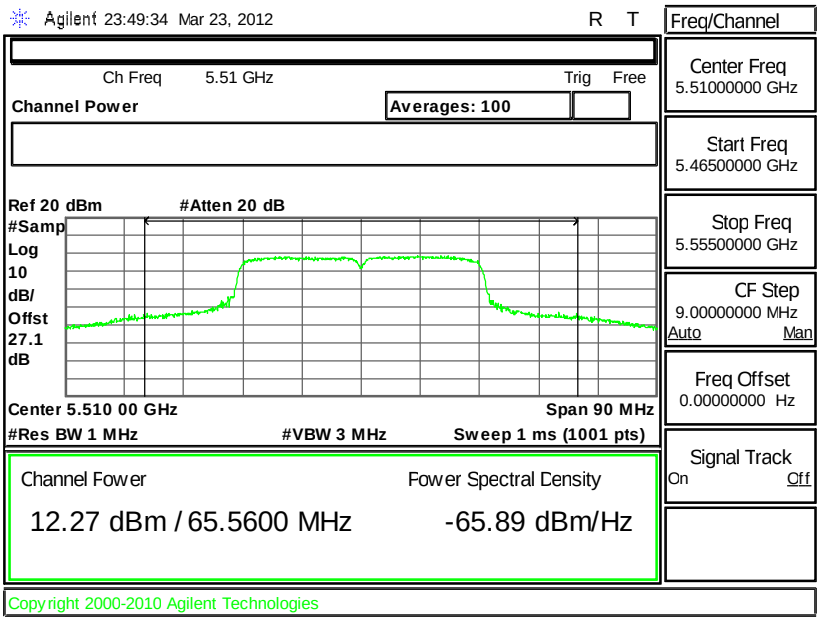


Total path loss 26.6 dB (cable loss: 1.4dB, attenuator: 25.2dB)

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

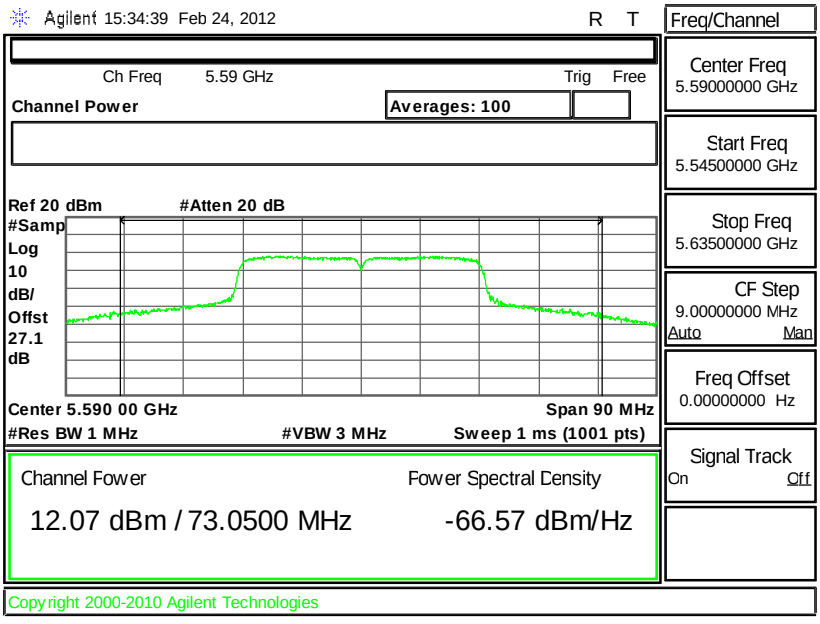


Output Power Plot on 802.11n (BW 40MHz) Channel 102

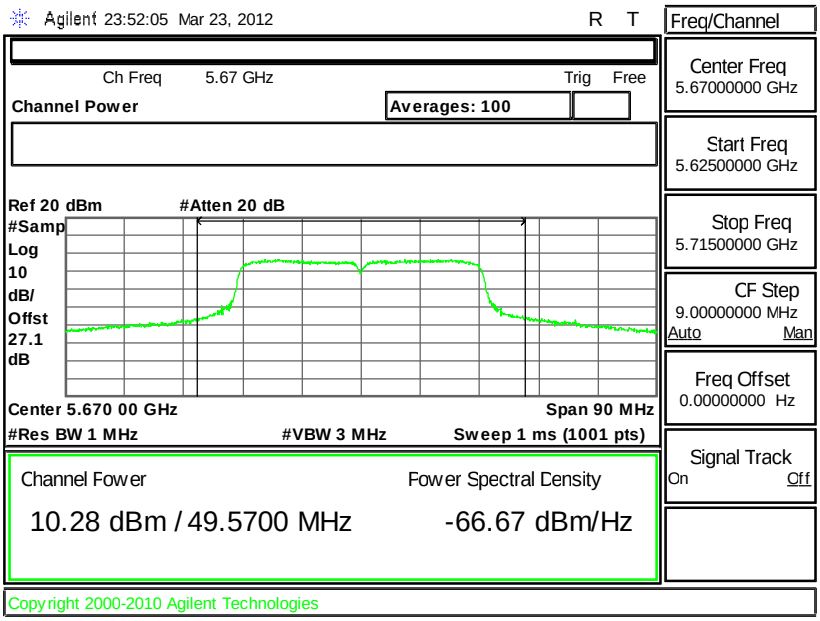


Total path loss 27.1 dB (cable loss: 1.5dB, attenuator: 25.6dB)

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



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



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

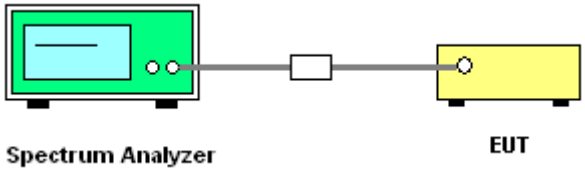
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r01.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = sample
   - Do not use sweep triggering.
   - Trace average at least 100 traces in power averaging mode.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup

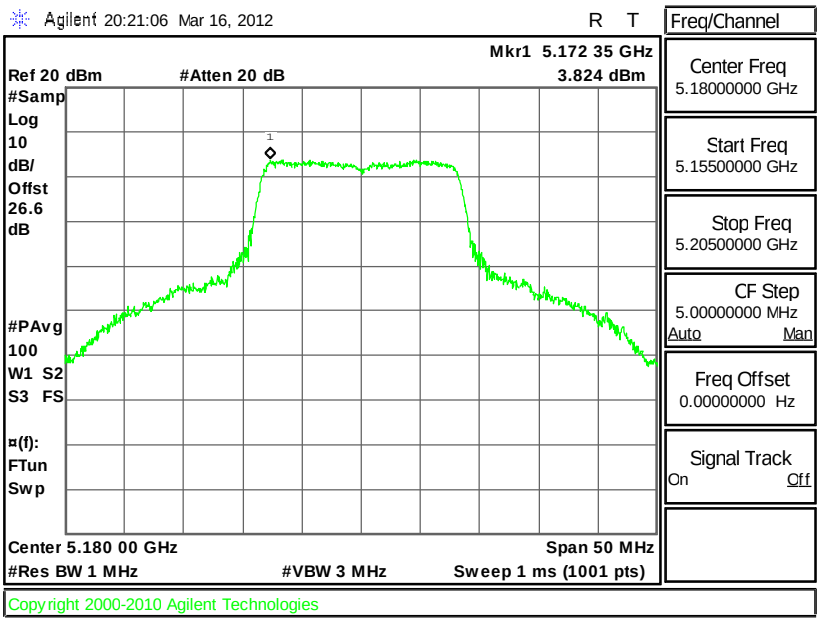


3.3.5 Test Result of Power Spectral Density

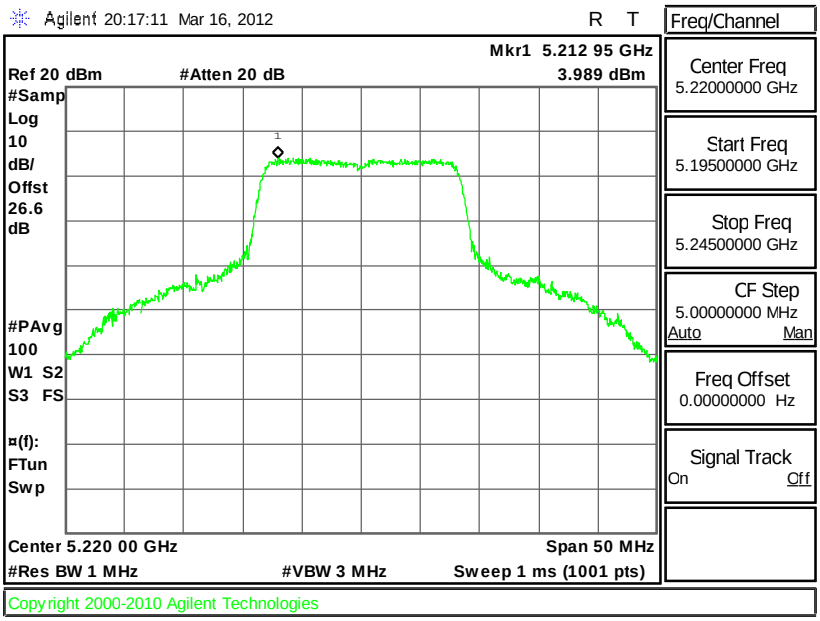
Test Mode :	Mode 1~9	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	3.824	4	Pass
44	5220	3.989	4	Pass
48	5240	3.833	4	Pass
52	5260	4.556	11	Pass
60	5300	4.402	11	Pass
64	5320	5.073	11	Pass
100	5500	4.845	11	Pass
116	5580	4.435	11	Pass
140	5700	5.126	11	Pass

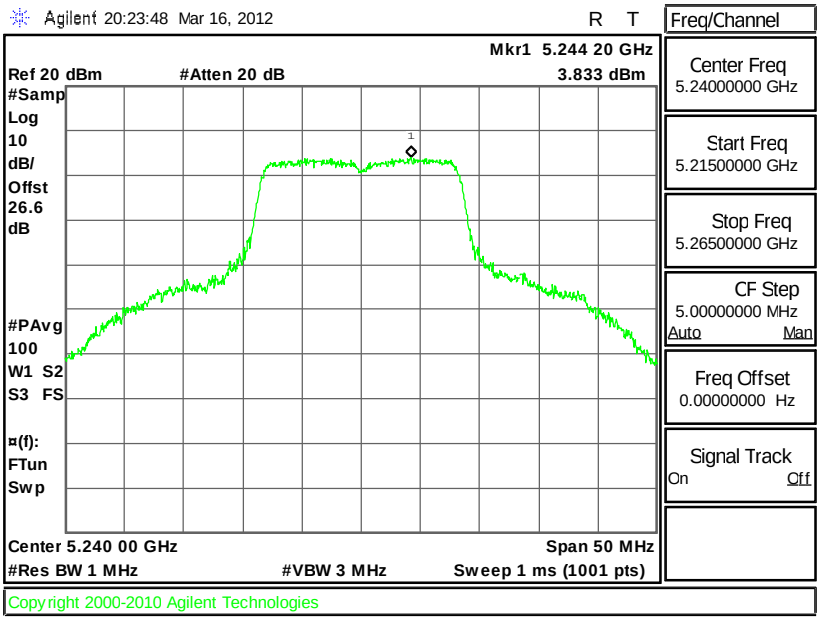
PSD Plot on 802.11a Channel 36



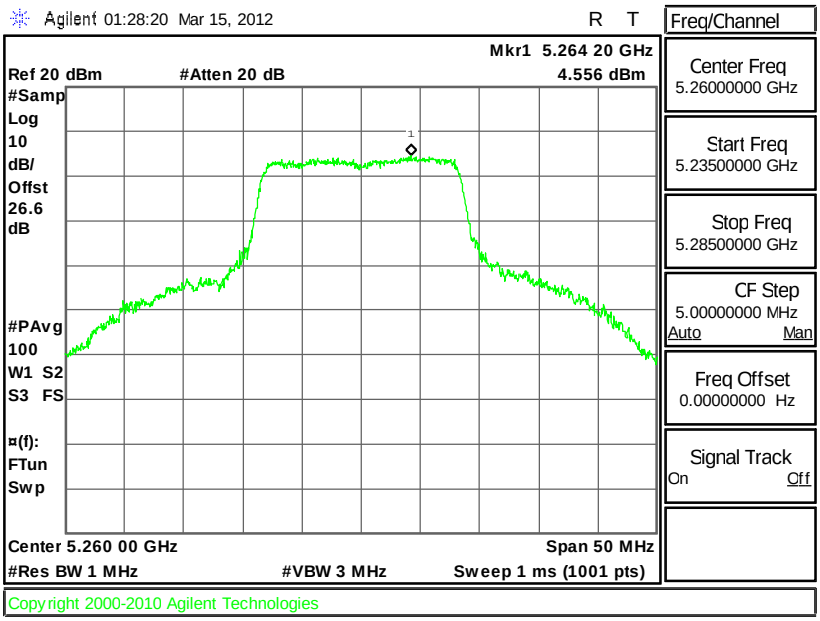
PSD Plot on 802.11a Channel 44



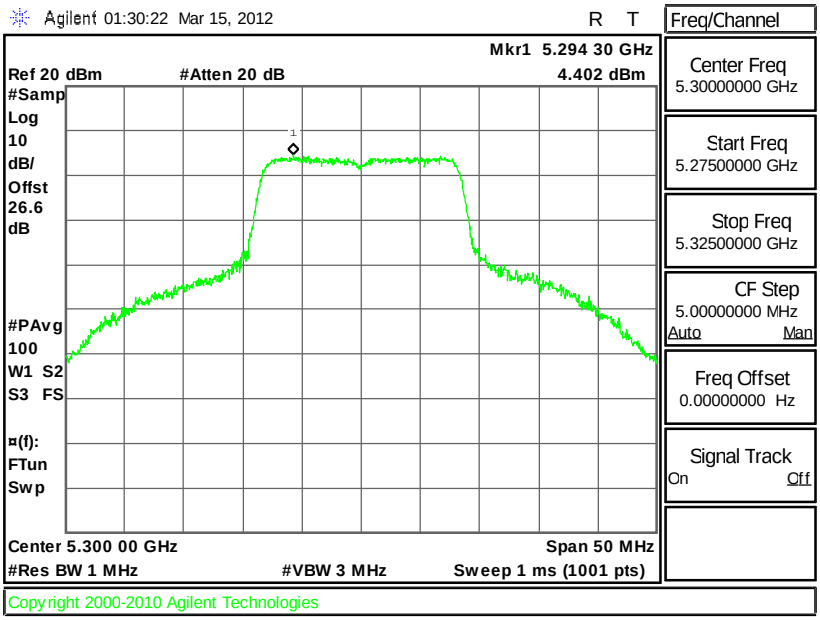
PSD Plot on 802.11a Channel 48



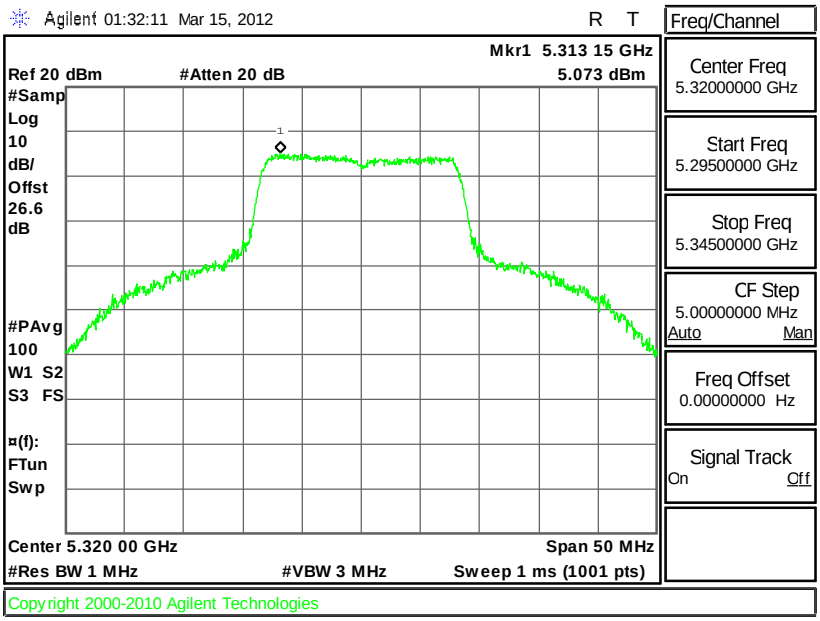
PSD Plot on 802.11a Channel 52



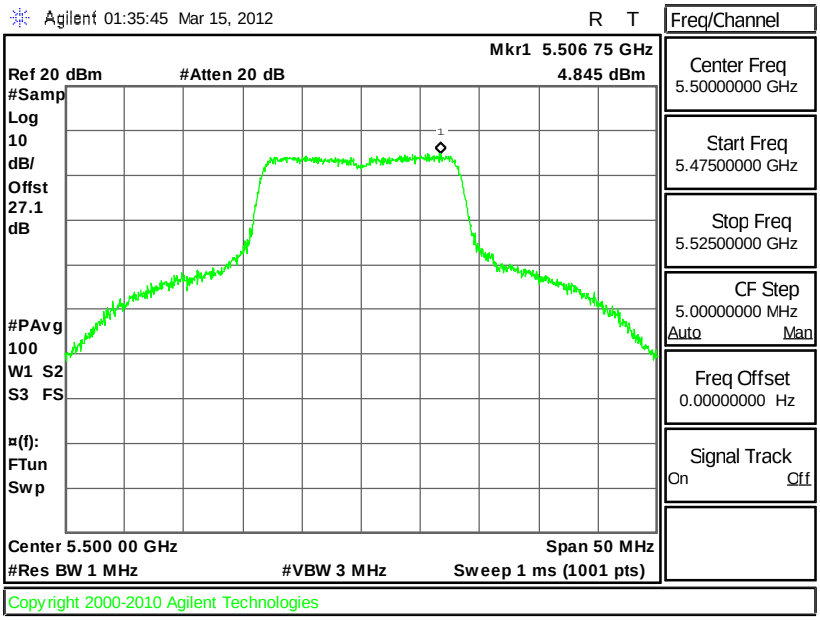
PSD Plot on 802.11a Channel 60



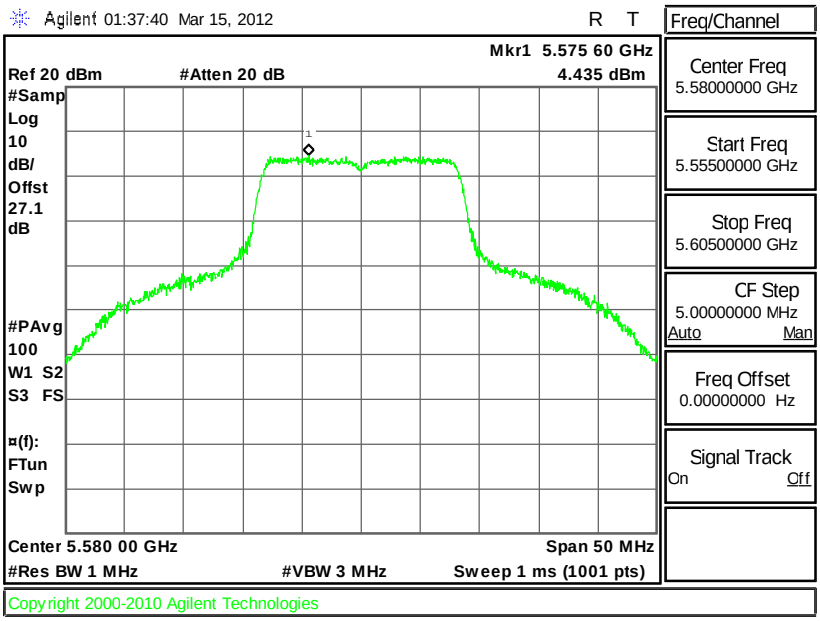
PSD Plot on 802.11a Channel 64



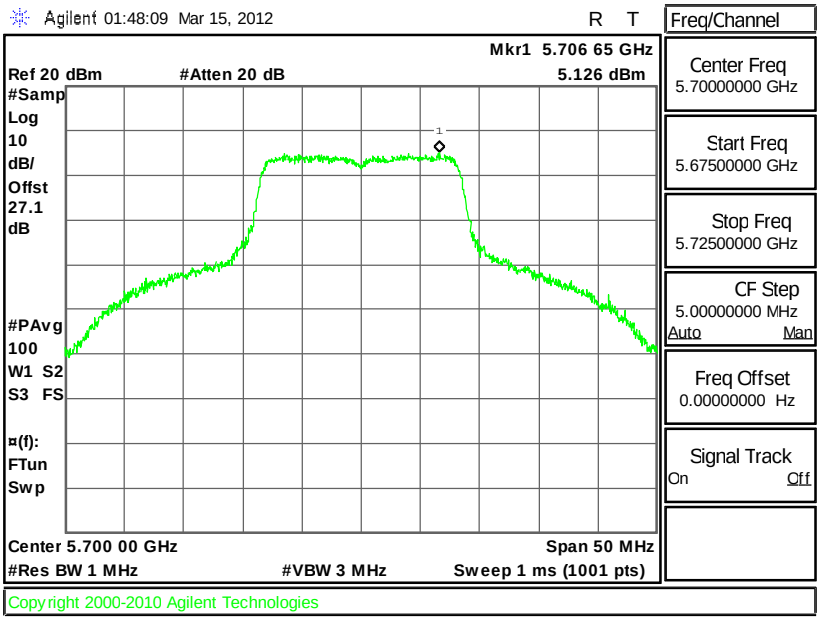
PSD Plot on 802.11a Channel 100



PSD Plot on 802.11a Channel 116



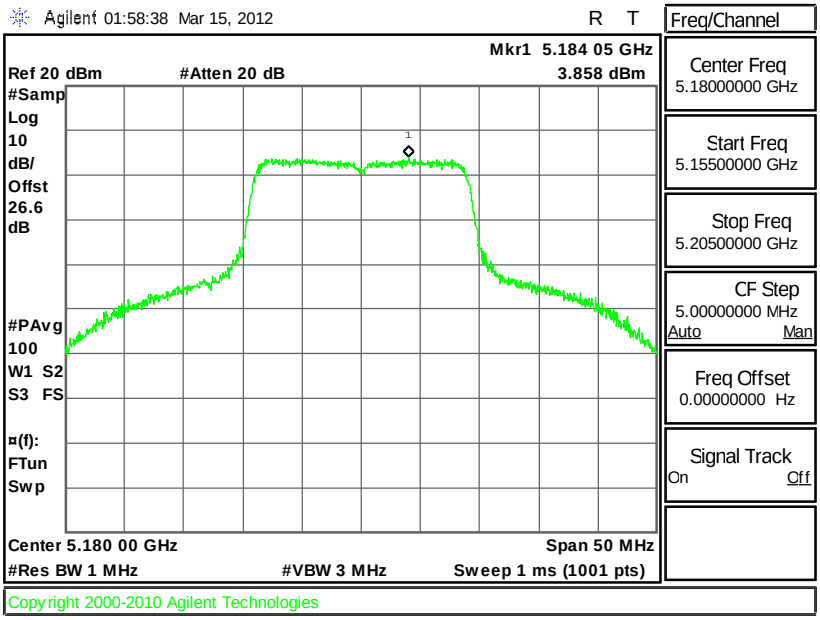
PSD Plot on 802.11a Channel 140



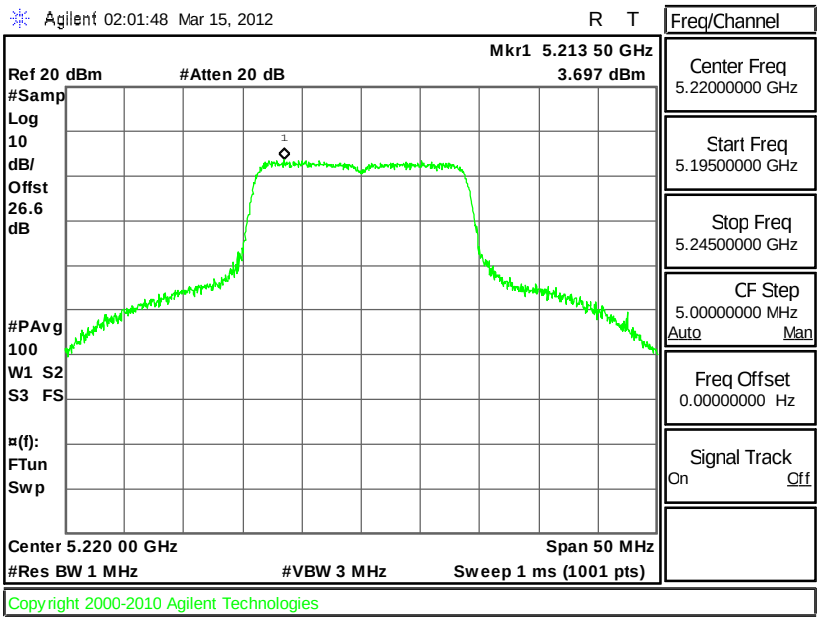
Test Mode :	Mode 10~18	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	3.858	4	Pass
44	5220	3.697	4	Pass
48	5240	3.406	4	Pass
52	5260	3.828	11	Pass
60	5300	3.290	11	Pass
64	5320	3.639	11	Pass
100	5500	3.709	11	Pass
116	5580	3.869	11	Pass
140	5700	3.604	11	Pass

