

FCC RF Test Report

APPLICANT : SAMSUNG Electronics Co., LTD.
EQUIPMENT : Mobile Phone
BRAND NAME : Samsung
MODEL NAME : GT-I9260
MARKETING NAME : Superior
FCC ID : A3LGTI9260
STANDARD : FCC Part 15 Subpart E
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Sep. 26, 2012 and completely tested on Oct. 04, 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 / Manager



SPORTON INTERNATIONAL INC.

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

SPORTON INTERNATIONAL INC.

TEL : 886-3-327-3456

FAX : 886-3-328-4978

FCC ID : A3LGTI9260

Page Number : 1 of 114

Report Issued Date : Oct. 11, 2012

Report Version : Rev. 01



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR292639C	Rev. 01	Initial issue of report	Oct. 11, 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	$\leq 17, 24, 30$ dBm (depend on band)	Pass	-
3.3	15.407(a)	A9.2	Power Spectral Density	$\leq 4, 11, 17$ dBm (depend on band)	Pass	-
3.4	15.407(a)(6)	A9.3	Peak Excursion Ratio	≤ 13 dB	Pass	-
3.5	15.407(b)	A9.3	Unwanted Emissions	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	Under limit 6.15 dB at 5725.000 MHz
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 10.40 dB at 2.078 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

SAMSUNG Electronics Co., LTD.

IT center, 416, Maetan-3dong, Yeongtong-gu, Suwon-city, Gyeonggi-do, Korea

1.2 Manufacturer

SAMSUNG Electronics Co., LTD.

IT center, 416, Maetan-3dong, Yeongtong-gu, Suwon-city, Gyeonggi-do, Korea

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Mobile Phone
Brand Name	Samsung
Model Name	GT-I9260
Marketing Name	Superior
FCC ID	A3LGTI9260
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA WLAN 11abgn / Bluetooth / NFC
HW Version	REV1.1
SW Version	I9260.002
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 : 12.97 dBm / 0.0198 W 802.11n HT20 : 13.00 dBm / 0.0200 W 802.11n HT40 : 12.98 dBm / 0.0199 W <5260 MHz ~ 5320 MHz> 802.11a : 12.82 dBm / 0.0191 W 802.11n HT20 : 12.88 dBm / 0.0194 W 802.11n HT40 : 12.73 dBm / 0.0187 W <5500 MHz ~ 5700 MHz> 802.11a : 13.25 dBm / 0.0211 W 802.11n HT20 : 13.00 dBm / 0.0200 W 802.11n HT40 : 12.91 dBm / 0.0195 W
99% Occupied Bandwidth	802.11a : 18.50 MHz 802.11n HT20 : 19.25 MHz 802.11n HT40 : 36.45 MHz
Antenna Type	PIFA Antenna with gain -3.90 dBi
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH06-HY	722060/4086B-1

1.5 Applied Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D01 General UNII Test Procedures v01r01
- ♦ ANSI C63.4-2003 and ANSI C63.10-2009
- ♦ IC RSS-210 Issued 8
- ♦ IC RSS-Gen Issue 3

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A

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 (X 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)	CH.	Fre.								
	CH36	5180	12.97	12.86	12.90	12.94	12.93	12.93	12.95	12.95
	CH52	5260	12.82	12.68	12.78	12.80	12.81	12.78	12.80	12.80
	CH100	5500	13.25	13.23	13.21	13.21	13.24	13.23	13.24	13.24

5GHz 802.11n HT20 mode										
Data Rate (MHz)			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	CH.	Fre.								
	CH44	5220	13.00	12.97	12.93	12.91	12.99	12.98	12.97	12.98
	CH52	5260	12.88	12.83	12.84	12.77	12.83	12.85	12.86	12.87
	CH140	5700	13.00	12.96	12.95	12.94	12.97	12.97	12.96	12.99

5GHz 802.11n HT40 mode										
Data Rate (MHz)			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	CH.	Fre.								
	CH38	5190	12.98	12.95	12.97	12.97	12.94	12.95	12.96	12.97
	CH542	5270	12.73	12.71	12.70	12.69	12.72	12.71	12.69	12.71
	CH134	5670	12.91	12.86	12.86	12.88	12.85	12.87	12.88	12.87

2.3 Test Mode

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

Test Cases				
Conducted TCs	Test Items	Mode	Data rate	Test Channel
	26dB and 99% 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 : GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3 + Battery			

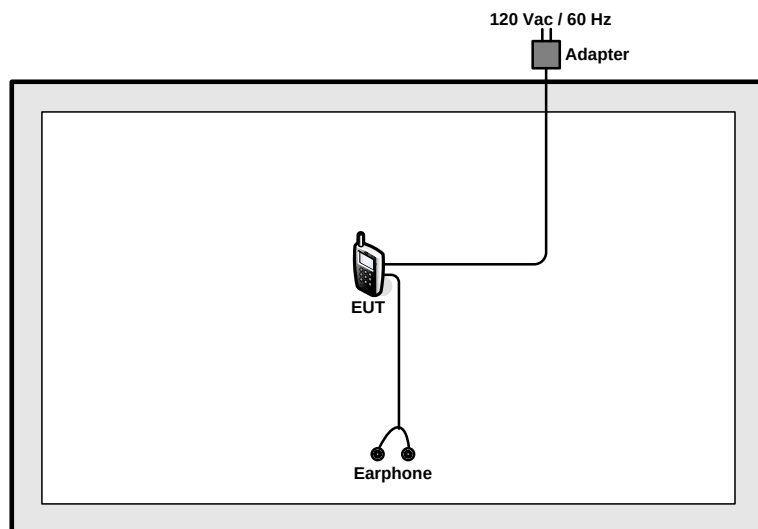
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725 MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725 MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

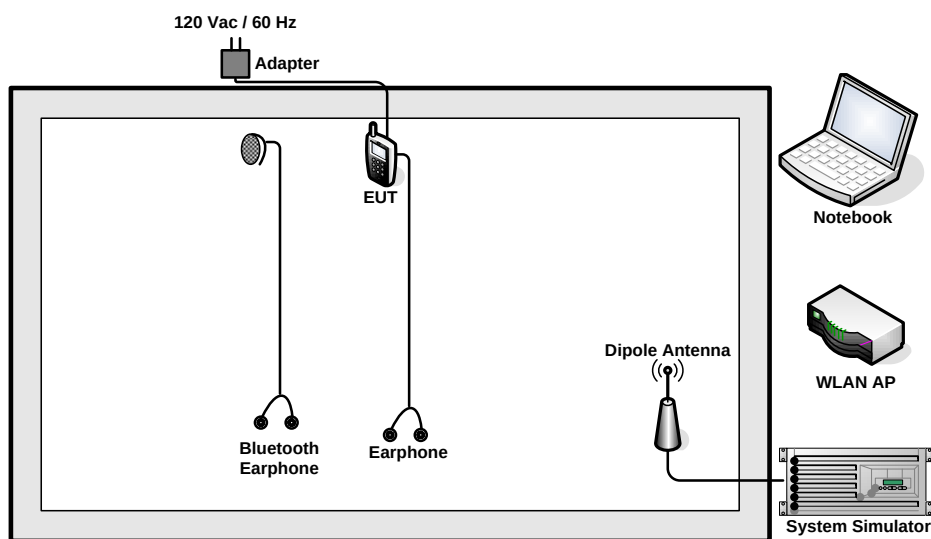
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725 MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 RF Utility

For WLAN function, key in “* # 232339 #” on the EUT directly. Then, the EUT will get into the engineering modes to contact with WLAN AP 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. For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log B.

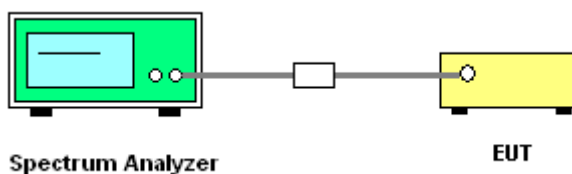
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r01.
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%.

3.1.4 Test Setup

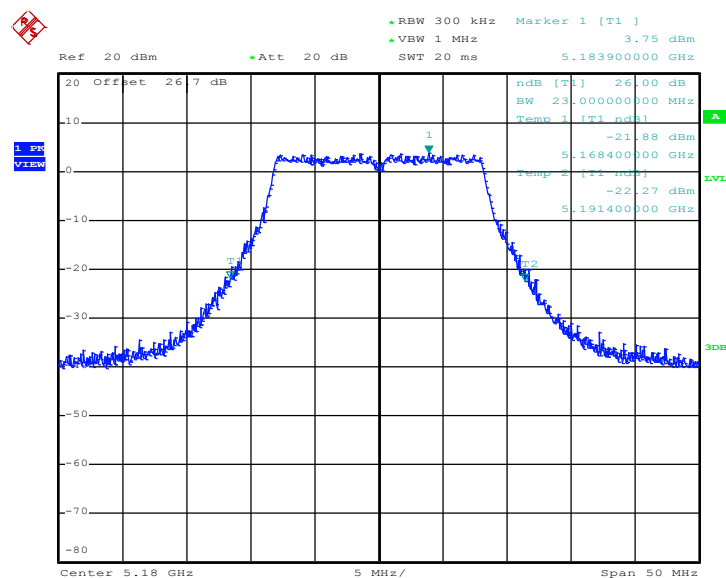


3.1.5 Test Result of 26dB Bandwidth Plots

Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

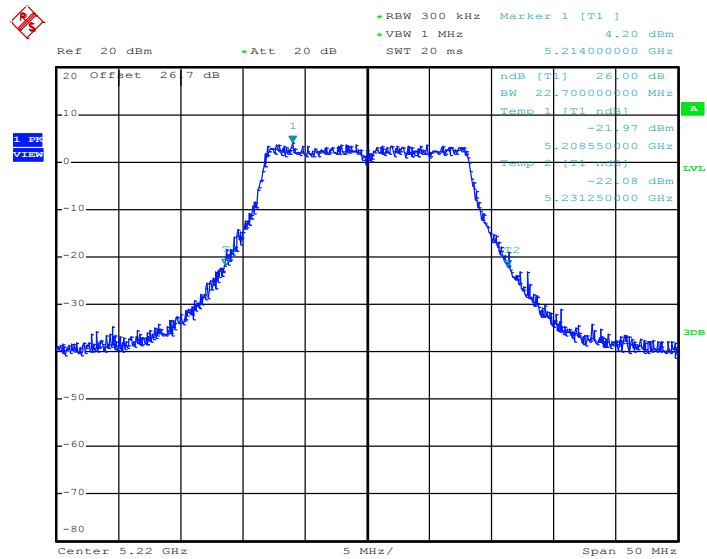
Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)	Pass/Fail
36	5180	23.00	N/A
44	5220	22.70	N/A
48	5240	22.65	N/A
52	5260	22.45	N/A
60	5300	22.90	N/A
64	5320	22.70	N/A
100	5500	22.90	N/A
116	5580	23.00	N/A
140	5700	22.90	N/A

