FCC RF Test Report

APPLICANT	:	VERTU Corporation Limited
EQUIPMENT	:	GSM/WCDMA Cellular Telephone with BT and WLAN
BRAND NAME	:	VERTU
MODEL NAME	:	RM-828V
MARKETING NAME	:	VERTU Ti
FCC ID	:	P7QRM-828V
STANDARD	:	FCC Part 15 Subpart E
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The product was received on Sep. 19, 2012 and completely tested on Oct. 23, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

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.

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APPENDIX A. PHOTOGRAPHS OF EUT

APPENDIX B. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR291928D	Rev. 01	Initial issue of report	Nov. 12, 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	15.407(a)(6)	A9.3	Peak Excursion Ratio	≤ 13dB	Pass	-
3.5	15.407(b)	A9.3	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 0.47 dB at 5149.900 MHz
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 14.50 dB at 0.198 MHz
3.7	15.407(g)	A9.5	Frequency Stability	Within Operation Band	Pass	-
3.8	15.407(c)	A9.5	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.9	15.203 & 15.407(a)	A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

VERTU Corporation Limited
Beacon Hill Road, Church Crookham, Hampshire GU52 8DY, United Kingdom

1.2 Manufacturer

VERTU Corporation Limited
Beacon Hill Road, Church Crookham, Hampshire GU52 8DY, United Kingdom

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	GSM/WCDMA Cellular Telephone with BT and WLAN
Brand Name	VERTU
Model Name	RM-828V
Marketing Name	VERTU Ti
FCC ID	P7QRM-828V
EUT supports Radios application	GSM/EGPRS/WCDMA/HSDPA WLAN 11abgn / Bluetooth / NFC
HW Version	F2.0
SW Version	4.0.4.A.0.1.30
EUT Stage	Identical Prototype

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

Product Specification subjective to this standard	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	**<5180 MHz ~ 5240 MHz>** 802.11a : 11.29 dBm / 0.0135 W 802.11n HT20 : 10.21 dBm / 0.0105 W 802.11n HT40: 10.47 dBm / 0.0111 W **<5260 MHz ~ 5320 MHz>** 802.11a : 10.83 dBm / 0.0121 W 802.11n HT20 : 10.38 dBm / 0.0109 W 802.11n HT40 : 10.45 dBm / 0.0111 W **<5500 MHz ~ 5700 MHz>** 802.11a : 11.31 dBm / 0.0135 W 802.11n HT20 : 10.12 dBm / 0.0103 W 802.11n HT40 : 10.04 dBm / 0.0101 W
Antenna Type	Monopole with Couple Antenna with gain 2.10 dBi
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)

Specification of Accessories complied with Test		
AC Adapter	**Brand Name**	VERTU
	Model Name	AC-31
Car Charger	**Brand Name**	VERTU
	Model Name	DC-30V
Portable Power Charger	**Brand Name**	VERTU
	Model Name	DC-15V
Battery	**Brand Name**	NOKIA
	Model Name	BL-5K
Earphone	**Brand Name**	VERTU
	Model Name	WH-3V
USB Cable 1	**Brand Name**	VERTU
	Model Name	CA-209DV
	Signal Line	1.2 meter shielded cable without ferrite core
USB Cable 2	**Brand Name**	VERTU
	Model Name	CA-210DV
	Signal Line	0.25 meter shielded cable without ferrite core
LCD Panel	**Brand Name**	CMI
	Model Name	Cleo
Camera (Main)	**Brand Name**	Toshiba
	Model Name	TCM8615MD
Camera (Front)	**Brand Name**	Sharp
	Model Name	RJ66HA101

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.**
	TH02-HY	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 v01r02
- ANSI C63.4-2003 and ANSI C63.10-2009
- 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.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
5.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
6.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
7.	LCD Monitor	Dell	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 KHz to 30 MHz) and radiated emission (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1	36	5180	44	5220
	38	**5190**	**46**	**5230**
	40	5200	48	5240

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2	52	5260	60	5300
	54	**5270**	**62**	**5310**
	56	5280	64	5320

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3	100	5500	116	5580
	102	**5510**	132	5660
	104	5520	**134**	**5670**
	108	5540	136	5680
	110	**5550**	140	5700
	112	5560		

Note: The above Frequency and Channel in boldface were 802.11n HT40.

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and antenna configurations as following table and the highest power data rates were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	11.31	11.08	10.93	11.07	10.89	11.03	11.11	11.18

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	10.38	10.32	10.32	10.36	10.32	10.31	10.34	10.20

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	10.47	10.26	10.33	10.24	10.36	10.42	10.36	10.43

2.3 Test Mode

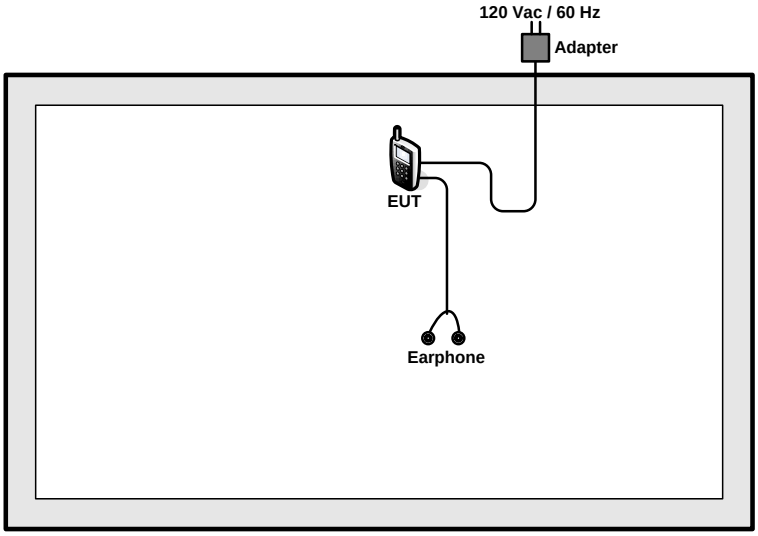
Final results of test modes, data rates and test channels are shown as following table.

Test Cases				
	Test Items	Mode	Data rate	Test Channel
Conducted TCs	26dB BW Power Spectral Density	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
	Output Power	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
	Peak Excursion	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
	Frequency Stability	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
Radiated TCs	Radiated Band Edge	802.11a	6 Mbps	L/H
		802.11n HT20	6.5 Mbps	L/H
		802.11n HT40	13.5 Mbps	L/H
	Radiated Spurious Emission	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
AC Conducted Emission	Mode 1 ： WCDMA Band IV Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone + Battery + USB Cable 1 (Data Link with Notebook)			

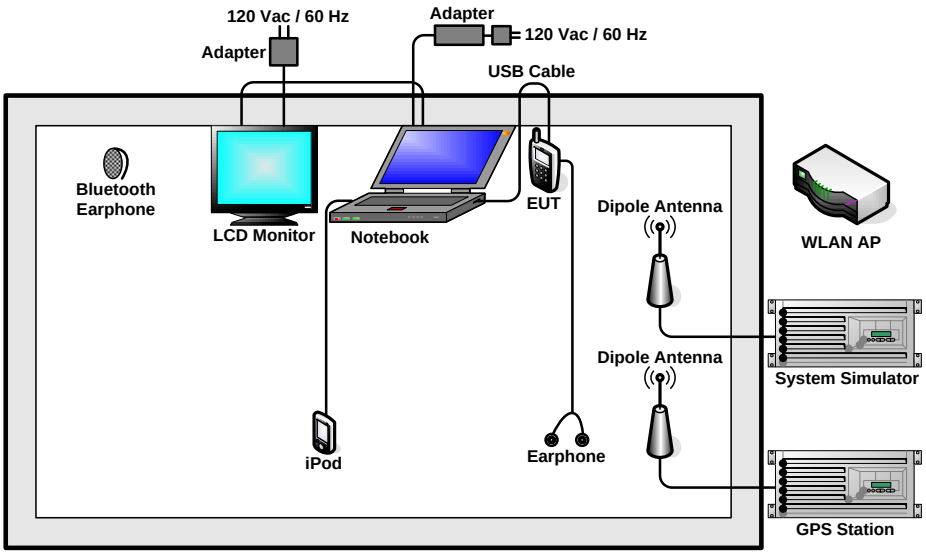
Ch. #		Band I：5150-5250 MHz		Band II：5250-5350 MHz		Band III：5470-5725 MHz	
		802.11a, 802.11n HT20	802.11n HT40	802.11a, 802.11n HT20	802.11n HT40	802.11a, 802.11n HT20	802.11n HT40
L	Low	36	38	52	54	100	102
M	Middle	44	-	60	-	116	110
H	High	48	46	64	62	140	134

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 RF Utility

For WLAN function, execute “QRCT.exe” installed in the notebook make the EUT provides functions like channel selection and power level for continuous transmitting and receiving signals..

3 Test Result

3.1 26dB Bandwidth Measurement

3.1.1 Description of Bandwidth Measurement

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

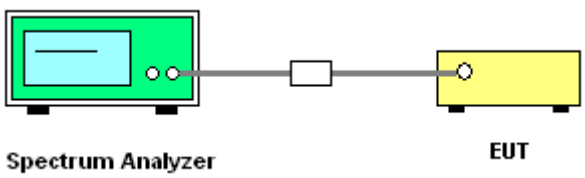
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r02. Section D) Emission bandwidth
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%.
7. Measure and record the results in the test report.

3.1.4 Test Setup

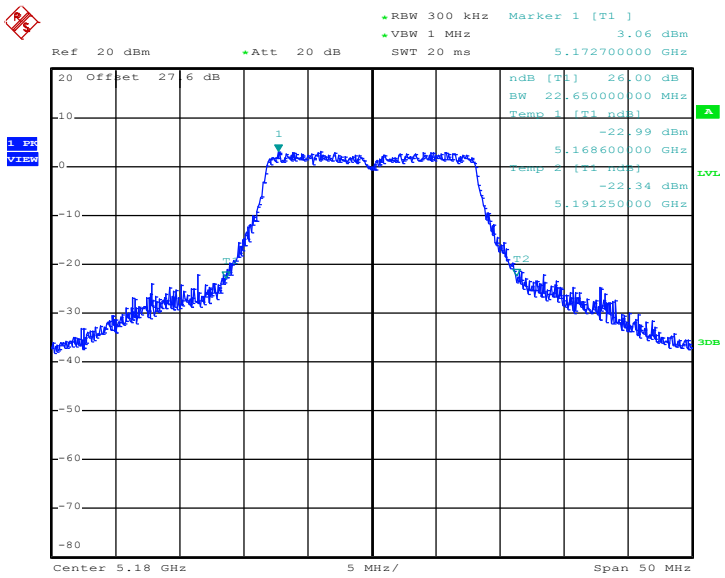


3.1.5 Test Result of 26dB Bandwidth Plots

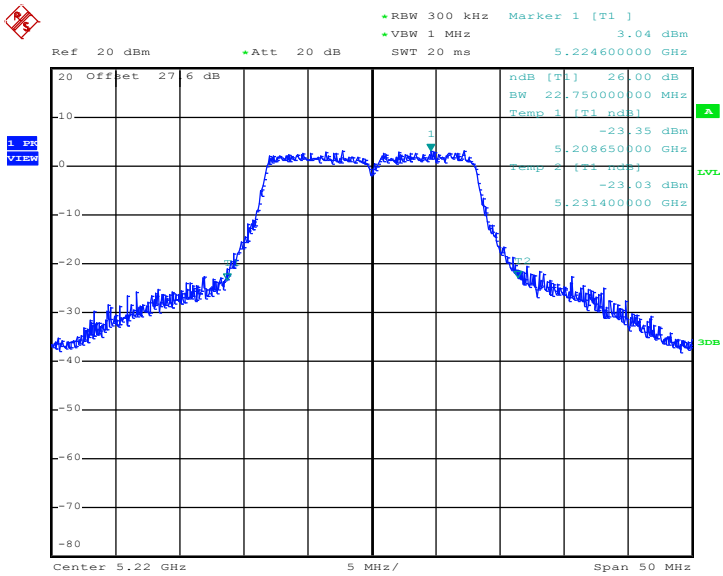
Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)	Pass/Fail
36	5180	22.650	N/A
44	5220	22.750	N/A
48	5240	22.600	N/A
52	5260	22.300	N/A
60	5300	22.600	N/A
64	5320	22.650	N/A
100	5500	22.800	N/A
116	5580	23.150	N/A
140	5700	22.950	N/A

26 dB Bandwidth Plot on 802.11a Channel 36



26 dB Bandwidth Plot on 802.11a Channel 44



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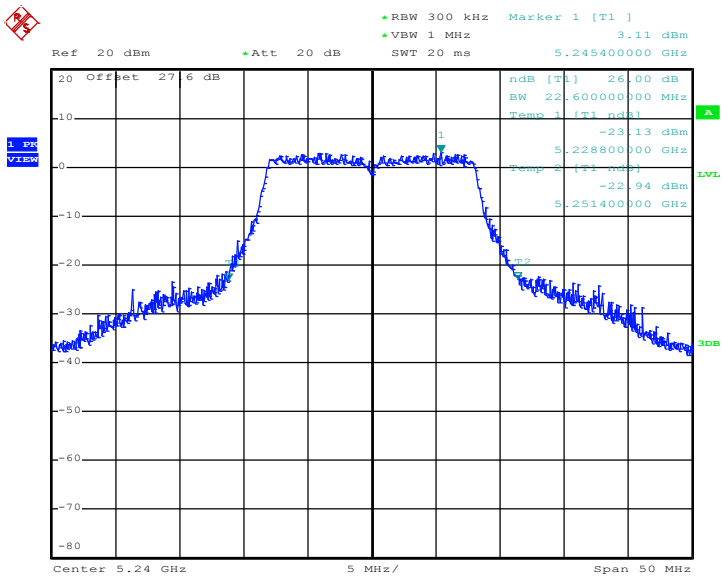
26 dB Bandwidth Plot on 802.11a Channel 48



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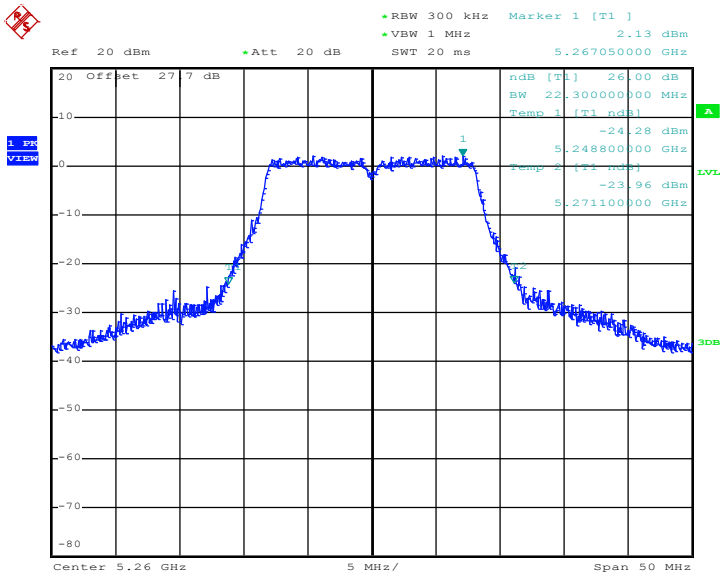
26 dB Bandwidth Plot on 802.11a Channel 52



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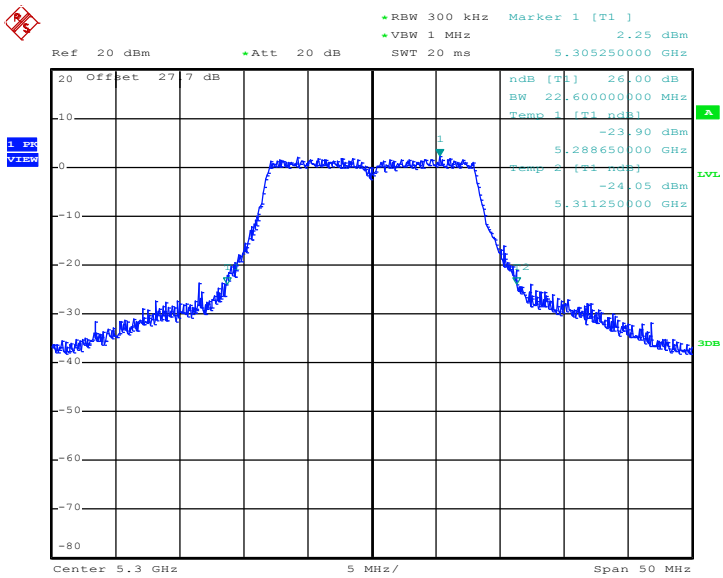
26 dB Bandwidth Plot on 802.11a Channel 60



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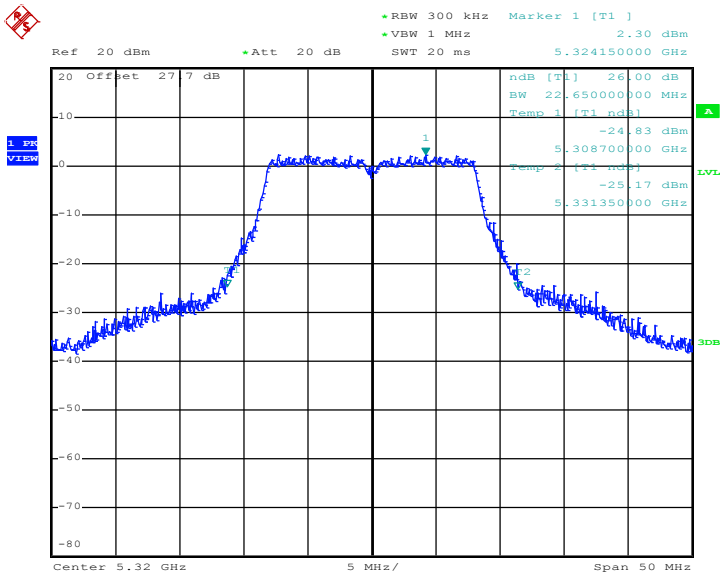
26 dB Bandwidth Plot on 802.11a Channel 64



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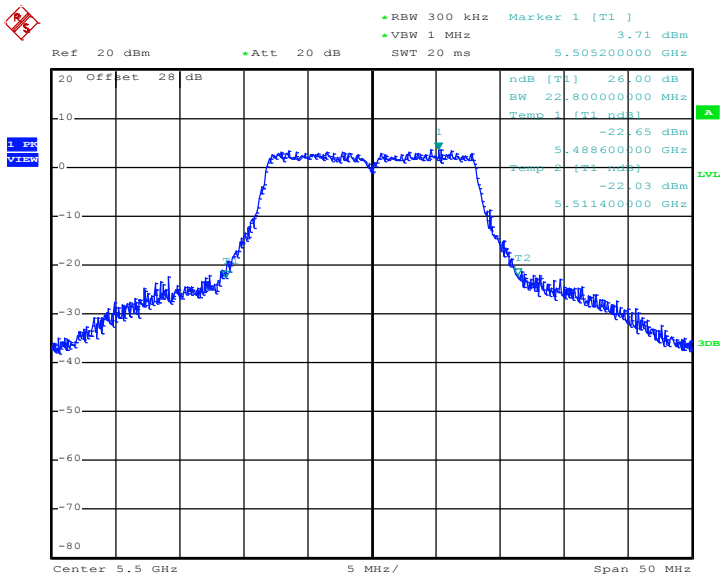
26 dB Bandwidth Plot on 802.11a Channel 100



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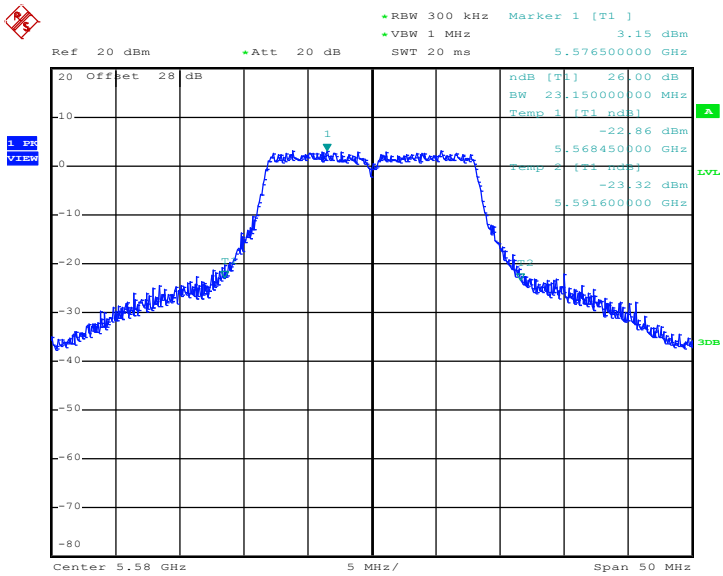
26 dB Bandwidth Plot on 802.11a Channel 116