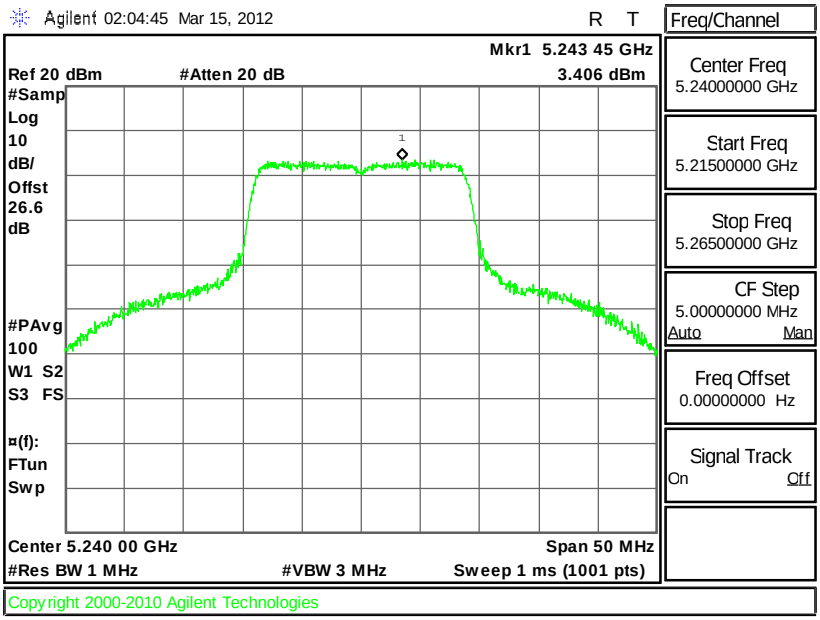
PSD Plot on 802.11n (BW 20MHz) Channel 36



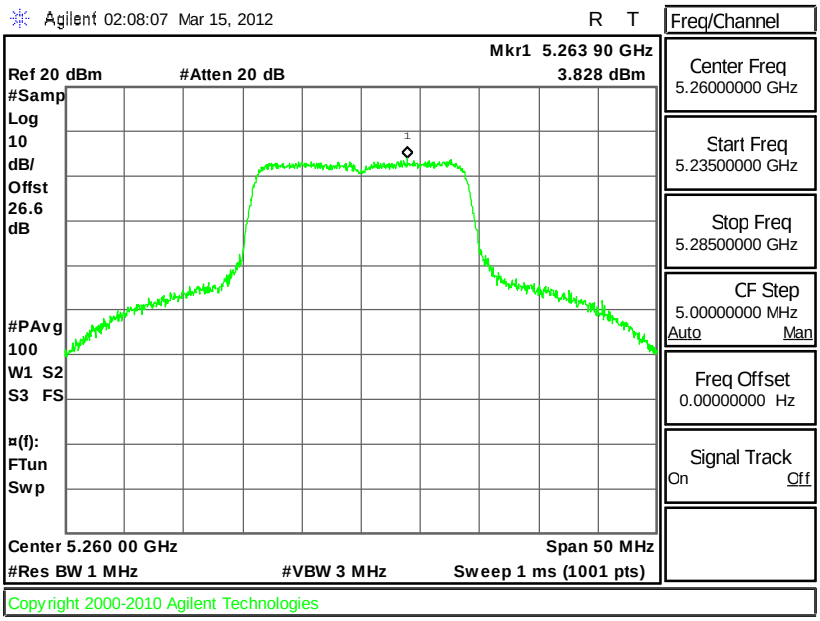
PSD Plot on 802.11n (BW 20MHz) Channel 44



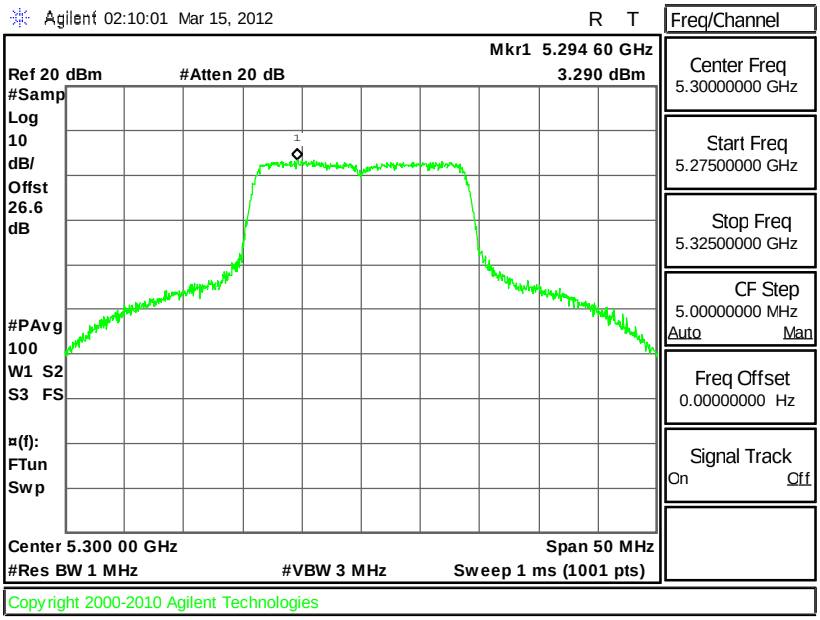
PSD Plot on 802.11n (BW 20MHz) Channel 48



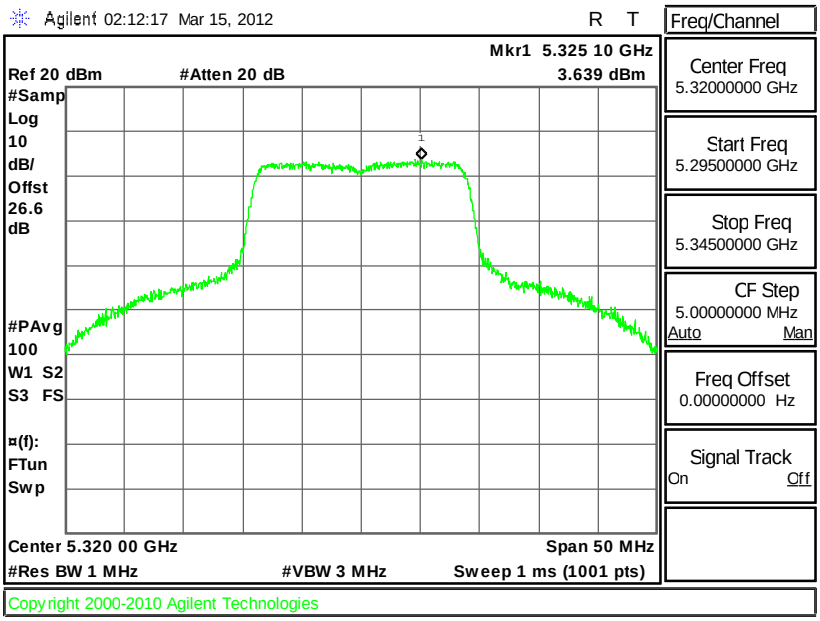
PSD Plot on 802.11n (BW 20MHz) Channel 52



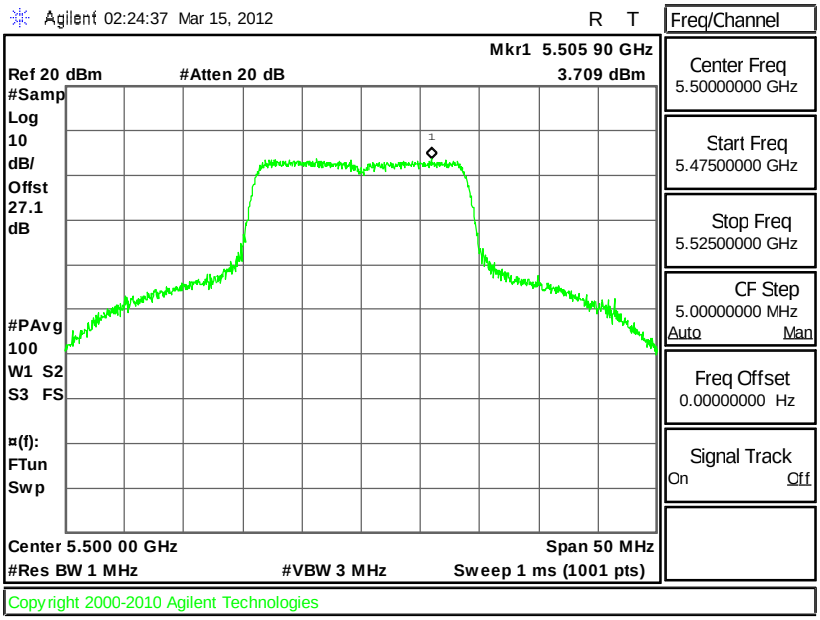
PSD Plot on 802.11n (BW 20MHz) Channel 60



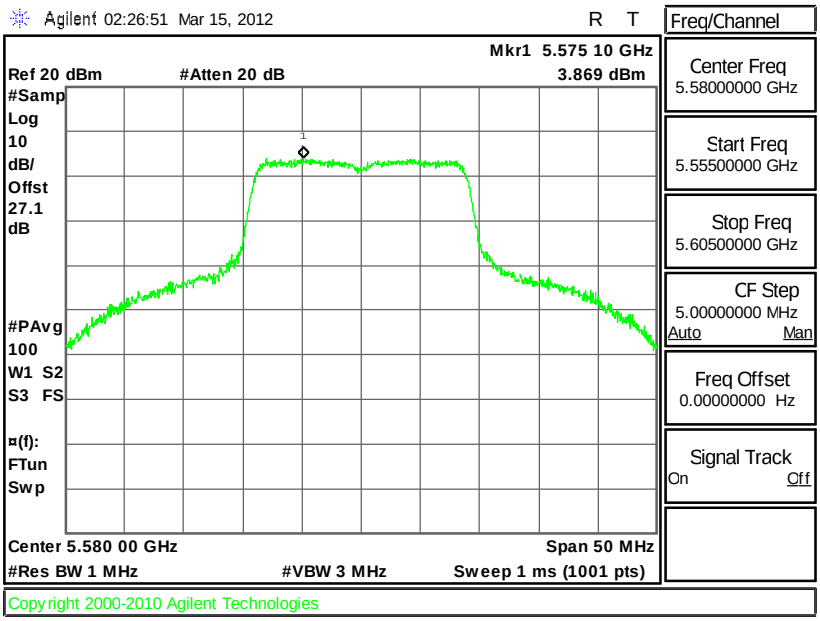
PSD Plot on 802.11n (BW 20MHz) Channel 64



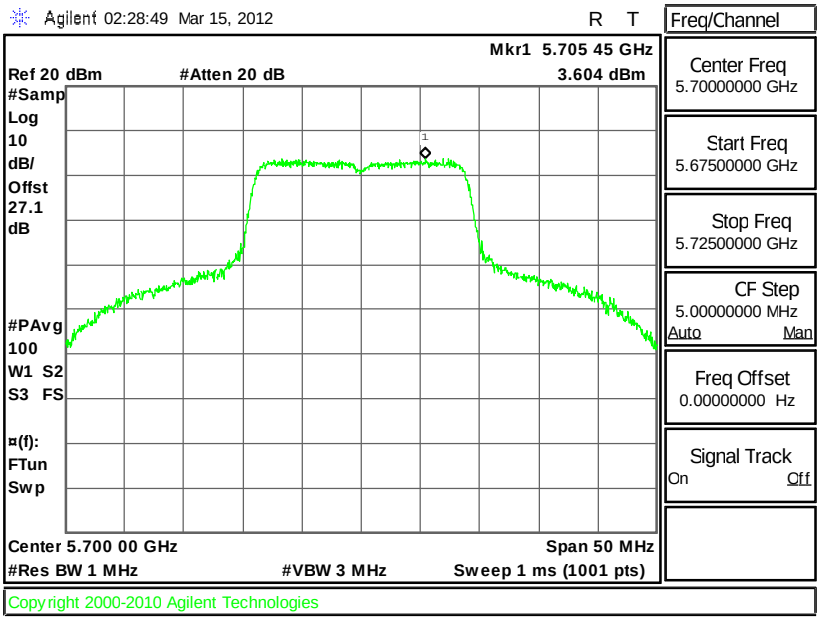
PSD Plot on 802.11n (BW 20MHz) Channel 100



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



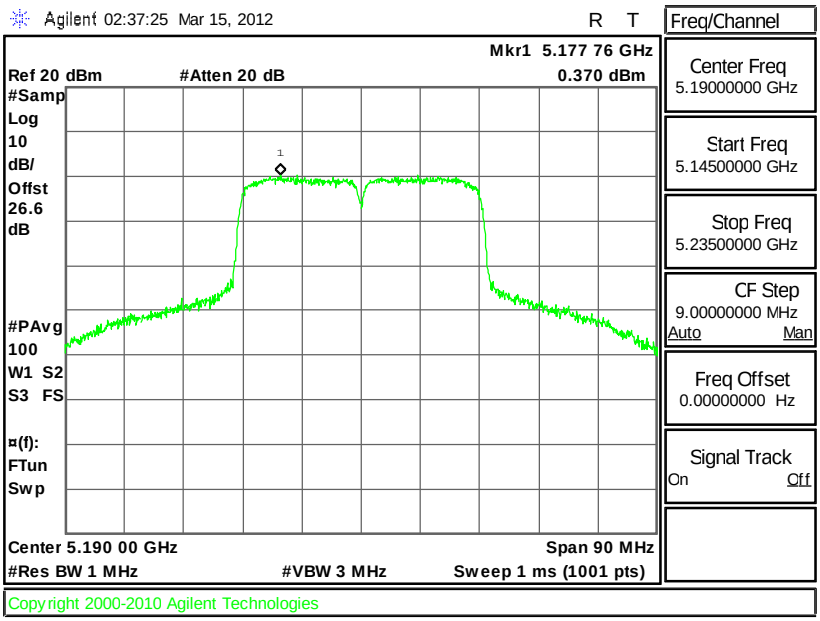
PSD Plot on 802.11n (BW 20MHz) Channel 140



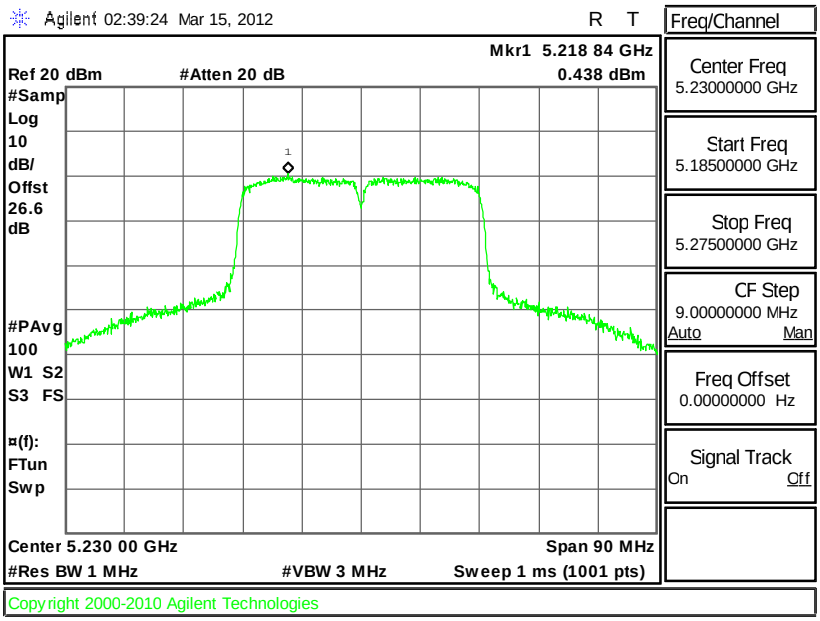
Test Mode :	Mode 10~18	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
38	5190	0.370	4	Pass
46	5230	0.438	4	Pass
54	5270	0.290	11	Pass
62	5310	-0.061	11	Pass
102	5510	0.011	11	Pass
118	5590	-0.059	11	Pass
134	5670	0.088	11	Pass

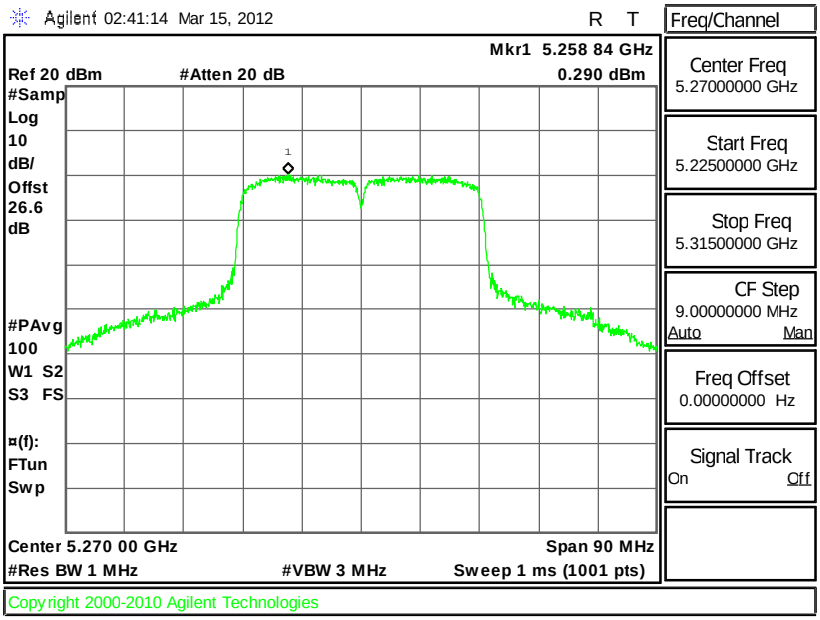
PSD Plot on 802.11n (BW 40MHz) Channel 38



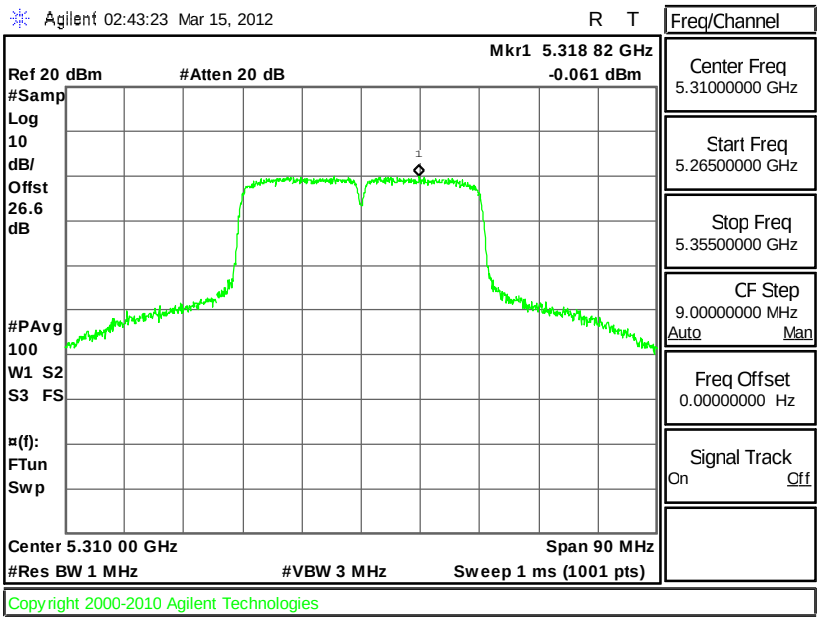
PSD Plot on 802.11n (BW 40MHz) Channel 46



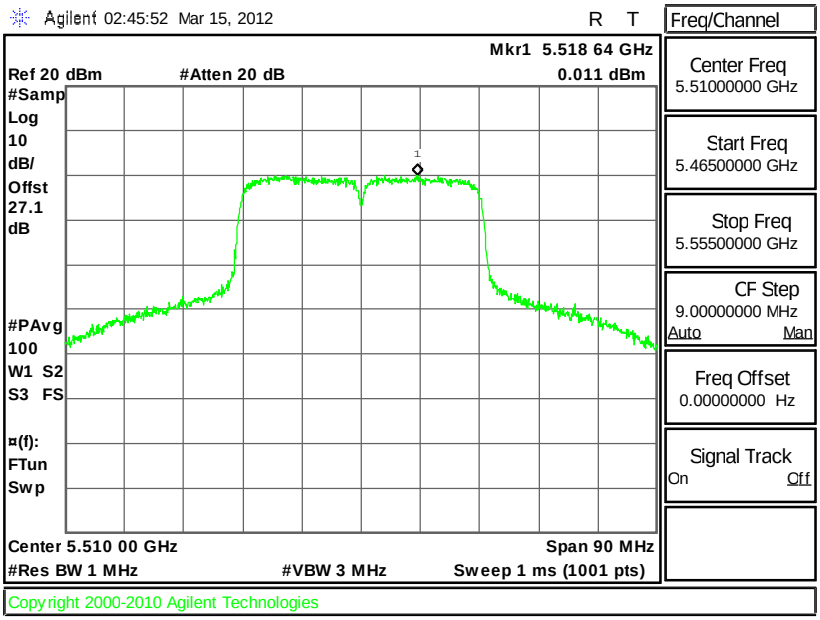
PSD Plot on 802.11n (BW 40MHz) Channel 54



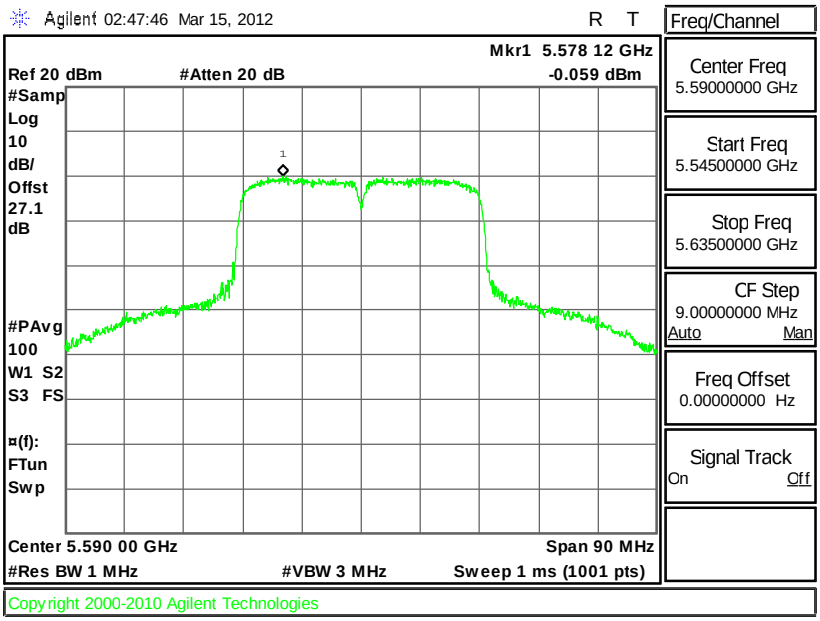
PSD Plot on 802.11n (BW 40MHz) Channel 62



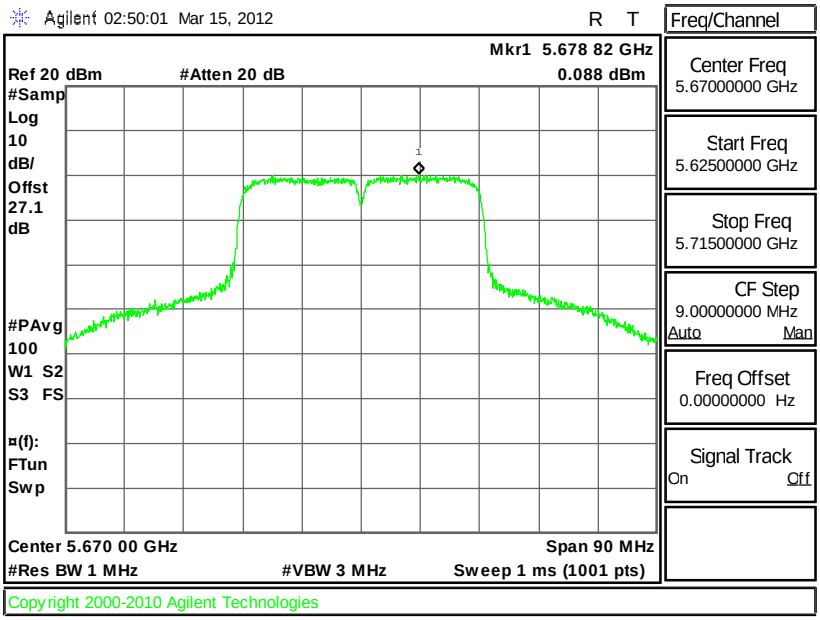
PSD Plot on 802.11n (BW 40MHz) Channel 102



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



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



3.4 AC Conducted Emission Measurement

3.4.1 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.