26 dB Bandwidth Plot on 802.11a Channel 36



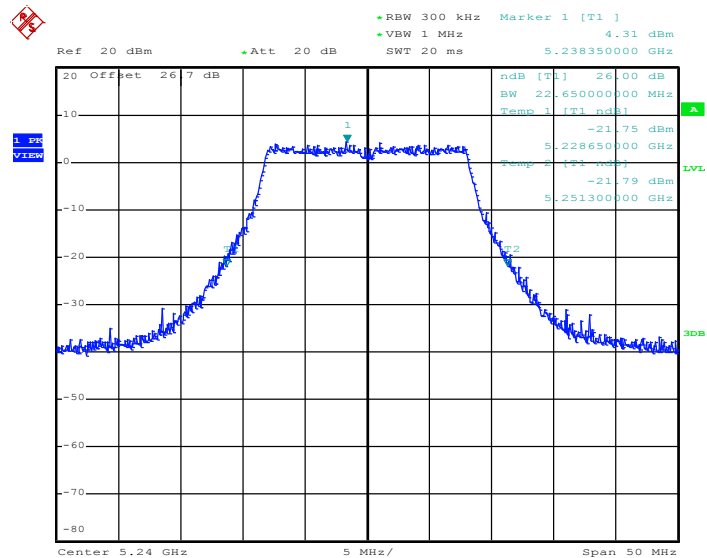
292639 15E 26dB 802.11a 5180 (ch36)

Date: 4.OCT.2012 12:36:14

26 dB Bandwidth Plot on 802.11a Channel 44


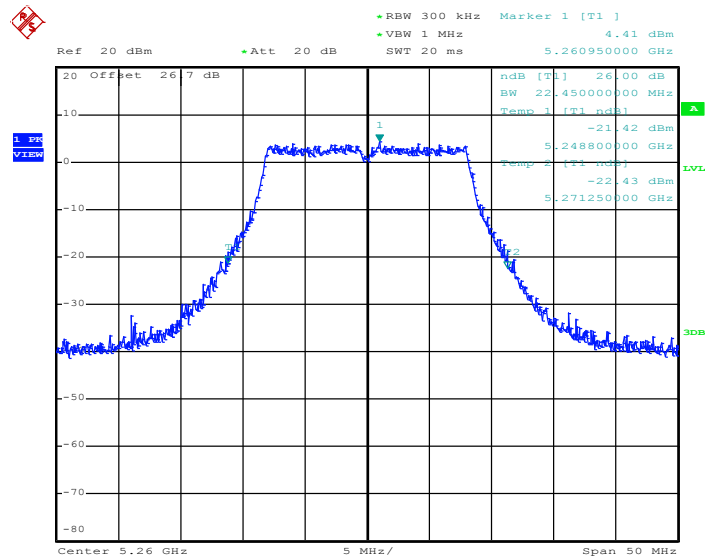
292639 15E 26dB 802.11a 5220 (ch44)

Date: 4.OCT.2012 13:33:18

26 dB Bandwidth Plot on 802.11a Channel 48


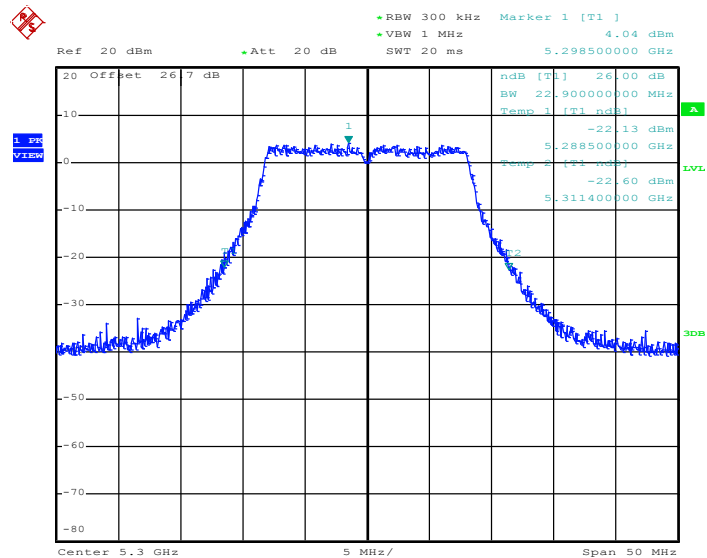
292639 15E 26dB 802.11a 5240 (ch48)

Date: 4.OCT.2012 13:36:22

26 dB Bandwidth Plot on 802.11a Channel 52


292639 15E 26dB 802.11a 5260 (ch52)

Date: 4.OCT.2012 13:38:22

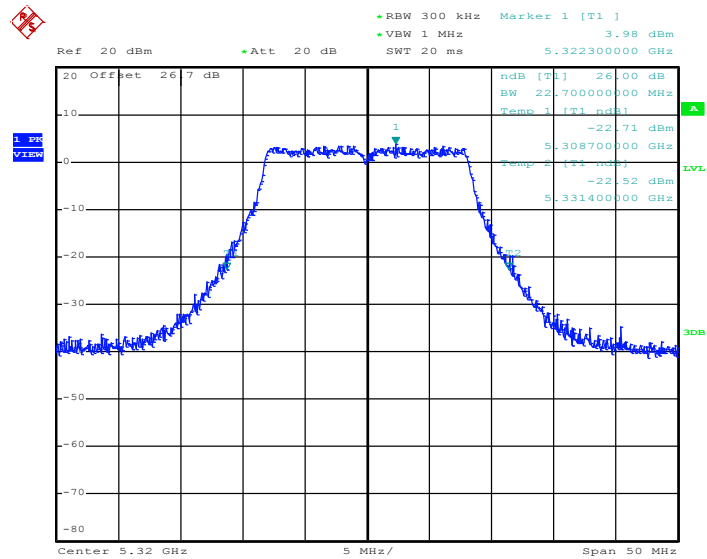
26 dB Bandwidth Plot on 802.11a Channel 60


292639 15E 26dB 802.11a 5300 (ch60)

Date: 4.OCT.2012 13:40:54



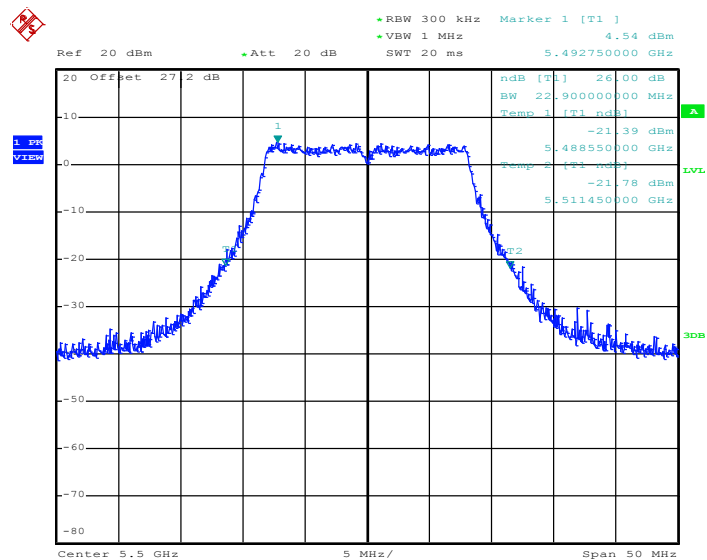
26 dB Bandwidth Plot on 802.11a Channel 64



292639 15E 26dB 802.11a 5320 (ch64)

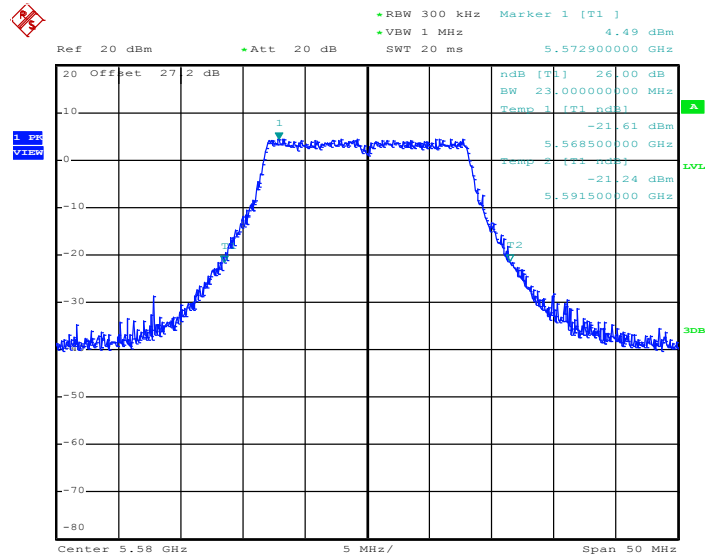
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26 dB Bandwidth Plot on 802.11a Channel 100