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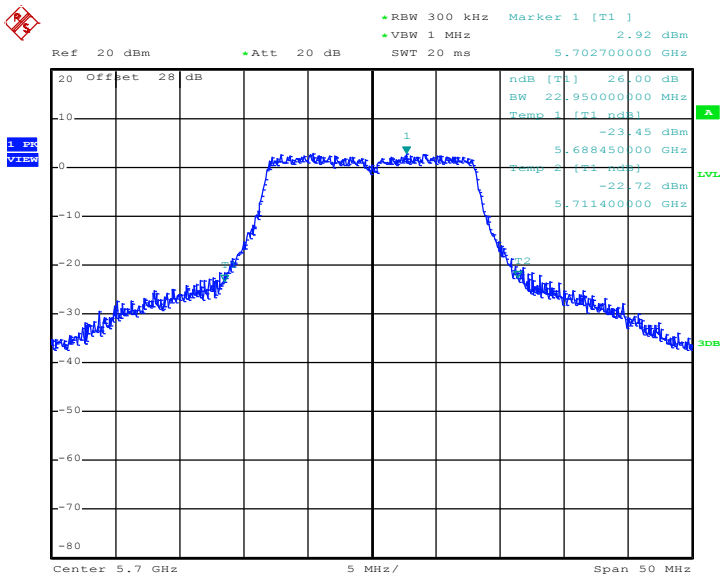
26 dB Bandwidth Plot on 802.11a Channel 140

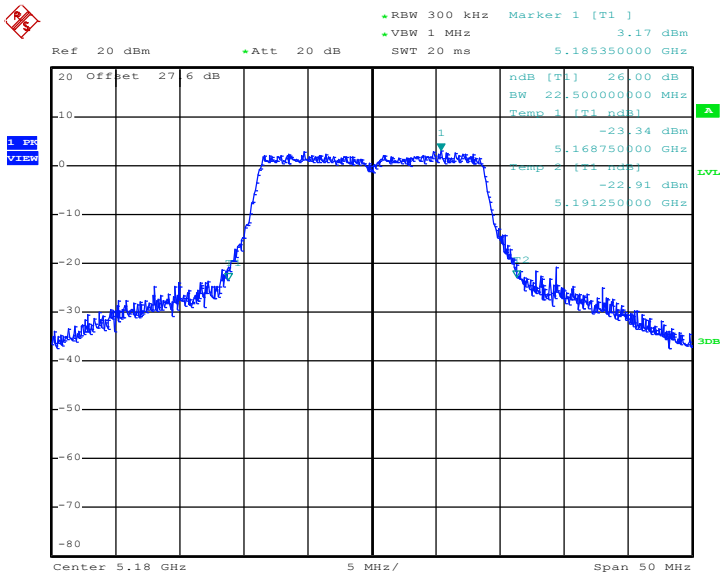


Date: 23.OCT.2012 22:14:55

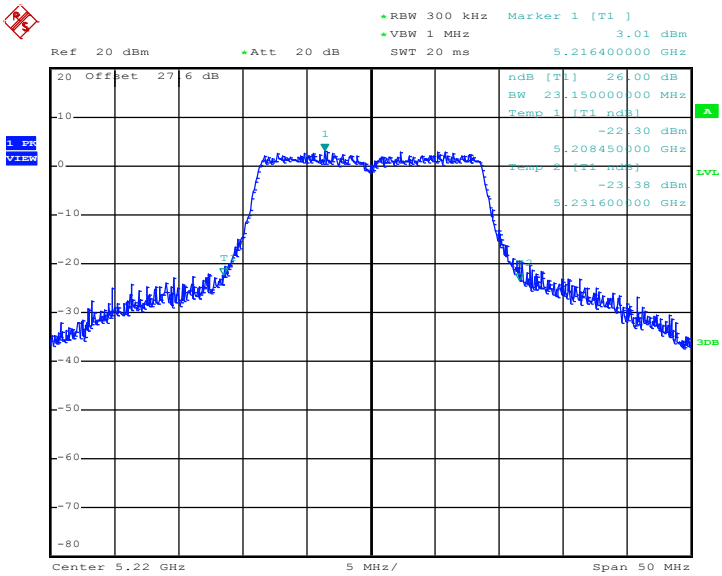
Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n HT20 26dB Bandwidth (MHz)	Pass/Fail
36	5180	22.500	N/A
44	5220	23.150	N/A
48	5240	22.900	N/A
52	5260	22.700	N/A
60	5300	23.200	N/A
64	5320	23.400	N/A
100	5500	22.750	N/A
116	5580	23.000	N/A
140	5700	23.300	N/A

26 dB Bandwidth Plot on 802.11n HT20 Channel 36



26 dB Bandwidth Plot on 802.11n HT20 Channel 44



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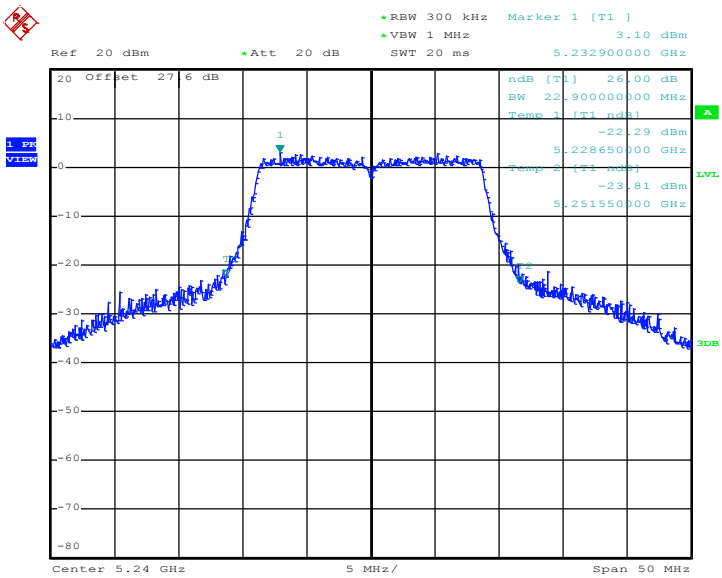
26 dB Bandwidth Plot on 802.11n HT20 Channel 48



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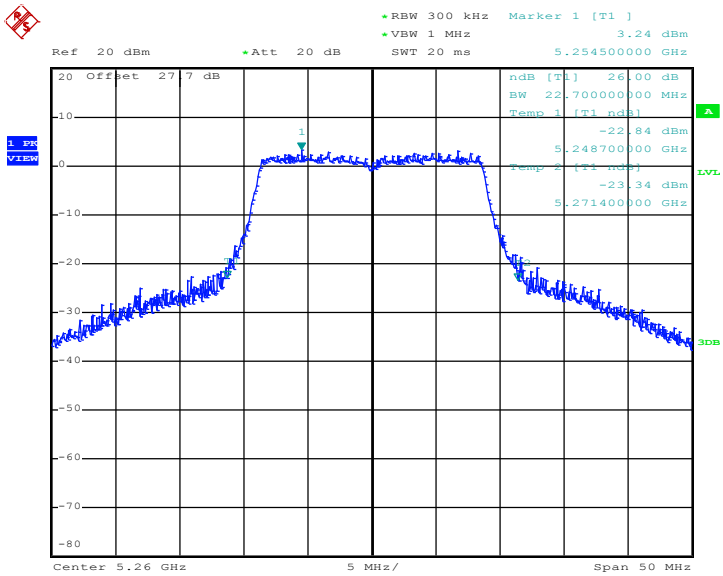
26 dB Bandwidth Plot on 802.11n HT20 Channel 52



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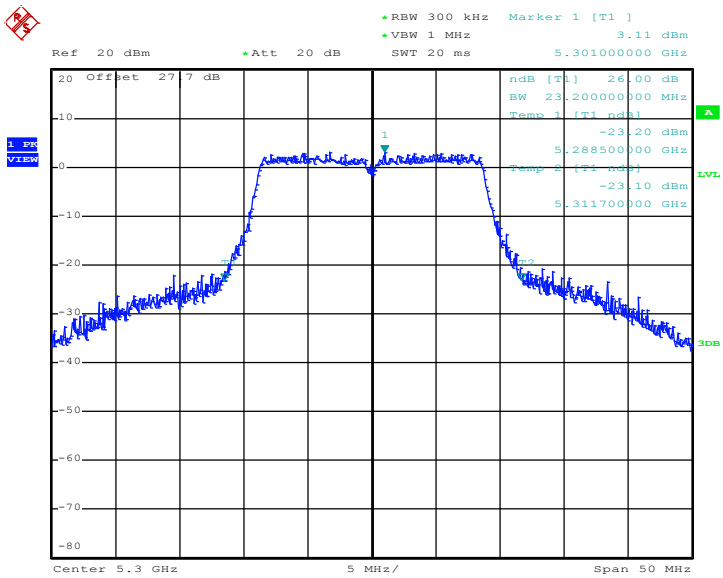
26 dB Bandwidth Plot on 802.11n HT20 Channel 60



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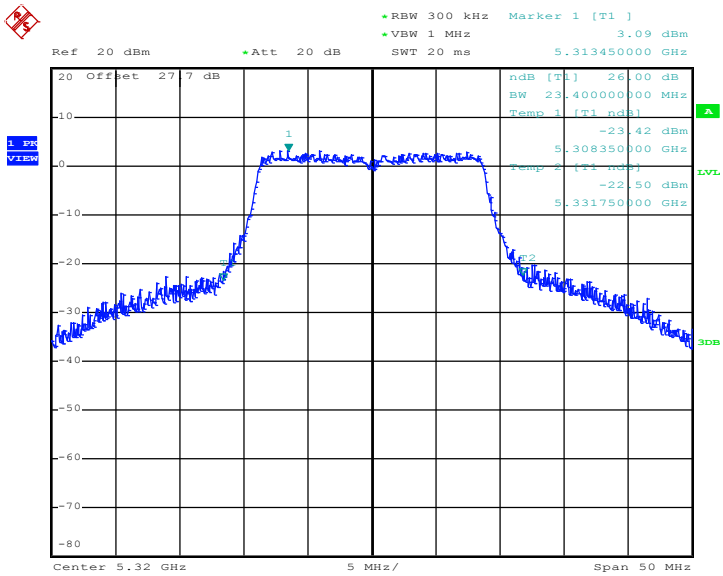
26 dB Bandwidth Plot on 802.11n HT20 Channel 64



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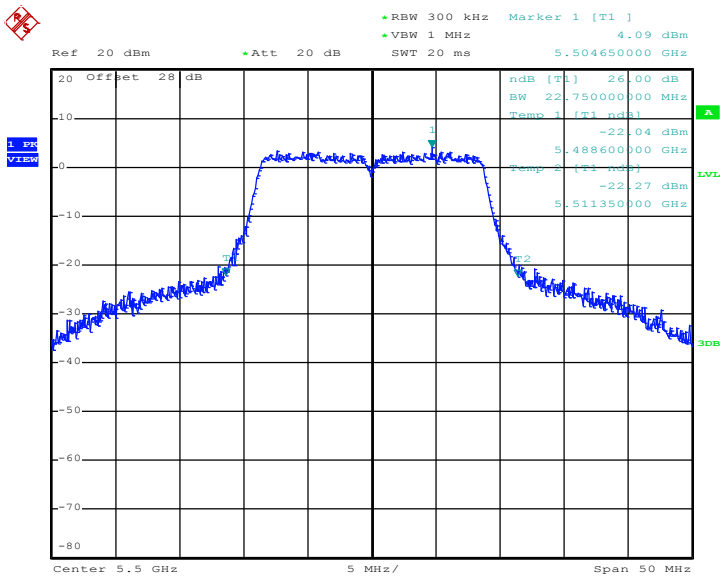
26 dB Bandwidth Plot on 802.11n HT20 Channel 100



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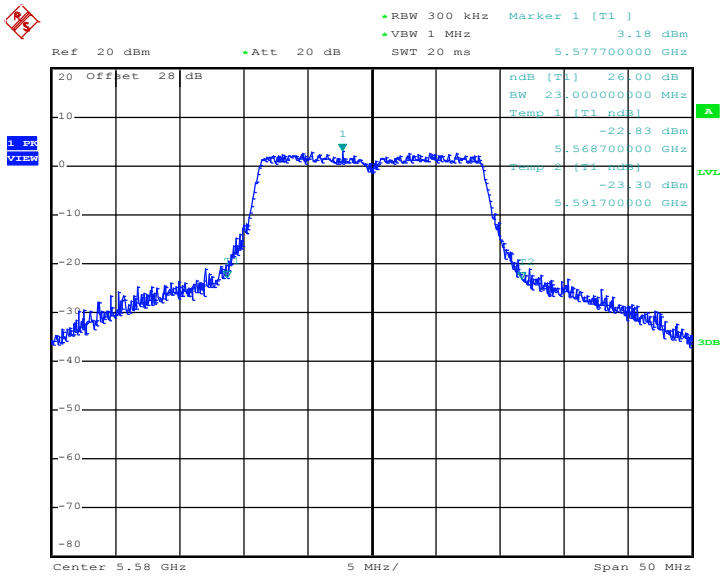
26 dB Bandwidth Plot on 802.11n HT20 Channel 116



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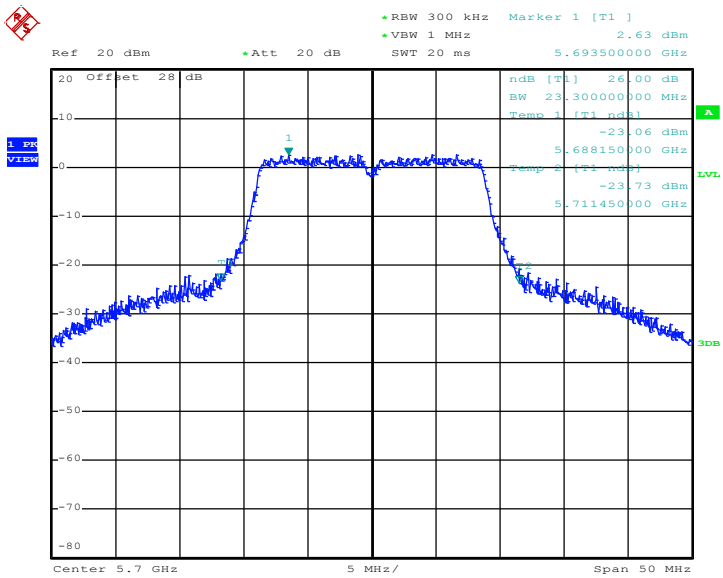
26 dB Bandwidth Plot on 802.11n HT20 Channel 140



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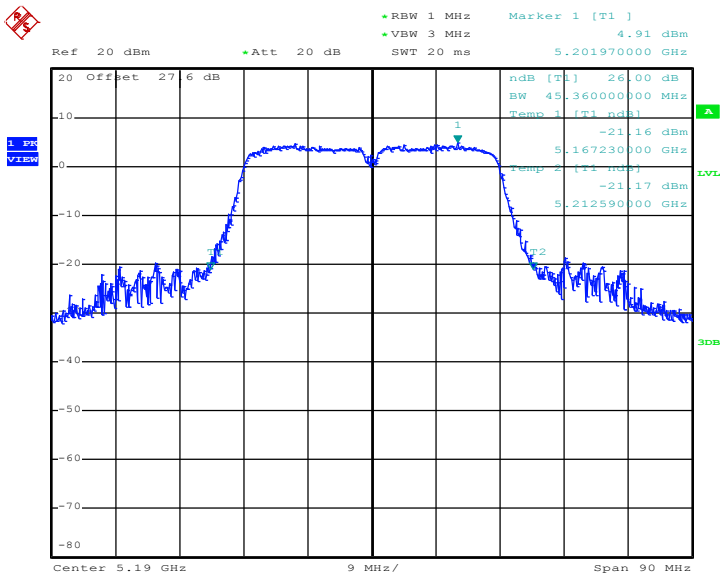
Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

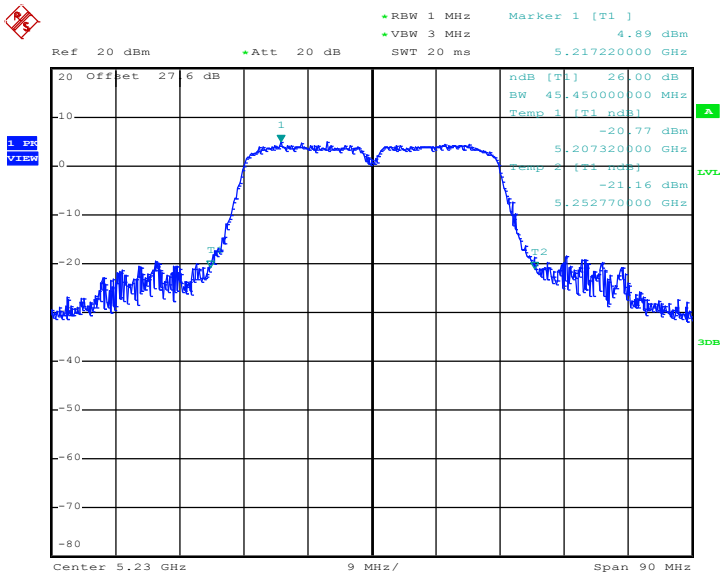
Channel	Frequency (MHz)	802.11n HT40 26dB Bandwidth (MHz)	Pass/Fail
38	5190	45.360	N/A
46	5230	45.450	N/A
54	5270	45.630	N/A
62	5310	44.910	N/A
102	5510	45.450	N/A
110	5550	45.450	N/A
134	5670	45.540	N/A