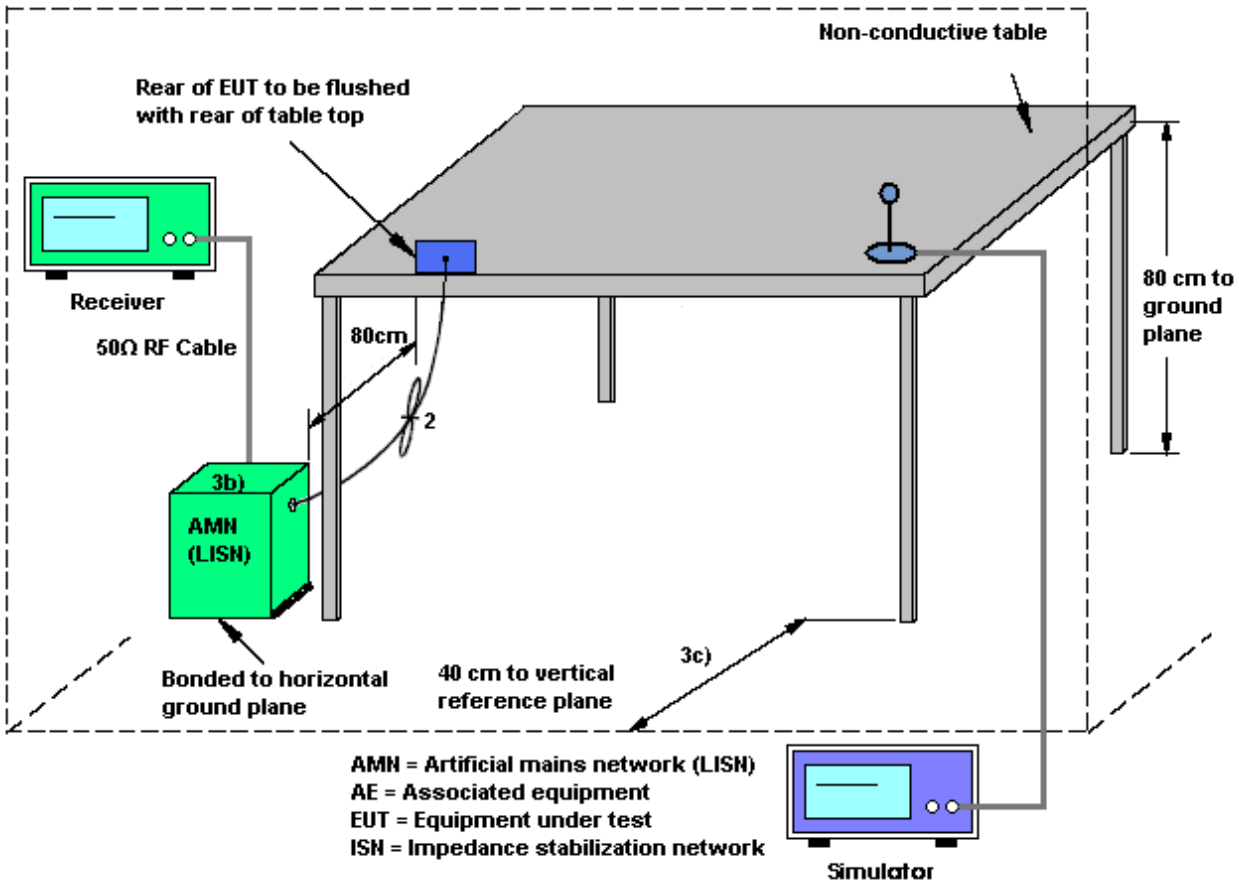
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

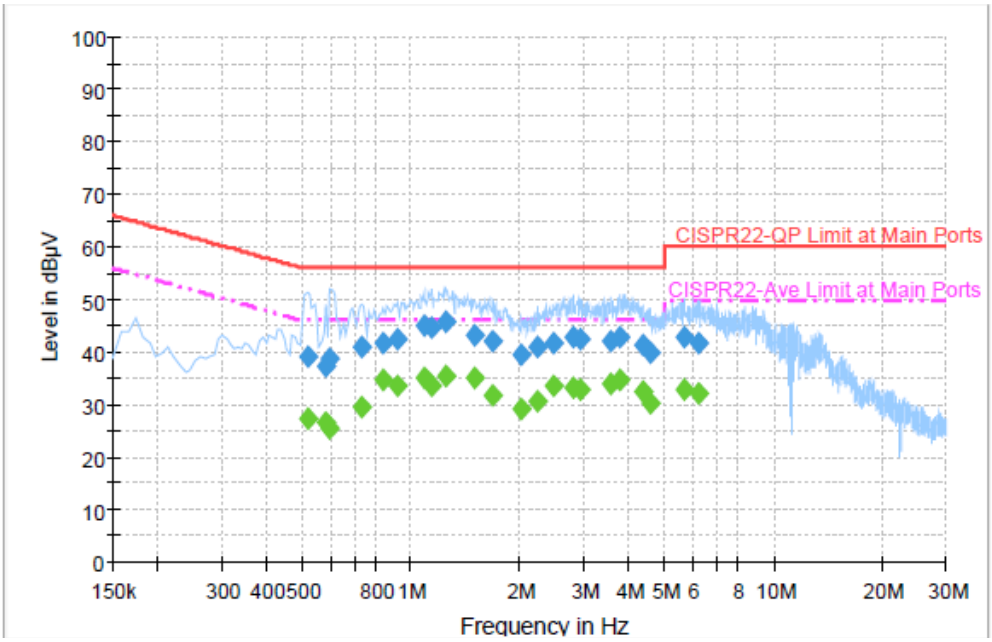
1. Please follow the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.4.4 Test Setup



3.4.5 Test Result of AC Conducted Emission

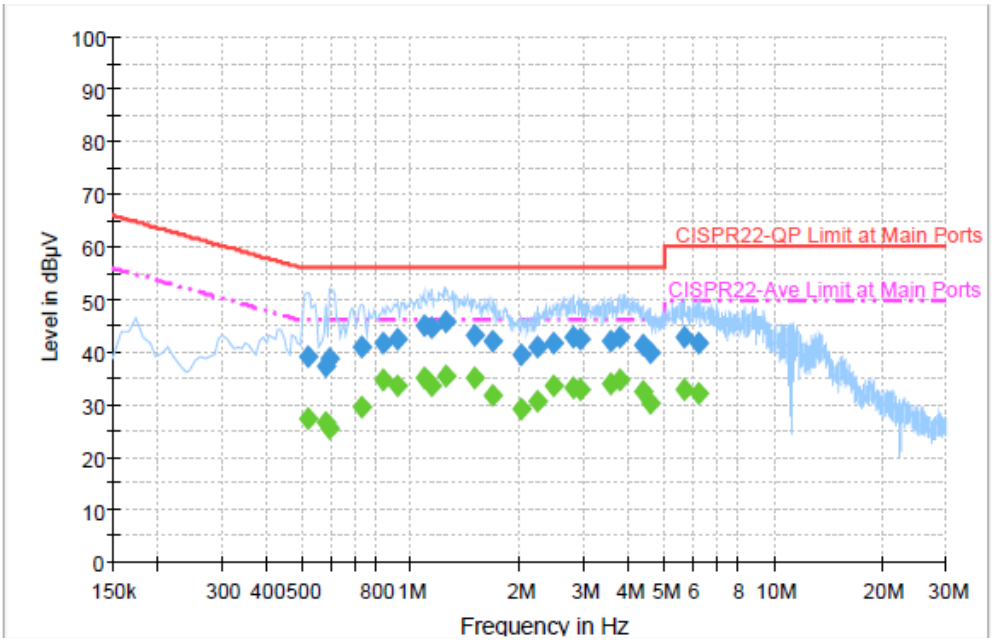
Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC On + Earphone + Battery 1 + USB Cable (Charging from Adapter) For Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.518000	39.3	Off	L1	19.3	16.7	56.0
0.582000	37.2	Off	L1	19.3	18.8	56.0
0.598000	38.6	Off	L1	19.4	17.4	56.0
0.734000	41.0	Off	L1	19.4	15.0	56.0
0.838000	41.5	Off	L1	19.5	14.5	56.0
0.918000	42.3	Off	L1	19.4	13.7	56.0
1.086000	45.1	Off	L1	19.4	10.9	56.0
1.142000	44.7	Off	L1	19.4	11.3	56.0
1.254000	45.6	Off	L1	19.4	10.4	56.0
1.502000	43.3	Off	L1	19.4	12.7	56.0
1.686000	41.9	Off	L1	19.4	14.1	56.0

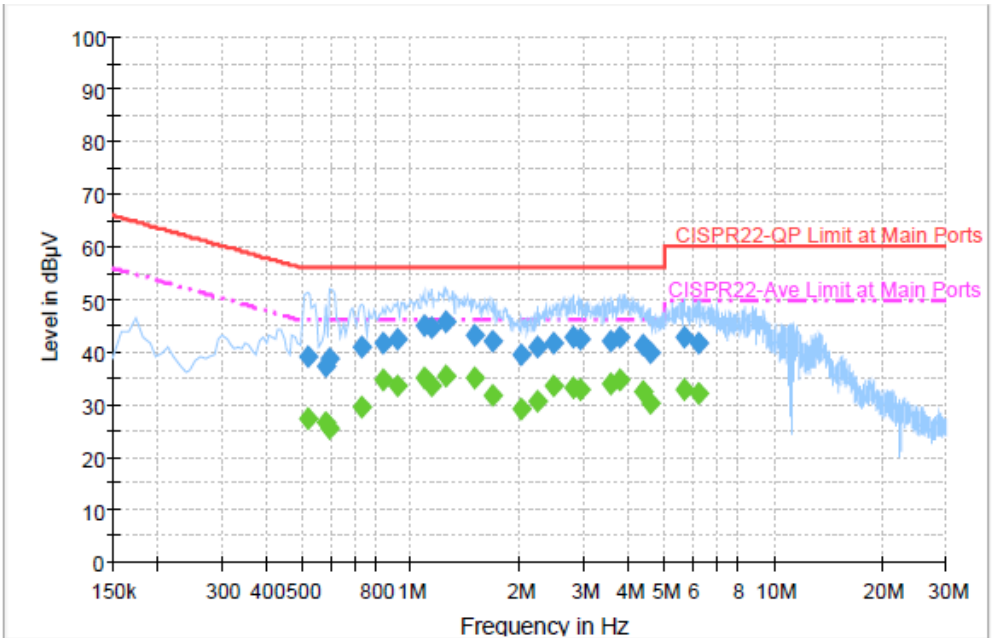
Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC On + Earphone + Battery 1 + USB Cable (Charging from Adapter) For Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.022000	39.3	Off	L1	19.4	16.7	56.0
2.230000	40.9	Off	L1	19.5	15.1	56.0
2.478000	41.7	Off	L1	19.5	14.3	56.0
2.790000	42.6	Off	L1	19.5	13.4	56.0
2.950000	42.3	Off	L1	19.5	13.7	56.0
3.574000	42.1	Off	L1	19.5	13.9	56.0
3.774000	42.9	Off	L1	19.5	13.1	56.0
4.350000	41.3	Off	L1	19.5	14.7	56.0
4.582000	39.8	Off	L1	19.5	16.2	56.0
5.662000	42.6	Off	L1	19.5	17.4	60.0
6.222000	41.5	Off	L1	19.5	18.5	60.0

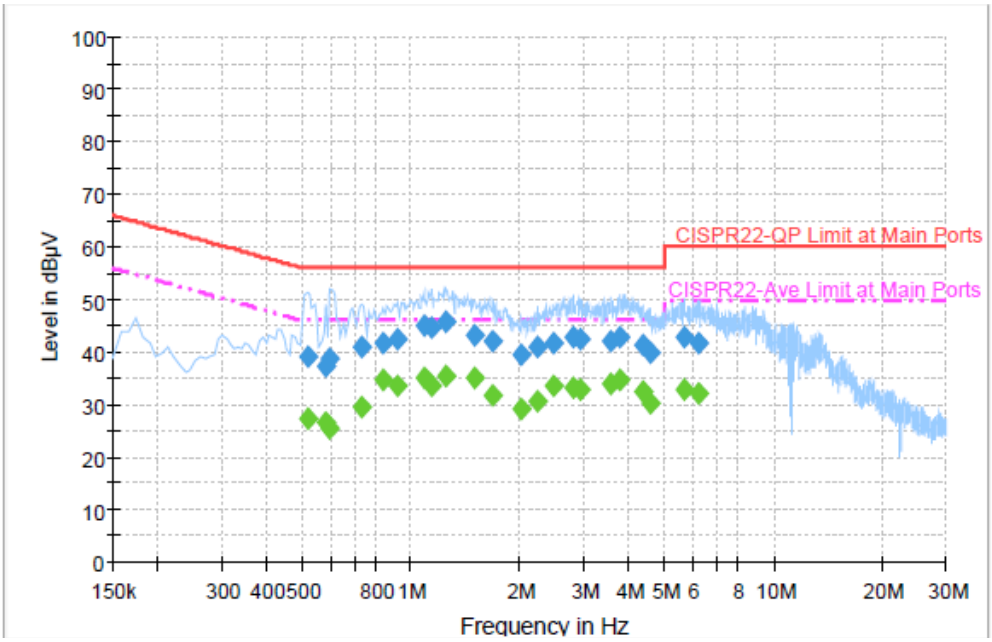
Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~50%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC On + Earphone + Battery 1 + USB Cable (Charging from Adapter) For Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.518000	27.5	Off	L1	19.3	18.5	46.0
0.582000	26.7	Off	L1	19.3	19.3	46.0
0.598000	25.3	Off	L1	19.4	20.7	46.0
0.734000	29.5	Off	L1	19.4	16.5	46.0
0.838000	34.5	Off	L1	19.5	11.5	46.0
0.918000	33.8	Off	L1	19.4	12.2	46.0
1.086000	34.9	Off	L1	19.4	11.1	46.0
1.142000	33.5	Off	L1	19.4	12.5	46.0
1.254000	35.4	Off	L1	19.4	10.6	46.0
1.502000	35.1	Off	L1	19.4	10.9	46.0
1.686000	31.9	Off	L1	19.4	14.1	46.0

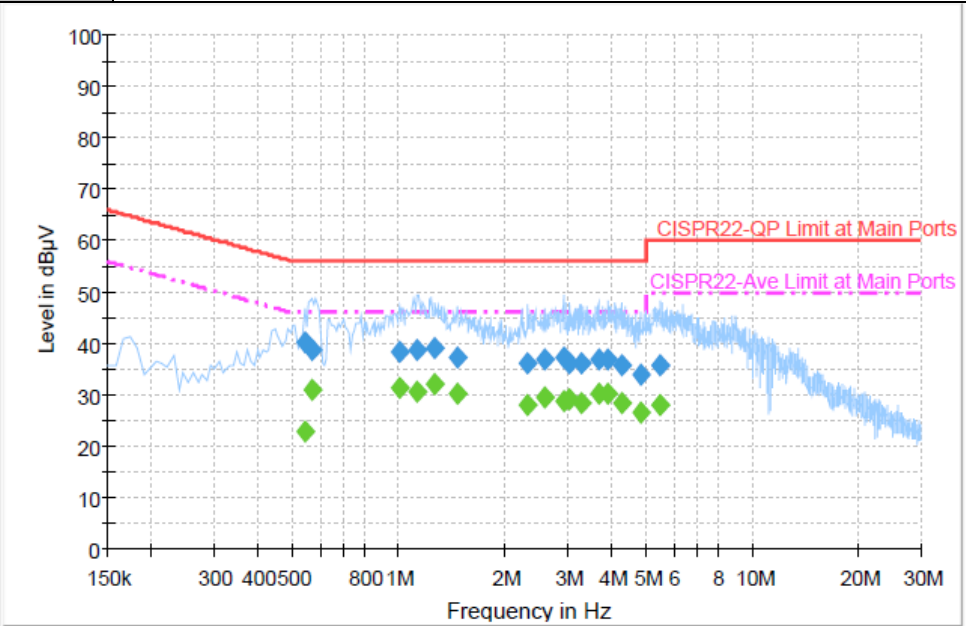
Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC On + Earphone + Battery 1 + USB Cable (Charging from Adapter) For Sample 1		
Remark :	1. All emissions not reported here are more than 10 dB below the prescribed limit. 2. 13.56 MHz is fundamental signal of RFID which can be ignored.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.022000	29.3	Off	L1	19.4	16.7	46.0
2.230000	30.6	Off	L1	19.5	15.4	46.0
2.478000	33.5	Off	L1	19.5	12.5	46.0
2.790000	33.2	Off	L1	19.5	12.8	46.0
2.950000	33.0	Off	L1	19.5	13.0	46.0
3.574000	34.0	Off	L1	19.5	12.0	46.0
3.774000	34.6	Off	L1	19.5	11.4	46.0
4.350000	32.4	Off	L1	19.5	13.6	46.0
4.582000	30.3	Off	L1	19.5	15.7	46.0
5.662000	32.9	Off	L1	19.5	17.1	50.0
6.222000	32.2	Off	L1	19.5	17.8	50.0

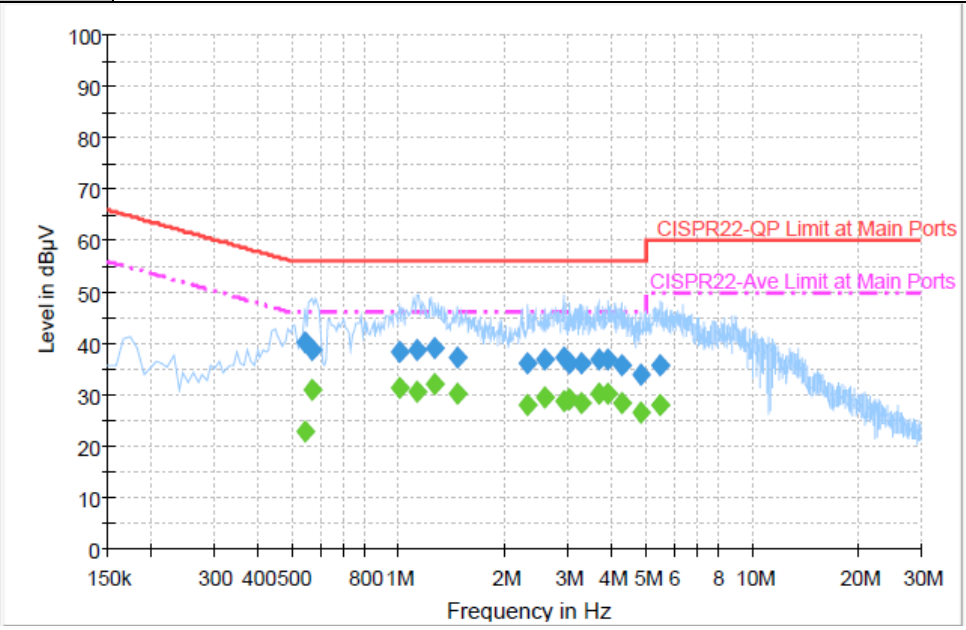
Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC On + Earphone + Battery 1 + USB Cable (Charging from Adapter) For Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.542000	40.3	Off	N	19.3	15.7	56.0
0.566000	38.6	Off	N	19.3	17.4	56.0
1.006000	38.3	Off	N	19.4	17.7	56.0
1.126000	38.7	Off	N	19.4	17.3	56.0
1.270000	39.0	Off	N	19.5	17.0	56.0
1.462000	37.4	Off	N	19.5	18.6	56.0
2.318000	36.0	Off	N	19.5	20.0	56.0
2.582000	36.9	Off	N	19.5	19.1	56.0
2.926000	37.2	Off	N	19.5	18.8	56.0
3.054000	36.2	Off	N	19.5	19.8	56.0
3.294000	36.0	Off	N	19.5	20.0	56.0
3.670000	37.0	Off	N	19.5	19.0	56.0
3.910000	37.0	Off	N	19.5	19.0	56.0
4.254000	35.8	Off	N	19.5	20.2	56.0
4.822000	34.0	Off	N	19.5	22.0	56.0
5.486000	36.0	Off	N	19.5	24.0	60.0

Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + NFC On + Earphone + Battery 1 + USB Cable (Charging from Adapter) For Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.542000	23.1	Off	N	19.3	22.9	46.0
0.566000	31.1	Off	N	19.3	14.9	46.0
1.006000	31.5	Off	N	19.4	14.5	46.0
1.126000	30.5	Off	N	19.4	15.5	46.0
1.270000	32.1	Off	N	19.5	13.9	46.0
1.462000	30.1	Off	N	19.5	15.9	46.0
2.318000	27.9	Off	N	19.5	18.1	46.0
2.582000	29.4	Off	N	19.5	16.6	46.0
2.926000	28.9	Off	N	19.5	17.1	46.0
3.054000	29.3	Off	N	19.5	16.7	46.0
3.294000	28.4	Off	N	19.5	17.6	46.0
3.670000	30.1	Off	N	19.5	15.9	46.0
3.910000	30.1	Off	N	19.5	15.9	46.0
4.254000	28.5	Off	N	19.5	17.5	46.0
4.822000	26.5	Off	N	19.5	19.5	46.0
5.486000	28.0	Off	N	19.5	22.0	50.0

3.5 Unwanted Radiated Emission Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.5.1 Limit of Unwanted Emissions

Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,

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

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

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

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

3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The testing follows the guidelines in FCC KDB 789033 D01 General UNII Test Procedures v01r01.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 KHz
   - VBW = 300 KHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - The setting follows the G) 5) of FCC KDB 789033.
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

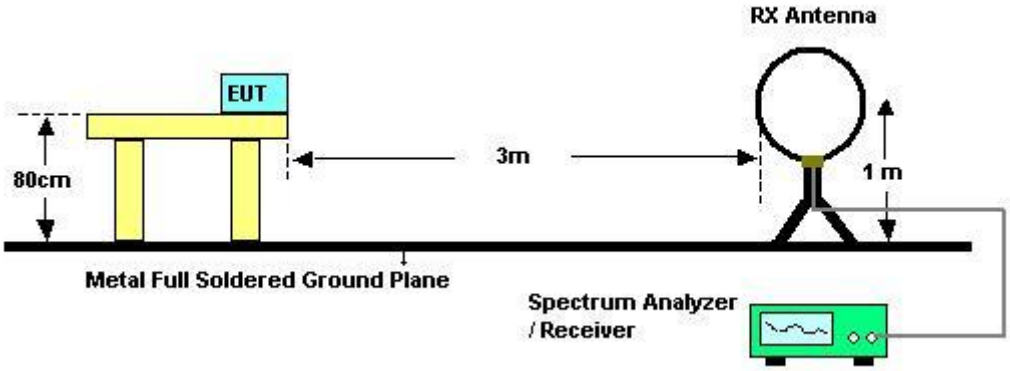
   - The setting follows G) 6) of FCC KDB 789033.
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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.