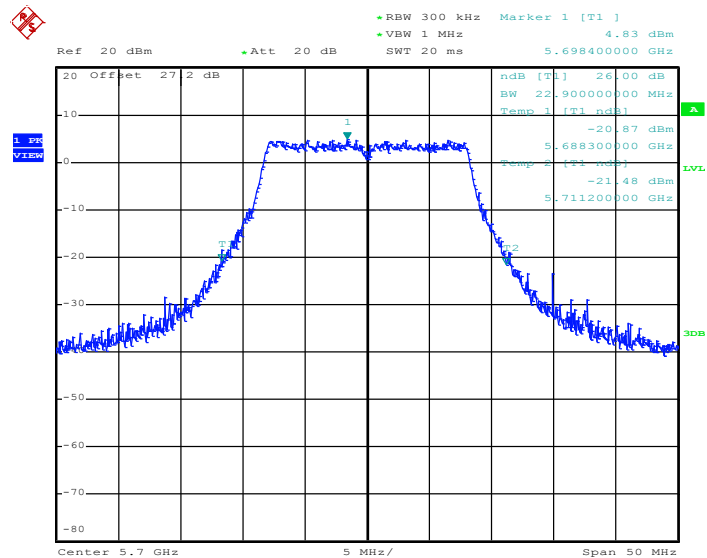
292639 15E 26dB 802.11a 5500 (ch100)

Date: 4.OCT.2012 13:46:32

26 dB Bandwidth Plot on 802.11a Channel 116


292639 15E 26dB 802.11a 5580

Date: 4.OCT.2012 13:48:57

26 dB Bandwidth Plot on 802.11a Channel 140


292639 15E 26dB 802.11a 5700 (ch140)

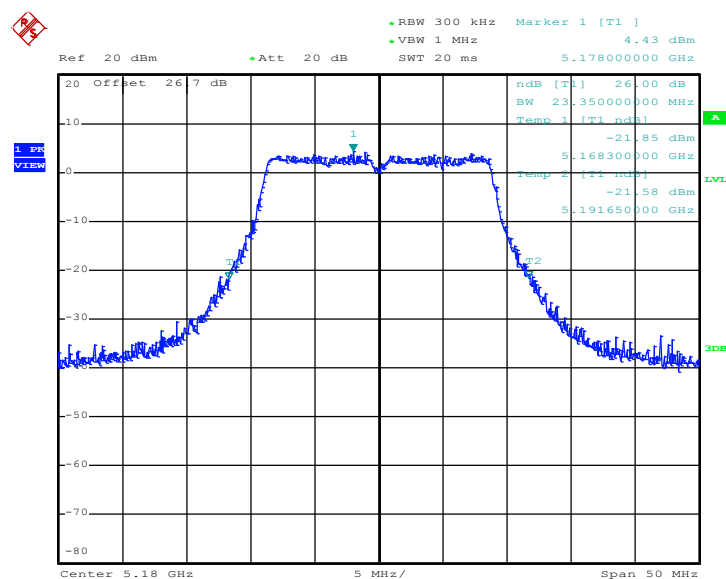
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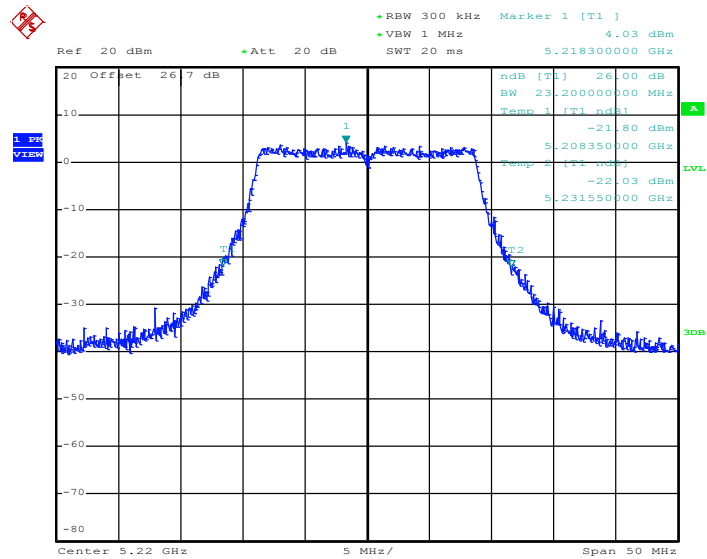
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n HT20 26dB Bandwidth (MHz)	Pass/Fail
36	5180	23.35	N/A
44	5220	23.20	N/A
48	5240	23.30	N/A
52	5260	23.45	N/A
60	5300	23.25	N/A
64	5320	23.30	N/A
100	5500	22.95	N/A
116	5580	23.40	N/A
140	5700	23.30	N/A

26 dB Bandwidth Plot on 802.11n HT20 Channel 36

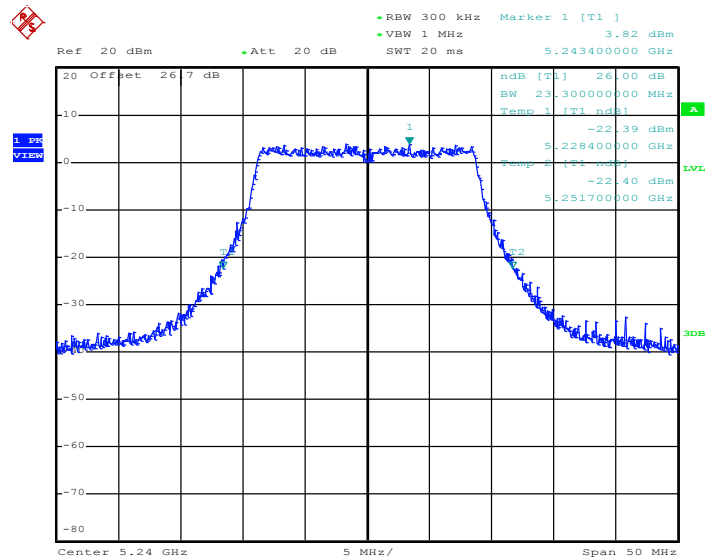


292639 15E 26dB 802.11a_N20 5180 (ch36)
Date: 4.OCT.2012 14:07:49

26 dB Bandwidth Plot on 802.11n HT20 Channel 44


292639 15E 26dB 802.11a_N20 5220 (ch44)

Date: 4.OCT.2012 14:10:00

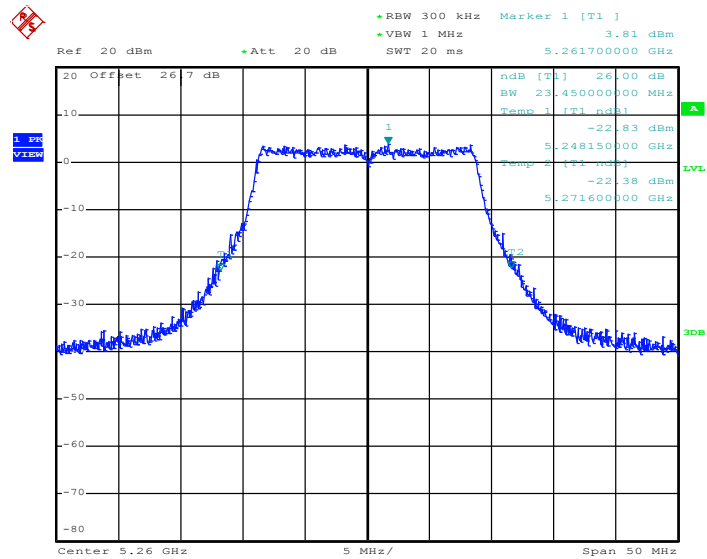
26 dB Bandwidth Plot on 802.11n HT20 Channel 48


292639 15E 26dB 802.11a_N20 5240 (ch48)

Date: 4.OCT.2012 14:12:52



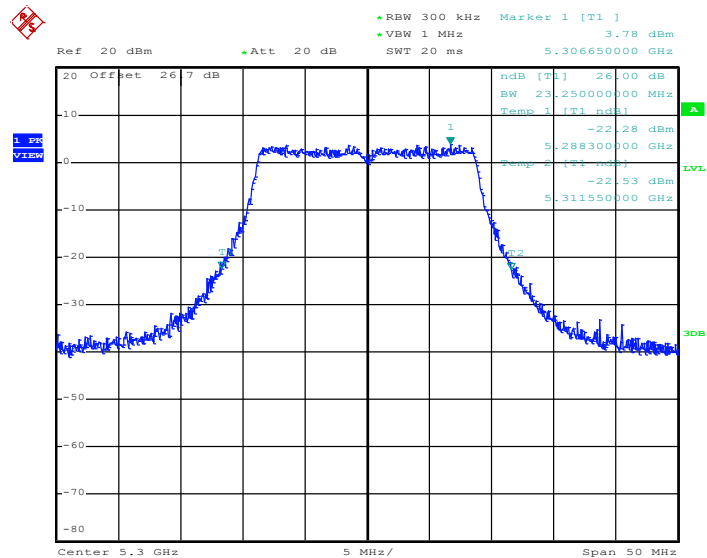
26 dB Bandwidth Plot on 802.11n HT20 Channel 52



292639 15E 26dB 802.11a_N20 5260 (ch52)