26 dB Bandwidth Plot on 802.11n HT40 Channel 38



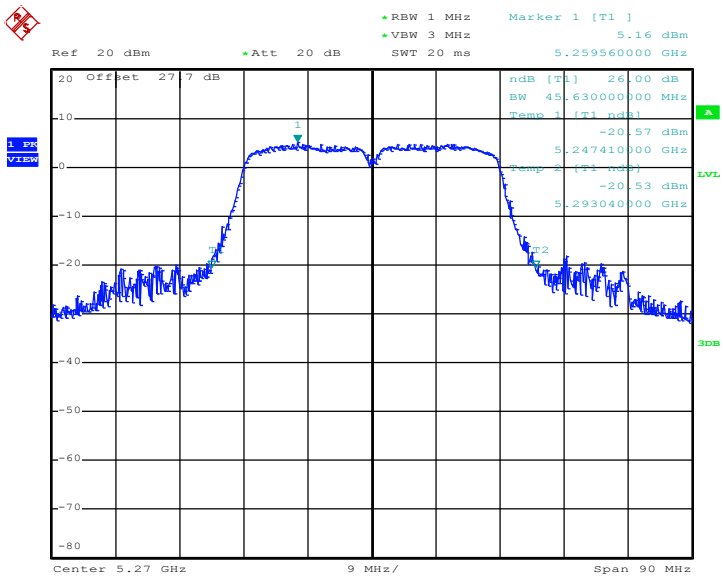
Date: 23.OCT.2012 23:02:35

26 dB Bandwidth Plot on 802.11n HT40 Channel 46



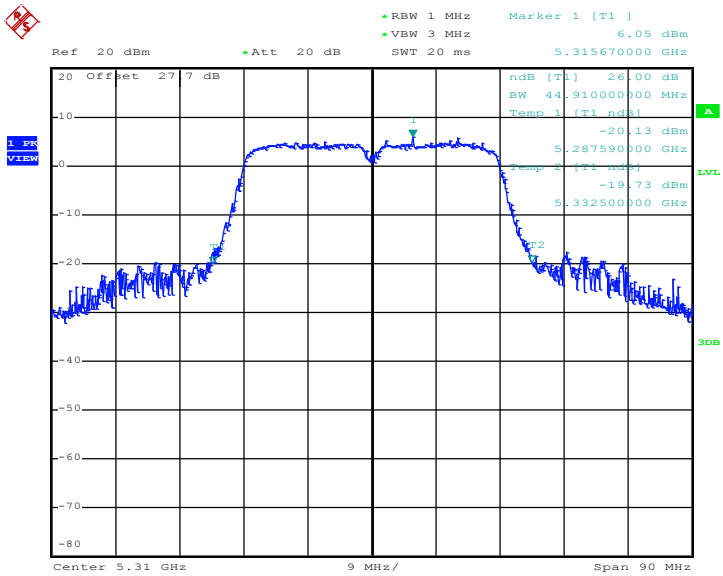
Date: 23.OCT.2012 23:05:34

26 dB Bandwidth Plot on 802.11n HT40 Channel 54



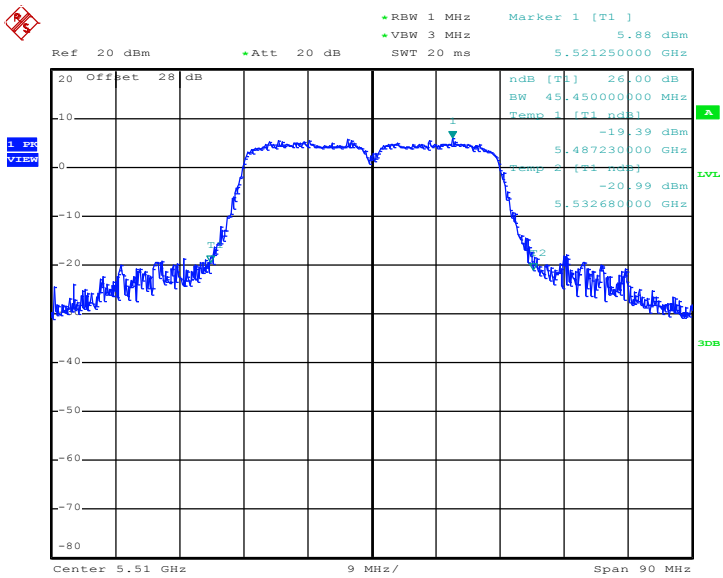
Date: 23.OCT.2012 23:08:56

26 dB Bandwidth Plot on 802.11n HT40 Channel 62



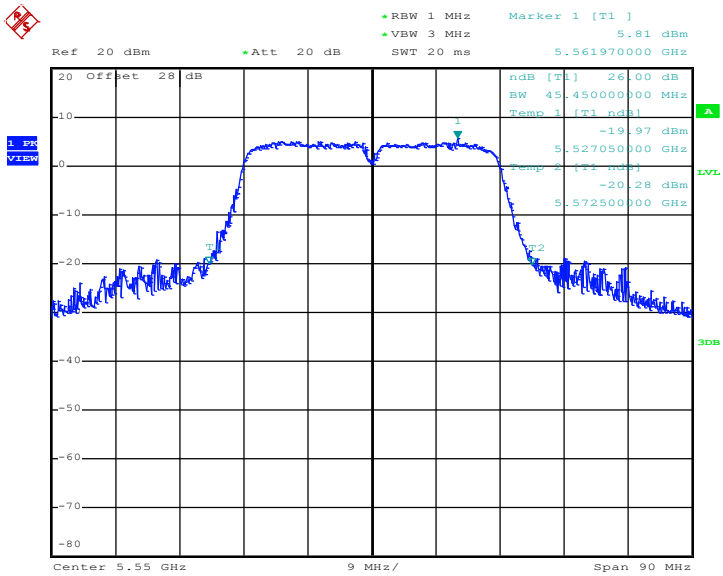
Date: 23.OCT.2012 23:11:36

26 dB Bandwidth Plot on 802.11n HT40 Channel 102



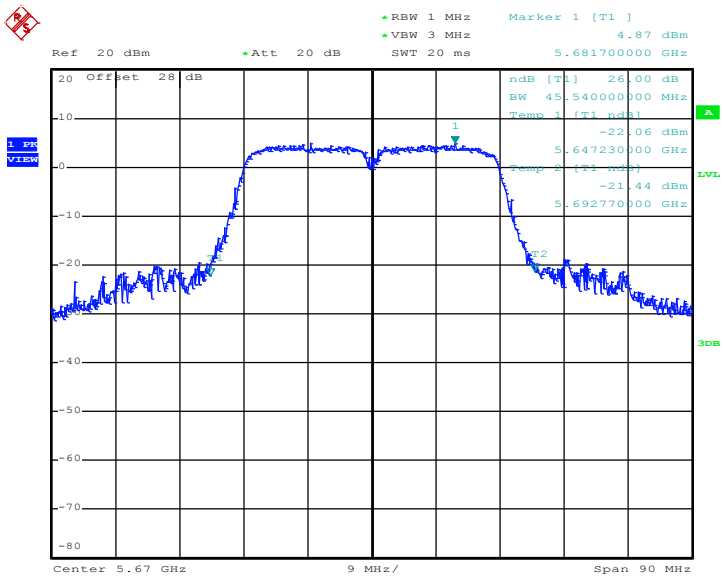
Date: 23.OCT.2012 23:15:38

26 dB Bandwidth Plot on 802.11n HT40 Channel 110



Date: 23.OCT.2012 23:17:53

26 dB Bandwidth Plot on 802.11n HT40 Channel 134



Date: 23.OCT.2012 23:20:47

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power 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, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power 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.

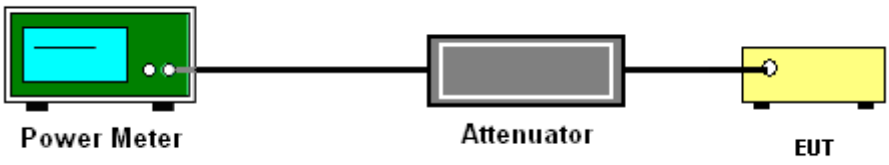
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r02.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%
Duty Cycle	87.26%	Duty Factor	0.59dB

Channel	Frequency (MHz)	802.11a Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	10.70	11.29	17	Pass
44	5220	10.16	10.75	17	Pass
48	5240	10.56	11.15	17	Pass
52	5260	10.06	10.65	24	Pass
60	5300	10.24	10.83	24	Pass
64	5320	9.97	10.56	24	Pass
100	5500	10.72	11.31	24	Pass
116	5580	10.51	11.10	24	Pass
140	5700	10.70	11.29	24	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. 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)
3. 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 :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%
Duty Cycle	86.49%	Duty Factor	0.63dB

Channel	Frequency (MHz)	802.11n HT20 Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	9.58	10.21	17	Pass
44	5220	9.51	10.14	17	Pass
48	5240	9.47	10.10	17	Pass
52	5260	9.64	10.27	24	Pass
60	5300	9.75	10.38	24	Pass
64	5320	9.57	10.20	24	Pass
100	5500	9.33	9.96	24	Pass
116	5580	9.44	10.07	24	Pass
140	5700	9.49	10.12	24	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. 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)
3. 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 :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%
Duty Cycle	86.49%	Duty Factor	0.63dB

Channel	Frequency (MHz)	802.11n HT40 Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
38	5190	9.84	10.47	17	Pass
46	5230	9.21	9.84	17	Pass
54	5270	9.26	9.89	24	Pass
62	5310	9.82	10.45	24	Pass
102	5510	9.41	10.04	24	Pass
110	5550	9.02	9.65	24	Pass
134	5670	8.87	9.50	24	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. 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)
3. 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)

3.3 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 1-MHz band. For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r02.
Section E) Peak power spectral density (PPSD).
Note: Though the rule refers to “peak power spectral density”, the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

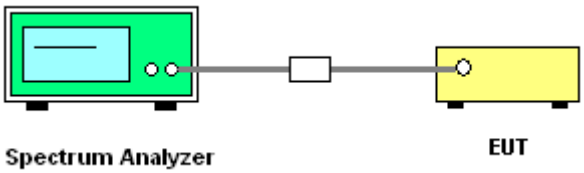
 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r02.
   - 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
   - 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



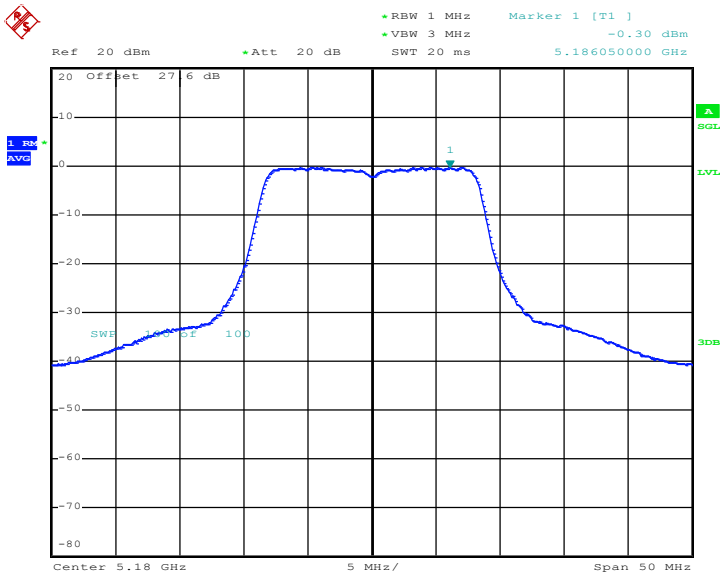
3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%
Duty Cycle:	87.26%	Duty Factor:	0.59dB

Channel	Frequency (MHz)	802.11a PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	-0.300	0.292	4	Pass
44	5220	-0.590	0.002	4	Pass
48	5240	-0.630	-0.038	4	Pass
52	5260	-1.490	-0.898	11	Pass
60	5300	-1.430	-0.838	11	Pass
64	5320	-1.290	-0.698	11	Pass
100	5500	0.140	0.732	11	Pass
116	5580	-0.410	0.182	11	Pass
140	5700	-0.780	-0.188	11	Pass

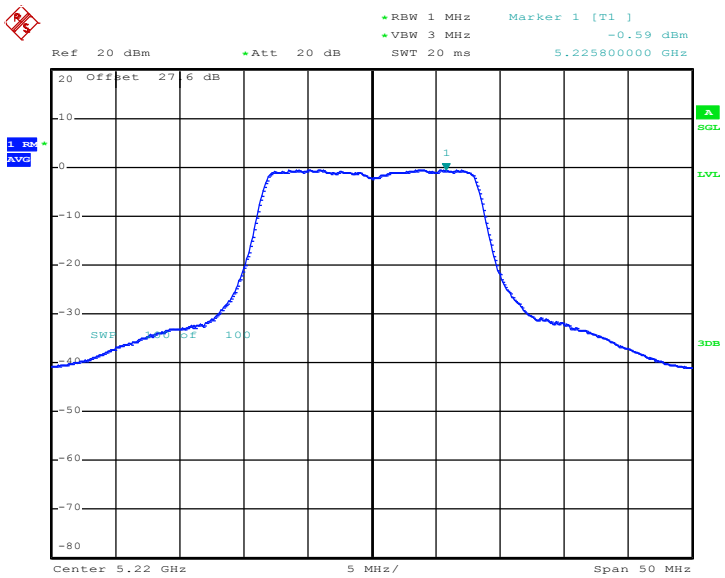
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11a Channel 36



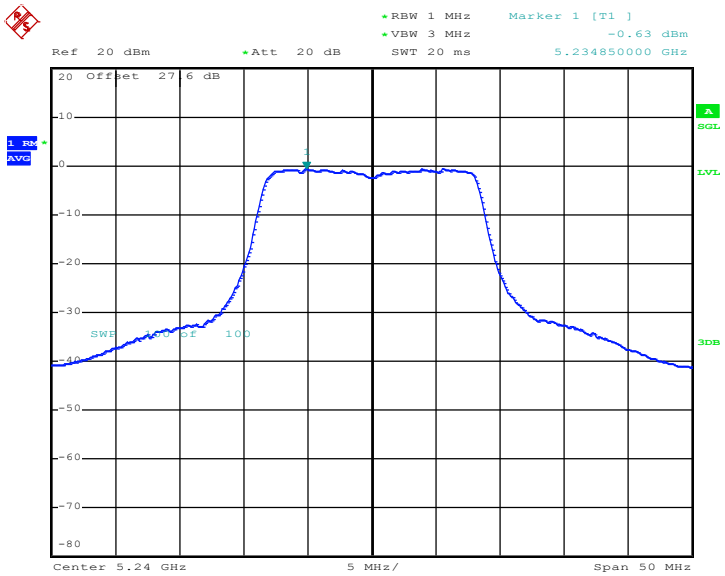
Date: 23.OCT.2012 23:40:25

PSD Plot on 802.11a Channel 44



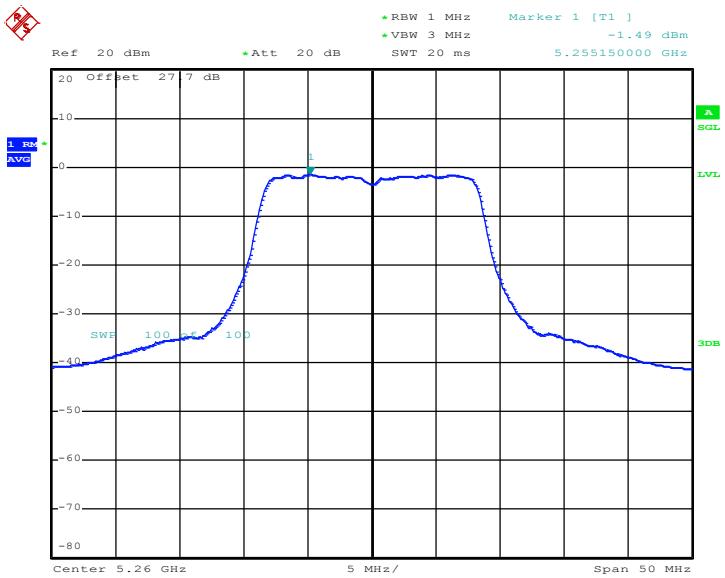
Date: 23.OCT.2012 21:44:04

PSD Plot on 802.11a Channel 48



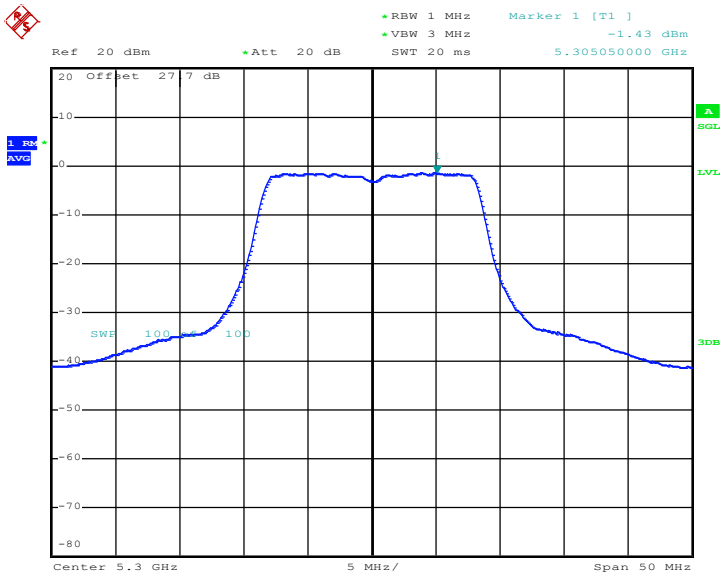
Date: 23.OCT.2012 21:48:28

PSD Plot on 802.11a Channel 52



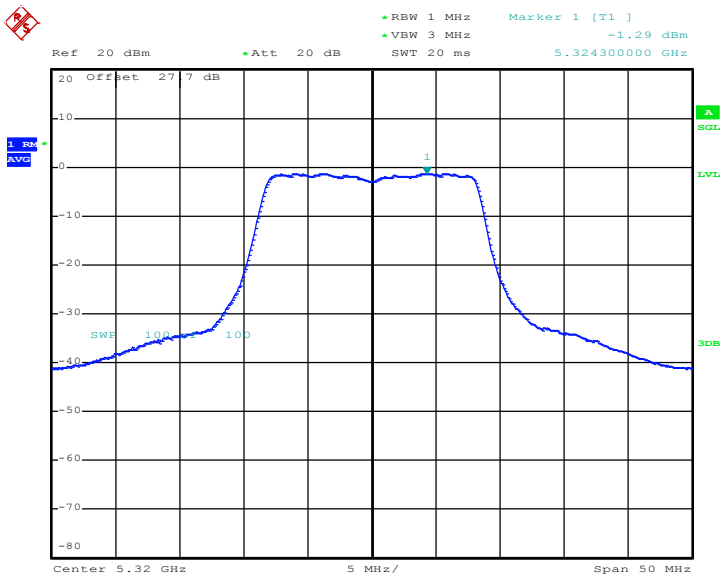
Date: 23.OCT.2012 21:52:24

PSD Plot on 802.11a Channel 60



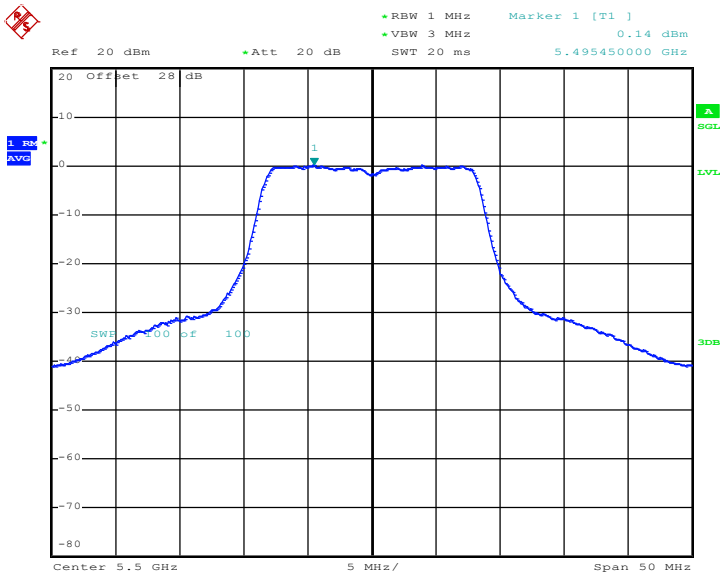
Date: 23.OCT.2012 21:56:39

PSD Plot on 802.11a Channel 64



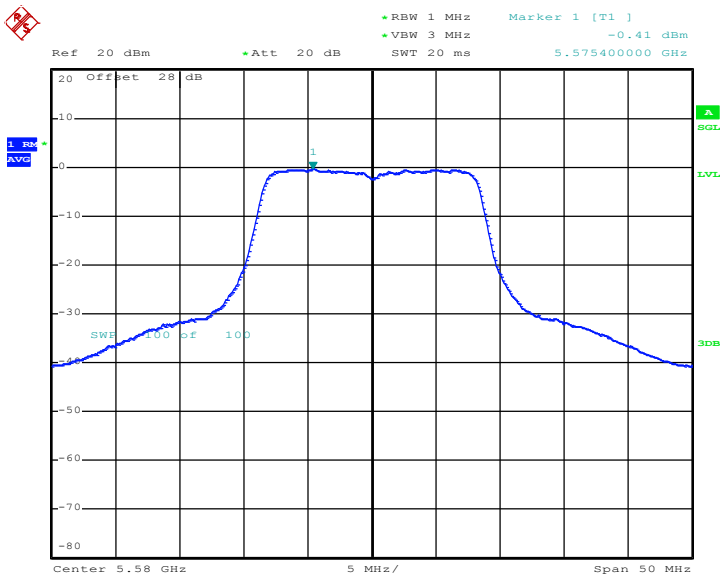
Date: 23.OCT.2012 21:59:24

PSD Plot on 802.11a Channel 100



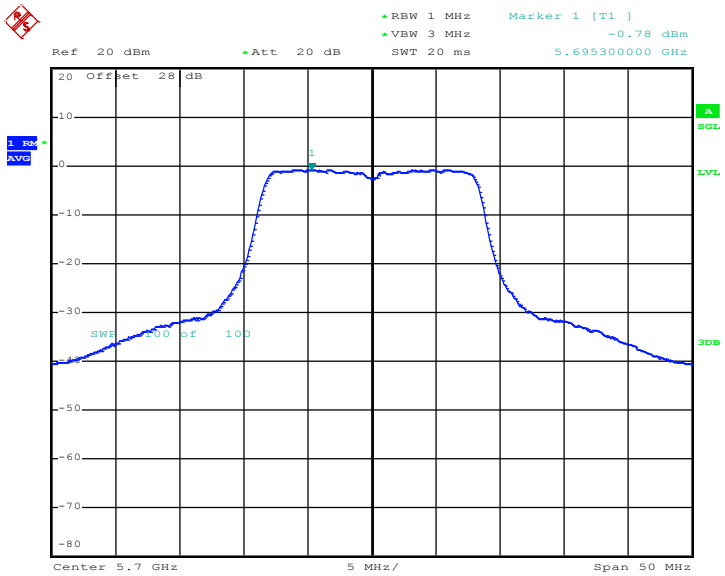
Date: 23.OCT.2012 22:05:44

PSD Plot on 802.11a Channel 116



Date: 23.OCT.2012 22:12:22

PSD Plot on 802.11a Channel 140



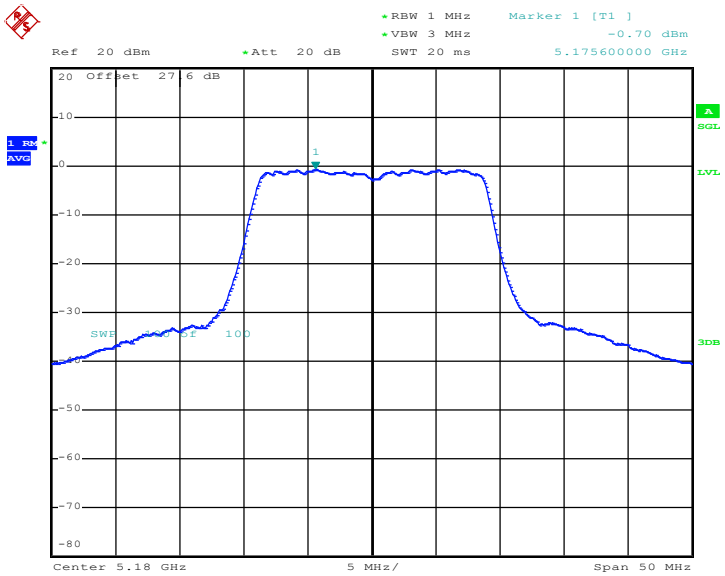
Date: 23.OCT.2012 22:15:12

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%
Duty Cycle:	86.49%	Duty Factor:	0.63dB