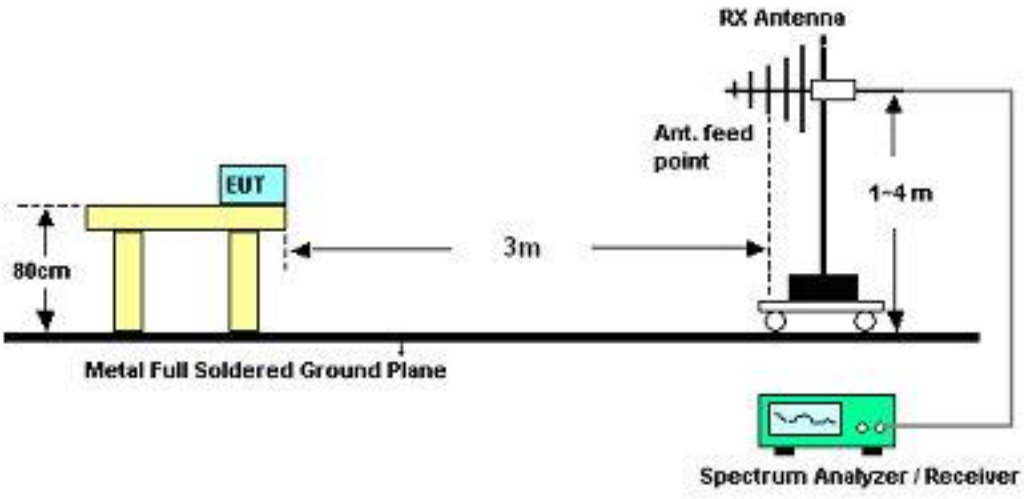
6. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
8. 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.

3.5.4 Test Setup

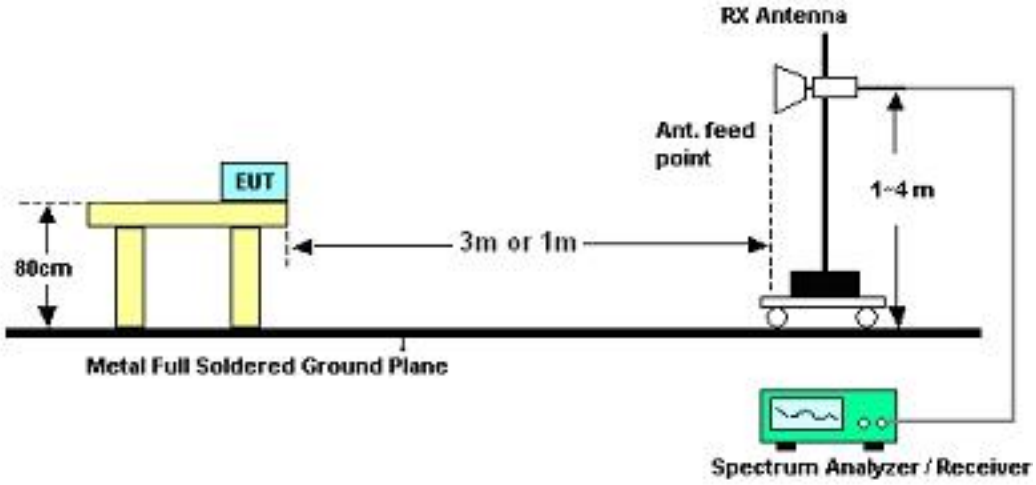
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.5.6 Test Result

3.5.6.1 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	20~22°C
Test Band :	802.11a	Relative Humidity :	59~61%
Test Channel :	36	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	64.46	-9.54	74	53.8	34.22	9.41	32.97	102	330	Peak
5150	48.74	-5.26	54	38.08	34.22	9.41	32.97	102	330	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	65.34	-8.66	74	54.68	34.22	9.41	32.97	113	76	Peak
5150	49.69	-4.31	54	39.03	34.22	9.41	32.97	113	76	Average

Test Mode :	Mode 3	Temperature :	20~22°C
Test Band :	802.11a	Relative Humidity :	59~61%
Test Channel :	48	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5356	54.36	-19.64	74	43.13	34.38	9.78	32.93	112	337	Peak
5356	42.1	-11.9	54	30.87	34.38	9.78	32.93	112	337	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5420	54.55	-19.45	74	43.18	34.43	9.86	32.92	110	66	Peak
5420	42.33	-11.67	54	30.96	34.43	9.86	32.92	110	66	Average

Test Mode :	Mode 4	Temperature :	20~22°C
Test Band :	802.11a	Relative Humidity :	59~61%
Test Channel :	52	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148	53.9	-20.1	74	43.24	34.22	9.41	32.97	102	322	Peak
5148	41.33	-12.67	54	30.67	34.22	9.41	32.97	102	322	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5076	54.01	-19.99	74	43.54	34.17	9.29	32.99	100	86	Peak
5076	41.14	-12.86	54	30.67	34.17	9.29	32.99	100	86	Average

Test Mode :	Mode 6	Temperature :	20~22°C
Test Band :	802.11a	Relative Humidity :	59~61%
Test Channel :	64	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350	64.7	-9.3	74	53.51	34.38	9.74	32.93	100	328	Peak
5350	49.17	-4.83	54	37.98	34.38	9.74	32.93	100	328	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350	65.65	-8.35	74	54.46	34.38	9.74	32.93	100	88	Peak
5350	49.7	-4.3	54	38.51	34.38	9.74	32.93	100	88	Average

Test Mode :	Mode 7	Temperature :	20~22°C
Test Band :	802.11a	Relative Humidity :	59~61%
Test Channel :	100	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470	65.47	-2.83	68.3	53.97	34.47	9.94	32.91	110	318	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470	64.68	-3.62	68.3	53.18	34.47	9.94	32.91	108	88	Peak

Test Mode :	Mode 9	Temperature :	20~22°C
Test Band :	802.11a	Relative Humidity :	59~61%
Test Channel :	140	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	66.53	-1.77	68.3	55.06	34.81	9.92	33.26	100	5	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	62.62	-5.68	68.3	51.15	34.81	9.92	33.26	100	80	Peak

Test Mode :	Mode 10	Temperature :	20~22°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	59~61%
Test Channel :	36	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	61.09	-12.91	74	50.43	34.22	9.41	32.97	140	332	Peak
5150	46.77	-7.23	54	36.11	34.22	9.41	32.97	140	332	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	62.29	-11.71	74	51.63	34.22	9.41	32.97	102	82	Peak
5150	48.15	-5.85	54	37.49	34.22	9.41	32.97	102	82	Average

Test Mode :	Mode 12	Temperature :	20~22°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	59~61%
Test Channel :	48	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5414	53.24	-20.76	74	41.87	34.43	9.86	32.92	100	335	Peak
5414	41.86	-12.14	54	30.49	34.43	9.86	32.92	100	335	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5398	54.37	-19.63	74	43.05	34.42	9.82	32.92	102	84	Peak
5398	41.8	-12.2	54	30.48	34.42	9.82	32.92	102	84	Average

Test Mode :	Mode 13	Temperature :	20~22°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	59~61%
Test Channel :	52	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5132	53.77	-20.23	74	43.17	34.21	9.37	32.98	100	328	Peak
5132	40.88	-13.12	54	30.28	34.21	9.37	32.98	100	328	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5134	53.22	-20.78	74	42.62	34.21	9.37	32.98	100	78	Peak
5134	40.89	-13.11	54	30.29	34.21	9.37	32.98	100	78	Average

Test Mode :	Mode 15	Temperature :	20~22°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	59~61%
Test Channel :	64	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350	61.34	-12.66	74	50.15	34.38	9.74	32.93	111	330	Peak
5350	47.5	-6.5	54	36.31	34.38	9.74	32.93	111	330	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350	60.6	-13.4	74	49.41	34.38	9.74	32.93	110	80	Peak
5350	46.84	-7.16	54	35.65	34.38	9.74	32.93	110	80	Average

Test Mode :	Mode 16	Temperature :	20~22°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	59~61%
Test Channel :	100	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470	62.38	-5.92	68.3	50.88	34.47	9.94	32.91	110	310	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470	61.14	-7.16	68.3	49.64	34.47	9.94	32.91	100	22	Peak

Test Mode :	Mode 18	Temperature :	20~22°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	59~61%
Test Channel :	140	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	67.37	-0.93	68.3	55.9	34.81	9.92	33.26	120	9	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	65.58	-2.72	68.3	54.11	34.81	9.92	33.26	100	81	Peak

Test Mode :	Mode 19	Temperature :	20~22°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	59~61%
Test Channel :	38	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	70.08	-3.92	74	59.42	34.22	9.41	32.97	100	334	Peak
5150	53.62	-0.38	54	42.96	34.22	9.41	32.97	100	334	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	70.75	-3.25	74	60.09	34.22	9.41	32.97	124	79	Peak
5150	53.81	-0.19	54	43.15	34.22	9.41	32.97	124	79	Average

Test Mode :	Mode 20	Temperature :	20~22°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	59~61%
Test Channel :	46	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5372	53.79	-20.21	74	42.55	34.39	9.78	32.93	114	314	Peak
5372	43.31	-10.69	54	32.07	34.39	9.78	32.93	114	314	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5380	54.15	-19.85	74	42.89	34.41	9.78	32.93	100	77	Peak
5380	42.31	-11.69	54	31.05	34.41	9.78	32.93	100	77	Average

Test Mode :	Mode 21	Temperature :	20~22°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	59~61%
Test Channel :	54	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148	54.05	-19.95	74	43.39	34.22	9.41	32.97	114	314	Peak
5148	43.04	-10.96	54	32.38	34.22	9.41	32.97	114	314	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5140	54.3	-19.7	74	43.69	34.22	9.37	32.98	100	86	Peak
5140	42.41	-11.59	54	31.8	34.22	9.37	32.98	100	86	Average

Test Mode :	Mode 22	Temperature :	20~22°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	59~61%
Test Channel :	62	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350	67.92	-6.08	74	56.73	34.38	9.74	32.93	110	323	Peak
5350	53.88	-0.12	54	42.69	34.38	9.74	32.93	110	323	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350	65.64	-8.36	74	54.45	34.38	9.74	32.93	122	84	Peak
5350	51.46	-2.54	54	40.27	34.38	9.74	32.93	122	84	Average

Test Mode :	Mode 23	Temperature :	20~22°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	59~61%
Test Channel :	102	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470	67.72	-0.58	68.3	56.22	34.47	9.94	32.91	108	308	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5470	67	-1.3	68.3	55.5	34.47	9.94	32.91	101	65	Peak

Test Mode :	Mode 25	Temperature :	20~22°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	59~61%
Test Channel :	134	Test Engineer :	Kyle Jhuang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	67.69	-0.61	68.3	56.22	34.81	9.92	33.26	100	3	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	64.23	-4.07	68.3	52.76	34.81	9.92	33.26	100	74	Peak

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

Temperature	20~22°C	Humidity	59~61%
Test Engineer	Kyle Jhuang		

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 (specific distance / test distance) (dB);

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

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

Test Mode :	Mode 1	**Temperature :**	20~22°C
Test Channel :	36	**Relative Humidity :**	59~61%
Test Engineer :	Kyle Jhuang	**Polarization :**	Horizontal
Remark :	5180 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.72	-19.28	40	31.65	20	0.53	31.46	122	100	Peak
148.53	21.09	-22.41	43.5	40.2	11.24	1.21	31.56	-	-	Peak
273.81	18.91	-27.09	46	35.7	12.93	1.64	31.36	-	-	Peak
374.2	18.67	-27.33	46	32.51	15.32	2.09	31.25	-	-	Peak
568.1	20.36	-25.64	46	29.46	19.26	2.6	30.96	-	-	Peak
772.5	22.68	-23.32	46	28.59	21.68	3.1	30.69	-	-	Peak
5150	64.46	-9.54	74	53.8	34.22	9.41	32.97	102	330	Peak
5150	48.74	-5.26	54	38.08	34.22	9.41	32.97	102	330	Average
5180	109.15	-	-	98.42	34.25	9.45	32.97	102	330	Peak
5180	98.15	-	-	87.42	34.25	9.45	32.97	102	330	Average
5398	42.35	-11.65	54	31.03	34.42	9.82	32.92	102	330	Average
5398	54.57	-19.43	74	43.25	34.42	9.82	32.92	102	330	Peak

Test Mode :	Mode 1	Temperature :	20~22°C
Test Channel :	36	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5180 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.01	-7.99	40	42.94	20	0.53	31.46	100	312	Peak
43.5	27.43	-12.57	40	47.19	11.1	0.64	31.5	-		Peak
106.41	23.66	-19.84	43.5	43.75	10.43	1.03	31.55	-		Peak
344.1	18.31	-27.69	46	33.17	14.51	1.92	31.29	-		Peak
531	20.62	-25.38	46	30.51	18.61	2.51	31.01	-		Peak
783	23.7	-22.3	46	29.44	21.84	3.11	30.69	-		Peak
5150	65.34	-8.66	74	54.68	34.22	9.41	32.97	113	76	Peak
5150	49.69	-4.31	54	39.03	34.22	9.41	32.97	113	76	Average
5180	110.1	-		99.39	34.23	9.45	32.97	113	76	Peak
5180	99.24	-		88.51	34.25	9.45	32.97	113	76	Average
5420	42.37	-11.63	54	31	34.43	9.86	32.92	113	76	Average
5420	54.79	-19.21	74	43.42	34.43	9.86	32.92	113	76	Peak

Test Mode :	Mode 2	Temperature :	20~22°C
Test Channel :	44	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5220 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.28	-19.72	40	31.21	20	0.53	31.46	115	109	Peak
104.25	17.7	-25.8	43.5	37.97	10.25	1.02	31.54	-	-	Peak
269.22	25.2	-20.8	46	42.07	12.87	1.64	31.38	-	-	Peak
357.4	18.66	-27.34	46	33.02	14.87	2.04	31.27	-	-	Peak
579.3	20.4	-25.6	46	29.28	19.44	2.63	30.95	-	-	Peak
797	23.6	-22.4	46	29.08	22.06	3.14	30.68	-	-	Peak
5134	53.66	-20.34	74	43.06	34.21	9.37	32.98	102	324	Peak
5134	41.55	-12.45	54	30.95	34.21	9.37	32.98	102	324	Average
5220	108.4	-	-	97.56	34.27	9.53	32.96	102	324	Peak
5220	97.42	-	-	86.58	34.27	9.53	32.96	102	324	Average
5438	55.02	-18.98	74	43.58	34.45	9.9	32.91	102	324	Peak
5438	42.47	-11.53	54	31.03	34.45	9.9	32.91	102	324	Average

Test Mode :	Mode 2	Temperature :	20~22°C
Test Channel :	44	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5220 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.3	-7.7	40	43.23	20	0.53	31.46	103	25	Peak
43.77	27.49	-12.51	40	47.25	11.1	0.64	31.5	-	-	Peak
297.57	28.09	-17.91	46	44.4	13.27	1.75	31.33	-	-	Peak
307	23.79	-22.21	46	39.82	13.51	1.79	31.33	-	-	Peak
346.2	25.98	-20.02	46	40.77	14.56	1.94	31.29	-	-	Peak
654.9	22	-24	46	29.79	20.23	2.85	30.87	-	-	Peak
5150	54.26	-19.74	74	43.6	34.22	9.41	32.97	100	77	Peak
5150	41.61	-12.39	54	30.95	34.22	9.41	32.97	100	77	Average
5220	109.65	-	-	98.81	34.27	9.53	32.96	100	77	Peak
5220	98.51	-	-	87.67	34.27	9.53	32.96	100	77	Average
5372	54.53	-19.47	74	43.29	34.39	9.78	32.93	100	77	Peak
5372	42.21	-11.79	54	30.97	34.39	9.78	32.93	100	77	Average

Test Mode :	Mode 3	Temperature :	20~22°C
Test Channel :	48	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5240 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.86	-19.14	40	31.79	20	0.53	31.46	110	152	Peak
106.41	17.51	-25.99	43.5	37.6	10.43	1.03	31.55	-	-	Peak
256.26	19	-27	46	36.17	12.68	1.57	31.42	-	-	Peak
354.6	18.29	-27.71	46	32.76	14.79	2.02	31.28	-	-	Peak
478.5	19.09	-26.91	46	30.14	17.64	2.37	31.06	-	-	Peak
752.9	22.68	-23.32	46	28.93	21.39	3.06	30.7	-	-	Peak
5030	54.2	-19.8	74	43.86	34.13	9.21	33	112	337	Peak
5030	41.01	-12.99	54	30.67	34.13	9.21	33	112	337	Average
5240	107.43	-	-	96.57	34.29	9.53	32.96	112	337	Peak
5240	96.58	-	-	85.67	34.29	9.57	32.95	112	337	Average
5356	54.36	-19.64	74	43.13	34.38	9.78	32.93	112	337	Peak
5356	42.1	-11.9	54	30.87	34.38	9.78	32.93	112	337	Average

Test Mode :	Mode 3	Temperature :	20~22°C
Test Channel :	48	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5240 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	32.74	-7.26	40	44.38	19.28	0.54	31.46	106	87	Peak
43.5	27.43	-12.57	40	47.19	11.1	0.64	31.5	-	-	Peak
215.49	22.84	-20.66	43.5	42.74	10.18	1.39	31.47	-	-	Peak
302.1	23.77	-22.23	46	39.94	13.38	1.78	31.33	-	-	Peak
483.4	18.16	-27.84	46	29.09	17.74	2.39	31.06	-	-	Peak
780.9	23.94	-22.06	46	29.71	21.81	3.11	30.69	-	-	Peak
5148	54.68	-19.32	74	44.02	34.22	9.41	32.97	110	66	Peak
5148	41.57	-12.43	54	30.91	34.22	9.41	32.97	110	66	Average
5240	108.43	-	-	97.57	34.29	9.53	32.96	110	66	Peak
5240	97.49	-	-	86.58	34.29	9.57	32.95	110	66	Average
5420	54.55	-19.45	74	43.18	34.43	9.86	32.92	110	66	Peak
5420	42.33	-11.67	54	30.96	34.43	9.86	32.92	110	66	Average

Test Mode :	Mode 4	Temperature :	20~22°C
Test Channel :	52	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5260 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	22.41	-17.59	40	34.05	19.28	0.54	31.46	112	197	Peak
105.06	18.08	-25.42	43.5	38.36	10.25	1.02	31.55	-	-	Peak
239.25	21.34	-24.66	46	39.37	11.86	1.53	31.42	-	-	Peak
351.8	18.06	-27.94	46	32.63	14.72	1.99	31.28	-	-	Peak
544.3	19.13	-26.87	46	28.74	18.84	2.54	30.99	-	-	Peak
755.7	23.19	-22.81	46	29.39	21.43	3.07	30.7	-	-	Peak
5148	53.9	-20.1	74	43.24	34.22	9.41	32.97	102	322	Peak
5148	41.33	-12.67	54	30.67	34.22	9.41	32.97	102	322	Average
5260	107.52	-	-	96.6	34.3	9.57	32.95	102	322	Peak
5260	96.4	-	-	85.42	34.31	9.62	32.95	102	322	Average
5422	54.74	-19.26	74	43.37	34.43	9.86	32.92	102	322	Peak
5422	42.24	-11.76	54	30.87	34.43	9.86	32.92	102	322	Average

Test Mode :	Mode 4	Temperature :	20~22°C
Test Channel :	52	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5260 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.62	-8.38	40	42.55	20	0.53	31.46	103	311	Peak
43.5	28.43	-11.57	40	48.19	11.1	0.64	31.5	-	-	Peak
240.06	26.17	-19.83	46	44.13	11.93	1.53	31.42	-	-	Peak
349	22.32	-23.68	46	37	14.64	1.97	31.29	-	-	Peak
545.7	20.05	-25.95	46	29.62	18.88	2.54	30.99	-	-	Peak
755	23.55	-22.45	46	29.76	21.42	3.07	30.7	-	-	Peak
5076	54.01	-19.99	74	43.54	34.17	9.29	32.99	100	86	Peak
5076	41.14	-12.86	54	30.67	34.17	9.29	32.99	100	86	Average
5260	108.61	-	-	97.63	34.31	9.62	32.95	100	86	Peak
5260	97.34	-	-	86.36	34.31	9.62	32.95	100	86	Average
5350	55.17	-18.83	74	43.98	34.38	9.74	32.93	100	86	Peak
5350	42.13	-11.87	54	30.94	34.38	9.74	32.93	100	86	Average