Date: 4.OCT.2012 14:15:29

26 dB Bandwidth Plot on 802.11n HT20 Channel 60

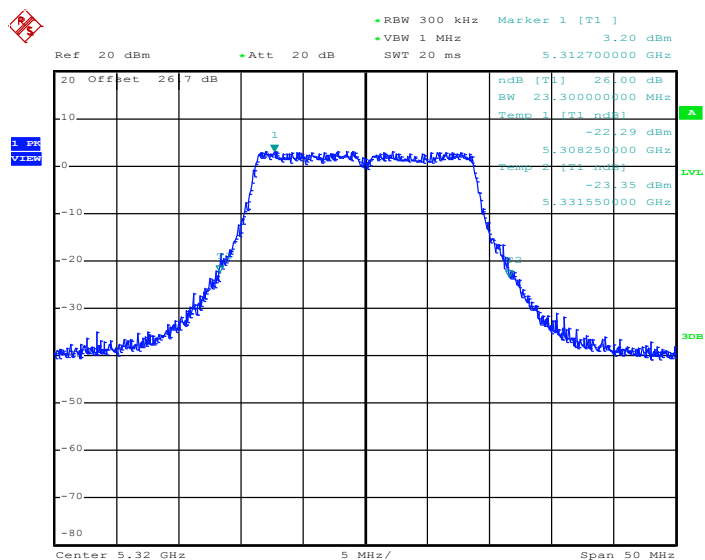


292639 15E 26dB 802.11a_N20 5300 (ch60)

Date: 4.OCT.2012 14:18:46



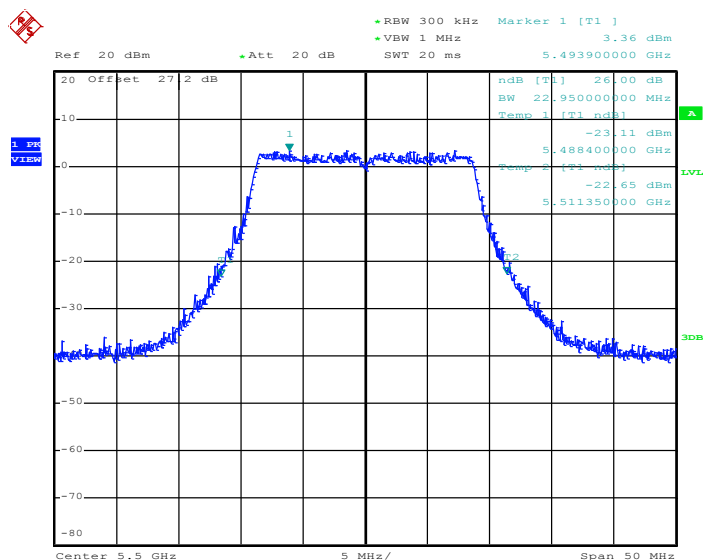
26 dB Bandwidth Plot on 802.11n HT20 Channel 64



292639 15E 26dB 802.11a_N20 5320 (ch64)

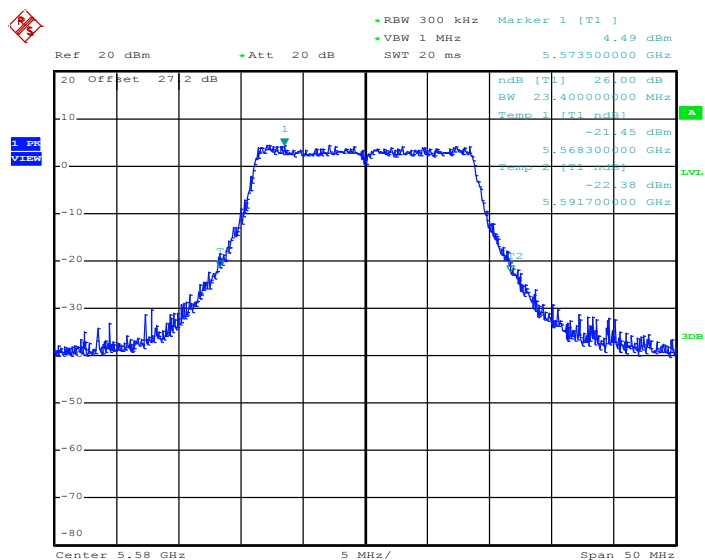
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26 dB Bandwidth Plot on 802.11n HT20 Channel 100



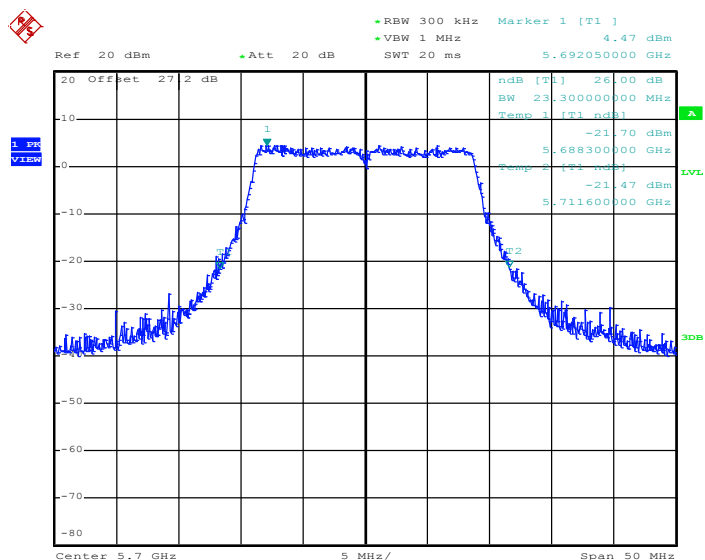
292639 15E 26dB 802.11a_N20 5500 (ch100)

Date: 4.OCT.2012 14:05:09

26 dB Bandwidth Plot on 802.11n HT20 Channel 116


292639 15E 26dB 802.11a_N20 5580

Date: 4.OCT.2012 14:01:48

26 dB Bandwidth Plot on 802.11n HT20 Channel 140


292639 15E 26dB 802.11a_N20 5700 (ch140)

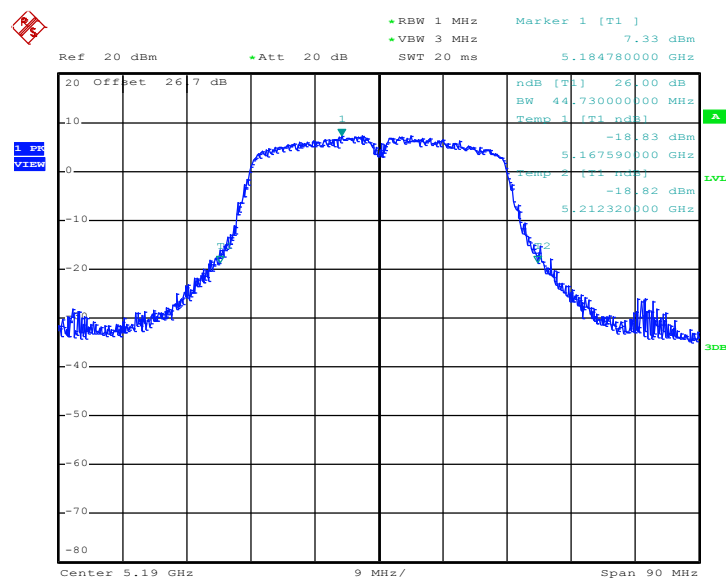
Date: 4.OCT.2012 13:59:12



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n HT40 26dB Bandwidth (MHz)	Pass/Fail
38	5190	44.73	N/A
46	5230	45.09	N/A
54	5270	44.37	N/A
62	5310	44.82	N/A
102	5510	44.91	N/A
110	5550	45.27	N/A
134	5670	45.45	N/A

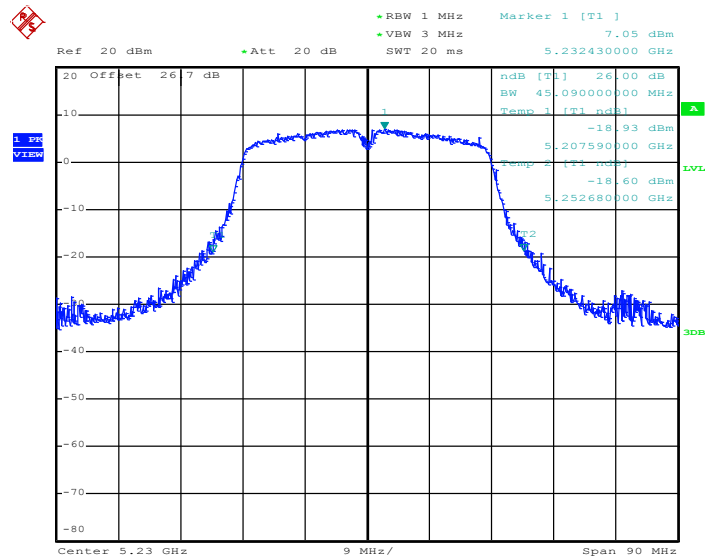
26 dB Bandwidth Plot on 802.11n HT40 Channel 38



292639 15E 26dB 802.11a_N40 5190 (ch38)
Date: 4.OCT.2012 14:25:44



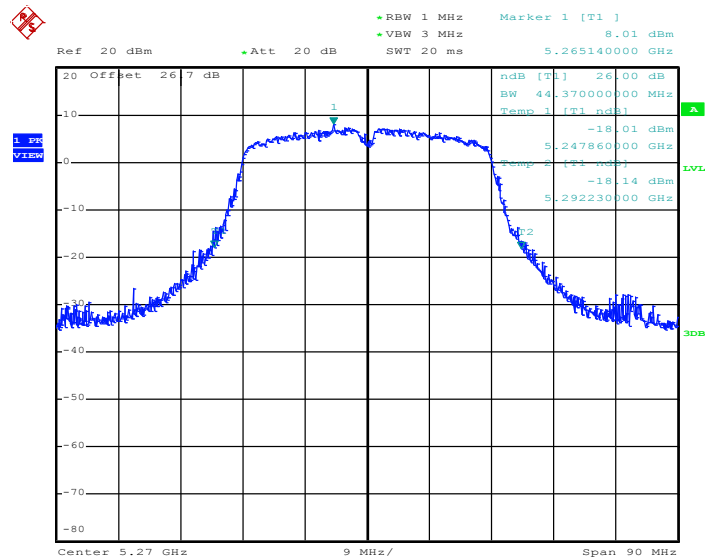
26 dB Bandwidth Plot on 802.11n HT40 Channel 46