Channel	Frequency (MHz)	802.11n HT20 PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	-0.700	-0.069	4	Pass
44	5220	-0.740	-0.109	4	Pass
48	5240	-0.940	-0.309	4	Pass
52	5260	-0.850	-0.219	11	Pass
60	5300	-0.550	0.081	11	Pass
64	5320	-0.510	0.121	11	Pass
100	5500	-0.210	0.421	11	Pass
116	5580	-0.730	-0.099	11	Pass
140	5700	-0.940	-0.309	11	Pass

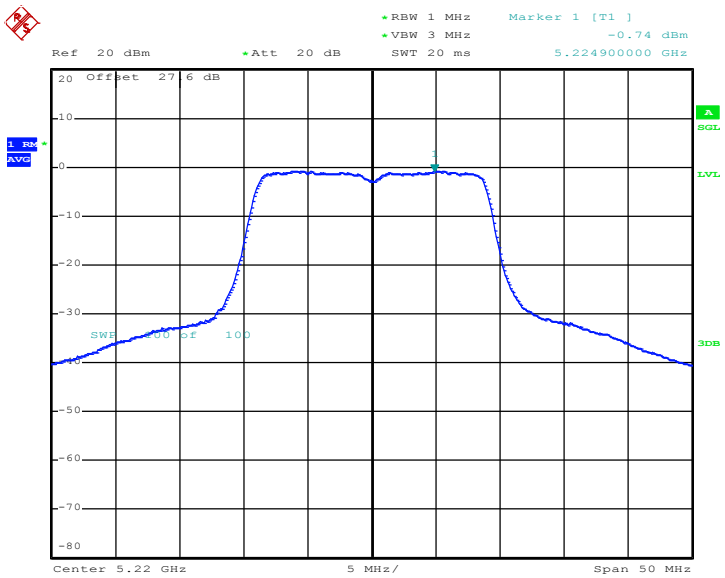
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11n HT20 channel 36



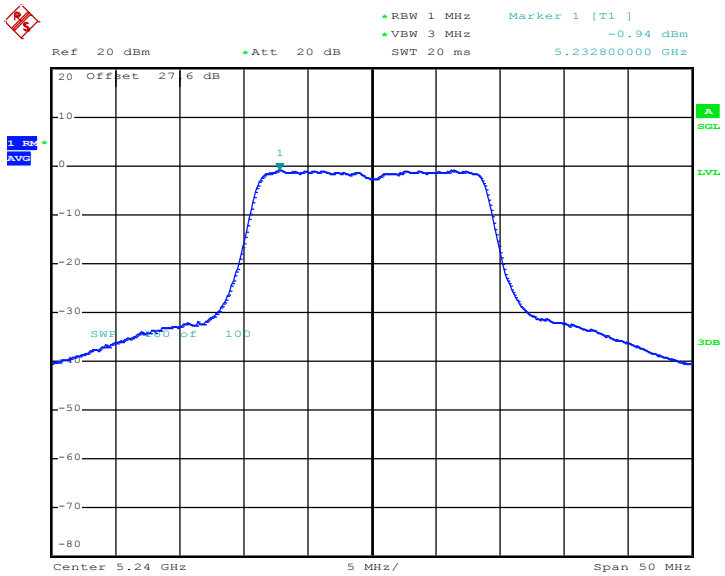
Date: 23.OCT.2012 22:32:53

PSD Plot on 802.11n HT20 Channel 44



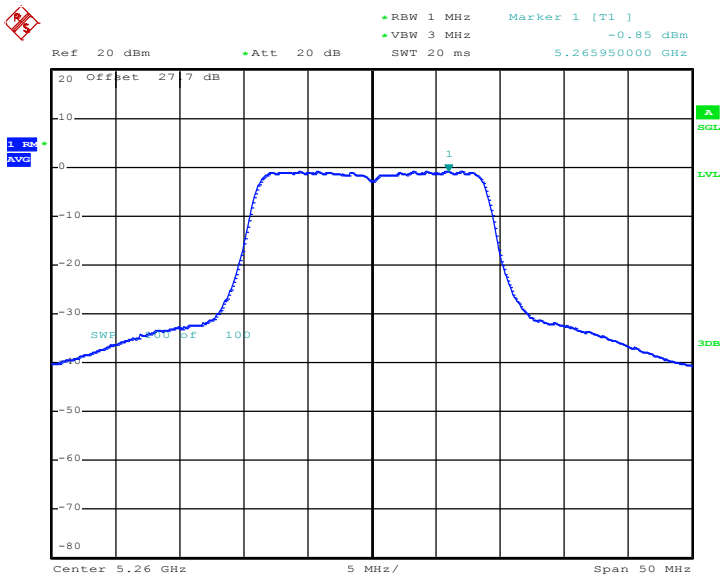
Date: 23.OCT.2012 22:37:23

PSD Plot on 802.11n HT20 Channel 48



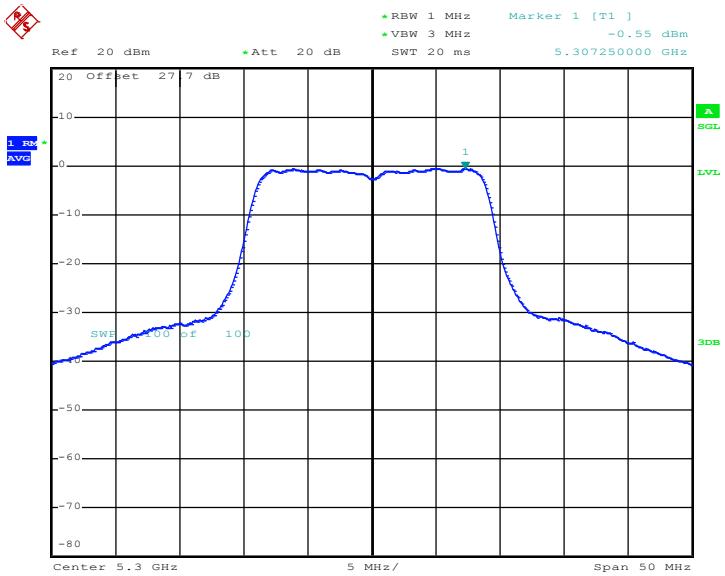
Date: 23.OCT.2012 22:39:45

PSD Plot on 802.11n HT20 Channel 52



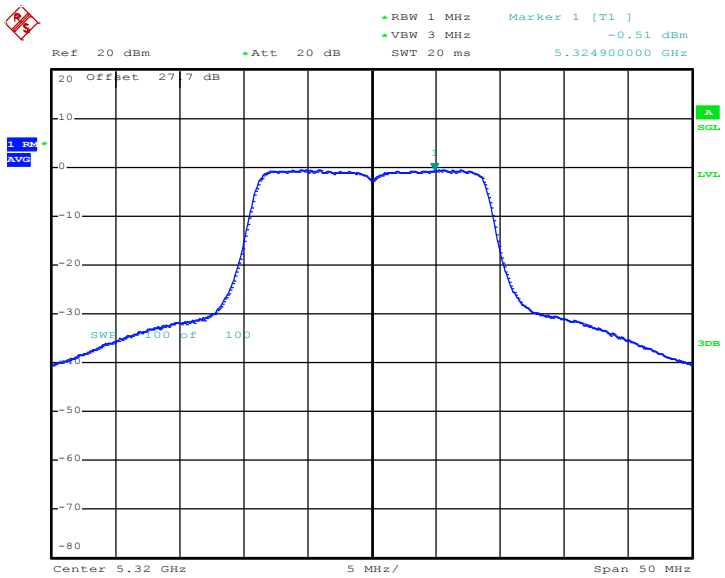
Date: 23.OCT.2012 22:42:38

PSD Plot on 802.11n HT20 Channel 60



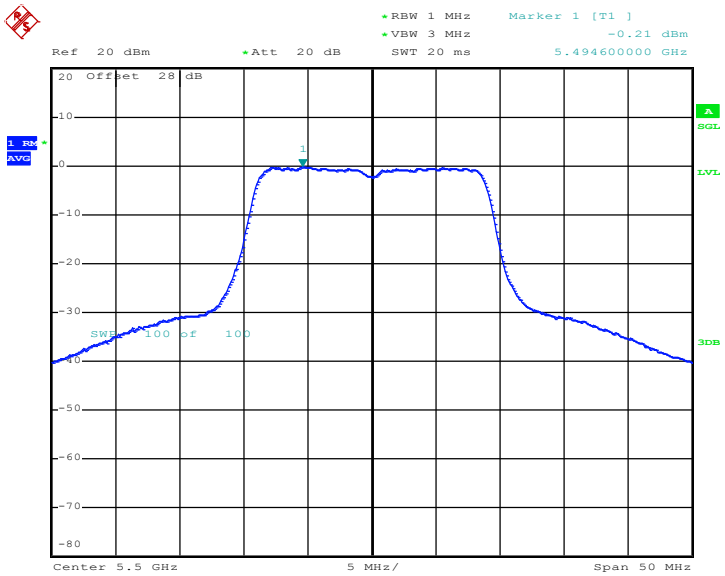
Date: 23.OCT.2012 22:45:08

PSD Plot on 802.11n HT20 Channel 64



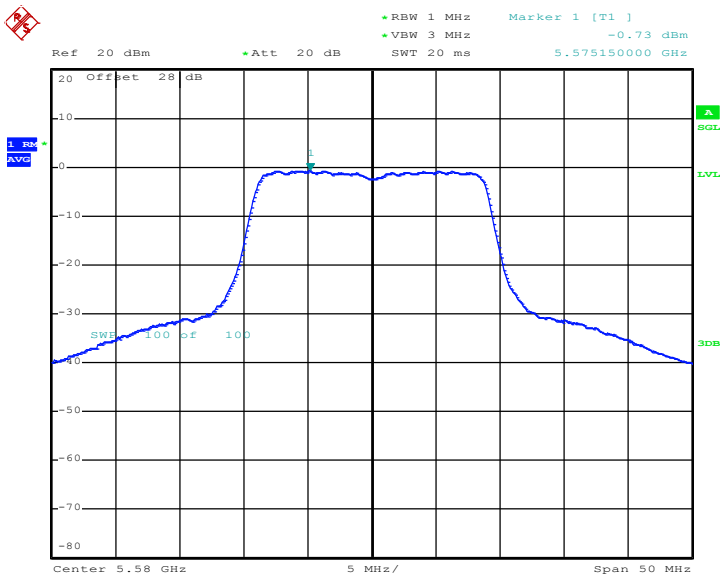
Date: 23.OCT.2012 22:48:08

PSD Plot on 802.11n HT20 Channel 100



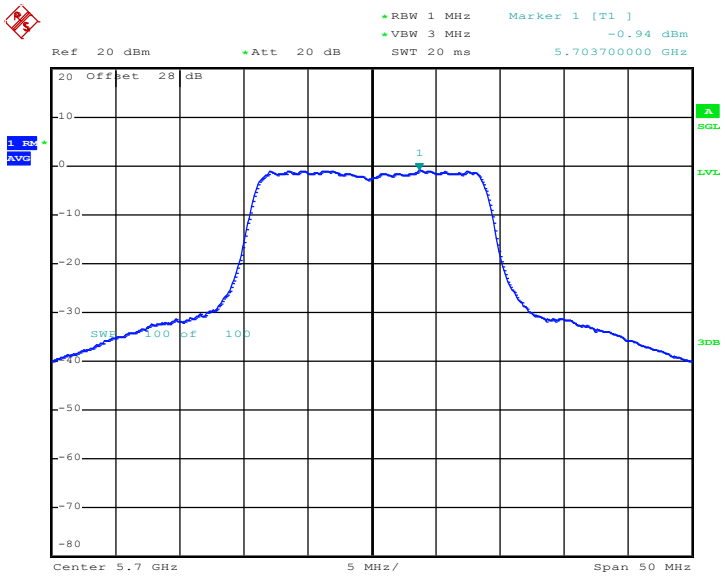
Date: 23.OCT.2012 22:51:56

PSD Plot on 802.11n HT20 Channel 116



Date: 23.OCT.2012 22:55:25

PSD Plot on 802.11n HT20 Channel 140



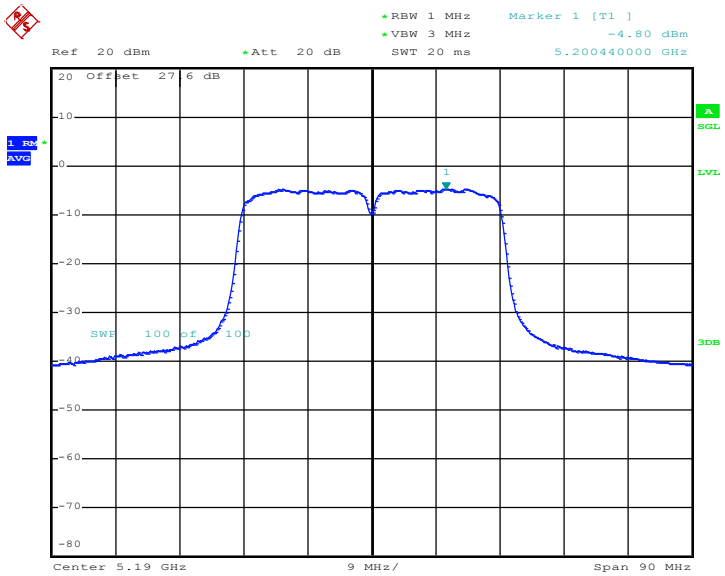
Date: 23.OCT.2012 22:58:38

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%
Duty Cycle:	86.49%	Duty Factor:	0.63dB

Channel	Frequency (MHz)	802.11n HT40 PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
38	5190	-4.800	-4.169	4	Pass
46	5230	-4.820	-4.189	4	Pass
54	5270	-4.550	-3.919	11	Pass
62	5310	-4.280	-3.649	11	Pass
102	5510	-3.970	-3.339	11	Pass
110	5550	-4.270	-3.639	11	Pass
134	5670	-4.730	-4.099	11	Pass

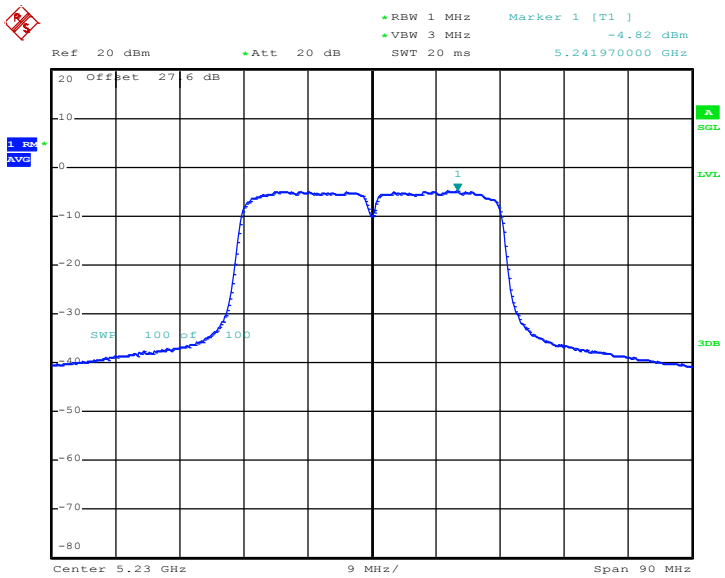
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11n HT40 Channel 38



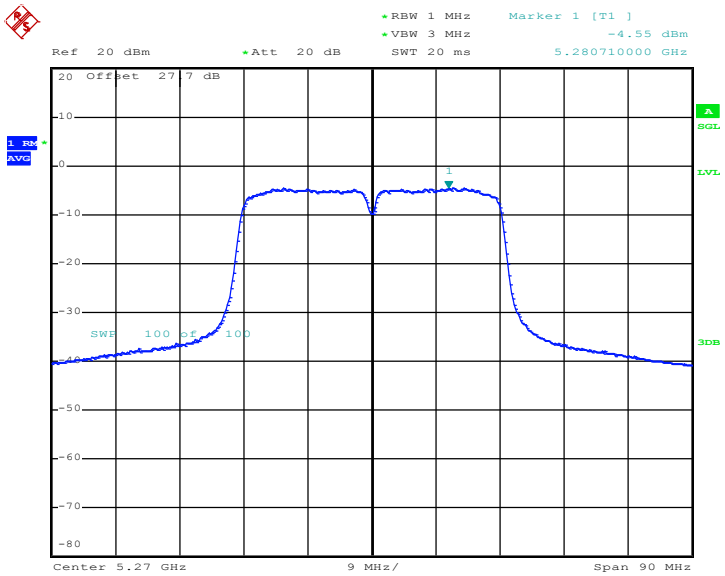
Date: 23.OCT.2012 23:02:53

PSD Plot on 802.11n HT40 Channel 46



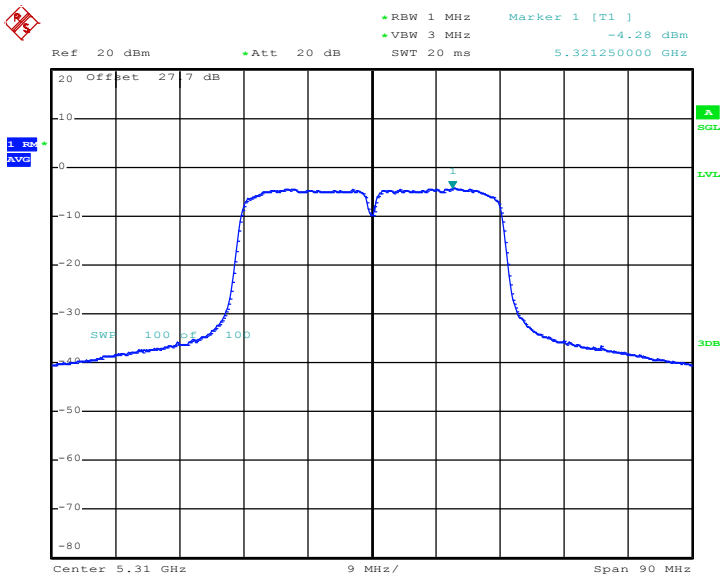
Date: 23.OCT.2012 23:06:13

PSD Plot on 802.11n HT40 Channel 54



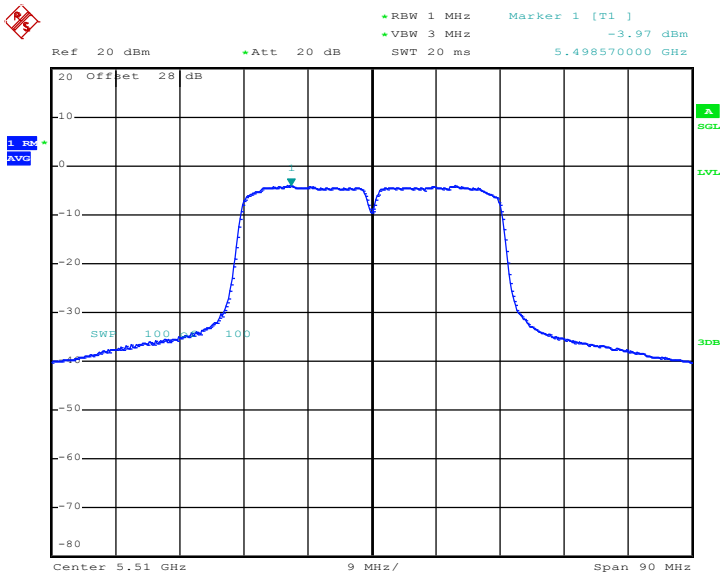
Date: 23.OCT.2012 23:09:19

PSD Plot on 802.11n HT40 Channel 62



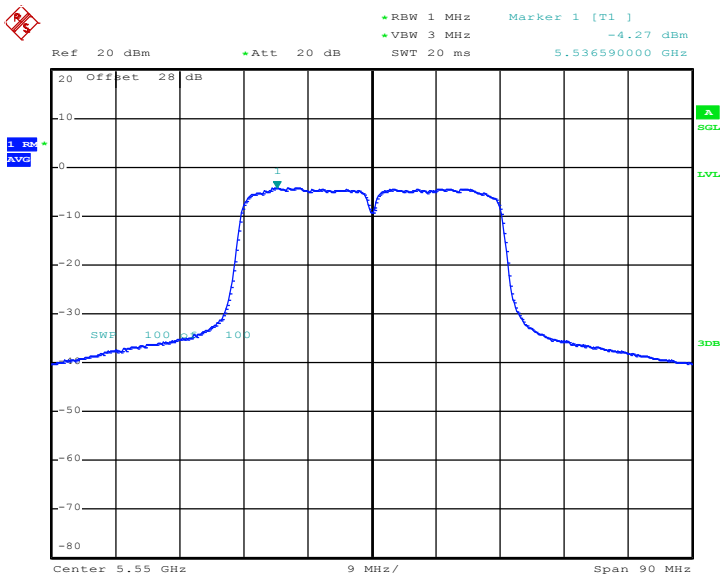
Date: 23.OCT.2012 23:11:53

PSD Plot on 802.11n HT40 Channel 102



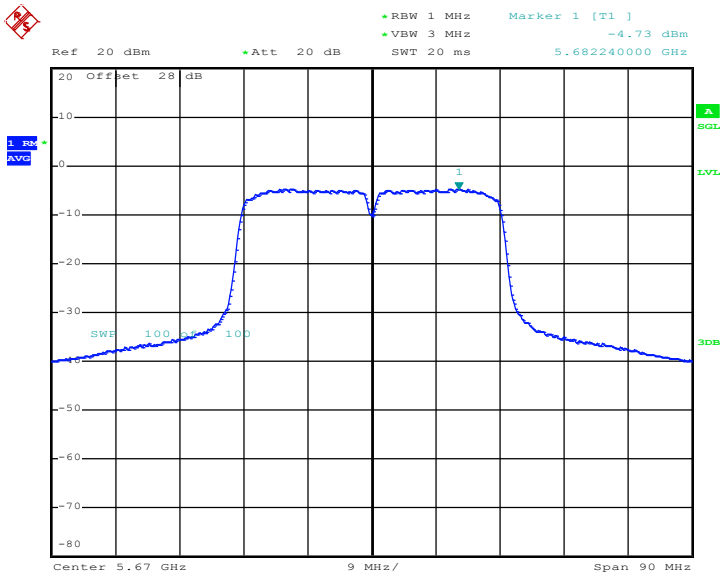
Date: 23.OCT.2012 23:15:55

PSD Plot on 802.11n HT40 Channel 110



Date: 23.OCT.2012 23:18:10

PSD Plot on 802.11n HT40 Channel 134



Date: 23.OCT.2012 23:21:03

3.4 Peak Excursion Ratio Measurement

3.4.1 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.