Test Mode :	Mode 5	Temperature :	20~22°C
Test Channel :	60	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5300 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	22.15	-17.85	40	33.08	20	0.53	31.46	115	182	Peak
104.25	17.83	-25.67	43.5	38.1	10.25	1.02	31.54	-	-	Peak
227.37	20.42	-25.58	46	39.43	10.98	1.46	31.45	-	-	Peak
351.8	18.66	-27.34	46	33.23	14.72	1.99	31.28	-	-	Peak
577.9	20.08	-25.92	46	28.98	19.42	2.63	30.95	-	-	Peak
758.5	22.82	-23.18	46	28.98	21.47	3.07	30.7	-	-	Peak
5134	54.13	-19.87	74	43.53	34.21	9.37	32.98	100	328	Peak
5134	41.35	-12.65	54	30.75	34.21	9.37	32.98	100	328	Average
5300	107.78	-	-	96.73	34.33	9.66	32.94	100	328	Peak
5300	96.07	-	-	85.01	34.34	9.66	32.94	100	328	Average
5350	57.2	-16.8	74	46.01	34.38	9.74	32.93	100	328	Peak
5350	45.67	-8.33	54	34.48	34.38	9.74	32.93	100	328	Average

Test Mode :	Mode 5	Temperature :	20~22°C
Test Channel :	60	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5300 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.18	-7.82	40	43.11	20	0.53	31.46	108	113	Peak
43.5	27.39	-12.61	40	47.15	11.1	0.64	31.5	-	-	Peak
211.98	25.08	-18.42	43.5	45.2	9.98	1.37	31.47	-	-	Peak
346.9	22.5	-23.5	46	37.26	14.58	1.95	31.29	-	-	Peak
533.1	19.44	-26.56	46	29.27	18.66	2.52	31.01	-	-	Peak
764.1	22.51	-23.49	46	28.56	21.56	3.08	30.69	-	-	Peak
5132	54.99	-19.01	74	44.39	34.21	9.37	32.98	100	82	Peak
5132	41.37	-12.63	54	30.77	34.21	9.37	32.98	100	82	Average
5300	108.7	-	-	97.64	34.34	9.66	32.94	100	82	Peak
5300	97.79	-	-	86.73	34.34	9.66	32.94	100	82	Average
5350	58.52	-15.48	74	47.33	34.38	9.74	32.93	100	82	Peak
5350	46.61	-7.39	54	35.42	34.38	9.74	32.93	100	82	Average

Test Mode :	Mode 6	Temperature :	20~22°C
Test Channel :	64	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5320 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.44	-19.56	40	31.37	20	0.53	31.46	131	105	Peak
103.98	17.23	-26.27	43.5	37.6	10.16	1.01	31.54	-	-	Peak
244.65	21.31	-24.69	46	39	12.2	1.53	31.42	-	-	Peak
346.9	18.3	-27.7	46	33.06	14.58	1.95	31.29	-	-	Peak
553.4	20.54	-25.46	46	29.95	19.01	2.56	30.98	-	-	Peak
727	22.42	-23.58	46	29.16	21.01	3.01	30.76	-	-	Peak
5132	53.74	-20.26	74	43.14	34.21	9.37	32.98	100	328	Peak
5132	41.38	-12.62	54	30.78	34.21	9.37	32.98	100	328	Average
5320	96.55	-	-	85.44	34.35	9.7	32.94	100	328	Average
5320	108.27	-	-	97.16	34.35	9.7	32.94	100	328	Peak
5350	64.7	-9.3	74	53.51	34.38	9.74	32.93	100	328	Peak
5350	49.17	-4.83	54	37.98	34.38	9.74	32.93	100	328	Average

Test Mode :	Mode 6	Temperature :	20~22°C
Test Channel :	64	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5320 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.61	-8.39	40	42.54	20	0.53	31.46	102	56	Peak
43.5	28.25	-11.75	40	48.01	11.1	0.64	31.5	-	-	Peak
92.37	22.41	-21.09	43.5	44.13	8.84	0.96	31.52	-	-	Peak
335.7	23.68	-22.32	46	38.84	14.27	1.87	31.3	-	-	Peak
556.9	19.74	-26.26	46	29.08	19.06	2.57	30.97	-	-	Peak
769	22.8	-23.2	46	28.77	21.63	3.09	30.69	-	-	Peak
5030	53.66	-20.34	74	43.32	34.13	9.21	33	100	88	Peak
5030	41.11	-12.89	54	30.77	34.13	9.21	33	100	88	Average
5320	97.53	-	-	86.42	34.35	9.7	32.94	100	88	Average
5320	108.53	-	-	97.42	34.35	9.7	32.94	100	88	Peak
5350	65.65	-8.35	74	54.46	34.38	9.74	32.93	100	88	Peak
5350	49.7	-4.3	54	38.51	34.38	9.74	32.93	100	88	Average

Test Mode :	Mode 7	Temperature :	20~22°C
Test Channel :	100	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band, and its limit line is 68.3dBuV/m.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.59	-18.41	40	32.52	20	0.53	31.46	119	203	Peak
103.98	17.31	-26.19	43.5	37.68	10.16	1.01	31.54	-	-	Peak
265.17	20.5	-25.5	46	37.47	12.81	1.62	31.4	-	-	Peak
344.1	19.19	-26.81	46	34.05	14.51	1.92	31.29	-	-	Peak
559	20.39	-25.61	46	29.7	19.09	2.57	30.97	-	-	Peak
752.9	22.47	-23.53	46	28.72	21.39	3.06	30.7	-	-	Peak
5470	65.47	-2.83	68.3	53.97	34.47	9.94	32.91	110	318	Peak
5500	107.42	-	-	95.8	34.5	10.02	32.9	110	318	Peak
5500	96.12	-	-	84.5	34.5	10.02	32.9	110	318	Average
5725	53.67	-14.63	68.3	42.2	34.81	9.92	33.26	110	318	Peak

Test Mode :	Mode 7	Temperature :	20~22°C
Test Channel :	100	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.18	-8.82	40	42.11	20	0.53	31.46	103	225	Peak
43.5	27.5	-12.5	40	47.26	11.1	0.64	31.5	-	-	Peak
92.37	22.04	-21.46	43.5	43.76	8.84	0.96	31.52	-	-	Peak
349	24.88	-21.12	46	39.56	14.64	1.97	31.29	-	-	Peak
534.5	19.54	-26.46	46	29.35	18.68	2.52	31.01	-	-	Peak
730.5	22.44	-23.56	46	29.13	21.05	3.01	30.75	-	-	Peak
5470	64.68	-3.62	68.3	53.18	34.47	9.94	32.91	108	88	Peak
5500	106.86	-	-	95.29	34.49	9.98	32.9	108	88	Peak
5500	95.6	-	-	83.98	34.5	10.02	32.9	108	88	Average
5725	53.92	-14.38	68.3	42.45	34.81	9.92	33.26	108	88	Peak

Test Mode :	Mode 8	Temperature :	20~22°C
Test Channel :	116	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.27	-18.73	40	32.2	20	0.53	31.46	131	162	Peak
106.41	17.18	-26.32	43.5	37.27	10.43	1.03	31.55	-	-	Peak
276.78	20.82	-25.18	46	37.57	12.97	1.64	31.36	-	-	Peak
310.5	20.51	-25.49	46	36.46	13.59	1.79	31.33	-	-	Peak
508.6	19.24	-26.76	46	29.59	18.23	2.47	31.05	-	-	Peak
704.6	22.02	-23.98	46	29.22	20.66	2.95	30.81	-	-	Peak
5470	53.09	-15.21	68.3	41.59	34.47	9.94	32.91	105	337	Peak
5580	96.45	-	-	84.88	34.6	9.99	33.02	105	337	Average
5580	107.24	-	-	95.67	34.6	9.99	33.02	105	337	Peak
5725	53.89	-14.41	68.3	42.42	34.81	9.92	33.26	105	337	Peak

Test Mode :	Mode 8	Temperature :	20~22°C
Test Channel :	116	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.77	-8.23	40	42.7	20	0.53	31.46	100	112	Peak
43.5	28.02	-11.98	40	47.78	11.1	0.64	31.5	-	-	Peak
186.33	23.47	-20.03	43.5	44.76	8.96	1.27	31.52	-	-	Peak
346.2	26.38	-19.62	46	41.17	14.56	1.94	31.29	-	-	Peak
503	19.14	-26.86	46	29.59	18.15	2.46	31.06	-	-	Peak
732.6	22.79	-23.21	46	29.43	21.08	3.02	30.74	-	-	Peak
5470	53.65	-14.65	68.3	42.15	34.47	9.94	32.91	107	93	Peak
5580	95.88	-	-	84.31	34.6	9.99	33.02	107	93	Average
5580	106.61	-	-	95.02	34.62	9.99	33.02	107	93	Peak
5725	53.91	-14.39	68.3	42.44	34.81	9.92	33.26	107	93	Peak

Test Mode :	Mode 9	Temperature :	20~22°C
Test Channel :	140	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.89	21.14	-18.86	40	33.49	18.56	0.55	31.46	142	155	Peak
103.98	17.61	-25.89	43.5	37.98	10.16	1.01	31.54	-	-	Peak
246.54	19.82	-26.18	46	37.37	12.33	1.53	31.41	-	-	Peak
344.1	18.66	-27.34	46	33.52	14.51	1.92	31.29	-	-	Peak
523.3	19.25	-26.75	46	29.28	18.5	2.5	31.03	-	-	Peak
736.1	22.15	-23.85	46	28.71	21.14	3.03	30.73	-	-	Peak
5470	52.33	-15.97	68.3	40.83	34.47	9.94	32.91	100	5	Peak
5700	105.98	-	-	94.48	34.79	9.93	33.22	100	5	Peak
5700	95.13	-	-	83.65	34.77	9.93	33.22	100	5	Average
5725	66.53	-1.77	68.3	55.06	34.81	9.92	33.26	100	5	Peak

Test Mode :	Mode 9	Temperature :	20~22°C
Test Channel :	140	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.67	-8.33	40	42.6	20	0.53	31.46	100	123	Peak
42.69	28.06	-11.94	40	47.22	11.7	0.64	31.5	-	-	Peak
92.37	21.92	-21.58	43.5	43.64	8.84	0.96	31.52	-	-	Peak
343.4	21.28	-24.72	46	36.18	14.48	1.92	31.3	-	-	Peak
419	20.93	-25.07	46	33.47	16.4	2.21	31.15	-	-	Peak
738.9	22.91	-23.09	46	29.43	21.18	3.03	30.73	-	-	Peak
5470	52.15	-16.15	68.3	40.65	34.47	9.94	32.91	100	80	Peak
5700	102.53	-	-	91.03	34.79	9.93	33.22	100	80	Peak
5700	92.04	-	-	80.56	34.77	9.93	33.22	100	80	Average
5725	62.62	-5.68	68.3	51.15	34.81	9.92	33.26	100	80	Peak

Test Mode :	Mode 10	Temperature :	20~22°C
Test Channel :	36	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5180 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.11	-18.89	40	32.04	20	0.53	31.46	116	208	Peak
104.25	17.16	-26.34	43.5	37.43	10.25	1.02	31.54	-	-	Peak
242.49	18.58	-27.42	46	36.41	12.06	1.53	31.42	-	-	Peak
357.4	19.58	-26.42	46	33.94	14.87	2.04	31.27	-	-	Peak
547.8	20.63	-25.37	46	30.15	18.91	2.55	30.98	-	-	Peak
769.7	22.76	-23.24	46	28.71	21.65	3.09	30.69	-	-	Peak
5150	61.09	-12.91	74	50.43	34.22	9.41	32.97	140	332	Peak
5150	46.77	-7.23	54	36.11	34.22	9.41	32.97	140	332	Average
5180	107.46	-	-	96.73	34.25	9.45	32.97	140	332	Peak
5180	96.23	-	-	85.5	34.25	9.45	32.97	140	332	Average
5388	41.77	-12.23	54	30.46	34.41	9.82	32.92	140	332	Average
5388	53.85	-20.15	74	42.54	34.41	9.82	32.92	140	332	Peak

Test Mode :	Mode 10	Temperature :	20~22°C
Test Channel :	36	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5180 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.89	-8.11	40	42.82	20	0.53	31.46	105	97	Peak
43.5	28.43	-11.57	40	48.19	11.1	0.64	31.5	-	-	Peak
106.41	22.36	-21.14	43.5	42.45	10.43	1.03	31.55	-	-	Peak
332.9	21.16	-24.84	46	36.42	14.19	1.86	31.31	-	-	Peak
461.7	17.63	-28.37	46	29.09	17.29	2.33	31.08	-	-	Peak
708.1	22.52	-23.48	46	29.64	20.72	2.96	30.8	-	-	Peak
5150	48.15	-5.85	54	37.49	34.22	9.41	32.97	102	82	Average
5150	62.29	-11.71	74	51.63	34.22	9.41	32.97	102	82	Peak
5180	108.41	-	-	97.68	34.25	9.45	32.97	102	82	Peak
5180	97.22	-	-	86.49	34.25	9.45	32.97	102	82	Average
5350	54.94	-19.06	74	43.75	34.38	9.74	32.93	102	82	Peak
5350	41.76	-12.24	54	30.57	34.38	9.74	32.93	102	82	Average

Test Mode :	Mode 11	Temperature :	20~22°C
Test Channel :	44	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5220 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.02	-18.98	40	31.95	20	0.53	31.46	131	164	Peak
106.14	17.74	-25.76	43.5	37.92	10.34	1.03	31.55	-	-	Peak
240.06	25.04	-20.96	46	43	11.93	1.53	31.42	-	-	Peak
363.7	18.51	-27.49	46	32.67	15.03	2.07	31.26	-	-	Peak
554.1	20.13	-25.87	46	29.54	19.01	2.56	30.98	-	-	Peak
666.1	22.27	-23.73	46	29.92	20.33	2.87	30.85	-	-	Peak
5014	54.23	-19.77	74	43.95	34.11	9.17	33	101	332	Peak
5014	40.58	-13.42	54	30.3	34.11	9.17	33	101	332	Average
5220	107.4	-	-	96.56	34.27	9.53	32.96	101	332	Peak
5220	96.71	-	-	85.87	34.27	9.53	32.96	101	332	Average
5406	53.42	-20.58	74	42.06	34.42	9.86	32.92	101	332	Peak
5406	41.88	-12.12	54	30.52	34.42	9.86	32.92	101	332	Average

Test Mode :	Mode 11	Temperature :	20~22°C
Test Channel :	44	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5220 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.05	-7.95	40	42.98	20	0.53	31.46	102	181	Peak
43.5	28.01	-11.99	40	47.77	11.1	0.64	31.5	-	-	Peak
92.37	22.39	-21.11	43.5	44.11	8.84	0.96	31.52	-	-	Peak
337.8	22.85	-23.15	46	37.95	14.32	1.88	31.3	-	-	Peak
542.9	19.61	-26.39	46	29.23	18.83	2.54	30.99	-	-	Peak
760.6	22.74	-23.26	46	28.86	21.5	3.08	30.7	-	-	Peak
5134	53.42	-20.58	74	42.82	34.21	9.37	32.98	101	82	Peak
5134	40.79	-13.21	54	30.19	34.21	9.37	32.98	101	82	Average
5220	107.96	-	-	97.12	34.27	9.53	32.96	101	82	Peak
5220	97.05	-	-	86.21	34.27	9.53	32.96	101	82	Average
5374	54.54	-19.46	74	43.3	34.39	9.78	32.93	101	82	Peak
5374	41.68	-12.32	54	30.44	34.39	9.78	32.93	101	82	Average

Test Mode :	Mode 12	Temperature :	20~22°C
Test Channel :	48	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5240 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	21.37	-18.63	40	33.01	19.28	0.54	31.46	124	178	Peak
103.98	17.58	-25.92	43.5	37.95	10.16	1.01	31.54	-	-	Peak
269.49	19.44	-26.56	46	36.31	12.87	1.64	31.38	-	-	Peak
354.6	19.35	-26.65	46	33.82	14.79	2.02	31.28	-	-	Peak
495.3	19.53	-26.47	46	30.17	18	2.43	31.07	-	-	Peak
772.5	22.95	-23.05	46	28.86	21.68	3.1	30.69	-	-	Peak
5126	53.98	-20.02	74	43.38	34.21	9.37	32.98	100	335	Peak
5126	40.84	-13.16	54	30.24	34.21	9.37	32.98	100	335	Average
5240	106.32	-	-	95.46	34.29	9.53	32.96	100	335	Peak
5240	95.47	-	-	84.56	34.29	9.57	32.95	100	335	Average
5414	53.24	-20.76	74	41.87	34.43	9.86	32.92	100	335	Peak
5414	41.86	-12.14	54	30.49	34.43	9.86	32.92	100	335	Average

Test Mode :	Mode 12	Temperature :	20~22°C
Test Channel :	48	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5240 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.44	-7.56	40	43.37	20	0.53	31.46	102	221	Peak
43.5	28.37	-11.63	40	48.13	11.1	0.64	31.5	-	-	Peak
190.65	23.45	-20.05	43.5	44.67	9.01	1.28	31.51	-	-	Peak
340.6	19.04	-26.96	46	34.05	14.4	1.89	31.3	-	-	Peak
509.3	19.28	-26.72	46	29.61	18.25	2.47	31.05	-	-	Peak
724.9	22.44	-23.56	46	29.24	20.96	3	30.76	-	-	Peak
5100	53.91	-20.09	74	43.38	34.18	9.33	32.98	102	84	Peak
5100	40.81	-13.19	54	30.28	34.18	9.33	32.98	102	84	Average
5240	107.25	-	-	96.39	34.29	9.53	32.96	102	84	Peak
5240	96.38	-	-	85.47	34.29	9.57	32.95	102	84	Average
5398	54.37	-19.63	74	43.05	34.42	9.82	32.92	102	84	Peak
5398	41.8	-12.2	54	30.48	34.42	9.82	32.92	102	84	Average

Test Mode :	Mode 13	Temperature :	20~22°C
Test Channel :	52	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5260 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.11	-18.89	40	32.04	20	0.53	31.46	122	154	Peak
103.98	17.62	-25.88	43.5	37.99	10.16	1.01	31.54	-	-	Peak
272.73	21.78	-24.22	46	38.58	12.92	1.64	31.36	-	-	Peak
351.8	18.35	-27.65	46	32.92	14.72	1.99	31.28	-	-	Peak
592.6	20.65	-25.35	46	29.24	19.67	2.67	30.93	-	-	Peak
780.9	23.33	-22.67	46	29.1	21.81	3.11	30.69	-	-	Peak
5132	53.77	-20.23	74	43.17	34.21	9.37	32.98	100	328	Peak
5132	40.88	-13.12	54	30.28	34.21	9.37	32.98	100	328	Average
5260	106.46	-	-	95.54	34.3	9.57	32.95	100	328	Peak
5260	95.65	-	-	84.67	34.31	9.62	32.95	100	328	Average
5454	53.56	-20.44	74	42.07	34.46	9.94	32.91	100	328	Peak
5454	41.99	-12.01	54	30.5	34.46	9.94	32.91	100	328	Average

Test Mode :	Mode 13	Temperature :	20~22°C
Test Channel :	52	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5260 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.47	-8.53	40	42.4	20	0.53	31.46	100	103	Peak
43.5	29	-11	40	48.76	11.1	0.64	31.5	-	-	Peak
203.34	28.08	-15.42	43.5	48.86	9.37	1.33	31.48	-	-	Peak
301.4	21.56	-24.44	46	37.77	13.35	1.77	31.33	-	-	Peak
427.4	20.05	-25.95	46	32.36	16.59	2.24	31.14	-	-	Peak
716.5	22.47	-23.53	46	29.42	20.85	2.98	30.78	-	-	Peak
5134	53.22	-20.78	74	42.62	34.21	9.37	32.98	100	78	Peak
5134	40.89	-13.11	54	30.29	34.21	9.37	32.98	100	78	Average
5260	107.09	-	-	96.17	34.3	9.57	32.95	100	78	Peak
5260	96.1	-	-	85.12	34.31	9.62	32.95	100	78	Average
5398	53.94	-20.06	74	42.62	34.42	9.82	32.92	100	78	Peak
5398	41.8	-12.2	54	30.48	34.42	9.82	32.92	100	78	Average

Test Mode :	Mode 14	Temperature :	20~22°C
Test Channel :	60	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5300 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	22.49	-17.51	40	33.42	20	0.53	31.46	130	144	Peak
105.33	16.98	-26.52	43.5	37.16	10.34	1.03	31.55	-	-	Peak
265.17	19.29	-26.71	46	36.26	12.81	1.62	31.4	-	-	Peak
309.8	20.32	-25.68	46	36.3	13.56	1.79	31.33	-	-	Peak
461	19.98	-26.02	46	31.47	17.27	2.32	31.08	-	-	Peak
738.9	22.62	-23.38	46	29.14	21.18	3.03	30.73	-	-	Peak
5116	53.87	-20.13	74	43.29	34.19	9.37	32.98	123	333	Peak
5116	40.9	-13.1	54	30.32	34.19	9.37	32.98	123	333	Average
5300	106.42	-	-	95.36	34.34	9.66	32.94	123	333	Peak
5300	95.5	-	-	84.44	34.34	9.66	32.94	123	333	Average
5350	56.3	-17.7	74	45.11	34.38	9.74	32.93	123	333	Peak
5350	45.22	-8.78	54	34.03	34.38	9.74	32.93	123	333	Average

Test Mode :	Mode 14	Temperature :	20~22°C
Test Channel :	60	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5300 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.75	-8.25	40	42.68	20	0.53	31.46	100	91	Peak
43.5	28.08	-11.92	40	47.84	11.1	0.64	31.5	-	-	Peak
278.13	29.29	-16.71	46	46	13	1.64	31.35	-	-	Peak
302.1	24.32	-21.68	46	40.49	13.38	1.78	31.33	-	-	Peak
439.3	18.13	-27.87	46	30.14	16.83	2.28	31.12	-	-	Peak
715.8	21.87	-24.13	46	28.84	20.83	2.98	30.78	-	-	Peak
5092	53.6	-20.4	74	43.12	34.18	9.29	32.99	100	82	Peak
5092	40.78	-13.22	54	30.3	34.18	9.29	32.99	100	82	Average
5300	106.96	-	-	95.9	34.34	9.66	32.94	100	82	Peak
5300	95.26	-	-	84.2	34.34	9.66	32.94	100	82	Average
5350	56.81	-17.19	74	45.62	34.38	9.74	32.93	100	82	Peak
5350	45.04	-8.96	54	33.85	34.38	9.74	32.93	100	82	Average

Test Mode :	Mode 15	Temperature :	20~22°C
Test Channel :	64	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5320 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	21.15	-18.85	40	32.79	19.28	0.54	31.46	119	304	Peak
104.25	17.95	-25.55	43.5	38.22	10.25	1.02	31.54	-	-	Peak
233.58	24.83	-21.17	46	43.3	11.46	1.5	31.43	-	-	Peak
354.6	18.72	-27.28	46	33.19	14.79	2.02	31.28	-	-	Peak
525.4	20.34	-25.66	46	30.33	18.53	2.5	31.02	-	-	Peak
738.2	22.71	-23.29	46	29.24	21.17	3.03	30.73	-	-	Peak
5140	53.21	-20.79	74	42.6	34.22	9.37	32.98	111	330	Peak
5140	40.91	-13.09	54	30.3	34.22	9.37	32.98	111	330	Average
5320	96.4	-	-	85.29	34.35	9.7	32.94	111	330	Average
5320	106.99	-	-	95.88	34.35	9.7	32.94	111	330	Peak
5350	61.34	-12.66	74	50.15	34.38	9.74	32.93	111	330	Peak
5350	47.5	-6.5	54	36.31	34.38	9.74	32.93	111	330	Average