292639 15E 26dB 802.11a_N40 5230 (ch46)

Date: 4.OCT.2012 14:30:35

26 dB Bandwidth Plot on 802.11n HT40 Channel 54

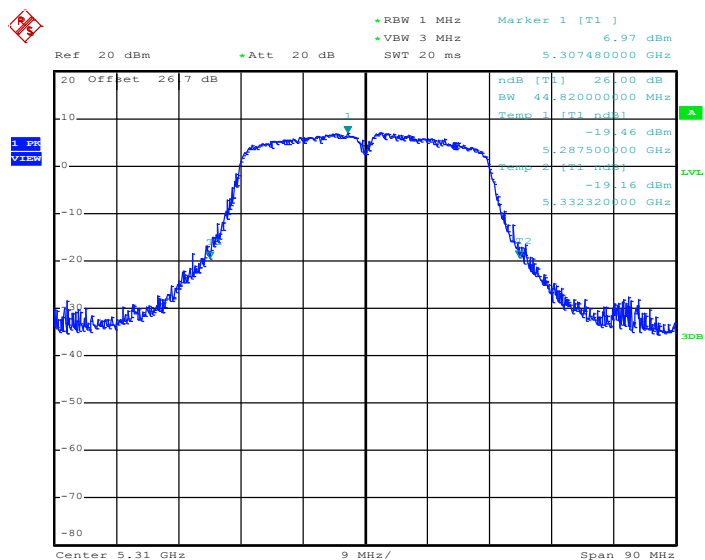


292639 15E 26dB 802.11a_N40 5270 (ch54)

Date: 4.OCT.2012 14:35:04

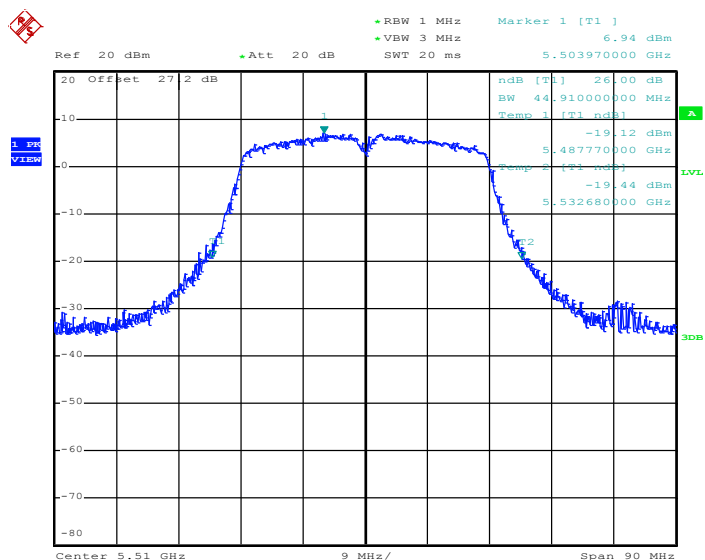


26 dB Bandwidth Plot on 802.11n HT40 Channel 62



292639 15E 26dB 802.11a_N40 5310 (ch62)
Date: 4.OCT.2012 14:39:42

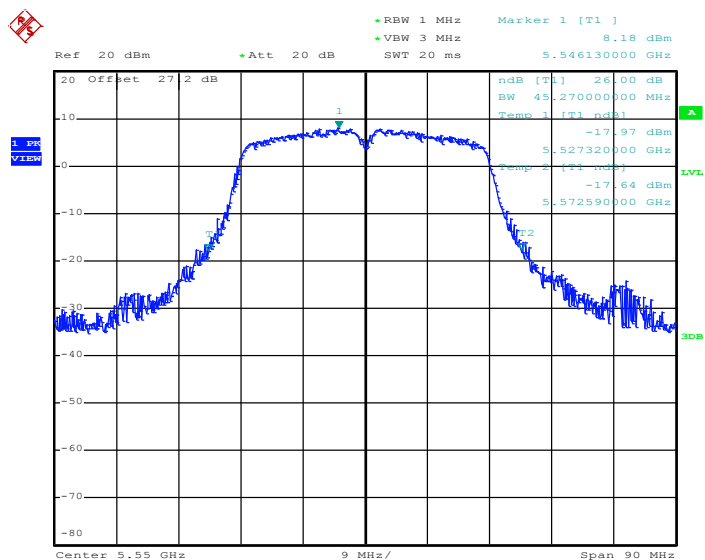
26 dB Bandwidth Plot on 802.11n HT40 Channel 102



292639 15E 26dB 802.11a_N40 5510 (ch102)
Date: 4.OCT.2012 14:42:18



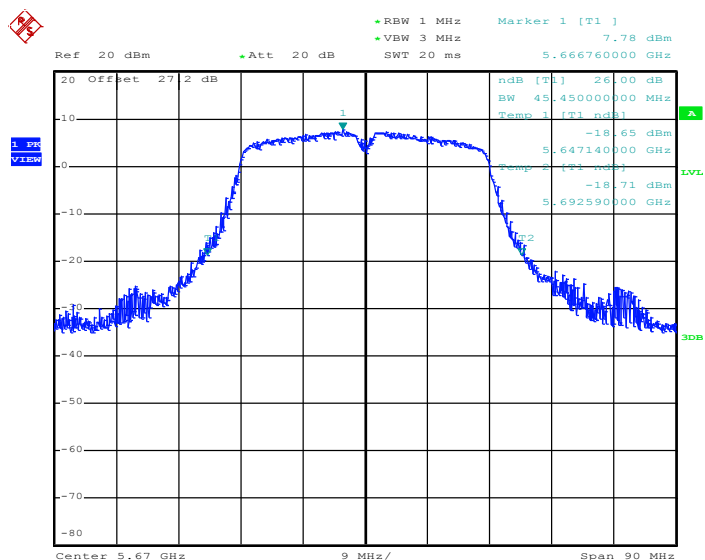
26 dB Bandwidth Plot on 802.11n HT40 Channel 110



292639 15E 26dB 802.11a_N40 5550

Date: 4.OCT.2012 14:46:36

26 dB Bandwidth Plot on 802.11n HT40 Channel 134



292639 15E 26dB 802.11a_N40 5670 (ch134)

Date: 4.OCT.2012 14:48:47

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or $4 \text{ dBm} + 10\log B$, where B is the 26 dB emissions bandwidth in 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 $11 \text{ dBm} + 10\log B$, 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.

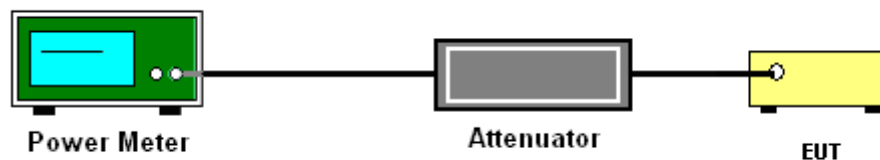
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r01.

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 :	Reece Li	Relative Humidity :	45~49%
Duty Cycle	93.23%	Duty Factor	0.30dB

Channel	Frequency (MHz)	802.11a Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	12.67	12.97	17	Pass
44	5220	12.51	12.81	17	Pass
48	5240	12.58	12.88	17	Pass
52	5260	12.52	12.82	24	Pass
60	5300	12.43	12.73	24	Pass
64	5320	12.33	12.63	24	Pass
100	5500	12.95	13.25	24	Pass
116	5580	12.51	12.81	24	Pass
140	5700	12.70	13.00	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°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%
Duty Cycle	92.95%	Duty Factor	0.32dB

Channel	Frequency (MHz)	802.11n HT20 Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	12.59	12.91	17	Pass
44	5220	12.68	13.00	17	Pass
48	5240	12.56	12.88	17	Pass
52	5260	12.56	12.88	24	Pass
60	5300	12.41	12.73	24	Pass
64	5320	12.26	12.58	24	Pass
100	5500	11.87	12.19	24	Pass
116	5580	12.55	12.87	24	Pass
140	5700	12.68	13.00	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°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%
Duty Cycle	87.50%	Duty Factor	0.58dB

Channel	Frequency (MHz)	802.11n HT40 Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
38	5190	12.40	12.98	17	Pass
46	5230	12.24	12.82	17	Pass
54	5270	12.15	12.73	24	Pass
62	5310	12.02	12.60	24	Pass
102	5510	11.48	12.06	24	Pass
110	5550	12.33	12.91	24	Pass
134	5670	11.67	12.25	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 v01r01.

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.