3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

T The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r02.

Section F) Peak excursion measurement

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 = 1MHz.

   *Set VBW ≥ 3MHz.

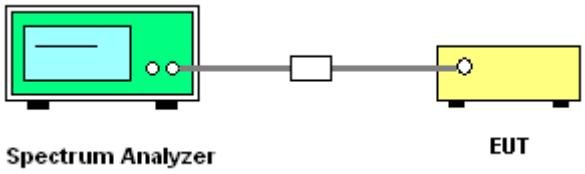
   *Detector = peak.

   *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.

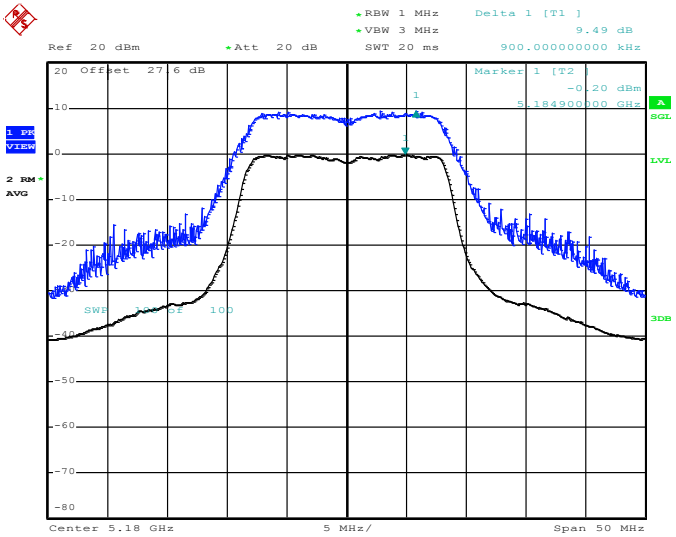
3.4.4 Test Setup



3.4.5 Test Result of Peak Excursion Ratio

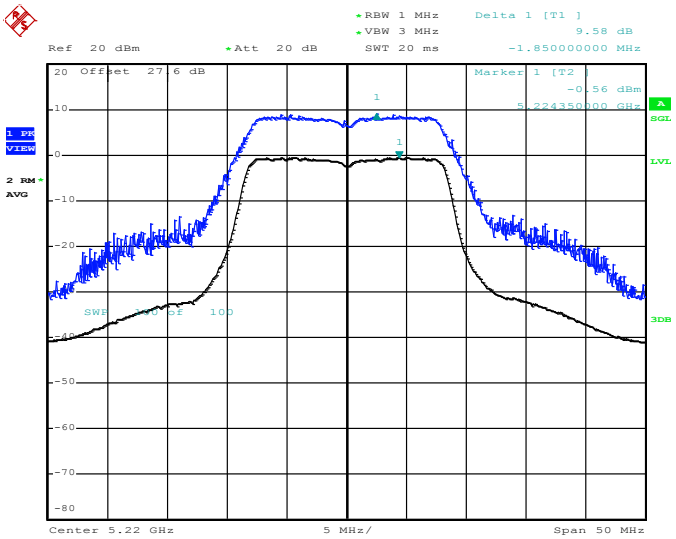
Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Peak Excursion Ratio Plot on 802.11a Channel 36



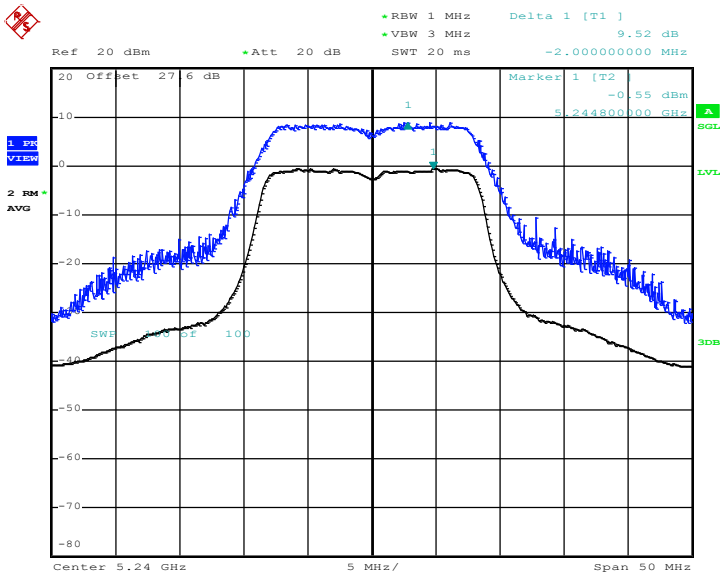
Date: 23.OCT.2012 23:40:43

Peak Excursion Ratio Plot on 802.11a Channel 44



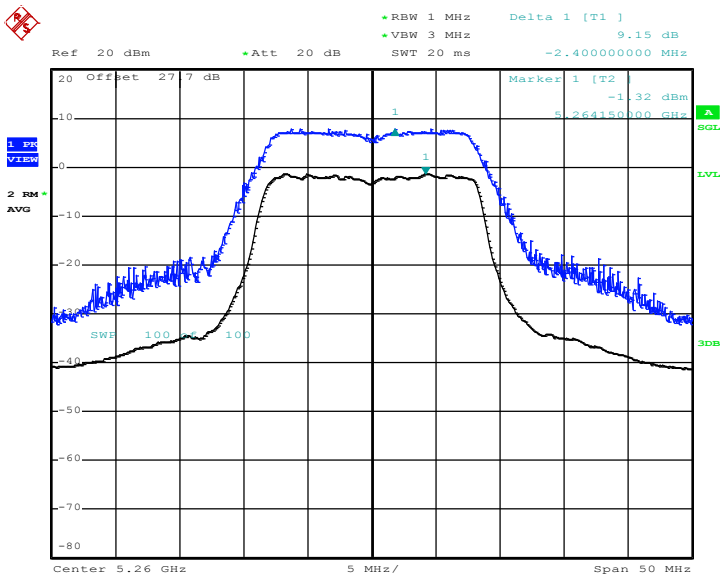
Date: 23.OCT.2012 21:44:24

Peak Excursion Ratio Plot on 802.11a Channel 48



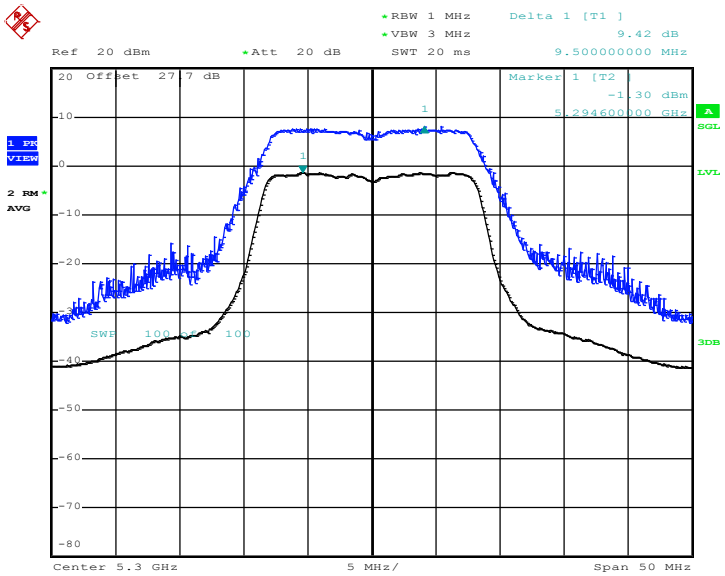
Date: 23.OCT.2012 21:48:48

Peak Excursion Ratio Plot on 802.11a Channel 52



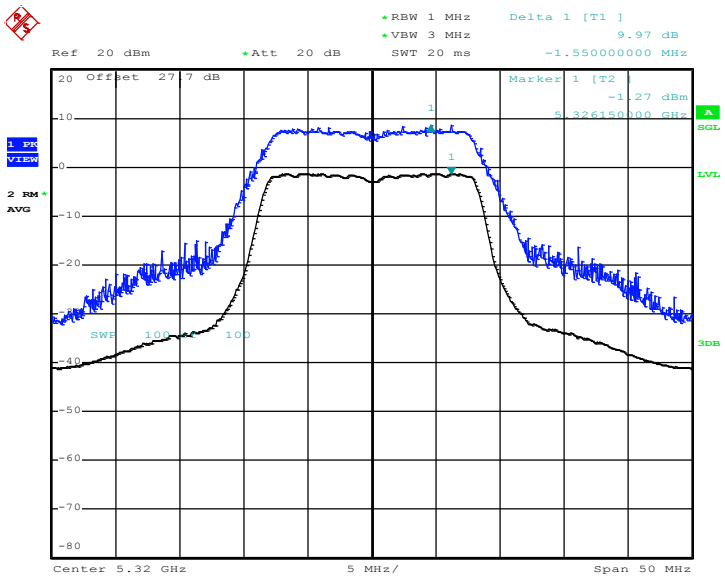
Date: 23.OCT.2012 21:52:48

Peak Excursion Ratio Plot on 802.11a Channel 60



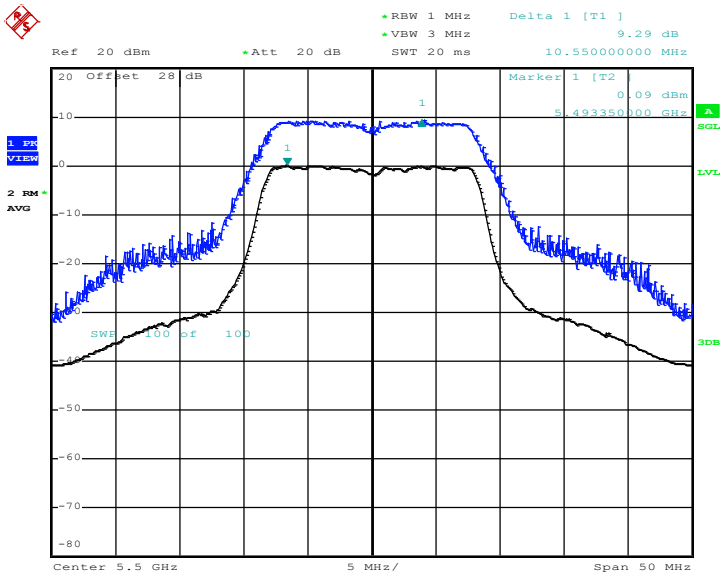
Date: 23.OCT.2012 21:56:57

Peak Excursion Ratio Plot on 802.11a Channel 64



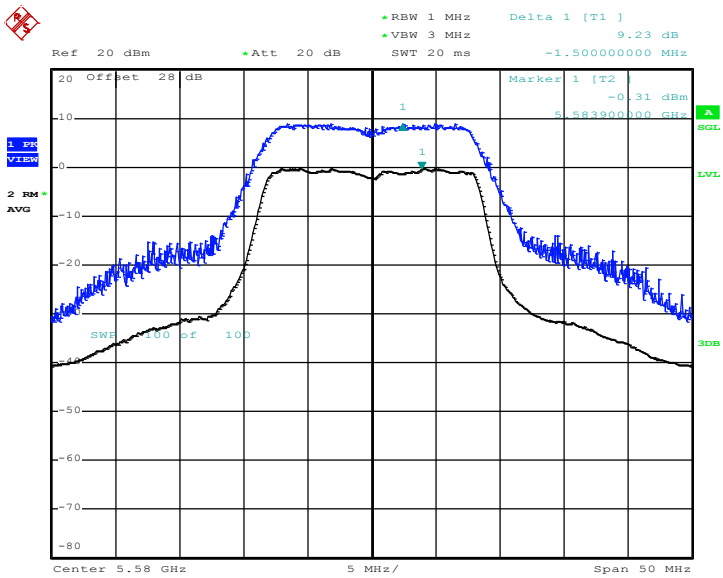
Date: 23.OCT.2012 21:59:42

Peak Excursion Ratio Plot on 802.11a Channel 100



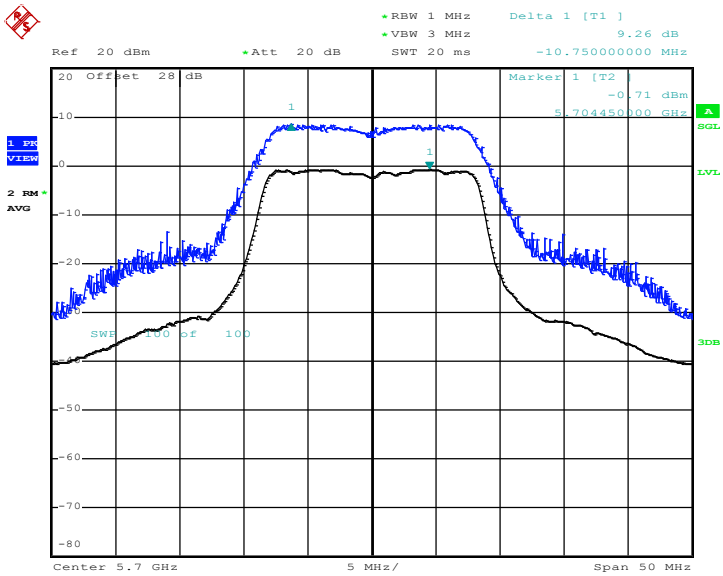
Date: 23.OCT.2012 22:06:02

Peak Excursion Ratio Plot on 802.11a Channel 116



Date: 23.OCT.2012 22:12:40

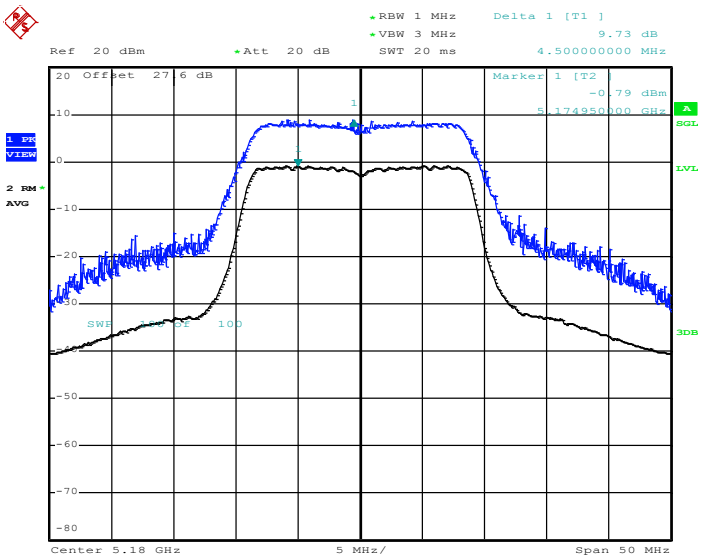
Peak Excursion Ratio Plot on 802.11a Channel 140



Date: 23.OCT.2012 22:15:29

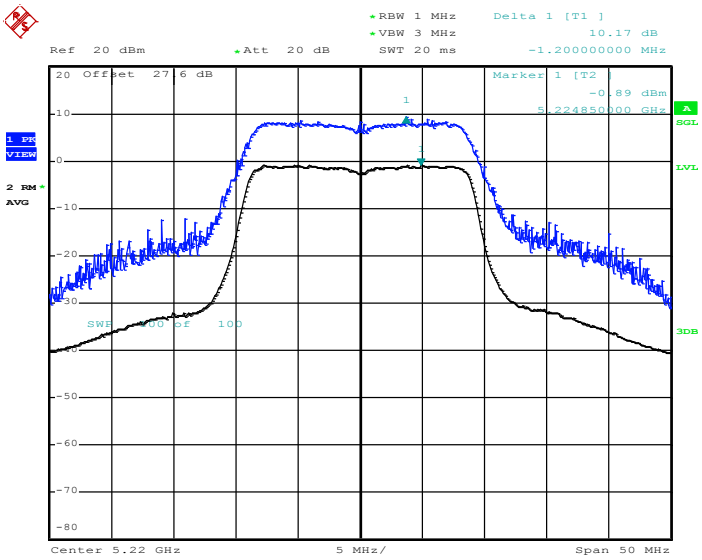
Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Peak Excursion Ratio Plot on 802.11n HT20 Channel 36