Test Mode :	Mode 15	Temperature :	20~22°C
Test Channel :	64	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5320 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.22	-7.78	40	43.15	20	0.53	31.46	103	114	Peak
43.5	28.32	-11.68	40	48.08	11.1	0.64	31.5	-	-	Peak
106.41	22.03	-21.47	43.5	42.12	10.43	1.03	31.55	-	-	Peak
368.6	19.39	-26.61	46	33.41	15.16	2.08	31.26	-	-	Peak
526.1	19.92	-26.08	46	29.91	18.53	2.5	31.02	-	-	Peak
771.8	22.76	-23.24	46	28.67	21.68	3.1	30.69	-	-	Peak
5140	53.5	-20.5	74	42.89	34.22	9.37	32.98	110	80	Peak
5140	40.92	-13.08	54	30.31	34.22	9.37	32.98	110	80	Average
5320	94.87	-	-	83.76	34.35	9.7	32.94	110	80	Average
5320	105.67	-	-	94.56	34.35	9.7	32.94	110	80	Peak
5350	60.6	-13.4	74	49.41	34.38	9.74	32.93	110	80	Peak
5350	46.84	-7.16	54	35.65	34.38	9.74	32.93	110	80	Average

Test Mode :	Mode 16	Temperature :	20~22°C
Test Channel :	100	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.96	-19.04	40	31.89	20	0.53	31.46	114	163	Peak
104.25	17.94	-25.56	43.5	38.21	10.25	1.02	31.54	-	-	Peak
271.38	22.25	-23.75	46	39.08	12.9	1.64	31.37	-	-	Peak
302.1	19.42	-26.58	46	35.59	13.38	1.78	31.33	-	-	Peak
495.3	18.34	-27.66	46	28.98	18	2.43	31.07	-	-	Peak
730.5	22.45	-23.55	46	29.14	21.05	3.01	30.75	-	-	Peak
5470	62.38	-5.92	68.3	50.88	34.47	9.94	32.91	110	310	Peak
5500	104.46	-	-	92.89	34.49	9.98	32.9	110	310	Peak
5500	93.78	-	-	82.16	34.5	10.02	32.9	110	310	Average
5725	52.72	-15.58	68.3	41.25	34.81	9.92	33.26	110	310	Peak

Test Mode :	Mode 16	Temperature :	20~22°C
Test Channel :	100	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.52	-7.48	40	43.45	20	0.53	31.46	101	327	Peak
43.5	28.12	-11.88	40	47.88	11.1	0.64	31.5	-	-	Peak
106.41	22.24	-21.26	43.5	42.33	10.43	1.03	31.55	-	-	Peak
327.3	19.93	-26.07	46	35.37	14.03	1.84	31.31	-	-	Peak
489	18.49	-27.51	46	29.28	17.86	2.41	31.06	-	-	Peak
730.5	22.93	-23.07	46	29.62	21.05	3.01	30.75	-	-	Peak
5470	61.14	-7.16	68.3	49.64	34.47	9.94	32.91	100	22	Peak
5500	102.13	-	-	90.56	34.49	9.98	32.9	100	22	Peak
5500	91.57	-	-	79.95	34.5	10.02	32.9	100	22	Average
5725	52.79	-15.51	68.3	41.32	34.81	9.92	33.26	100	22	Peak

Test Mode :	Mode 17	Temperature :	20~22°C
Test Channel :	116	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.61	-19.39	40	31.54	20	0.53	31.46	135	142	Peak
106.14	17.34	-26.16	43.5	37.52	10.34	1.03	31.55	-	-	Peak
267.33	18.04	-27.96	46	34.95	12.85	1.63	31.39	-	-	Peak
344.1	18.94	-27.06	46	33.8	14.51	1.92	31.29	-	-	Peak
469.4	19.41	-26.59	46	30.68	17.45	2.35	31.07	-	-	Peak
668.9	22.11	-23.89	46	29.73	20.35	2.88	30.85	-	-	Peak
5470	52.02	-16.28	68.3	40.52	34.47	9.94	32.91	109	316	Peak
5580	95.59	-	-	84.02	34.6	9.99	33.02	109	316	Average
5580	106.6	-	-	95.01	34.62	9.99	33.02	109	316	Peak
5725	52.83	-15.47	68.3	41.36	34.81	9.92	33.26	109	316	Peak

Test Mode :	Mode 17	Temperature :	20~22°C
Test Channel :	116	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.5	-7.5	40	43.43	20	0.53	31.46	104	178	Peak
42.69	27.86	-12.14	40	47.02	11.7	0.64	31.5	-	-	Peak
106.41	22.12	-21.38	43.5	42.21	10.43	1.03	31.55	-	-	Peak
338.5	22.25	-23.75	46	37.32	14.35	1.88	31.3	-	-	Peak
497.4	18.61	-27.39	46	29.2	18.04	2.44	31.07	-	-	Peak
741.7	23.15	-22.85	46	29.6	21.23	3.04	30.72	-	-	Peak
5470	52.95	-15.35	68.3	41.45	34.47	9.94	32.91	114	114	Peak
5580	92.34	-	-	80.77	34.6	9.99	33.02	114	114	Average
5580	103.08	-	-	91.49	34.62	9.99	33.02	114	114	Peak
5725	52.75	-15.55	68.3	41.28	34.81	9.92	33.26	114	114	Peak

Test Mode :	Mode 18	Temperature :	20~22°C
Test Channel :	140	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	21.61	-18.39	40	33.25	19.28	0.54	31.46	117	193	Peak
104.25	17.87	-25.63	43.5	38.14	10.25	1.02	31.54	-	-	Peak
238.98	21.85	-24.15	46	39.96	11.79	1.52	31.42	-	-	Peak
354.6	19.5	-26.5	46	33.97	14.79	2.02	31.28	-	-	Peak
511.4	19.55	-26.45	46	29.85	18.28	2.47	31.05	-	-	Peak
738.2	22.25	-23.75	46	28.78	21.17	3.03	30.73	-	-	Peak
5470	52.8	-15.5	68.3	41.3	34.47	9.94	32.91	120	9	Peak
5700	104.9	-	-	93.4	34.79	9.93	33.22	120	9	Peak
5700	94.38	-	-	82.9	34.77	9.93	33.22	120	9	Average
5725	67.37	-0.93	68.3	55.9	34.81	9.92	33.26	120	9	Peak

Test Mode :	Mode 18	Temperature :	20~22°C
Test Channel :	140	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.23	-7.77	40	43.16	20	0.53	31.46	110	314	Peak
43.5	28.03	-11.97	40	47.79	11.1	0.64	31.5	-	-	Peak
92.37	22.3	-21.2	43.5	44.02	8.84	0.96	31.52	-	-	Peak
340.6	18.76	-27.24	46	33.77	14.4	1.89	31.3	-	-	Peak
503.7	18.89	-27.11	46	29.34	18.15	2.46	31.06	-	-	Peak
713	22.97	-23.03	46	30	20.79	2.97	30.79	-	-	Peak
5470	53.11	-15.19	68.3	41.61	34.47	9.94	32.91	100	81	Peak
5700	101.38	-	-	89.88	34.79	9.93	33.22	100	81	Peak
5700	90.5	-	-	79.02	34.77	9.93	33.22	100	81	Average
5725	65.58	-2.72	68.3	54.11	34.81	9.92	33.26	100	81	Peak

Test Mode :	Mode 19	Temperature :	20~22°C
Test Channel :	38	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5190 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.12	-18.88	40	32.05	20	0.53	31.46	116	203	Peak
107.22	17.66	-25.84	43.5	37.65	10.52	1.04	31.55	-	-	Peak
270.57	19.08	-26.92	46	35.92	12.89	1.64	31.37	-	-	Peak
351.8	19.04	-26.96	46	33.61	14.72	1.99	31.28	-	-	Peak
556.9	19.8	-26.2	46	29.14	19.06	2.57	30.97	-	-	Peak
766.9	22.98	-23.02	46	28.98	21.6	3.09	30.69	-	-	Peak
5150	70.08	-3.92	74	59.42	34.22	9.41	32.97	100	334	Peak
5150	53.62	-0.38	54	42.96	34.22	9.41	32.97	100	334	Average
5190	102.18	-	-	91.4	34.25	9.49	32.96	100	334	Peak
5190	90.95	-	-	80.17	34.25	9.49	32.96	100	334	Average
5398	42.2	-11.8	54	30.88	34.42	9.82	32.92	100	334	Average
5398	54.18	-19.82	74	42.86	34.42	9.82	32.92	100	334	Peak

Test Mode :	Mode 19	Temperature :	20~22°C
Test Channel :	38	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5190 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.84	-8.16	40	42.77	20	0.53	31.46	100	117	Peak
43.5	28.4	-11.6	40	48.16	11.1	0.64	31.5	-	-	Peak
205.5	24.84	-18.66	43.5	45.47	9.5	1.34	31.47	-	-	Peak
300	22.78	-23.22	46	39.04	13.3	1.77	31.33	-	-	Peak
428.1	19.41	-26.59	46	31.72	16.59	2.24	31.14	-	-	Peak
769	23.31	-22.69	46	29.28	21.63	3.09	30.69	-	-	Peak
5150	70.75	-3.25	74	60.09	34.22	9.41	32.97	124	79	Peak
5150	53.81	-0.19	54	43.15	34.22	9.41	32.97	124	79	Average
5190	103.34	-	-	92.61	34.25	9.45	32.97	124	79	Peak
5190	92.62	-	-	81.84	34.25	9.49	32.96	124	79	Average
5350	41.96	-12.04	54	30.77	34.38	9.74	32.93	124	79	Average
5350	55.05	-18.95	74	43.86	34.38	9.74	32.93	124	79	Peak

Test Mode :	Mode 20	Temperature :	20~22°C
Test Channel :	46	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5230 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	21.71	-18.29	40	33.35	19.28	0.54	31.46	125	146	Peak
103.98	17.63	-25.87	43.5	38	10.16	1.01	31.54	-	-	Peak
270.57	23.95	-22.05	46	40.79	12.89	1.64	31.37	-	-	Peak
357.4	18.56	-27.44	46	32.92	14.87	2.04	31.27	-	-	Peak
519.8	18.82	-27.18	46	28.93	18.43	2.49	31.03	-	-	Peak
771.8	22.99	-23.01	46	28.9	21.68	3.1	30.69	-	-	Peak
5150	54.73	-19.27	74	44.07	34.22	9.41	32.97	114	314	Peak
5150	42.31	-11.69	54	31.65	34.22	9.41	32.97	114	314	Average
5230	105.66	-	-	94.82	34.27	9.53	32.96	114	314	Peak
5230	94.26	-	-	83.4	34.29	9.53	32.96	114	314	Average
5372	53.79	-20.21	74	42.55	34.39	9.78	32.93	114	314	Peak
5372	43.31	-10.69	54	32.07	34.39	9.78	32.93	114	314	Average

Test Mode :	Mode 20	Temperature :	20~22°C
Test Channel :	46	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5230 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.18	-7.82	40	43.11	20	0.53	31.46	104	198	Peak
43.5	28	-12	40	47.76	11.1	0.64	31.5	-	-	Peak
106.41	23.69	-19.81	43.5	43.78	10.43	1.03	31.55	-	-	Peak
327.3	22.98	-23.02	46	38.42	14.03	1.84	31.31	-	-	Peak
534.5	18.87	-27.13	46	28.68	18.68	2.52	31.01	-	-	Peak
775.3	22.99	-23.01	46	28.86	21.72	3.1	30.69	-	-	Peak
5148	56.58	-17.42	74	45.92	34.22	9.41	32.97	100	77	Peak
5148	43.7	-10.3	54	33.04	34.22	9.41	32.97	100	77	Average
5230	104.27	-	-	93.43	34.27	9.53	32.96	100	77	Peak
5230	93.66	-	-	82.8	34.29	9.53	32.96	100	77	Average
5380	54.15	-19.85	74	42.89	34.41	9.78	32.93	100	77	Peak
5380	42.31	-11.69	54	31.05	34.41	9.78	32.93	100	77	Average

Test Mode :	Mode 21	Temperature :	20~22°C
Test Channel :	54	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5270 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	20.93	-19.07	40	32.57	19.28	0.54	31.46	131	160	Peak
104.25	17.31	-26.19	43.5	37.58	10.25	1.02	31.54	-	-	Peak
271.38	22.87	-23.13	46	39.7	12.9	1.64	31.37	-	-	Peak
344.1	18.44	-27.56	46	33.3	14.51	1.92	31.29	-	-	Peak
494.6	19.34	-26.66	46	30	17.98	2.43	31.07	-	-	Peak
748.7	22.59	-23.41	46	28.9	21.33	3.06	30.7	-	-	Peak
5148	54.05	-19.95	74	43.39	34.22	9.41	32.97	114	314	Peak
5148	43.04	-10.96	54	32.38	34.22	9.41	32.97	114	314	Average
5270	105.19	-	-	94.27	34.3	9.57	32.95	114	314	Peak
5270	93.93	-	-	82.95	34.31	9.62	32.95	114	314	Average
5350	55.63	-18.37	74	44.44	34.38	9.74	32.93	114	314	Peak
5350	42.74	-11.26	54	31.55	34.38	9.74	32.93	114	314	Average

Test Mode :	Mode 21	Temperature :	20~22°C
Test Channel :	54	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5270 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.92	-8.08	40	42.85	20	0.53	31.46	103	227	Peak
43.5	27.8	-12.2	40	47.56	11.1	0.64	31.5	-	-	Peak
106.41	22.4	-21.1	43.5	42.49	10.43	1.03	31.55	-	-	Peak
341.3	19.51	-26.49	46	34.48	14.43	1.9	31.3	-	-	Peak
564.6	19.98	-26.02	46	29.16	19.19	2.59	30.96	-	-	Peak
729.8	23.29	-22.71	46	29.99	21.04	3.01	30.75	-	-	Peak
5140	54.3	-19.7	74	43.69	34.22	9.37	32.98	100	86	Peak
5140	42.41	-11.59	54	31.8	34.22	9.37	32.98	100	86	Average
5270	102.5	-	-	91.58	34.3	9.57	32.95	100	86	Peak
5270	91.73	-	-	80.75	34.31	9.62	32.95	100	86	Average
5374	54.43	-19.57	74	43.19	34.39	9.78	32.93	100	86	Peak
5374	42.46	-11.54	54	31.22	34.39	9.78	32.93	100	86	Average

Test Mode :	Mode 22	Temperature :	20~22°C
Test Channel :	62	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5310 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	21.21	-18.79	40	32.85	19.28	0.54	31.46	120	145	Peak
105.06	17.4	-26.1	43.5	37.68	10.25	1.02	31.55	-	-	Peak
235.74	18.58	-27.42	46	36.91	11.59	1.51	31.43	-	-	Peak
346.9	20.11	-25.89	46	34.87	14.58	1.95	31.29	-	-	Peak
545	19.54	-26.46	46	29.13	18.86	2.54	30.99	-	-	Peak
749.4	22.65	-23.35	46	28.95	21.34	3.06	30.7	-	-	Peak
5150	54.27	-19.73	74	43.61	34.22	9.41	32.97	110	323	Peak
5150	41.63	-12.37	54	30.97	34.22	9.41	32.97	110	323	Average
5310	92.35	-	-	81.24	34.35	9.7	32.94	110	323	Average
5310	103.59	-	-	92.53	34.34	9.66	32.94	110	323	Peak
5350	67.92	-6.08	74	56.73	34.38	9.74	32.93	110	323	Peak
5350	53.88	-0.12	54	42.69	34.38	9.74	32.93	110	323	Average

Test Mode :	Mode 22	Temperature :	20~22°C
Test Channel :	62	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5310 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.61	-8.39	40	42.54	20	0.53	31.46	111	129	Peak
43.5	27.93	-12.07	40	47.69	11.1	0.64	31.5	-	-	Peak
234.66	29.52	-16.48	46	47.93	11.52	1.5	31.43	-	-	Peak
318.9	22.33	-23.67	46	38.02	13.82	1.81	31.32	-	-	Peak
421.8	23.06	-22.94	46	35.53	16.46	2.22	31.15	-	-	Peak
705.3	22.37	-23.63	46	29.56	20.67	2.95	30.81	-	-	Peak
5092	54.17	-19.83	74	43.69	34.18	9.29	32.99	122	84	Peak
5092	41.47	-12.53	54	30.99	34.18	9.29	32.99	122	84	Average
5310	101.96	-	-	90.9	34.34	9.66	32.94	122	84	Peak
5310	90.91	-	-	79.8	34.35	9.7	32.94	122	84	Average
5350	65.64	-8.36	74	54.45	34.38	9.74	32.93	122	84	Peak
5350	51.46	-2.54	54	40.27	34.38	9.74	32.93	122	84	Average

Test Mode :	Mode 23	Temperature :	20~22°C
Test Channel :	102	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5510 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.89	21.08	-18.92	40	33.43	18.56	0.55	31.46	119	215	Peak
106.41	17.79	-25.71	43.5	37.88	10.43	1.03	31.55	-	-	Peak
282.18	22.31	-23.69	46	38.95	13.05	1.65	31.34	-	-	Peak
344.1	18.19	-27.81	46	33.05	14.51	1.92	31.29	-	-	Peak
508.6	19.13	-26.87	46	29.48	18.23	2.47	31.05	-	-	Peak
803.3	24.21	-21.79	46	29.61	22.13	3.15	30.68	-	-	Peak
5470	67.72	-0.58	68.3	56.22	34.47	9.94	32.91	108	308	Peak
5510	101.29	-	-	89.65	34.52	10.02	32.9	108	308	Peak
5510	90.21	-	-	78.59	34.5	10.02	32.9	108	308	Average
5725	52.49	-15.81	68.3	41.02	34.81	9.92	33.26	108	308	Peak

Test Mode :	Mode 23	Temperature :	20~22°C
Test Channel :	102	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5510 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.13	-7.87	40	43.06	20	0.53	31.46	100	71	Peak
43.5	27.85	-12.15	40	47.61	11.1	0.64	31.5	-	-	Peak
200.37	24.64	-18.86	43.5	45.63	9.17	1.32	31.48	-	-	Peak
302.1	19.74	-26.26	46	35.91	13.38	1.78	31.33	-	-	Peak
519.8	19.02	-26.98	46	29.13	18.43	2.49	31.03	-	-	Peak
668.2	23.26	-22.74	46	30.89	20.34	2.88	30.85	-	-	Peak
5470	67	-1.3	68.3	55.5	34.47	9.94	32.91	101	65	Peak
5510	99.32	-	-	87.68	34.52	10.02	32.9	101	65	Peak
5510	88.43	-	-	76.81	34.5	10.02	32.9	101	65	Average
5725	52.95	-15.35	68.3	41.48	34.81	9.92	33.26	101	65	Peak

Test Mode :	Mode 24	Temperature :	20~22°C
Test Channel :	118	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5590 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
32.7	21.16	-18.84	40	34.23	17.84	0.56	31.47	118	147	Peak
103.98	17.28	-26.22	43.5	37.65	10.16	1.01	31.54	-	-	Peak
269.22	23.68	-22.32	46	40.55	12.87	1.64	31.38	-	-	Peak
354.6	18.52	-27.48	46	32.99	14.79	2.02	31.28	-	-	Peak
587.7	20.61	-25.39	46	29.3	19.59	2.65	30.93	-	-	Peak
792.1	23.92	-22.08	46	29.49	21.98	3.13	30.68	-	-	Peak
5470	52.82	-15.48	68.3	41.32	34.47	9.94	32.91	100	5	Peak
5590	91.54	-	-	79.95	34.62	9.99	33.02	100	5	Average
5590	102.68	-	-	91.09	34.62	9.99	33.02	100	5	Peak
5725	52.84	-15.46	68.3	41.37	34.81	9.92	33.26	100	5	Peak

Test Mode :	Mode 24	Temperature :	20~22°C
Test Channel :	118	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5590 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	31.97	-8.03	40	42.9	20	0.53	31.46	105	350	Peak
43.5	28.09	-11.91	40	47.85	11.1	0.64	31.5	-	-	Peak
106.41	21.93	-21.57	43.5	42.02	10.43	1.03	31.55	-	-	Peak
346.2	19.94	-26.06	46	34.73	14.56	1.94	31.29	-	-	Peak
564.6	20.62	-25.38	46	29.8	19.19	2.59	30.96	-	-	Peak
803.3	24.08	-21.92	46	29.48	22.13	3.15	30.68	-	-	Peak
5470	52.77	-15.53	68.3	41.27	34.47	9.94	32.91	100	70	Peak
5590	89.82	-	-	78.23	34.62	9.99	33.02	100	70	Average
5590	100.85	-	-	89.31	34.62	9.98	33.06	100	70	Peak
5725	52.81	-15.49	68.3	41.34	34.81	9.92	33.26	100	70	Peak

Test Mode :	Mode 25	Temperature :	20~22°C
Test Channel :	134	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5670 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	21.47	-18.53	40	33.11	19.28	0.54	31.46	117	253	Peak
103.98	18.39	-25.11	43.5	38.76	10.16	1.01	31.54	-	-	Peak
243.3	18.61	-27.39	46	36.37	12.13	1.53	31.42	-	-	Peak
349	18.8	-27.2	46	33.48	14.64	1.97	31.29	-	-	Peak
568.1	20	-26	46	29.1	19.26	2.6	30.96	-	-	Peak
808.9	23.98	-22.02	46	29.32	22.19	3.16	30.69	-	-	Peak
5470	52.66	-15.64	68.3	41.16	34.47	9.94	32.91	100	3	Peak
5670	102.25	-	-	90.72	34.72	9.95	33.14	100	3	Peak
5670	90.82	-	-	79.32	34.74	9.94	33.18	100	3	Average
5725	67.69	-0.61	68.3	56.22	34.81	9.92	33.26	100	3	Peak

Test Mode :	Mode 25	Temperature :	20~22°C
Test Channel :	134	Relative Humidity :	59~61%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5670 MHz is fundamental signal which can be ignored. 2. 5470 MHz and 5725 MHz are not within a restricted band.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	30.84	-9.16	40	41.77	20	0.53	31.46	103	152	Peak
43.5	27.94	-12.06	40	47.7	11.1	0.64	31.5	-	-	Peak
92.37	22.86	-20.64	43.5	44.58	8.84	0.96	31.52	-	-	Peak
335	16.77	-29.23	46	31.97	14.24	1.87	31.31	-	-	Peak
528.2	19.34	-26.66	46	29.27	18.58	2.51	31.02	-	-	Peak
766.9	23.97	-22.03	46	29.97	21.6	3.09	30.69	-	-	Peak
5470	53.03	-15.27	68.3	41.53	34.47	9.94	32.91	100	74	Peak
5670	100.32	-	-	88.79	34.72	9.95	33.14	100	74	Peak
5670	88.95	-	-	77.45	34.74	9.94	33.18	100	74	Average
5725	64.23	-4.07	68.3	52.76	34.81	9.92	33.26	100	74	Peak

3.6 Peak Excursion Ratio Measurement

3.6.1 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.