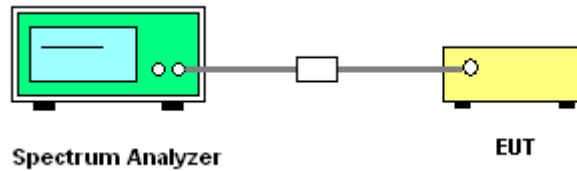
Method SA-2

(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 v01r01.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW $\geq$ 3 MHz.
 - Number of points in sweep $\geq$ 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



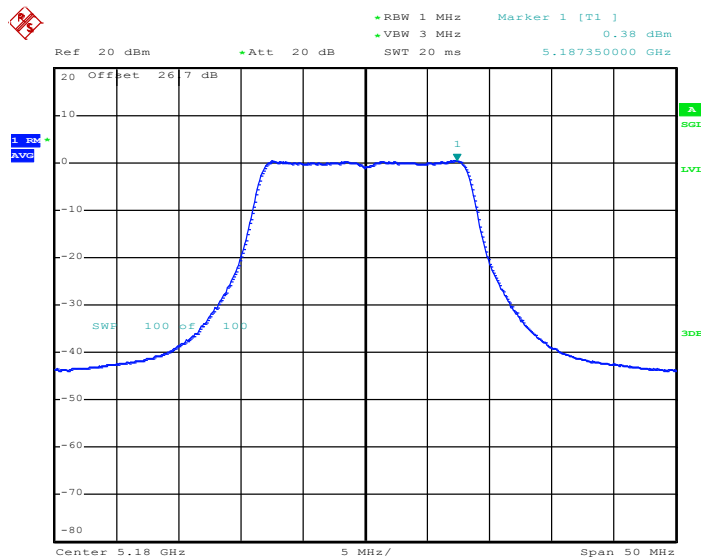
3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Reece Li	Relative Humidity :	45~49%
Duty Cycle:	93.23%	Duty Factor:	0.30dB

Channel	Frequency (MHz)	802.11a PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	0.38	0.68	4	Pass
44	5220	0.63	0.93	4	Pass
48	5240	0.45	0.75	4	Pass
52	5260	0.67	0.97	11	Pass
60	5300	0.77	1.07	11	Pass
64	5320	0.48	0.78	11	Pass
100	5500	1.46	1.76	11	Pass
116	5580	1.44	1.74	11	Pass
140	5700	1.72	2.02	11	Pass

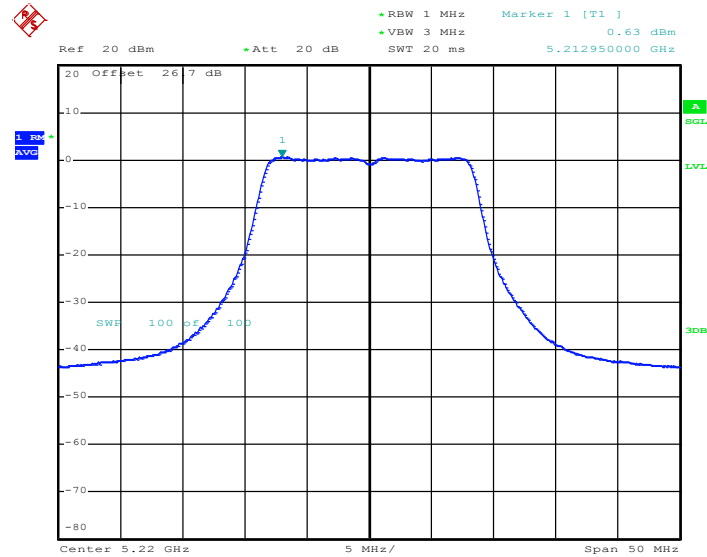
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11a Channel 36



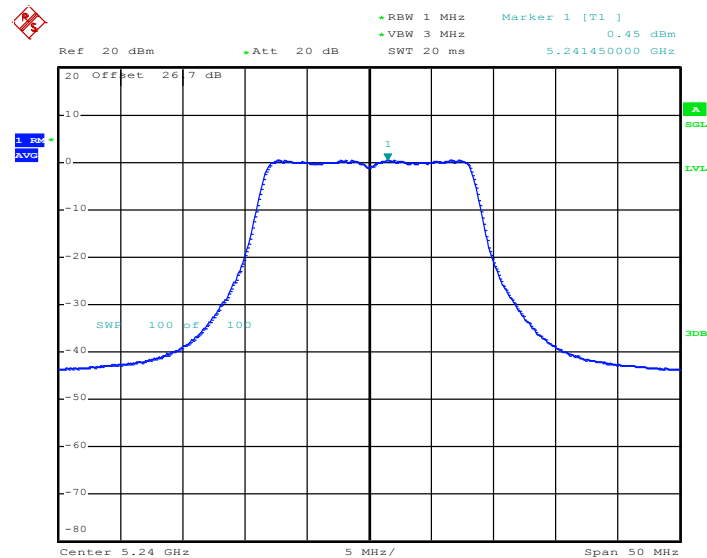
292639 15E PSD 802.11a 5180 (ch36)

Date: 4.OCT.2012 12:36:55

PSD Plot on 802.11a Channel 44


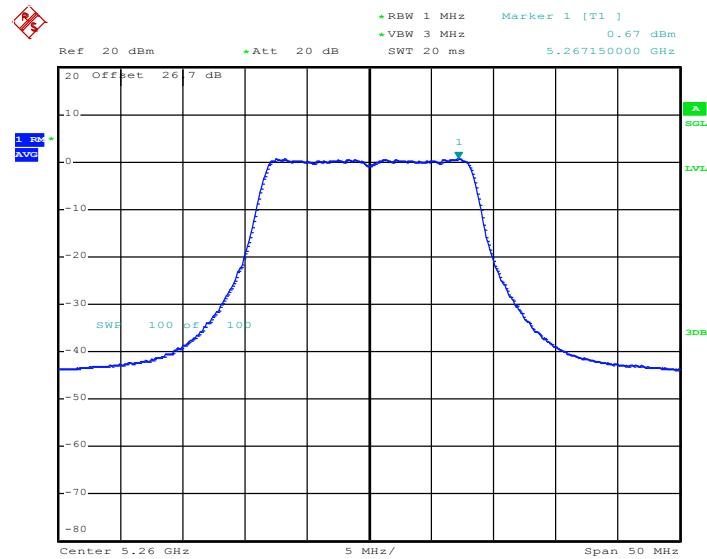
292639 15E PSD 802.11a 5220 (ch44)

Date: 4.OCT.2012 13:33:38

PSD Plot on 802.11a Channel 48


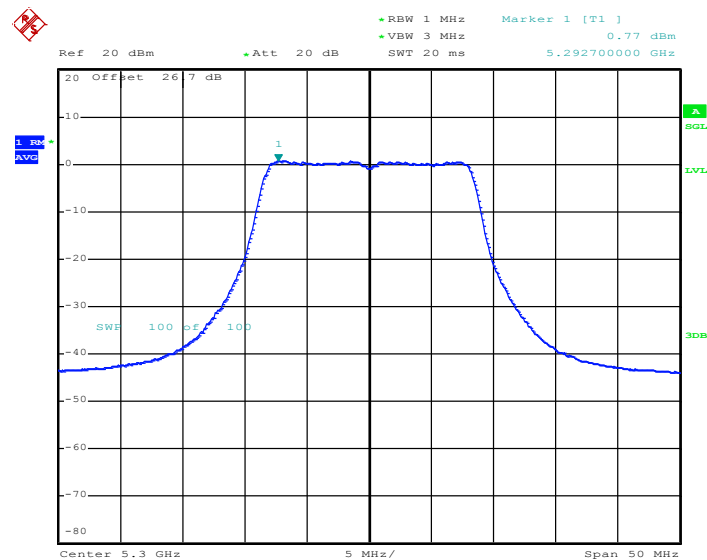
292639 15E PSD 802.11a 5240 (ch48)

Date: 4.OCT.2012 13:36:41

PSD Plot on 802.11a Channel 52


292639 15E PSD 802.11a 5260 (ch52)

Date: 4.OCT.2012 13:38:39

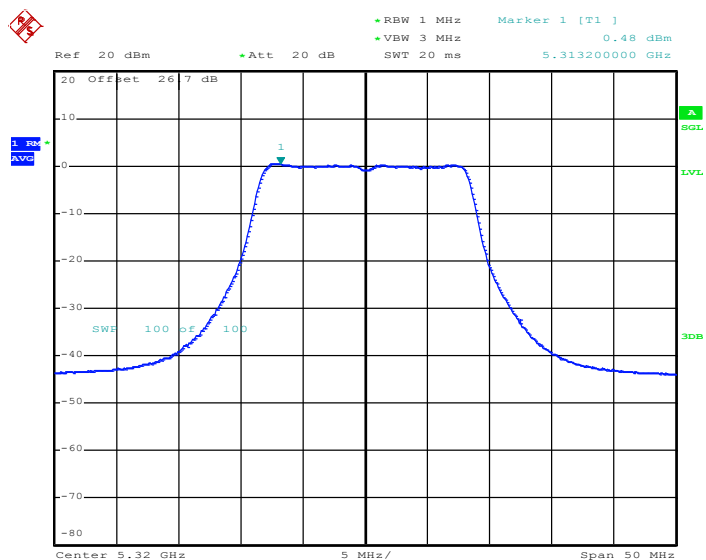
PSD Plot on 802.11a Channel 60


292639 15E PSD 802.11a 5300 (ch60)

Date: 4.OCT.2012 13:41:31



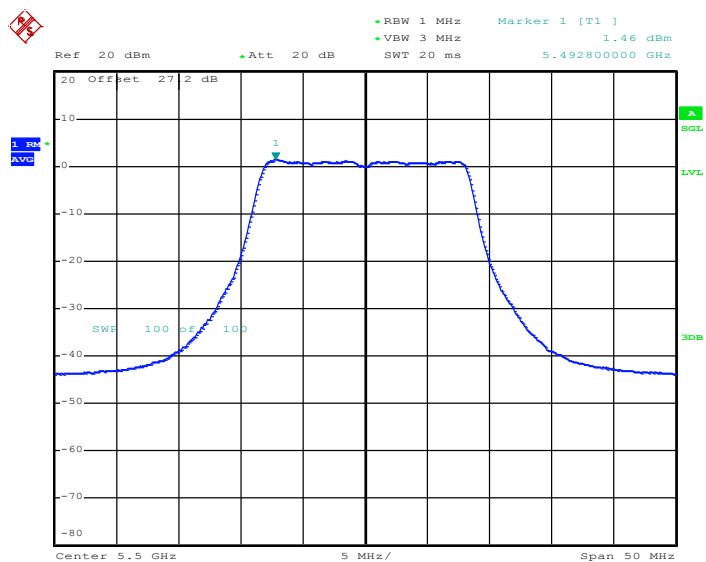
PSD Plot on 802.11a Channel 64



292639 15E PSD 802.11a 5320 (ch64)