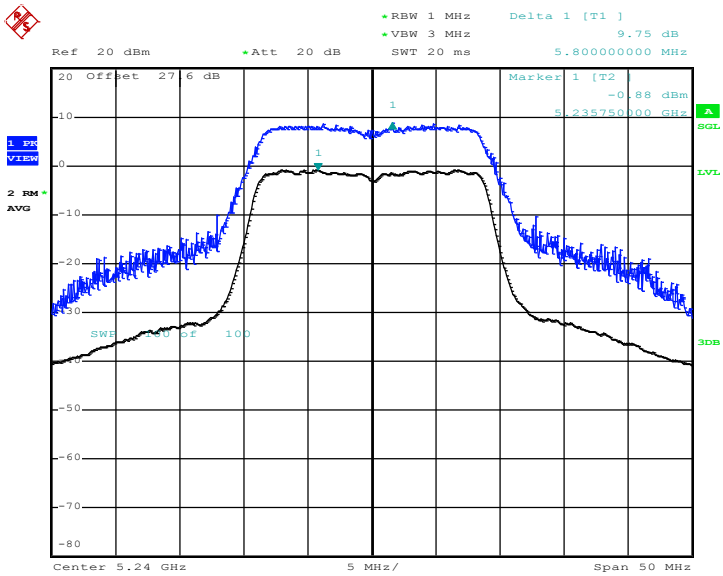
Date: 23.OCT.2012 22:33:10

Peak Excursion Ratio Plot on 802.11n HT20 Channel 44



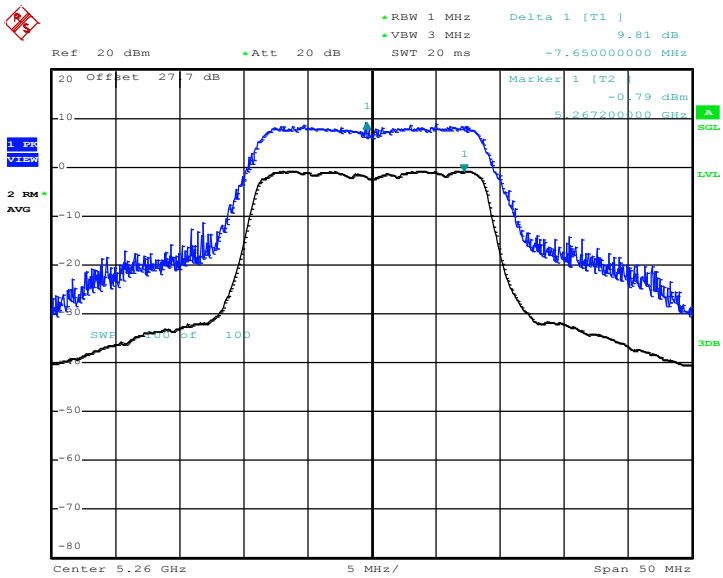
Date: 23.OCT.2012 22:37:40

Peak Excursion Ratio Plot on 802.11n HT20 Channel 48



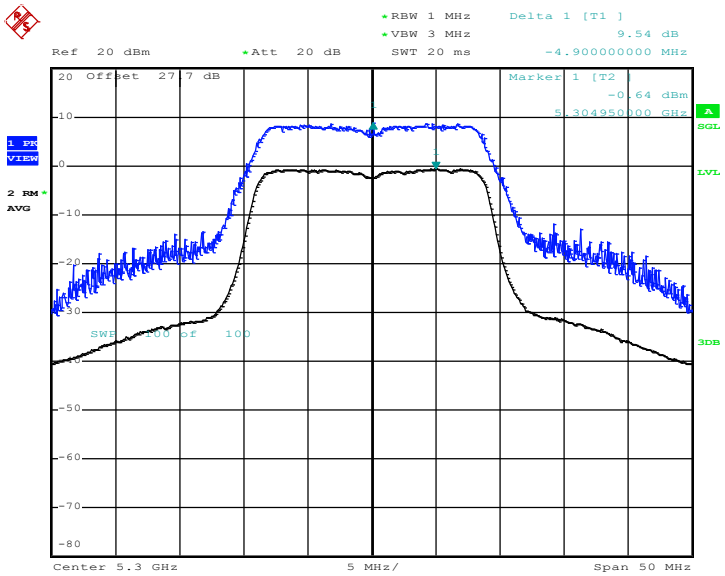
Date: 23.OCT.2012 22:40:02

Peak Excursion Ratio Plot on 802.11n HT20 Channel 52



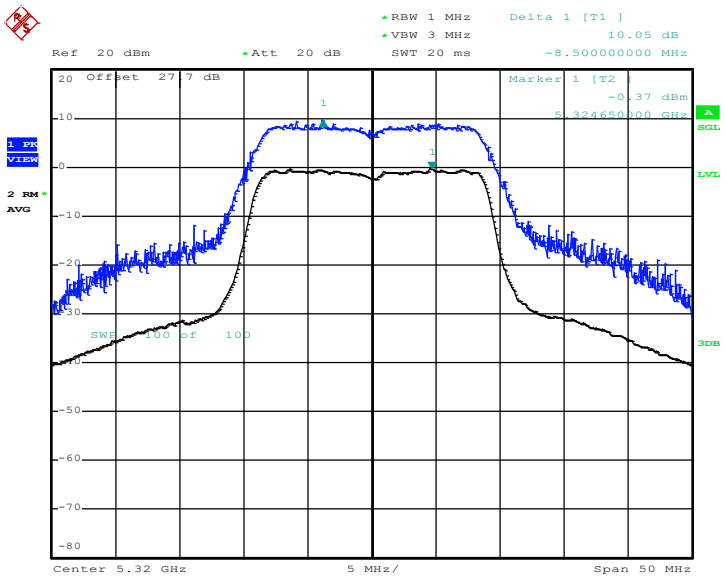
Date: 23.OCT.2012 22:42:56

Peak Excursion Ratio Plot on 802.11n HT20 Channel 60



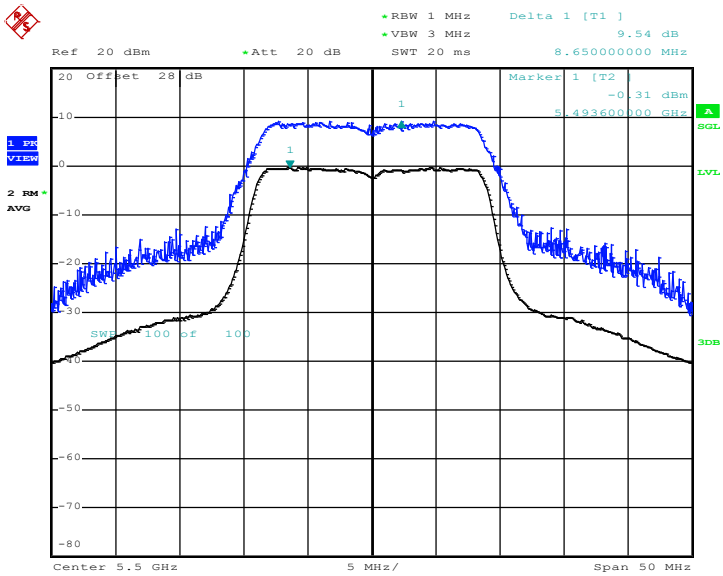
Date: 23.OCT.2012 22:45:25

Peak Excursion Ratio Plot on 802.11n HT20 Channel 64



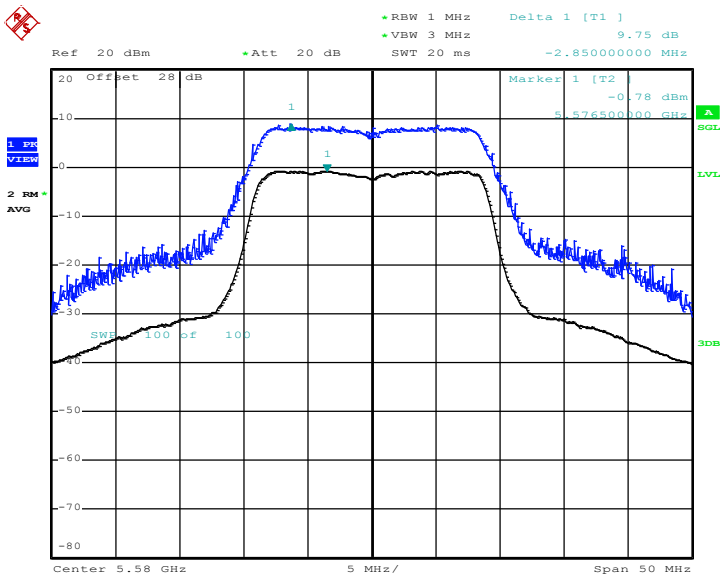
Date: 23.OCT.2012 22:48:27

Peak Excursion Ratio Plot on 802.11n HT20 Channel 100



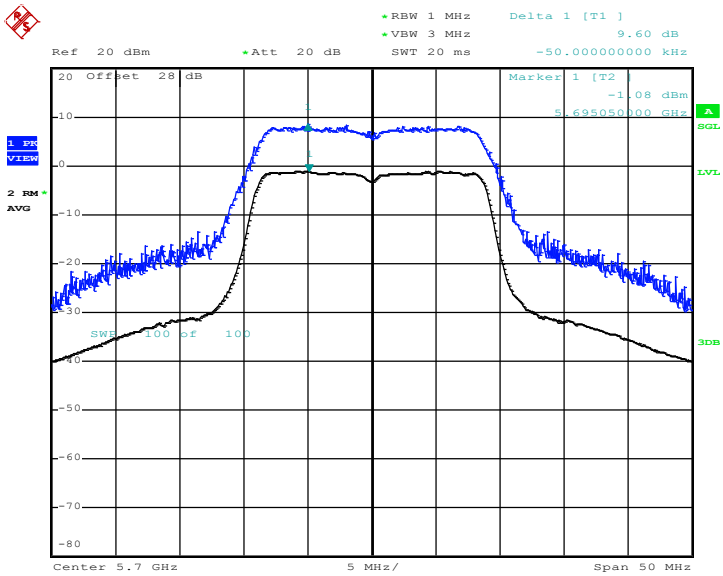
Date: 23.OCT.2012 22:52:13

Peak Excursion Ratio Plot on 802.11n HT20 Channel 116



Date: 23.OCT.2012 22:55:43

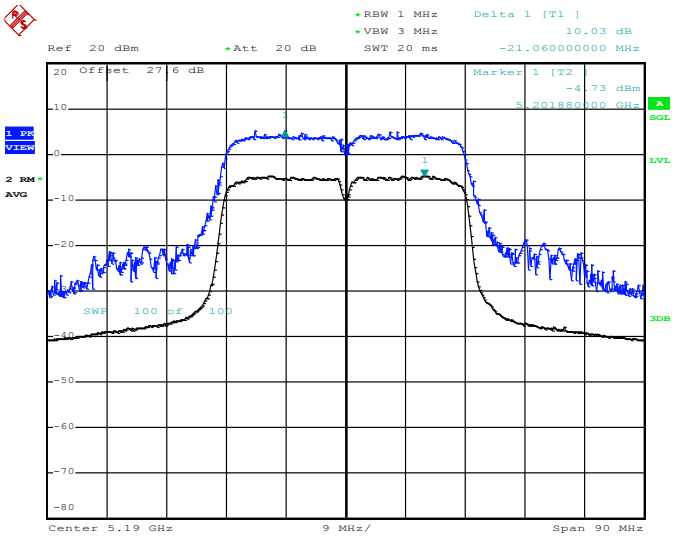
Peak Excursion Ratio Plot on 802.11n HT20 Channel 140



Date: 23.OCT.2012 22:58:56

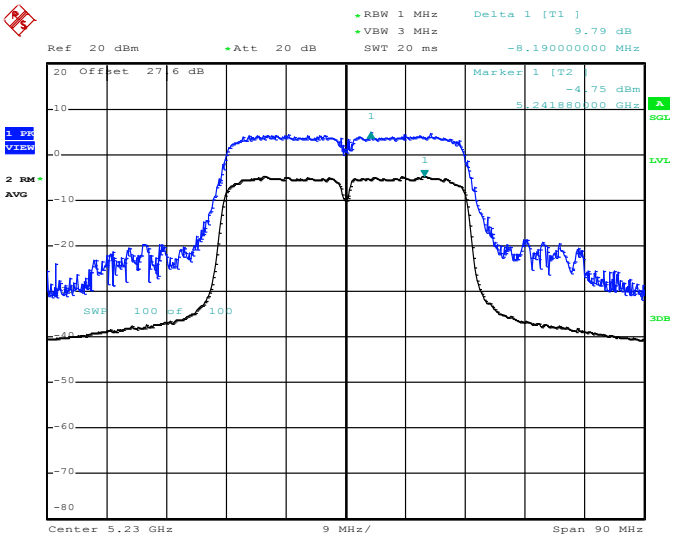
Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Peak Excursion Ratio Plot on 802.11n HT40 Channel 38



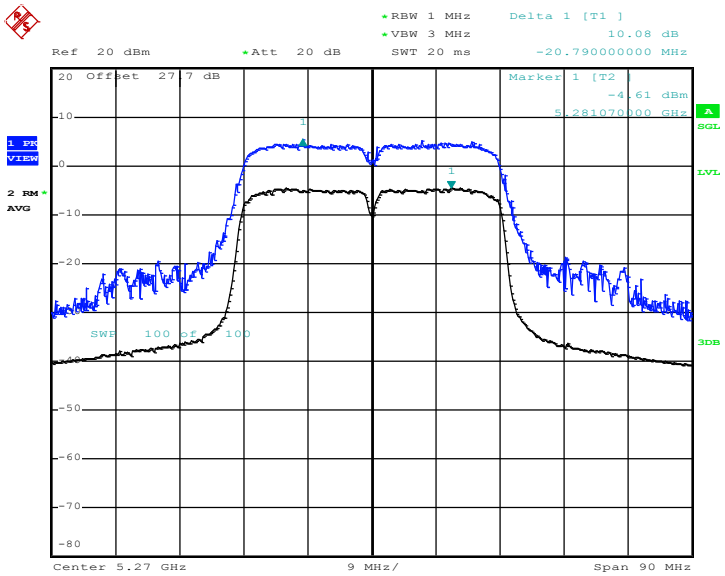
Date: 23.OCT.2012 23:03:28

Peak Excursion Ratio Plot on 802.11n HT40 Channel 46



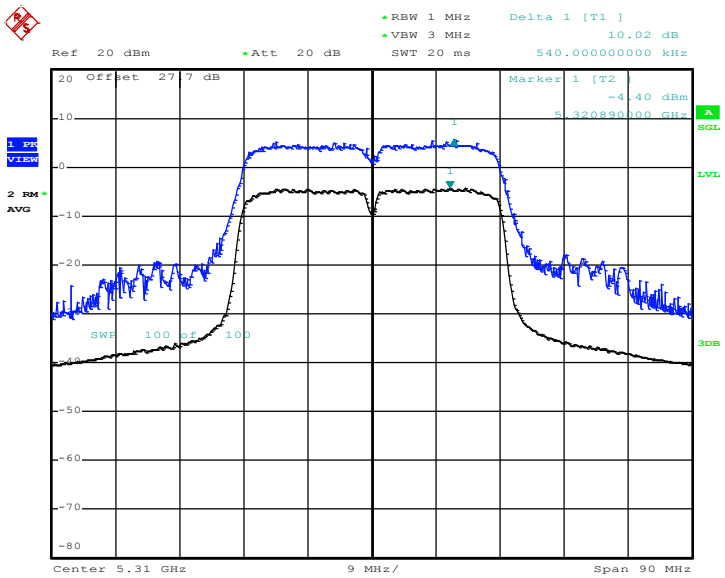
Date: 23.OCT.2012 23:06:31

Peak Excursion Ratio Plot on 802.11n HT40 Channel 54



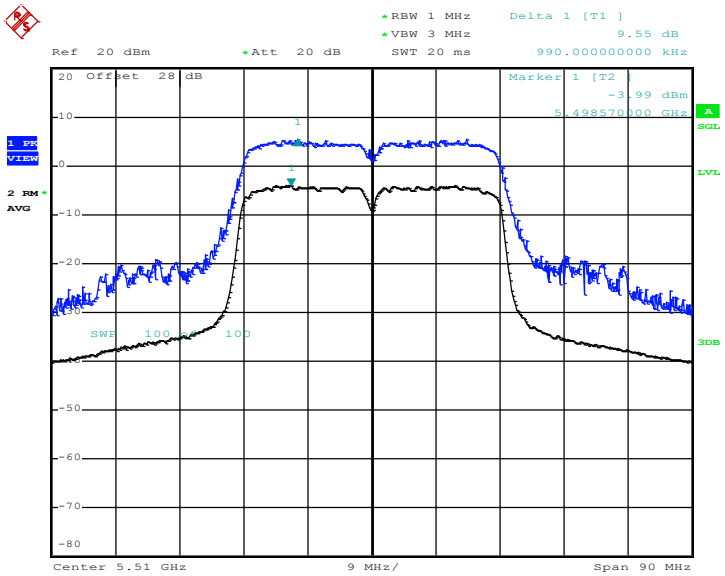
Date: 23.OCT.2012 23:09:41

Peak Excursion Ratio Plot on 802.11n HT40 Channel 62



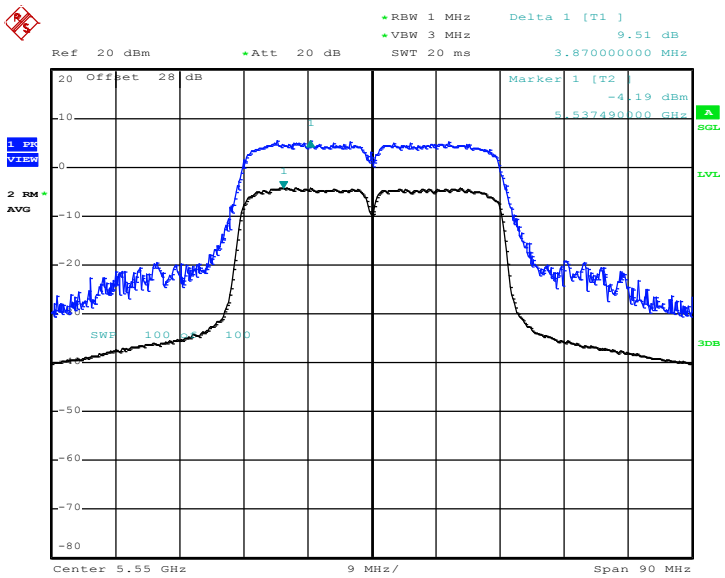
Date: 23.OCT.2012 23:12:10

Peak Excursion Ratio Plot on 802.11n HT40 Channel 102



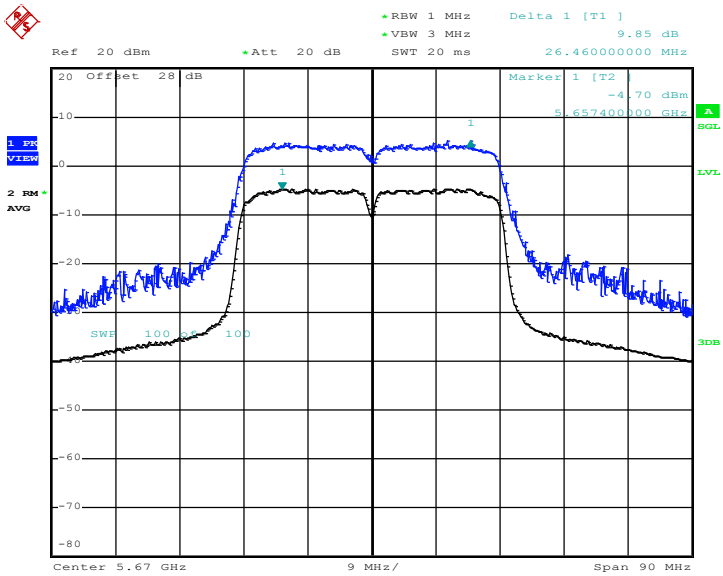
Date: 23.OCT.2012 23:16:13

Peak Excursion Ratio Plot on 802.11n HT40 Channel 110



Date: 23.OCT.2012 23:18:28

Peak Excursion Ratio Plot on 802.11n HT40 Channel 134



Date: 23.OCT.2012 23:21:21

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

(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) 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)
-17	78.3
- 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 fulfills ANSI C63.4-2003 and the guidelines in ANSI C63.10-2009 test site requirement and FCC KDB 789033 D01 General UNII Test Procedures v01r02.

   Section G) Unwanted emissions measurement.

   (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.

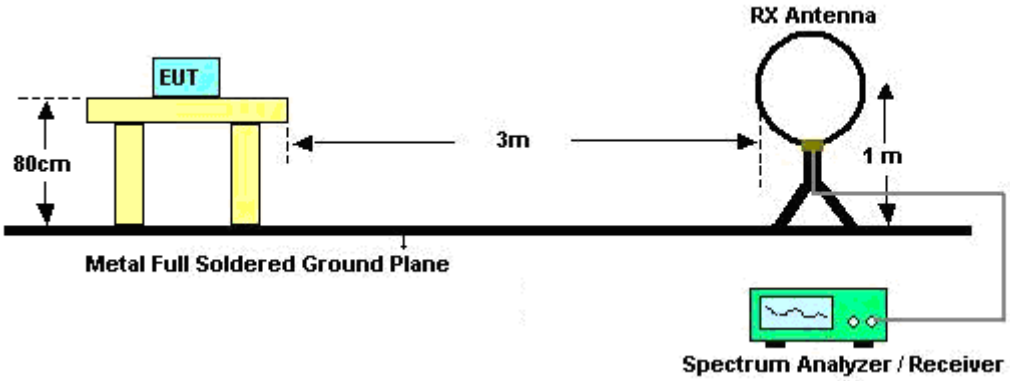
Band	Duty Cycle(%)	T(us)	1/T(KHz)	VBW Setting
802.11a	87.26	1370.00	0.730	1KHz
802.11n HT20	86.49	1280.00	0.781	1KHz
802.11n HT40	86.49	640.00	1.563	3KHz

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.