3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

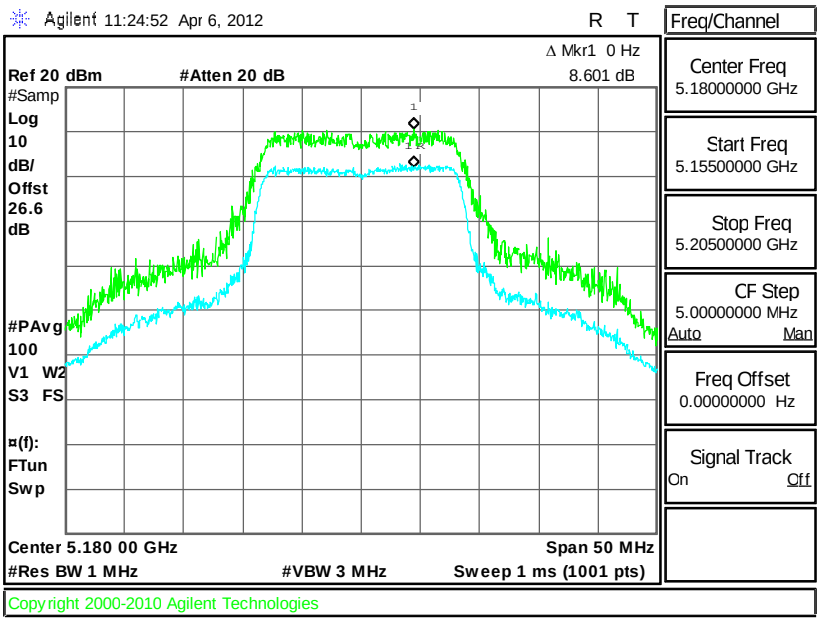
1. The transmitter output is connected to the spectrum analyzer.
2. Set the spectrum analyzer span to view the entire emission bandwidth.
3. Find the maximum of the peak-max-hold spectrum.
   * Set RBW = 1 MHz.
   *Set VBW ≥ 3 MHz.
   *Detector = peak.
   *Trace mode = max-hold.
   *Allow the sweeps to continue until the trace stabilizes.
   *Use the peak search function to find the peak of the spectrum.
4. Use the procedure found under section 3.3 to measure the PPSD.
5. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

3.6.4 Test Setup

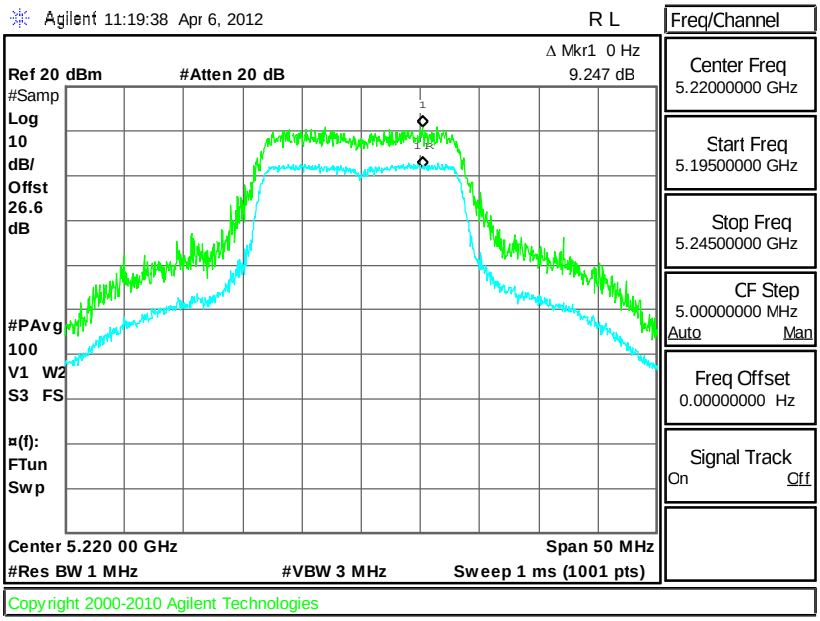
3.6.5 Test Result of Peak Excursion Ratio

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

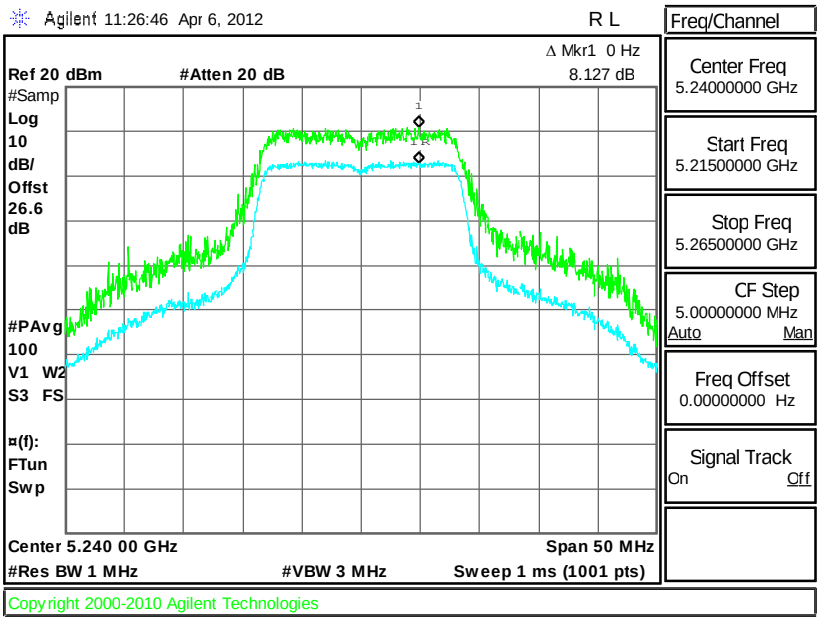
Peak Excursion Ratio Plot on 802.11a Channel 36



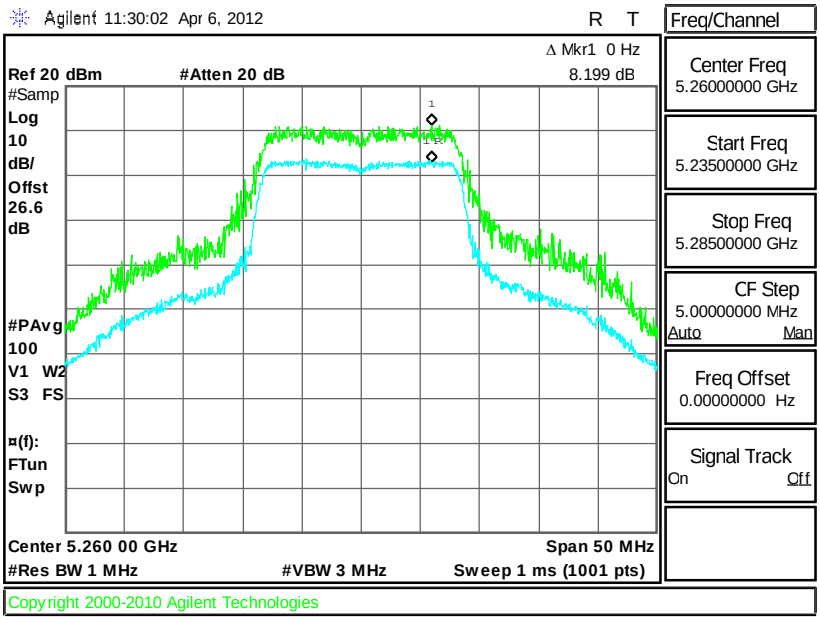
Peak Excursion Ratio Plot on 802.11a Channel 44



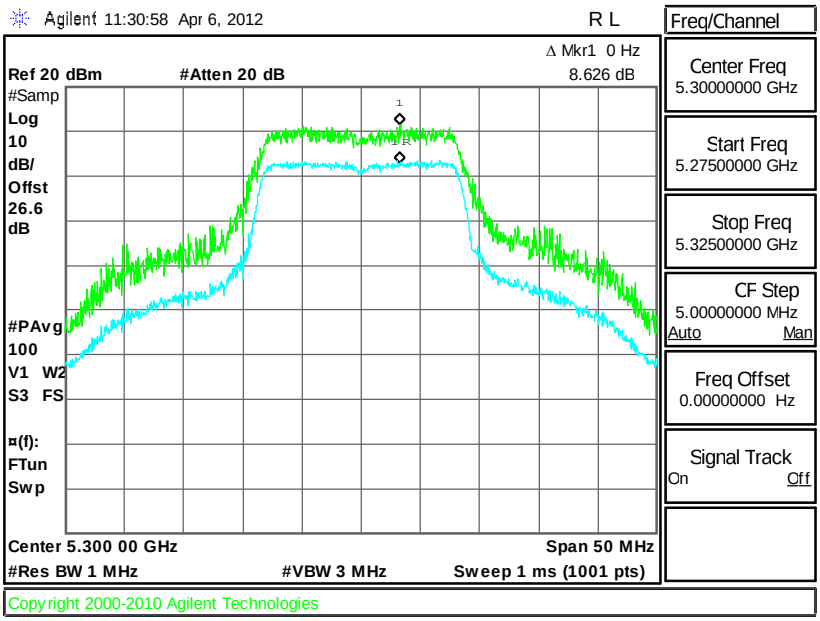
Peak Excursion Ratio Plot on 802.11a Channel 48



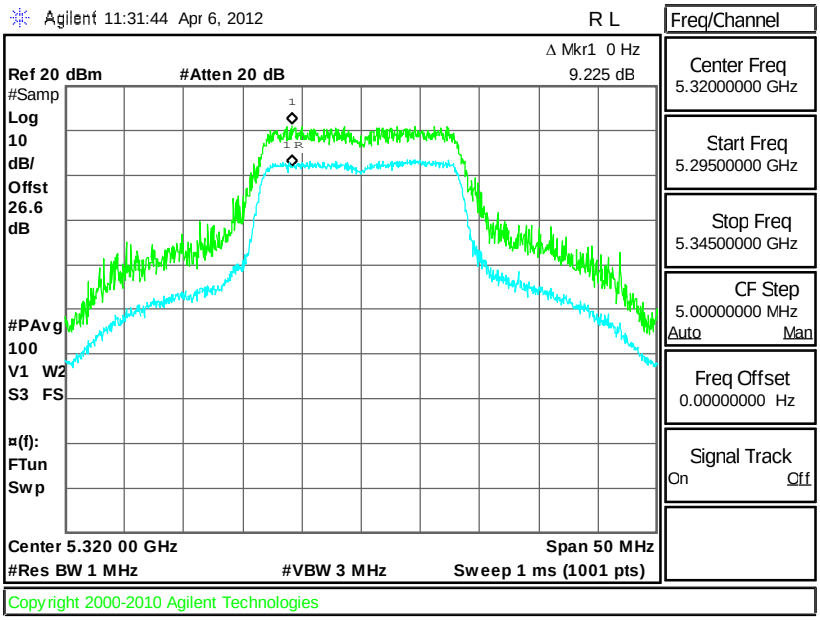
Peak Excursion Ratio Plot on 802.11a Channel 52



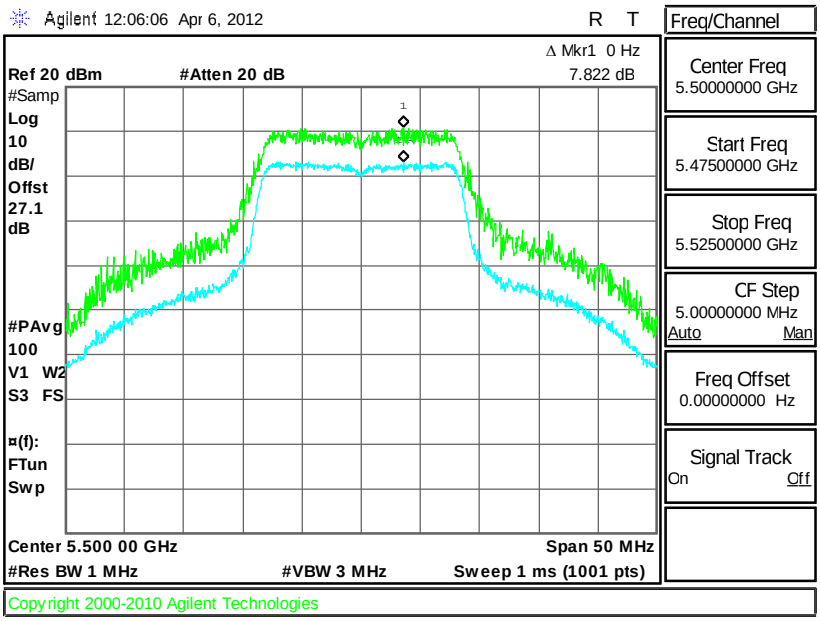
Peak Excursion Ratio Plot on 802.11a Channel 60



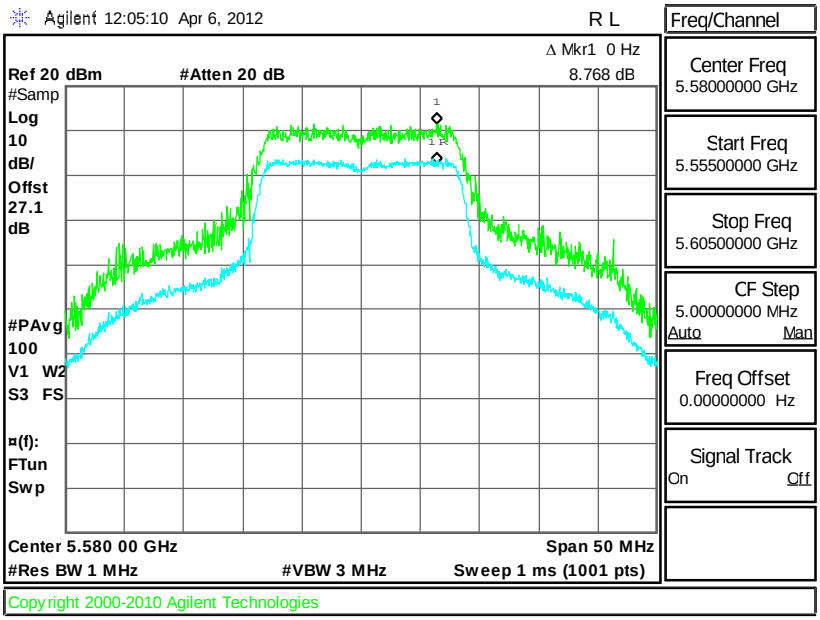
Peak Excursion Ratio Plot on 802.11a Channel 64



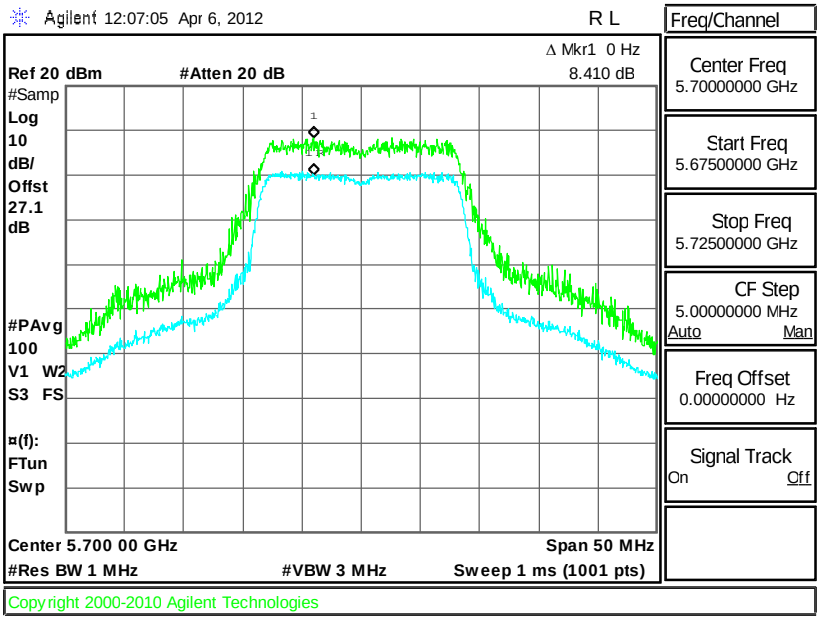
Peak Excursion Ratio Plot on 802.11a Channel 100



Peak Excursion Ratio Plot on 802.11a Channel 116

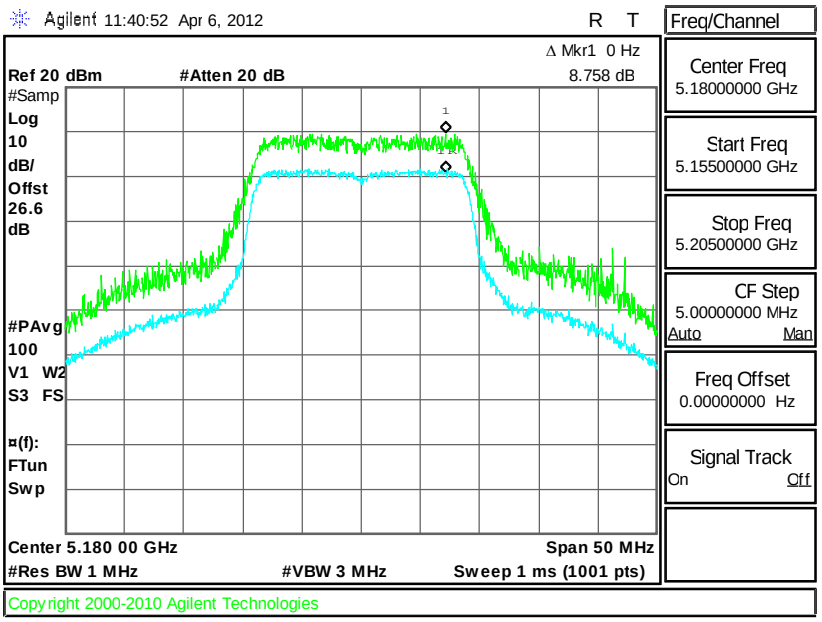


Peak Excursion Ratio Plot on 802.11a Channel 140

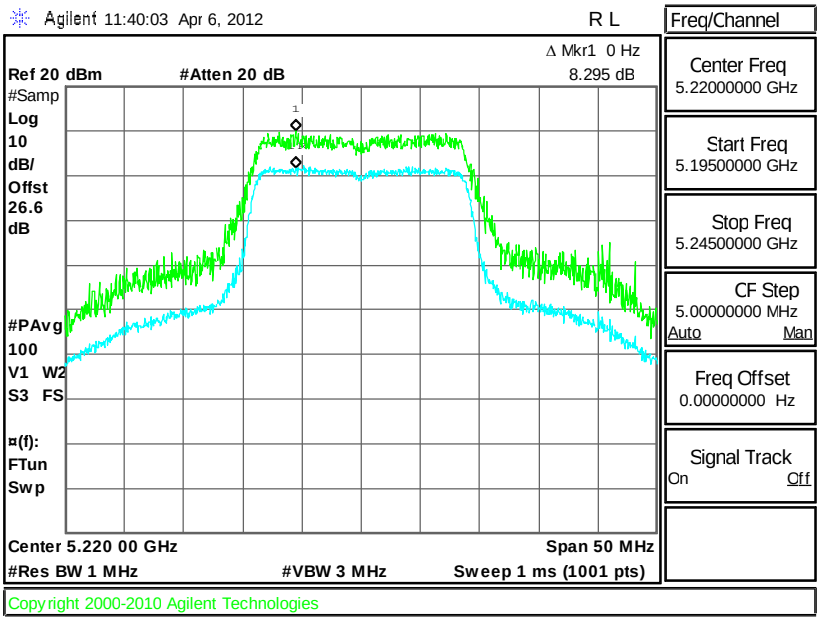


Test Mode :	Mode 10~18	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

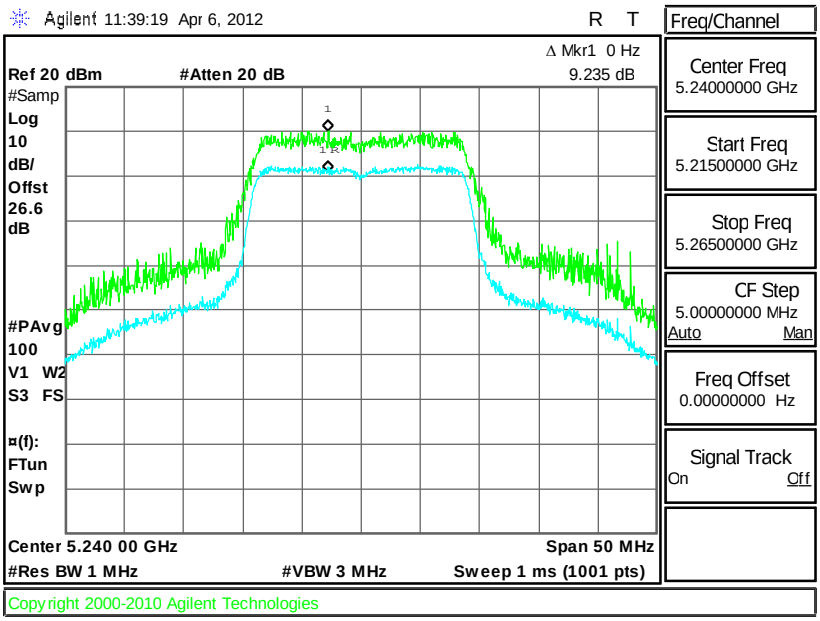
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 36



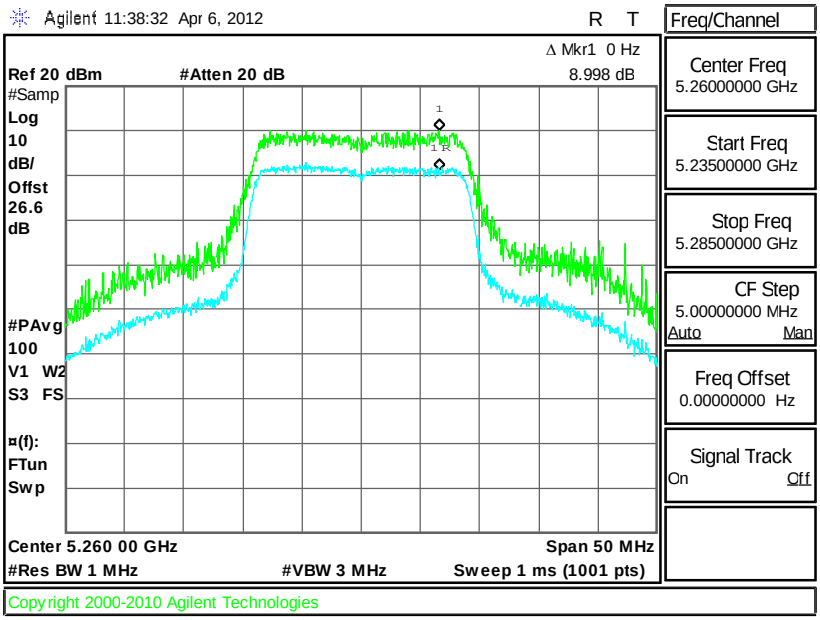
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 44



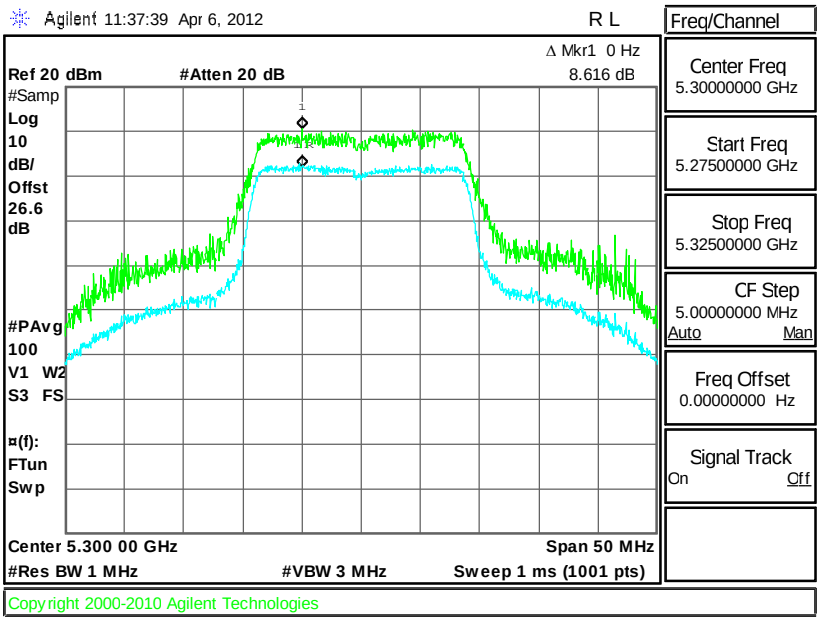
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 48