Date: 4.OCT.2012 13:43:37

PSD Plot on 802.11a Channel 100



292639 15E PSD 802.11a 5500 (ch100)

Date: 4.OCT.2012 13:46:56



Ref 20 dBm Att 20 dB RBW 1 MHz VBW 3 MHz SWT 20 ms Marker 1 [T1] 1.44 dBm 5.572550000 GHz

20 Offset 27.2 dB

1 Ref AVG

SWF 100 5F 100

Center 5.58 GHz 5 MHz/ Span 50 MHz

[illegible]

292639 15E PSD 802.11a 5700 (ch140)
Date: 4.OCT.2012 13:51:31

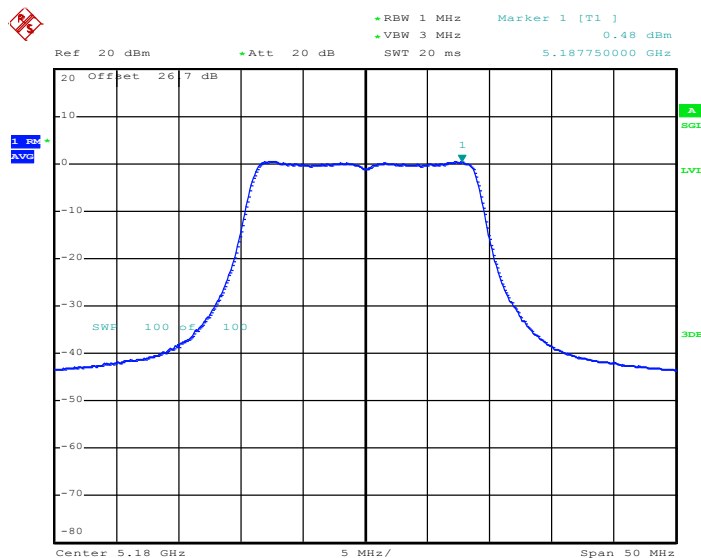


Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%
Duty Cycle:	92.95%	Duty Factor:	0.32dB

Channel	Frequency (MHz)	802.11n HT20 PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	0.48	0.80	4	Pass
44	5220	0.48	0.80	4	Pass
48	5240	0.39	0.71	4	Pass
52	5260	0.34	0.66	11	Pass
60	5300	0.56	0.88	11	Pass
64	5320	0.20	0.52	11	Pass
100	5500	0.17	0.49	11	Pass
116	5580	1.17	1.49	11	Pass
140	5700	1.47	1.79	11	Pass

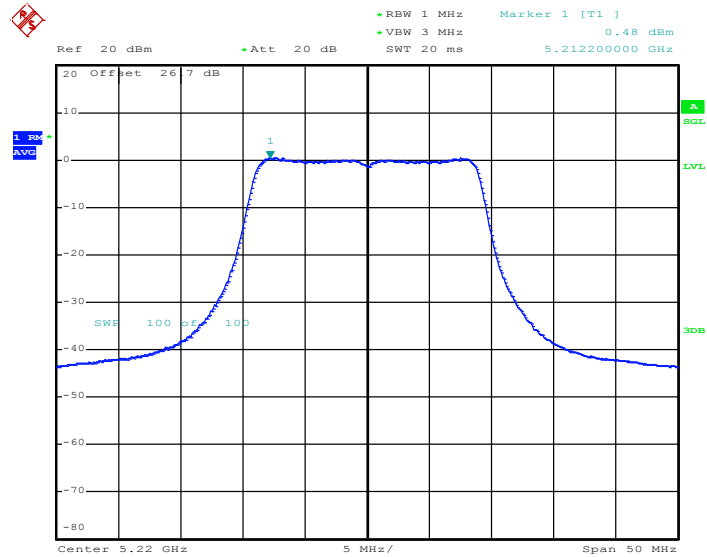
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11n HT20 channel 36



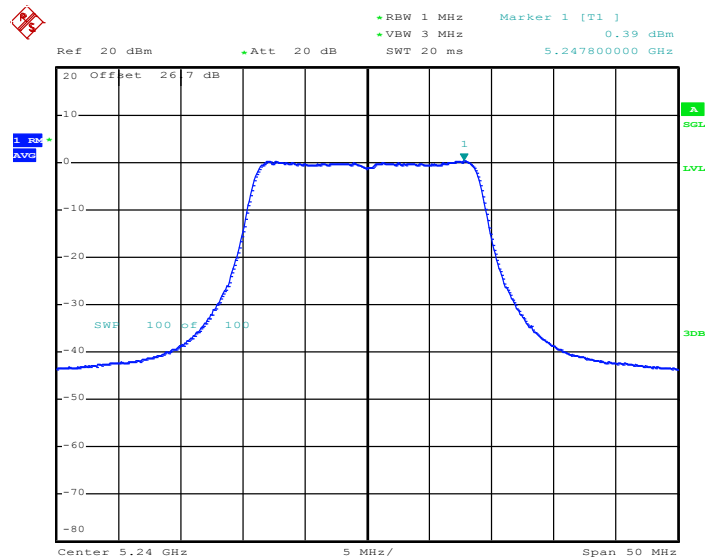
292639 15E PSD 802.11a_N20 5180 (ch36)

Date: 4.OCT.2012 14:08:11

PSD Plot on 802.11n HT20 Channel 44


292639 15E PSD 802.11a_N20 5220 (ch44)

Date: 4.OCT.2012 14:10:28

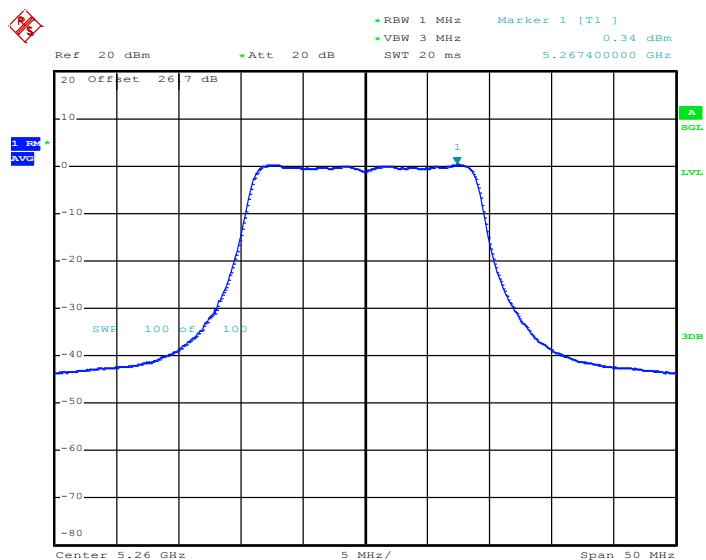
PSD Plot on 802.11n HT20 Channel 48


292639 15E PSD 802.11a_N20 5240 (ch48)

Date: 4.OCT.2012 14:13:14



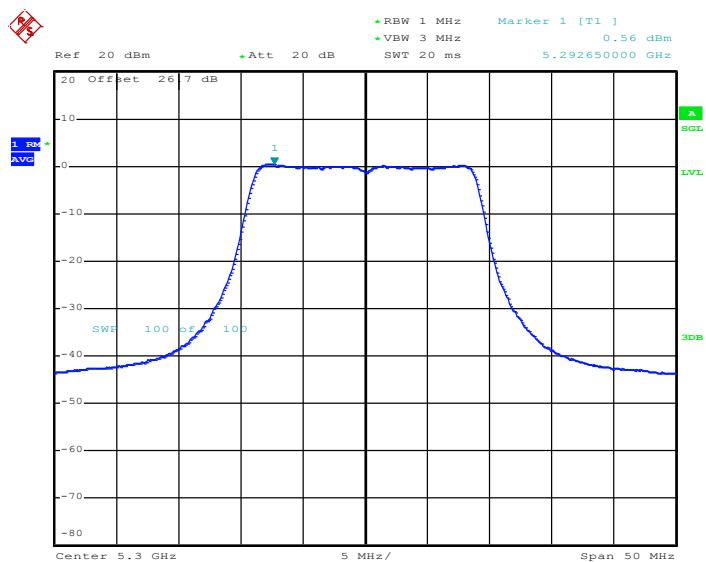
PSD Plot on 802.11n HT20 Channel 52



292639 15E PSD 802.11a_N20 5260 (ch52)