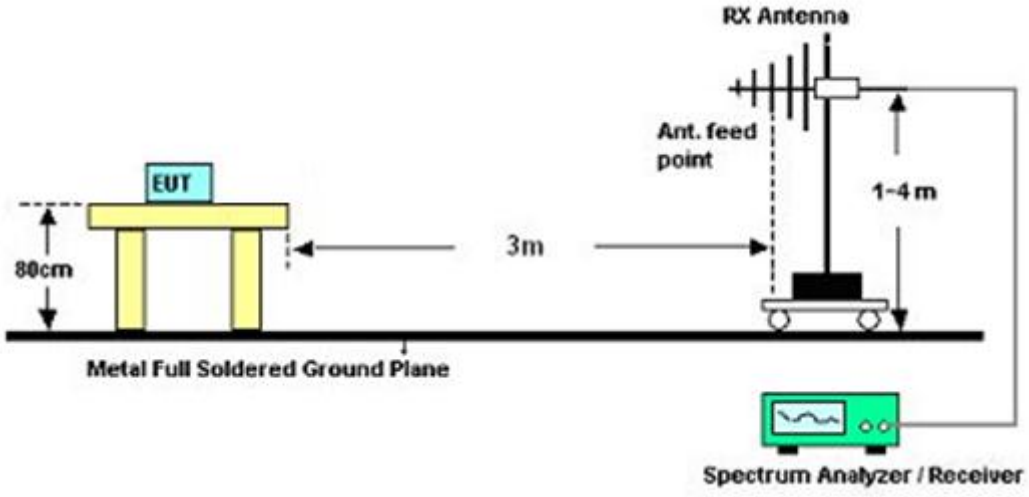
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst 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.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. 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 peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.5.4 Test Setup

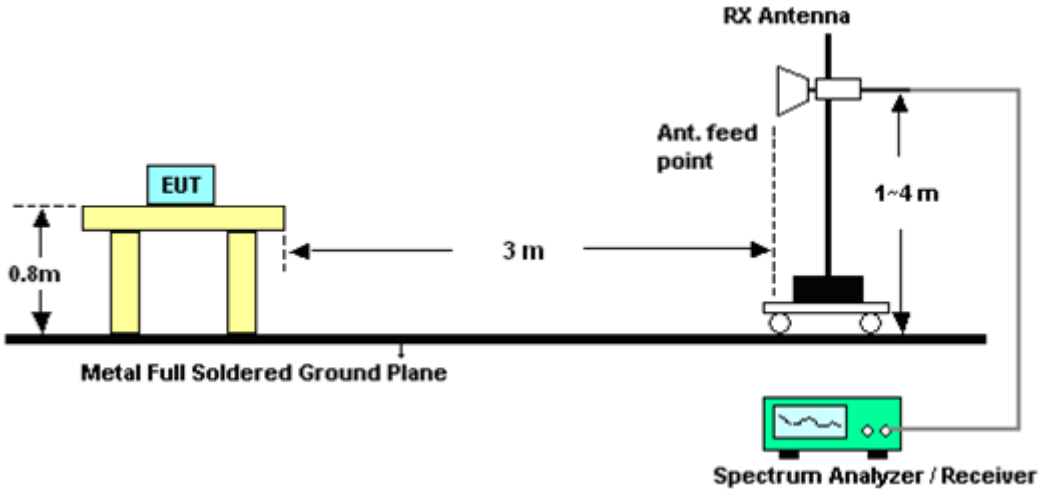
For radiated emissions below 30MHz



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 :	802.11a	**Temperature :**	25~26°C
Test Channel :	36	**Relative Humidity :**	41~42%
Test Engineer :	Gavin Wu		

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
5148.75	54.42	-19.58	74	43.69	34.29	9.41	32.97	100	66	Peak
5127.1	41.94	-12.06	54	31.3	34.25	9.37	32.98	100	66	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
5147.5	61.93	-12.07	74	51.2	34.29	9.41	32.97	100	322	Peak
5127.65	45.94	-8.06	54	35.3	34.25	9.37	32.98	100	322	Average

Test Mode :	802.11a	**Temperature :**	25~26°C
Test Channel :	48	**Relative Humidity :**	41~42%
Test Engineer :	Gavin Wu		

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
5133.5	53.71	-20.29	74	43.07	34.25	9.37	32.98	107	41	Peak
5149.8	40.65	-13.35	54	29.92	34.29	9.41	32.97	107	41	Average
5371.1	55.31	-18.69	74	43.61	34.85	9.78	32.93	107	41	Peak
5351.6	42.25	-11.75	54	30.63	34.81	9.74	32.93	107	41	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
5100.55	54.19	-19.81	74	43.68	34.16	9.33	32.98	147	322	Peak
5149.95	40.75	-13.25	54	30.02	34.29	9.41	32.97	147	322	Average
5396.5	55.61	-18.39	74	43.77	34.94	9.82	32.92	147	322	Peak
5388.15	42.33	-11.67	54	30.53	34.9	9.82	32.92	147	322	Average

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	52	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5143.2	53.68	-20.32	74	42.95	34.29	9.41	32.97	100	63	Peak
5132.75	40.73	-13.27	54	30.09	34.25	9.37	32.98	100	63	Average
5367.25	55.33	-18.67	74	43.63	34.85	9.78	32.93	100	63	Peak
5355.3	42.36	-11.64	54	30.74	34.81	9.74	32.93	100	63	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
5147.75	54.11	-19.89	74	43.38	34.29	9.41	32.97	160	322	Peak
5147.5	40.71	-13.29	54	29.98	34.29	9.41	32.97	160	322	Average
5387.45	55.4	-18.6	74	43.6	34.9	9.82	32.92	160	322	Peak
5356	42.42	-11.58	54	30.76	34.81	9.78	32.93	160	322	Average

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	64	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5352.75	55.87	-18.13	74	44.25	34.81	9.74	32.93	101	319	Peak
5372.65	42.88	-11.12	54	31.18	34.85	9.78	32.93	101	319	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	58.73	-15.27	74	47.11	34.81	9.74	32.93	160	338	Peak
5372.55	44.56	-9.44	54	32.86	34.85	9.78	32.93	160	338	Average

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	100	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5431.12	54.5	-19.5	74	42.48	35.03	9.9	32.91	100	327	Peak
5470	52.99	-15.31	68.3	40.85	35.11	9.94	32.91	100	327	Peak
5446.8	42.61	-11.39	54	30.55	35.07	9.9	32.91	100	327	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
5447.76	55.78	-18.22	74	43.72	35.07	9.9	32.91	152	326	Peak
5470	55.4	-12.9	68.3	43.26	35.11	9.94	32.91	152	326	Peak
5447.2	44.38	-9.62	54	32.32	35.07	9.9	32.91	152	326	Average

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	140	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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	62.5	-5.8	68.3	50.51	35.33	9.92	33.26	143	20	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	66.22	-2.08	68.3	54.23	35.33	9.92	33.26	110	322	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	36	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5149.25	54.35	-19.65	74	43.62	34.29	9.41	32.97	100	55	Peak
5128.3	41.63	-12.37	54	30.99	34.25	9.37	32.98	100	55	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
5145.3	59.9	-14.1	74	49.17	34.29	9.41	32.97	122	330	Peak
5128.15	45.44	-8.56	54	34.8	34.25	9.37	32.98	122	330	Average

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	48	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5131.65	53.23	-20.77	74	42.59	34.25	9.37	32.98	121	86	Peak
5146.75	40.53	-13.47	54	29.8	34.29	9.41	32.97	121	86	Average
5367.65	55.53	-18.47	74	43.83	34.85	9.78	32.93	121	86	Peak
5372.1	42.28	-11.72	54	30.58	34.85	9.78	32.93	121	86	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
5122.15	53.94	-20.06	74	43.35	34.2	9.37	32.98	132	328	Peak
5149.55	40.63	-13.37	54	29.9	34.29	9.41	32.97	132	328	Average
5381.05	55.08	-18.92	74	43.28	34.9	9.82	32.92	132	328	Peak
5390.45	42.28	-11.72	54	30.48	34.9	9.82	32.92	132	328	Average

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	52	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5123.75	53.11	-20.89	74	42.47	34.25	9.37	32.98	125	77	Peak
5149.45	40.7	-13.3	54	29.97	34.29	9.41	32.97	125	77	Average
5384.65	55.03	-18.97	74	43.23	34.9	9.82	32.92	125	77	Peak
5353.2	42.33	-11.67	54	30.71	34.81	9.74	32.93	125	77	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
5143.05	53.53	-20.47	74	42.8	34.29	9.41	32.97	133	338	Peak
5137.85	40.72	-13.28	54	30.08	34.25	9.37	32.98	133	338	Average
5384.7	55.1	-18.9	74	43.3	34.9	9.82	32.92	133	338	Peak
5352.1	42.44	-11.56	54	30.82	34.81	9.74	32.93	133	338	Average

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	64	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5359.1	56.12	-17.88	74	44.46	34.81	9.78	32.93	155	60	Peak
5372.95	42.44	-11.56	54	30.74	34.85	9.78	32.93	155	60	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
5350.35	62.92	-11.08	74	51.3	34.81	9.74	32.93	144	332	Peak
5371.75	45.02	-8.98	54	33.32	34.85	9.78	32.93	144	332	Average

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	100	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5447.28	54.71	-19.29	74	42.65	35.07	9.9	32.91	100	15	Peak
5470	54.85	-13.45	68.3	42.71	35.11	9.94	32.91	100	15	Peak
5448.64	42.62	-11.38	54	30.56	35.07	9.9	32.91	100	15	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
5448.72	56.33	-17.67	74	44.27	35.07	9.9	32.91	102	339	Peak
5470	55.66	-12.64	68.3	43.52	35.11	9.94	32.91	102	339	Peak
5448.4	44.12	-9.88	54	32.06	35.07	9.9	32.91	102	339	Average

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	140	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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	65.1	-3.2	68.3	53.11	35.33	9.92	33.26	169	18	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	67.22	-1.08	68.3	55.23	35.33	9.92	33.26	145	335	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	38	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5149.4	63.48	-10.52	74	52.75	34.29	9.41	32.97	100	74	Peak
5149.8	46.6	-7.4	54	35.87	34.29	9.41	32.97	100	74	Average
5381.05	55.73	-18.27	74	43.93	34.9	9.82	32.92	100	74	Peak
5352.7	43.07	-10.93	54	31.45	34.81	9.74	32.93	100	74	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	72.08	-1.92	74	61.35	34.29	9.41	32.97	136	325	Peak
5149.9	53.53	-0.47	54	42.8	34.29	9.41	32.97	136	325	Average
5350.65	55.16	-18.84	74	43.54	34.81	9.74	32.93	123	316	Peak
5373.05	42.86	-11.14	54	31.16	34.85	9.78	32.93	123	316	Average

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	46	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5120.45	53.54	-20.46	74	42.95	34.2	9.37	32.98	100	74	Peak
5147.9	41.42	-12.58	54	30.69	34.29	9.41	32.97	100	74	Average
5354.15	55.43	-18.57	74	43.81	34.81	9.74	32.93	100	74	Peak
5382.75	42.92	-11.08	54	31.12	34.9	9.82	32.92	100	74	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
5135.65	53.71	-20.29	74	43.07	34.25	9.37	32.98	123	330	Peak
5127.05	42.16	-11.84	54	31.52	34.25	9.37	32.98	123	330	Average
5359.55	55.67	-18.33	74	44.01	34.81	9.78	32.93	123	330	Peak
5383.9	42.92	-11.08	54	31.12	34.9	9.82	32.92	123	330	Average

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	54	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5147.2	53.98	-20.02	74	43.25	34.29	9.41	32.97	100	74	Peak
5150	41.46	-12.54	54	30.73	34.29	9.41	32.97	100	74	Average
5382.4	55.38	-18.62	74	43.58	34.9	9.82	32.92	100	74	Peak
5357.8	42.78	-11.22	54	31.12	34.81	9.78	32.93	100	74	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
5105.6	53.5	-20.5	74	42.95	34.2	9.33	32.98	134	318	Peak
5149.95	41.96	-12.04	54	31.23	34.29	9.41	32.97	134	318	Average
5359.6	55.4	-18.6	74	43.74	34.81	9.78	32.93	134	318	Peak
5353.3	42.99	-11.01	54	31.37	34.81	9.74	32.93	134	318	Average

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	62	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5149.95	53.53	-20.47	74	42.8	34.29	9.41	32.97	100	152	Peak
5145.3	41.27	-12.73	54	30.54	34.29	9.41	32.97	100	152	Average
5351.55	57.86	-16.14	74	46.24	34.81	9.74	32.93	100	152	Peak
5351	44.84	-9.16	54	33.22	34.81	9.74	32.93	100	152	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
5149	53.83	-20.17	74	43.1	34.29	9.41	32.97	145	330	Peak
5109.2	41.33	-12.67	54	30.78	34.2	9.33	32.98	145	330	Average
5350.1	71.34	-2.66	74	59.72	34.81	9.74	32.93	145	330	Peak
5350.05	53.03	-0.97	54	41.41	34.81	9.74	32.93	145	330	Average

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	102	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5458.88	56.95	-17.05	74	44.85	35.07	9.94	32.91	100	327	Peak
5470	63.07	-5.23	68.3	50.93	35.11	9.94	32.91	100	327	Peak
5459.44	43.8	-10.2	54	31.7	35.07	9.94	32.91	100	327	Average
5725	53.91	-14.39	68.3	41.92	35.33	9.92	33.26	100	327	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
5459.36	58.17	-15.83	74	46.07	35.07	9.94	32.91	102	321	Peak
5470	64.68	-3.62	68.3	52.54	35.11	9.94	32.91	102	321	Peak
5460	44.75	-9.25	54	32.65	35.07	9.94	32.91	102	321	Average
5725	52.86	-15.44	68.3	40.87	35.33	9.92	33.26	102	321	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	134	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu		

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
5437.6	54.89	-19.11	74	42.87	35.03	9.9	32.91	171	27	Peak
5470	52.12	-16.18	68.3	39.98	35.11	9.94	32.91	171	27	Peak
5440.64	43.08	-10.92	54	31.06	35.03	9.9	32.91	171	27	Average
5725	61.14	-7.16	68.3	49.15	35.33	9.92	33.26	171	27	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
5443.52	55.15	-18.85	74	43.13	35.03	9.9	32.91	159	344	Peak
5470	52.96	-15.34	68.3	40.82	35.11	9.94	32.91	159	344	Peak
5430.96	42.9	-11.1	54	30.88	35.03	9.9	32.91	159	344	Average
5725	65.86	-2.44	68.3	53.87	35.33	9.92	33.26	159	344	Peak

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

Test Mode :	802.11a	**Temperature :**	25~26°C
Test Channel :	36	**Relative Humidity :**	41~42%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. 10359 MHz is 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
5180	89.13	-	-	78.27	34.38	9.45	32.97	100	66	Average
5180	99.54	-	-	88.68	34.38	9.45	32.97	100	66	Peak
10359	45.4	-22.9	68.3	55.36	37.29	11.31	58.56	100	0	Peak

Test Mode :	802.11a	**Temperature :**	25~26°C
Test Channel :	36	**Relative Humidity :**	41~42%
Test Engineer :	Gavin Wu	**Polarization :**	Vertical
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. 10359 MHz is 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
5180	96.4	-	-	85.54	34.38	9.45	32.97	100	322	Average
5180	106.53	-	-	95.67	34.38	9.45	32.97	100	322	Peak
10359	43.37	-24.93	68.3	53.33	37.29	11.31	58.56	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	44	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. 10440 MHz is 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
5220	88.2	-	-	77.17	34.46	9.53	32.96	111	78	Average
5220	98.59	-	-	87.56	34.46	9.53	32.96	111	78	Peak
10440	44.35	-23.95	68.3	54.41	37.35	11.21	58.62	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	44	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. 10440 MHz is 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
5220	96.05	-	-	85.02	34.46	9.53	32.96	100	340	Average
5220	106.15	-	-	95.12	34.46	9.53	32.96	100	340	Peak
10440	42.13	-26.17	68.3	52.19	37.35	11.21	58.62	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	48	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. 10479 MHz is 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
5240	87.18	-	-	76.05	34.51	9.57	32.95	107	41	Average
5240	97.54	-	-	86.41	34.51	9.57	32.95	107	41	Peak
10479	43.75	-24.55	68.3	53.88	37.39	11.14	58.66	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	48	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. 10479 MHz is 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
5240	94.97	-	-	83.84	34.51	9.57	32.95	147	322	Average
5240	105.32	-	-	94.19	34.51	9.57	32.95	147	322	Peak
10479	41.3	-27	68.3	51.43	37.39	11.14	58.66	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	52	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. 10521 MHz is 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
5260	86.32	-	-	75.06	34.59	9.62	32.95	100	63	Average
5260	98.19	-	-	86.93	34.59	9.62	32.95	100	63	Peak
10521	46.31	-21.99	68.3	56.35	37.42	11.21	58.67	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	52	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. 10521 MHz is 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
5260	94.98	-	-	83.72	34.59	9.62	32.95	160	322	Average
5260	105.6	-	-	94.34	34.59	9.62	32.95	160	322	Peak
10521	43.49	-24.81	68.3	53.53	37.42	11.21	58.67	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	60	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5300	86.93	-	-	75.53	34.68	9.66	32.94	107	360	Average
5300	98.23	-	-	86.83	34.68	9.66	32.94	107	360	Peak
10600	46.03	-27.97	74	55.66	37.5	11.51	58.64	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	60	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. 10599 MHz is 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
5300	95.54	-	-	84.14	34.68	9.66	32.94	144	328	Average
5300	105.97	-	-	94.57	34.68	9.66	32.94	144	328	Peak
10599	42.56	-25.74	68.3	52.19	37.5	11.51	58.64	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	64	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5320	88.97	-	-	77.49	34.72	9.7	32.94	101	319	Average
5320	99.04	-	-	87.56	34.72	9.7	32.94	101	319	Peak
10641	46.32	-27.68	74	55.7	37.54	11.71	58.63	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	64	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5320	96.23	-	-	84.75	34.72	9.7	32.94	160	338	Average
5320	106.8	-	-	95.32	34.72	9.7	32.94	160	338	Peak
10641	42.87	-31.13	74	52.25	37.54	11.71	58.63	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	100	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5500	88.64	-	-	76.32	35.2	10.02	32.9	100	327	Average
5500	99.48	-	-	87.16	35.2	10.02	32.9	100	327	Peak
11001	45.6	-28.4	74	53.02	37.9	13.22	58.54	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	100	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5500	95.44	-	-	83.12	35.2	10.02	32.9	152	326	Average
5500	105.98	-	-	93.66	35.2	10.02	32.9	152	326	Peak
11001	44.5	-29.5	74	51.92	37.9	13.22	58.54	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	116	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5580	90.05	-	-	77.84	35.24	9.99	33.02	100	22	Average
5580	100.93	-	-	88.72	35.24	9.99	33.02	100	22	Peak
11160	45.43	-28.57	74	52.7	38.07	13.2	58.54	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	116	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5580	95.99	-	-	83.78	35.24	9.99	33.02	162	345	Average
5580	106.5	-	-	94.29	35.24	9.99	33.02	162	345	Peak
11163	45.2	-28.8	74	52.47	38.07	13.2	58.54	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	140	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5700	91.21	-	-	79.19	35.31	9.93	33.22	143	20	Average
5700	101.35	-	-	89.33	35.31	9.93	33.22	143	20	Peak
11400	42.55	-31.45	74	49.63	38.3	13.16	58.54	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	140	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5700	95.42	-	-	83.4	35.31	9.93	33.22	110	322	Average
5700	105.53	-	-	93.51	35.31	9.93	33.22	110	322	Peak
11400	43.79	-30.21	74	50.87	38.3	13.16	58.54	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	36	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. 10359 MHz is 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
5180	88.45	-	-	77.59	34.38	9.45	32.97	100	55	Average
5180	98.9	-	-	88.04	34.38	9.45	32.97	100	55	Peak
10359	43.95	-24.35	68.3	53.91	37.29	11.31	58.56	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	36	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. 10359 MHz is 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
5180	96.09	-	-	85.23	34.38	9.45	32.97	122	330	Average
5180	106.25	-	-	95.39	34.38	9.45	32.97	122	330	Peak
10359	43.69	-24.61	68.3	53.65	37.29	11.31	58.56	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	44	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. 10440 MHz is 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
5220	88.69	-	-	77.66	34.46	9.53	32.96	110	82	Average
5220	99.14	-	-	88.11	34.46	9.53	32.96	110	82	Peak
10440	44.85	-23.45	68.3	54.91	37.35	11.21	58.62	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	44	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. 10443 MHz is 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
5220	96.9	-	-	85.87	34.46	9.53	32.96	149	332	Average
5220	107.48	-	-	96.45	34.46	9.53	32.96	149	332	Peak
10443	43.04	-25.26	68.3	53.1	37.35	11.21	58.62	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	48	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. 10479 MHz is 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
5240	87.01	-	-	75.88	34.51	9.57	32.95	121	86	Average
5240	97.51	-	-	86.38	34.51	9.57	32.95	121	86	Peak
10479	44.57	-23.73	68.3	54.7	37.39	11.14	58.66	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	48	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. 10479 MHz is 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
5240	94.83	-	-	83.7	34.51	9.57	32.95	132	328	Average
5240	105.55	-	-	94.42	34.51	9.57	32.95	132	328	Peak
10479	42.17	-26.13	68.3	52.3	37.39	11.14	58.66	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	52	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. 10521 MHz is 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
5260	86.66	-	-	75.4	34.59	9.62	32.95	125	77	Average
5260	96.8	-	-	85.54	34.59	9.62	32.95	125	77	Peak
10521	46.02	-22.28	68.3	56.06	37.42	11.21	58.67	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	52	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. 10521 MHz is 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
5260	96.59	-	-	85.33	34.59	9.62	32.95	133	338	Average
5260	107.44	-	-	96.18	34.59	9.62	32.95	133	338	Peak
10521	43.09	-25.21	68.3	53.13	37.42	11.21	58.67	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	60	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5300	86.9	-	-	75.5	34.68	9.66	32.94	130	59	Average
5300	97.21	-	-	85.81	34.68	9.66	32.94	130	59	Peak
10600	46.45	-27.55	74	56.08	37.5	11.51	58.64	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	60	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. 10599 MHz is 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
5300	95.15	-	-	83.75	34.68	9.66	32.94	135	318	Average
5300	105.63	-	-	94.23	34.68	9.66	32.94	135	318	Peak
10599	42.93	-25.37	68.3	52.56	37.5	11.51	58.64	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	64	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5320	85.76	-	-	74.28	34.72	9.7	32.94	155	60	Average
5320	96.19	-	-	84.71	34.72	9.7	32.94	155	60	Peak
10641	46.65	-27.35	74	56.03	37.54	11.71	58.63	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	64	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5320	96.09	-	-	84.61	34.72	9.7	32.94	144	332	Average
5320	106.26	-	-	94.78	34.72	9.7	32.94	144	332	Peak
10641	43.28	-30.72	74	52.66	37.54	11.71	58.63	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	100	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5500	90.13	-	-	77.81	35.2	10.02	32.9	100	15	Average
5500	101.11	-	-	88.79	35.2	10.02	32.9	100	15	Peak
11001	45.8	-28.2	74	53.22	37.9	13.22	58.54	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	100	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5500	94.92	-	-	82.6	35.2	10.02	32.9	102	339	Average
5500	105.3	-	-	92.98	35.2	10.02	32.9	102	339	Peak
11001	44.1	-29.9	74	51.52	37.9	13.22	58.54	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	116	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5580	99.32	-	-	87.11	35.24	9.99	33.02	100	22	Average
5580	100.44	-	-	88.23	35.24	9.99	33.02	100	22	Peak
11160	45.12	-28.88	74	52.39	38.07	13.2	58.54	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	116	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5580	95.52	-	-	83.31	35.24	9.99	33.02	162	345	Average
5580	106.08	-	-	93.87	35.24	9.99	33.02	162	345	Peak
11160	45.03	-28.97	74	52.3	38.07	13.2	58.54	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	140	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5700	91.85	-	-	79.83	35.31	9.93	33.22	169	18	Average
5700	102.29	-	-	90.27	35.31	9.93	33.22	169	18	Peak
11400	43.03	-30.97	74	50.11	38.3	13.16	58.54	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Channel :	140	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5700	94.82	-	-	82.8	35.31	9.93	33.22	145	335	Average
5700	104.81	-	-	92.79	35.31	9.93	33.22	145	335	Peak
11400	42.77	-31.23	74	49.85	38.3	13.16	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	38	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5190 MHz is fundamental signal which can be ignored. 2. 10380 MHz is 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	19.91	-20.09	40	31.25	20	0.53	31.87	-	-	Peak
52.41	15.06	-24.94	40	38.3	7.7	0.71	31.65	-	-	Peak
62.13	15.73	-24.27	40	40.59	6.14	0.78	31.78	-	-	Peak
628.3	21.68	-24.32	46	29.3	20.03	2.78	30.43	-	-	Peak
696.2	22.26	-23.74	46	29.24	20.57	2.93	30.48	-	-	Peak
788.6	23.79	-22.21	46	28.98	21.93	3.12	30.24	102	218	Peak
5190	85.92	-	-	75.01	34.38	9.49	32.96	100	74	Average
5190	96.08	-	-	85.17	34.38	9.49	32.96	100	74	Peak
10380	43.93	-24.37	68.3	53.92	37.31	11.27	58.57	100	0	Peak