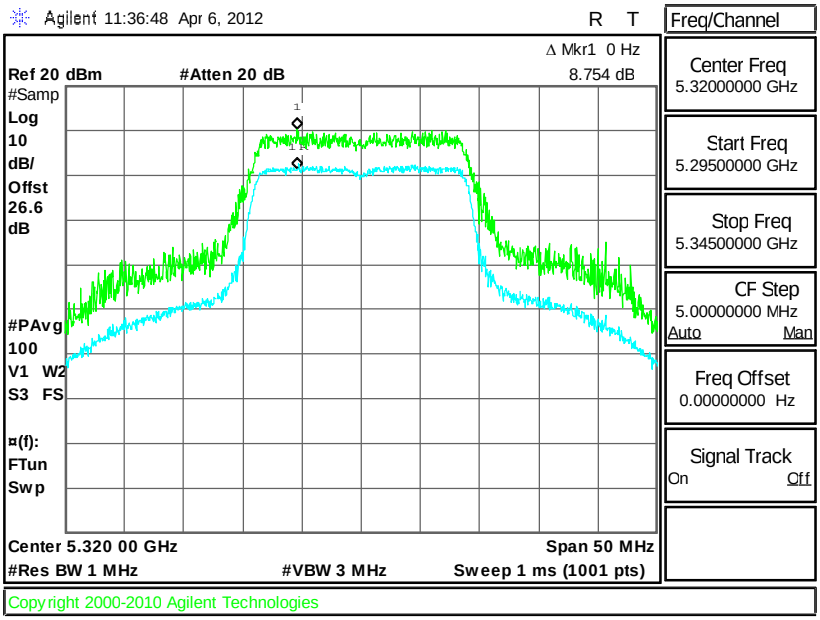
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 52



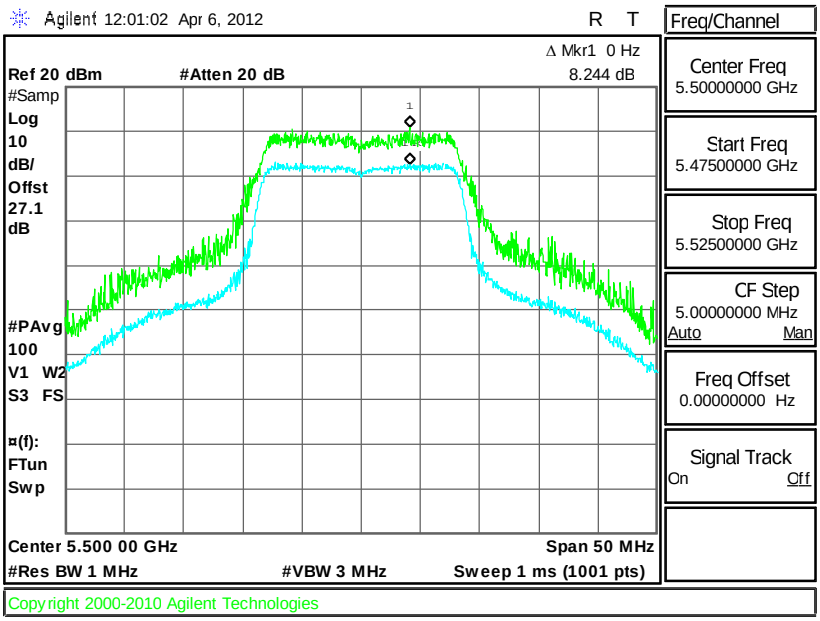
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 60



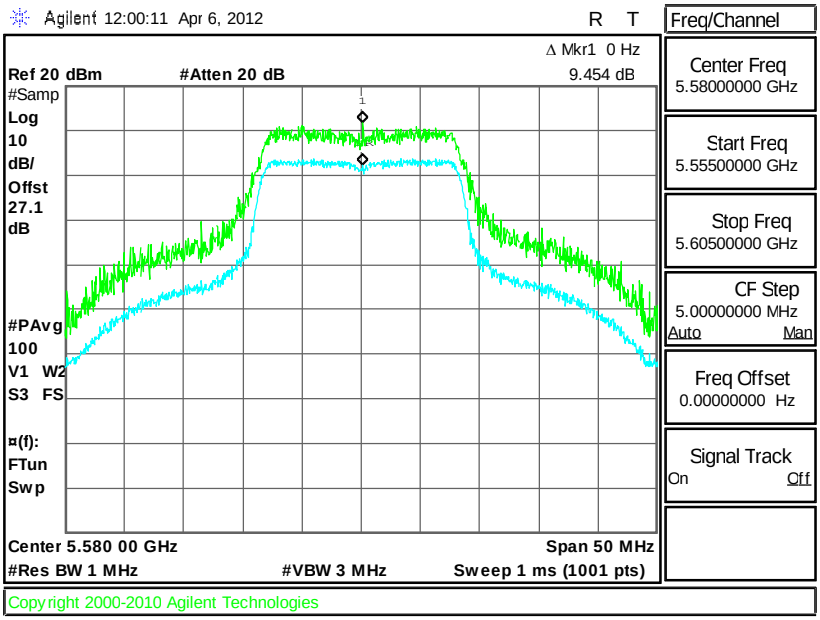
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 64



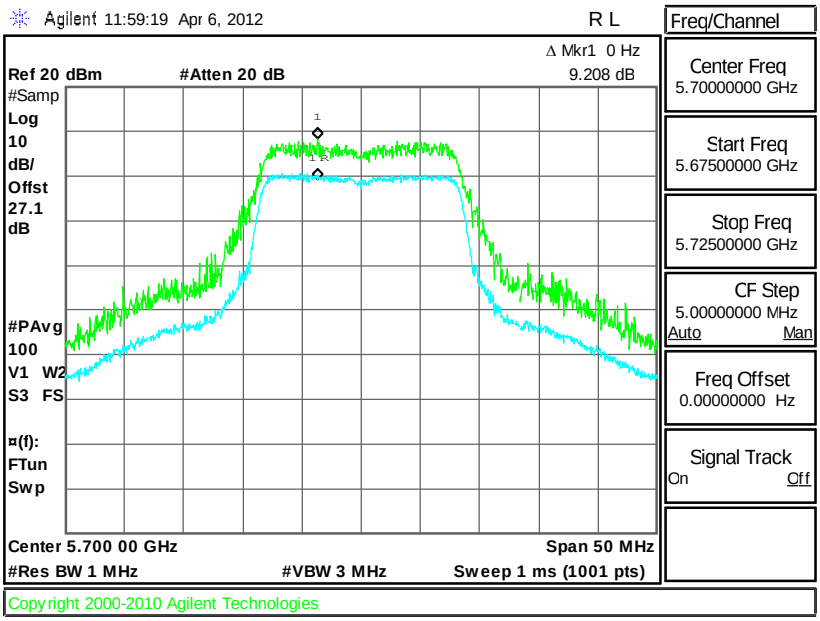
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 100



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

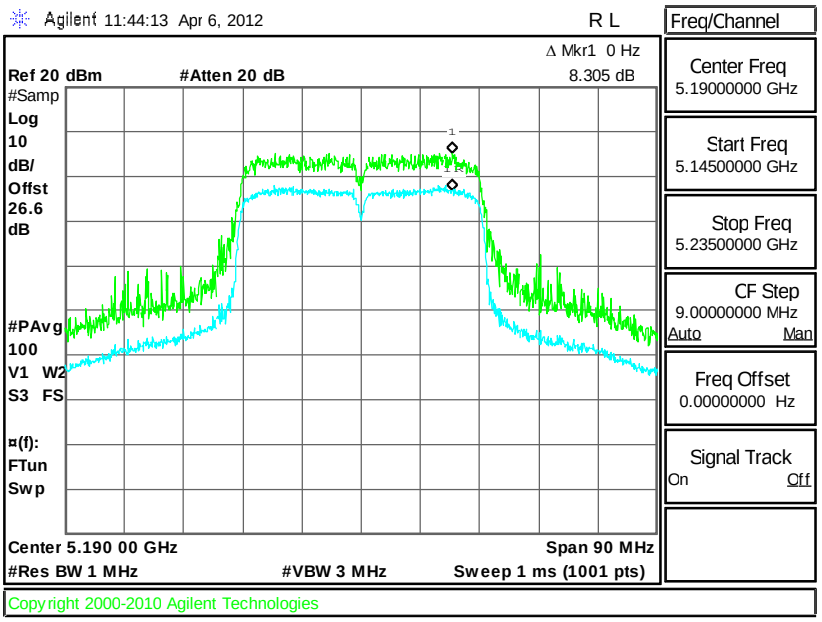


Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 140

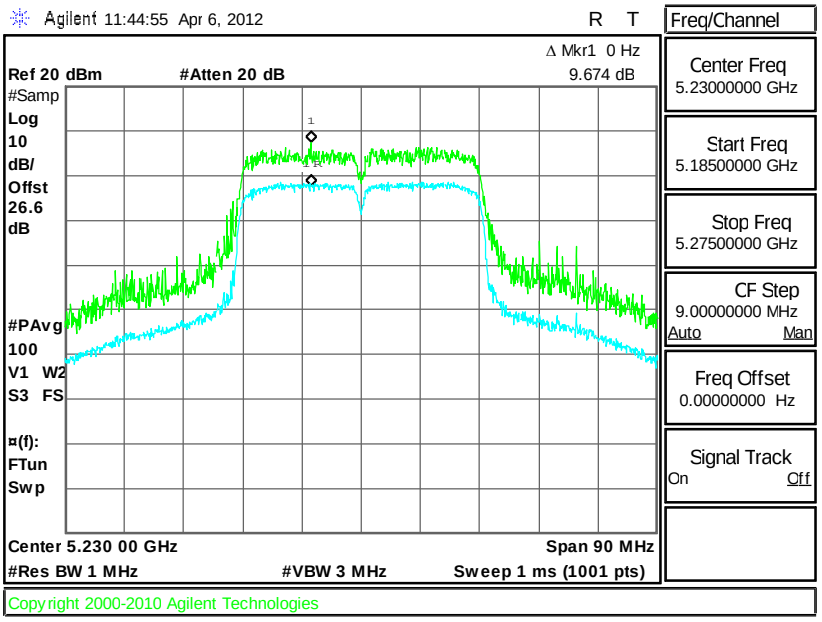


Test Mode :	Mode 19~25	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

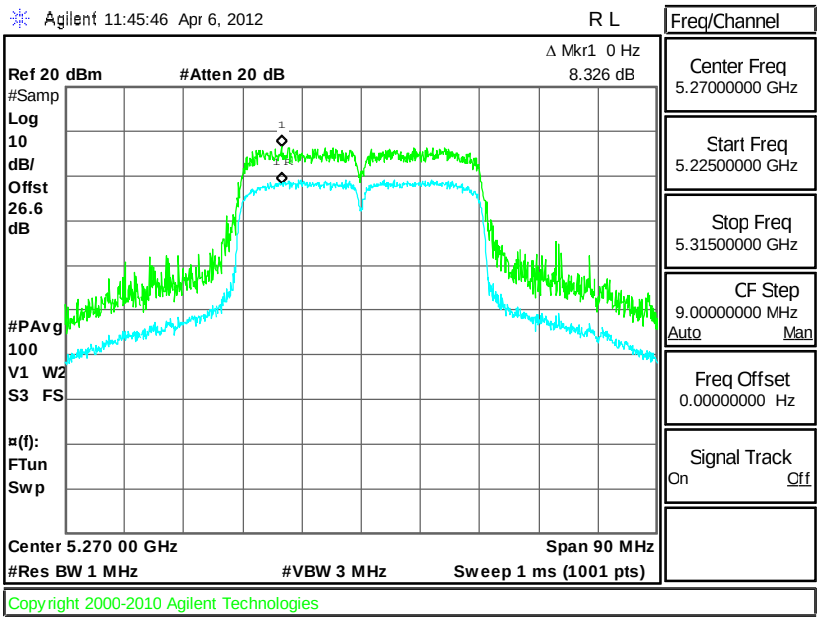
Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 38



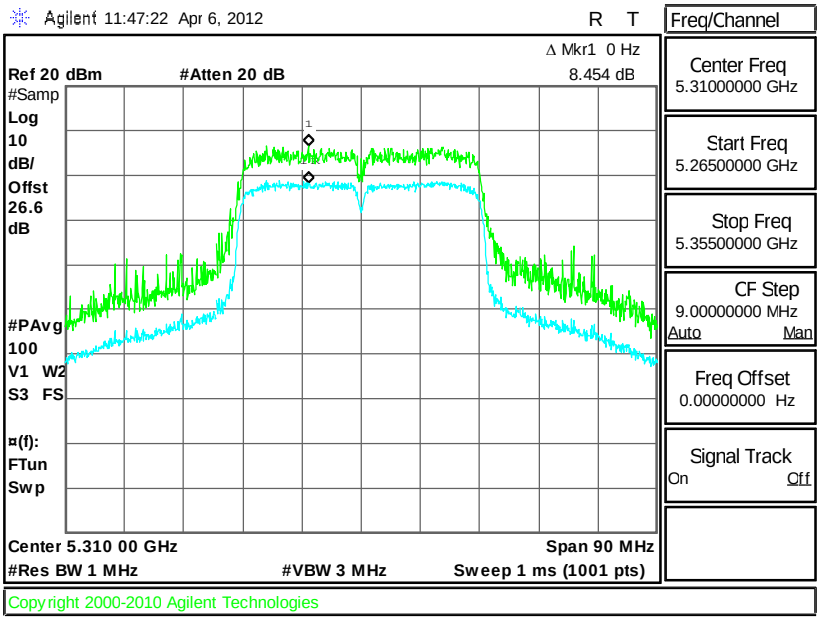
Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 46



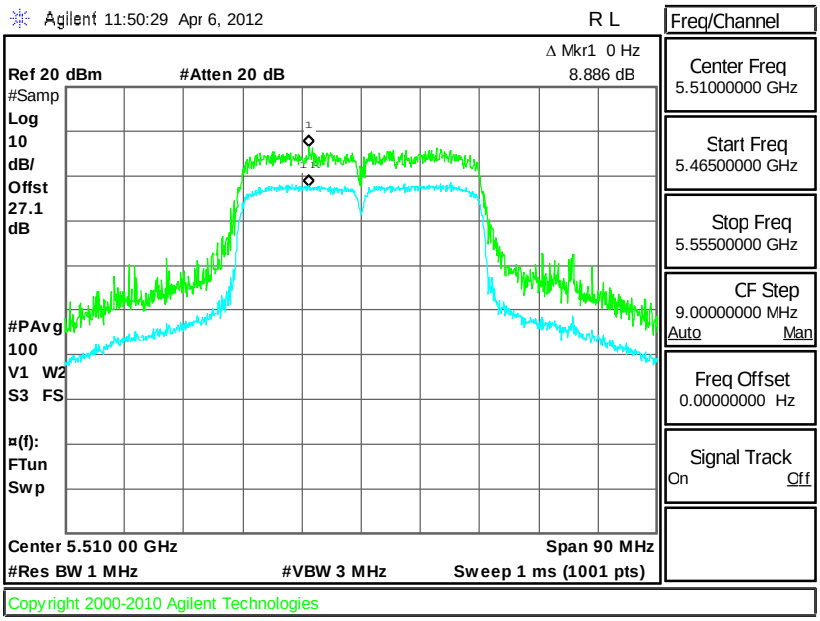
Peak Excursion Ratio Plot on 802.11n (BW 40MHz) Channel 54



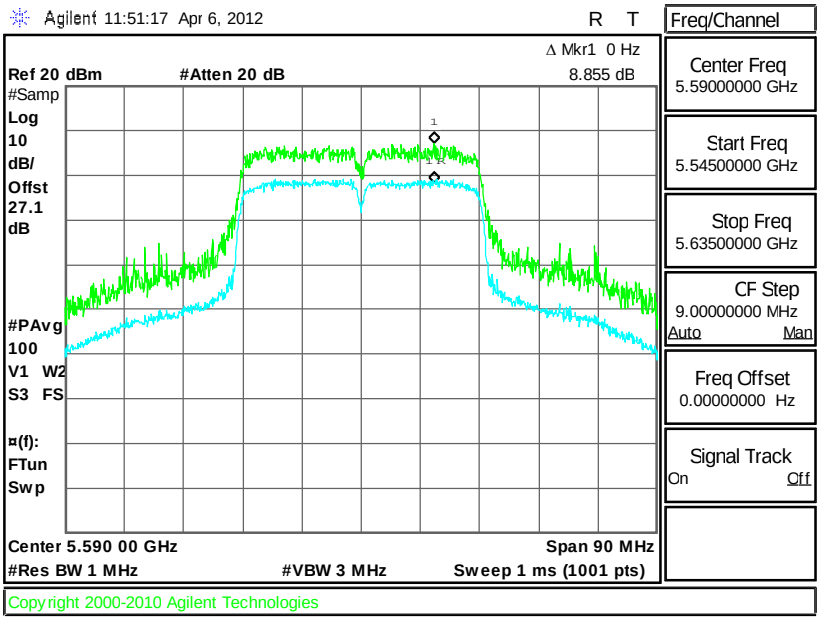
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 62



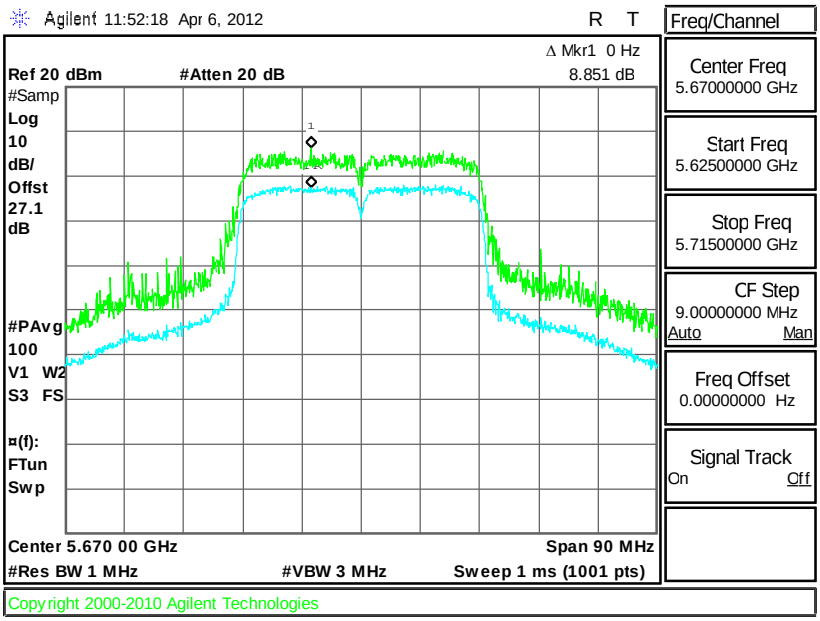
Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 102



Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 118



Peak Excursion Ratio Plot on 802.11n (BW 20MHz) Channel 134



3.7 Automatically Discontinue Transmission

3.7.1 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.

3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

3.7.3 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.

3.8 Frequency Stability Measurement

3.8.1 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.

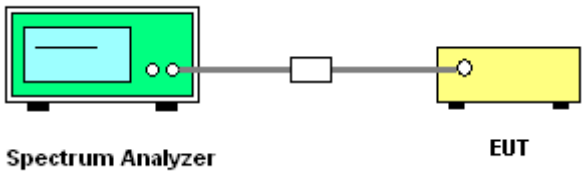
3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

3.8.3 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.

3.8.4 Test Setup



3.8.5 Test Result of Frequency Stability

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

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.68	5188.28	-3.86
44	5220	5211.68	5228.90	55.56
48	5240	5231.68	5248.26	-5.73
52	5260	5251.68	5268.28	-3.80
60	5300	5291.68	5308.28	-3.77
64	5320	5311.68	5328.28	-3.76
100	5500	5491.66	5508.28	-5.45
116	5580	5571.66	5588.28	-5.38
140	5700	5691.68	5708.28	-3.51

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

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.06	5188.90	-3.86
44	5220	5211.06	5228.90	-3.83
48	5240	5231.06	5248.90	-3.82
52	5260	5251.06	5268.90	-3.80
60	5300	5291.06	5308.88	-5.66
64	5320	5311.06	5328.90	-3.76
100	5500	5491.06	5508.90	-3.64
116	5580	5571.06	5588.90	-3.58
140	5700	5691.06	5708.90	-3.51

Test Mode :	Mode 19~25	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
38	5190	5171.76	5208.20	-3.85
46	5230	5211.76	5248.20	-3.82
54	5270	5251.80	5288.20	0.00
62	5310	5291.76	5328.20	-3.77
102	5510	5491.76	5528.20	-3.63
118	5590	5571.76	5608.20	-3.58
134	5670	5651.76	5688.20	-3.53

3.9 Antenna Requirements

3.9.1 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.

3.9.2 Antenna Connected Construction

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

3.9.3 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	Test Date	Due Date	Remark
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	Apr. 03, 2011	Feb. 24, 2012~ Mar. 23, 2012	Apr. 02, 2012	Conducted (TH02-HY)
Spectrum Analyzer	Agilent	E4445A	MY4820287	3Hz~13.2GHz	Nov. 02, 2011	Apr. 06, 2012	Nov. 01, 2013	Conducted (TH02-HY)
EMI Test Receive	R&S	ESCS 30	100356	9KHz ~ 2.75GHz	Oct. 27, 2011	Mar. 21, 2012	Oct. 26, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz ~ 30MHz	Dec. 09, 2011	Mar. 21, 2012	Dec. 08, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz ~ 30MHz	Dec. 06, 2011	Mar. 21, 2012	Dec. 05, 2012	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Mar. 21, 2012	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	117995	N/A	Jul. 28, 2011	Mar. 21, 2012	Jul. 27, 2012	Conduction (CO05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 22, 2011	Mar. 13, 2012~ Mar. 23, 2012	Oct. 21, 2012	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP30	101067	9KHz ~ 30GHz	Dec. 06, 2011	Mar. 13, 2012~ Mar. 23, 2012	Dec. 05, 2012	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 10, 2011	Mar. 13, 2012~ Mar. 23, 2012	Aug. 09, 2012	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz ~ 26.5GHz	Dec. 05, 2011	Mar. 13, 2012~ Mar. 23, 2012	Dec. 04, 2012	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10 ~ 1000MHz 32dB GAIN	Mar 29, 2011	Mar. 13, 2012~ Mar. 23, 2012	Mar 28, 2012	Radiation (03CH07-HY)
EMI TEST RECEIVER	R&S	ESCI 7	100724	9kHz ~ 7GHz	Aug. 22, 2011	Mar. 13, 2012~ Mar. 23, 2012	Aug. 21, 2012	Radiation (03CH07-HY)
Pre Amplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 18, 2011	Mar. 13, 2012~ Mar. 23, 2012	Jul. 17, 2012	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Mar. 13, 2012~ Mar. 23, 2012	Jul. 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 Uc(y)	**1.13**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(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 Uc(y)	**1.27**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(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 Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				