Test Mode :	802.11n HT40	**Temperature :**	25~26°C
Test Channel :	38	**Relative Humidity :**	41~42%
Test Engineer :	Gavin Wu	**Polarization :**	Vertical
Remark :	1. 5190 MHz is fundamental signal which can be ignored. 2. 10380 MHz is 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
30.27	21.85	-18.15	40	33.19	20	0.53	31.87	-	-	Peak
49.71	29.39	-10.61	40	51.81	8.5	0.69	31.61	111	195	Peak
58.89	18.54	-21.46	40	43.26	6.3	0.75	31.77	-	-	Peak
627.6	22.31	-23.69	46	29.95	20.02	2.77	30.43	-	-	Peak
759.2	23.37	-22.63	46	29.26	21.49	3.08	30.46	-	-	Peak
815.9	24.98	-21.02	46	29.82	22.26	3.18	30.28	-	-	Peak
5190	94.02	-	-	83.11	34.38	9.49	32.96	136	325	Average
5190	104.65	-	-	93.74	34.38	9.49	32.96	136	325	Peak
10380	42.02	-26.28	68.3	52.01	37.31	11.27	58.57	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	46	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5230 MHz is fundamental signal which can be ignored. 2. 10461 MHz is 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
5230	88.33	-	-	77.25	34.51	9.53	32.96	100	74	Average
5230	98.21	-	-	87.13	34.51	9.53	32.96	100	74	Peak
10461	44.32	-23.98	68.3	54.41	37.37	11.18	58.64	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	46	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5230 MHz is fundamental signal which can be ignored. 2. 10461 MHz is 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
5230	92.74	-	-	81.66	34.51	9.53	32.96	123	330	Average
5230	103.1	-	-	92.02	34.51	9.53	32.96	123	330	Peak
10461	43.47	-24.83	68.3	53.56	37.37	11.18	58.64	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	54	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5270 MHz is fundamental signal which can be ignored. 2. 10539 MHz is 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
5270	85.92	-	-	74.66	34.59	9.62	32.95	100	74	Average
5270	96.06	-	-	84.8	34.59	9.62	32.95	100	74	Peak
10539	44.94	-23.36	68.3	54.96	37.43	11.21	58.66	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	54	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5270 MHz is fundamental signal which can be ignored. 2. 10539 MHz is 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
5270	93.75	-	-	82.49	34.59	9.62	32.95	134	318	Average
5270	103.61	-	-	92.35	34.59	9.62	32.95	134	318	Peak
10539	42.38	-25.92	68.3	52.4	37.43	11.21	58.66	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	62	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5310 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5310	84.07	-	-	72.59	34.72	9.7	32.94	100	152	Average
5310	93.88	-	-	82.4	34.72	9.7	32.94	100	152	Peak
10620	45.8	-28.2	74	55.31	37.52	11.61	58.64	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	62	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5310 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5310	93.86	-	-	82.38	34.72	9.7	32.94	145	330	Average
5310	103.47	-	-	91.99	34.72	9.7	32.94	145	330	Peak
10620	43.34	-30.66	74	52.85	37.52	11.61	58.64	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	102	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5510 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5510	87.25	-	-	74.93	35.2	10.02	32.9	100	327	Average
5510	97.41	-	-	85.09	35.2	10.02	32.9	100	327	Peak
11022	45.69	-28.31	74	53.08	37.93	13.22	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	102	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5510 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5510	92.38	-	-	80.06	35.2	10.02	32.9	102	321	Average
5510	102.48	-	-	90.16	35.2	10.02	32.9	102	321	Peak
11019	43.08	-30.92	74	50.48	37.92	13.22	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	110	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5550 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 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5437.6	54.65	-19.35	74	42.63	35.03	9.9	32.91	100	13	Peak
5441.28	42.8	-11.2	54	30.78	35.03	9.9	32.91	100	13	Average
5470	53.19	-15.11	68.3	41.05	35.11	9.94	32.91	100	13	Peak
5550	87.73	-	-	75.48	35.23	10	32.98	100	13	Average
5550	98.06	-	-	85.81	35.23	10	32.98	100	13	Peak
5725	53.31	-14.99	68.3	41.32	35.33	9.92	33.26	100	13	Peak
11100	45.95	-28.05	74	53.29	38	13.2	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	110	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5550 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 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5430.08	43.24	-10.76	54	31.22	35.03	9.9	32.91	166	346	Average
5453.04	55.2	-18.8	74	43.1	35.07	9.94	32.91	166	346	Peak
5470	53.52	-14.78	68.3	41.38	35.11	9.94	32.91	166	346	Peak
5550	92.74	-	-	80.49	35.23	10	32.98	166	346	Average
5550	103.08	-	-	90.83	35.23	10	32.98	166	346	Peak
5725	53.55	-14.75	68.3	41.56	35.33	9.92	33.26	166	346	Peak
11100	42.12	-31.88	74	49.46	38	13.2	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	134	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5670 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5670	89.24	-	-	77.18	35.3	9.94	33.18	171	27	Average
5670	99.06	-	-	87	35.3	9.94	33.18	171	27	Peak
11340	45.36	-28.64	74	52.5	38.23	13.17	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	25~26°C
Test Channel :	134	Relative Humidity :	41~42%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5670 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5670	94.26	-	-	82.2	35.3	9.94	33.18	159	344	Average
5670	104	-	-	91.94	35.3	9.94	33.18	159	344	Peak
11340	44.04	-29.96	74	51.18	38.23	13.17	58.54	100	0	Peak

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

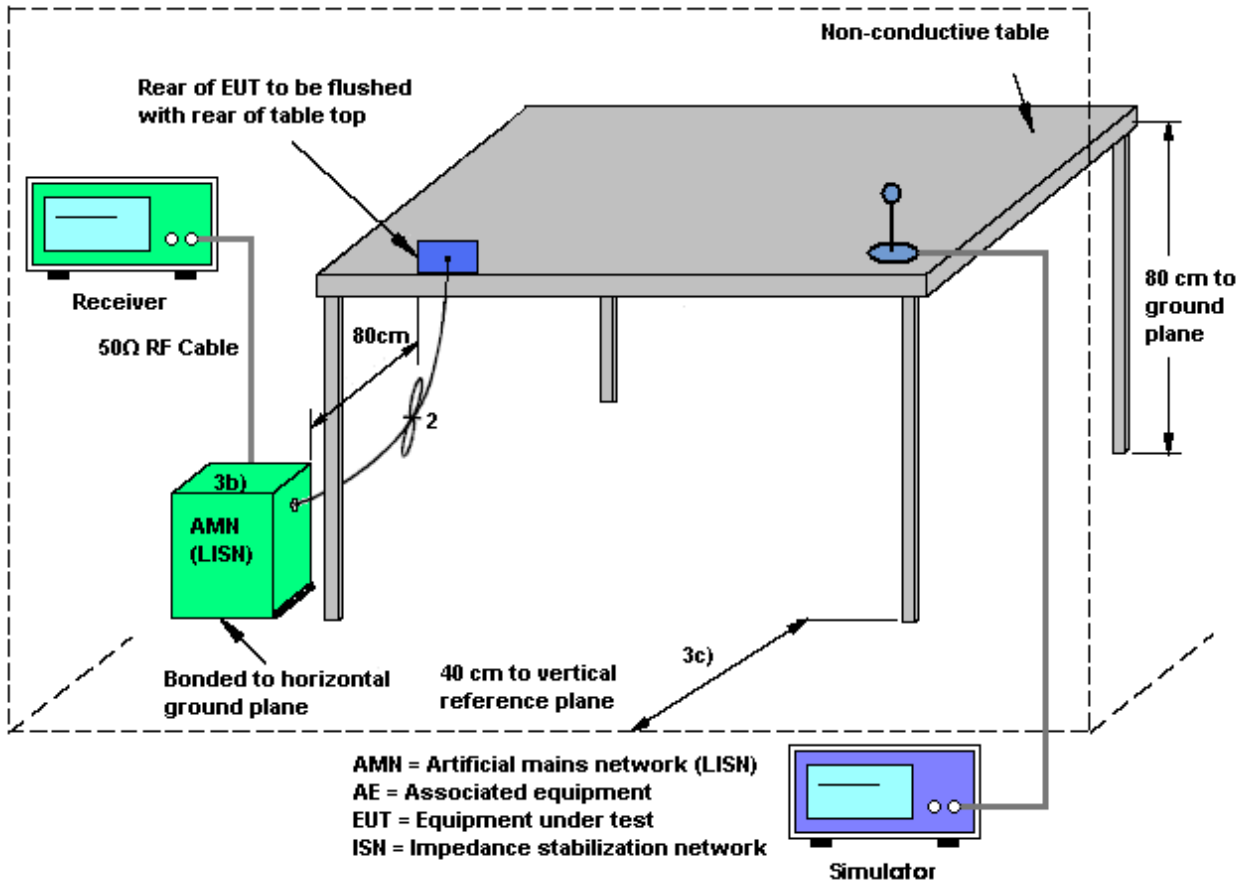
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

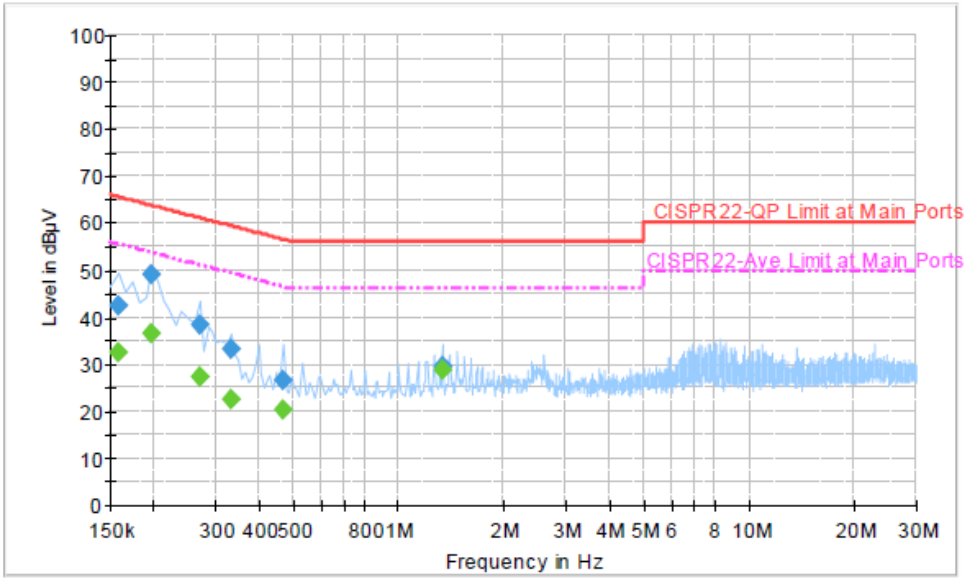
1. The testing follows the guidelines in ANSI C63.4-2003 and ANSI C63.10-2009 test site requirement.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~47%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	WCDMA Band IV Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone + Battery + USB Cable 1 (Data Link with Notebook)		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



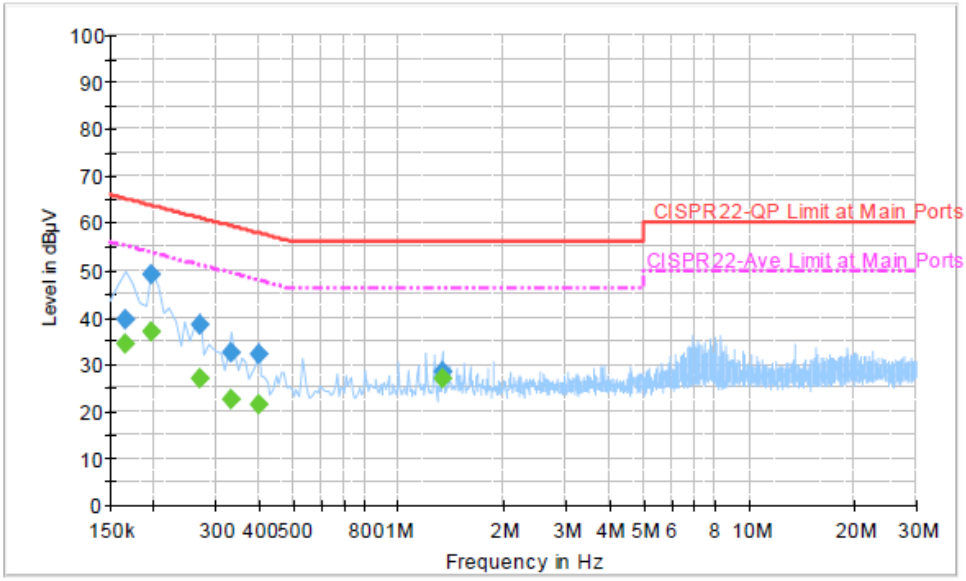
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	42.3	Off	L1	19.3	23.3	65.6
0.198000	49.2	Off	L1	19.3	14.5	63.7
0.270000	38.5	Off	L1	19.3	22.6	61.1
0.334000	33.3	Off	L1	19.4	26.1	59.4
0.470000	26.6	Off	L1	19.4	29.9	56.5
1.334000	29.6	Off	L1	19.4	26.4	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	32.3	Off	L1	19.3	23.3	55.6
0.198000	36.7	Off	L1	19.3	17.0	53.7
0.270000	27.4	Off	L1	19.3	23.7	51.1
0.334000	22.6	Off	L1	19.4	26.8	49.4
0.470000	20.5	Off	L1	19.4	26.0	46.5
1.334000	28.6	Off	L1	19.4	17.4	46.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band IV Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone + Battery + USB Cable 1 (Data Link with Notebook)		
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)
0.166000	39.6	Off	N	19.4	25.6	65.2
0.198000	49.1	Off	N	19.3	14.6	63.7
0.270000	38.2	Off	N	19.4	22.9	61.1
0.334000	32.7	Off	N	19.4	26.7	59.4
0.398000	32.0	Off	N	19.5	25.9	57.9
1.334000	28.6	Off	N	19.5	27.4	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	34.3	Off	N	19.4	20.9	55.2
0.198000	36.9	Off	N	19.3	16.8	53.7
0.270000	27.0	Off	N	19.4	24.1	51.1
0.334000	22.4	Off	N	19.4	27.0	49.4
0.398000	21.6	Off	N	19.5	26.3	47.9
1.334000	27.1	Off	N	19.5	18.9	46.0

3.7 Frequency Stability Measurement

3.7.1 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.

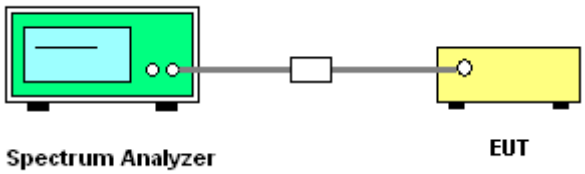
3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

3.7.3 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.

3.7.4 Test Setup



3.7.5 Test Result of Frequency Stability

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.70	5188.30	0.00
44	5220	5211.70	5228.30	0.00
48	5240	5231.65	5248.30	-4.77
52	5260	5251.75	5268.30	4.75
60	5300	5291.65	5308.25	-9.43
64	5320	5311.75	5328.25	0.00
100	5500	5491.70	5508.30	0.00
116	5580	5571.65	5588.25	-8.96
140	5700	5691.70	5708.30	0.00

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.10	5188.85	-4.83
44	5220	5211.10	5228.90	0.00
48	5240	5231.05	5248.90	-4.77
52	5260	5251.05	5268.90	-4.75
60	5300	5291.05	5308.85	-9.43
64	5320	5311.05	5328.85	-9.40
100	5500	5491.10	5508.90	0.00
116	5580	5571.05	5588.90	-4.48
140	5700	5691.05	5708.85	-8.77

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Jeff Chou	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
38	5190	5171.73	5208.27	0.00
46	5230	5211.73	5248.27	0.00
54	5270	5251.73	5288.27	0.00
62	5310	5291.73	5328.27	0.00
102	5510	5491.73	5528.27	0.00
110	5550	5531.64	5568.18	-16.22
134	5670	5651.73	5688.27	0.00

3.8 Automatically Discontinue Transmission

3.8.1 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.

3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

3.8.3 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.

3.9 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

Non-standard connector used.

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	R&S	FSP40	100055	9kHz~40GHz	Jun. 06, 2012	Sep. 25, 2012 ~ Oct. 23, 2012	Jun. 05, 2013	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Sep. 25, 2012 ~ Oct. 23, 2012	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Sep. 25, 2012 ~ Oct. 23, 2012	Sep. 07, 2013	Conducted (TH02-HY)
EMI Test Receiver	R&S	ESCI 7	100724	9kHz~7GHz	Sep. 03, 2012	Oct. 20, 2012	Sep. 02, 2013	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz ~ 30MHz	Dec. 09, 2011	Oct. 20, 2012	Dec. 08, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz ~ 30MHz	Dec. 06, 2011	Oct. 20, 2012	Dec. 05, 2012	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Oct. 20, 2012	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	117995	N/A	Jul. 28, 2011	Oct. 20, 2012	Jul. 27, 2013	Conduction (CO05-HY)
GPS Station	Pendulum	GSG-54	N/A	N/A	N/A	Oct. 20, 2012	N/A	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 06, 2012	Oct. 12, 2012 ~ Oct. 21, 2012	Oct. 05, 2013	Radiation (03CH07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz ~ 30GHz	Dec. 06, 2011	Oct. 12, 2012 ~ Oct. 21, 2012	Dec. 05, 2012	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 22, 2012	Oct. 12, 2012 ~ Oct. 21, 2012	Aug. 21, 2013	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz ~ 26.5GHz	Dec. 05, 2011	Oct. 12, 2012 ~ Oct. 21, 2012	Dec. 04, 2012	Radiation (03CH07-HY)
Pre Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	159088	1GHz ~ 18GHz	Mar. 10, 2012	Oct. 12, 2012 ~ Oct. 21, 2012	Mar. 09, 2013	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32 dB.GAIN	Feb. 27, 2012	Oct. 12, 2012 ~ Oct. 21, 2012	Feb. 26, 2013	Radiation (03CH07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 03, 2012	Oct. 12, 2012 ~ Oct. 21, 2012	Sep. 02, 2013	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Sep. 28, 2012	Oct. 12, 2012 ~ Oct. 21, 2012	Sep. 27, 2013	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9KHz ~ 30MHz	Jul. 03, 2012	Oct. 12, 2012 ~ Oct. 21, 2012	Jul. 02, 2014	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

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

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

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

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

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

Appendix A. Photographs of EUT

Please refer to Sporton report number EP291928 as below.