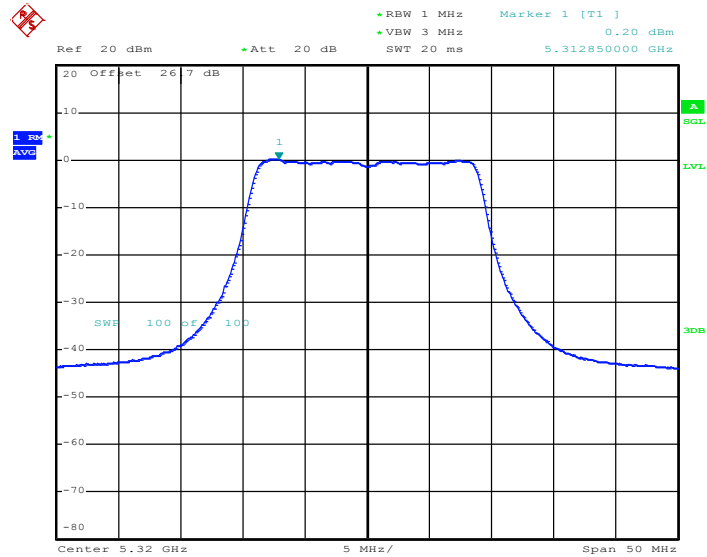
Date: 4.OCT.2012 14:16:51

PSD Plot on 802.11n HT20 Channel 60



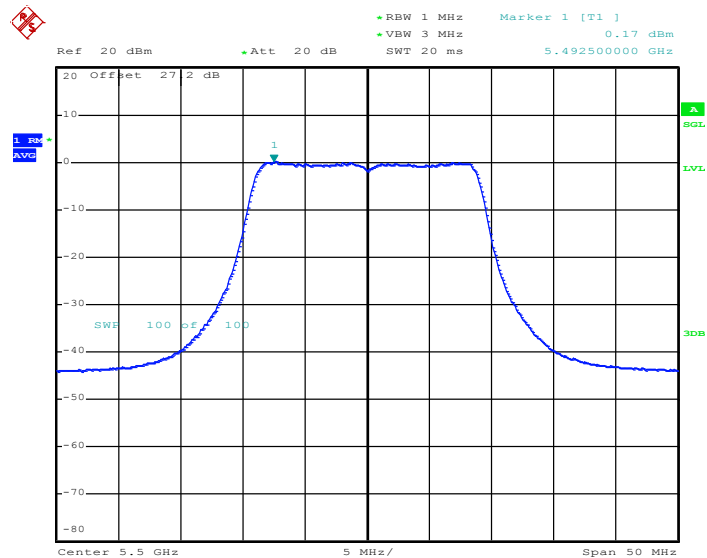
292639 15E PSD 802.11a_N20 5300 (ch60)

Date: 4.OCT.2012 14:19:08

PSD Plot on 802.11n HT20 Channel 64


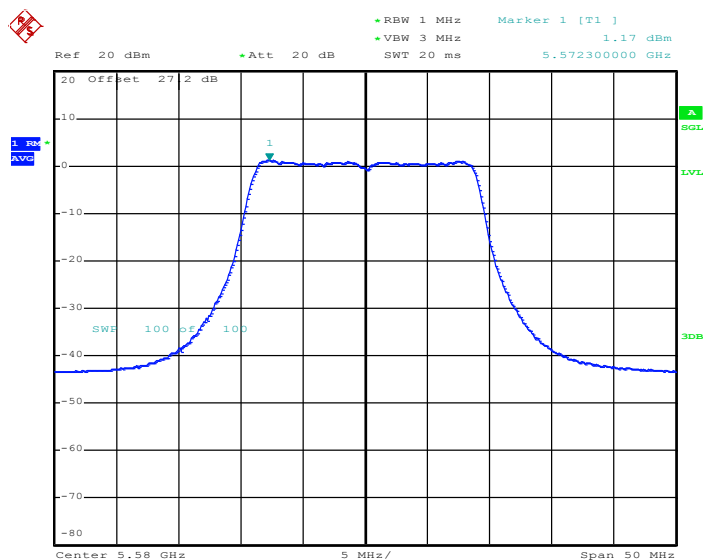
292639 15E PSD 802.11a_N20 5320 (ch64)

Date: 4.OCT.2012 14:22:37

PSD Plot on 802.11n HT20 Channel 100


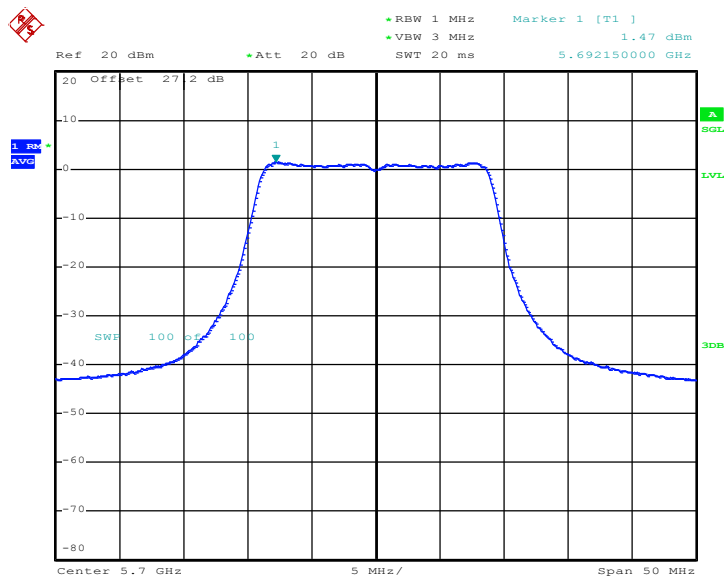
292639 15E PSD 802.11a_N20 5500 (ch100)

Date: 4.OCT.2012 14:05:35

PSD Plot on 802.11n HT20 Channel 116


292639 15E PSD 802.11a_N20 5580

Date: 4.OCT.2012 14:02:08

PSD Plot on 802.11n HT20 Channel 140


292639 15E PSD 802.11a_N20 5700 (ch140)

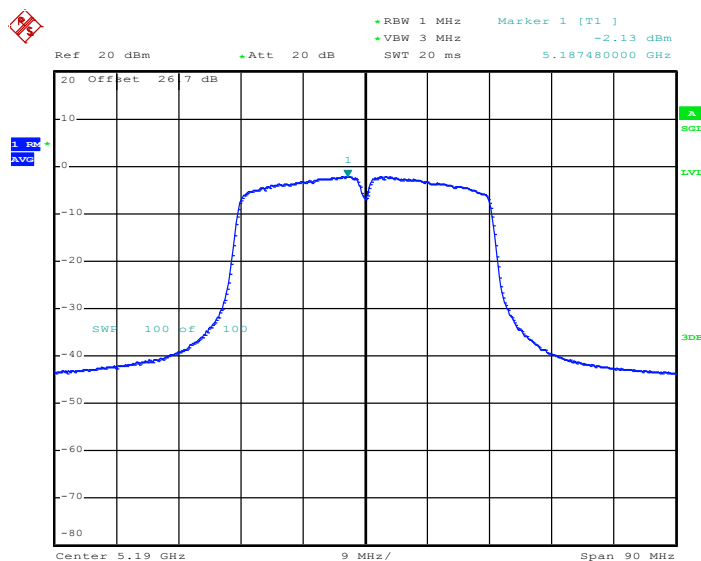
Date: 4.OCT.2012 13:59:32

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%
Duty Cycle:	87.50%	Duty Factor:	0.58dB

Channel	Frequency (MHz)	802.11n HT40 PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
38	5190	-2.13	-1.55	4	Pass
46	5230	-2.18	-1.60	4	Pass
54	5270	-2.03	-1.45	11	Pass
62	5310	-2.17	-1.59	11	Pass
102	5510	-2.29	-1.71	11	Pass
110	5550	-1.37	-0.79	11	Pass
134	5670	-1.80	-1.22	11	Pass

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

PSD Plot on 802.11n HT40 Channel 38

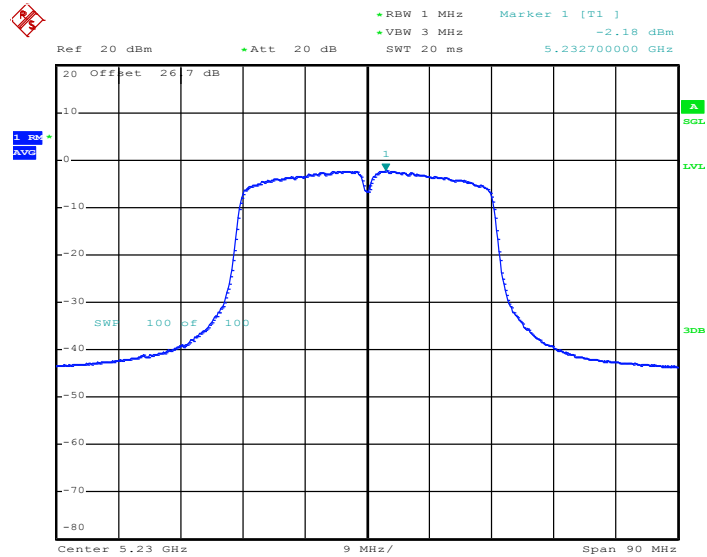


292639 15E PSD 802.11a_N40 5190 (ch38)

Date: 4.OCT.2012 14:26:05



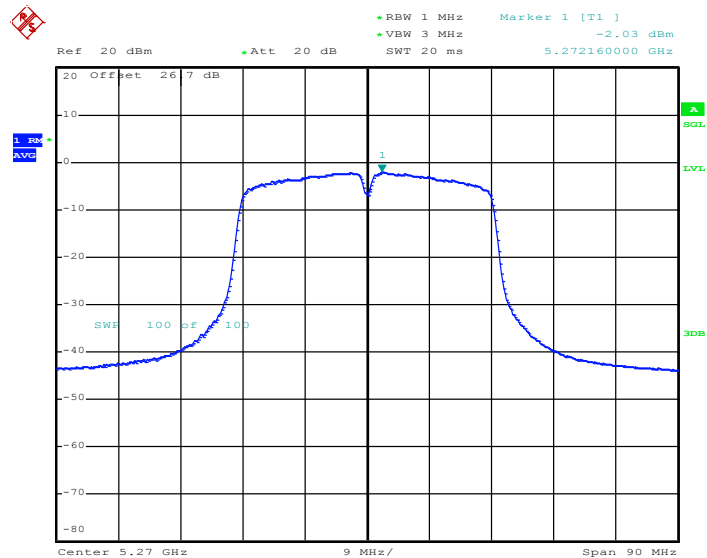
PSD Plot on 802.11n HT40 Channel 46



292639 15E PSD 802.11a_N40 5230 (ch46)

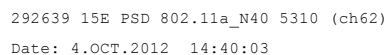
Date: 4.OCT.2012 14:30:55

PSD Plot on 802.11n HT40 Channel 54

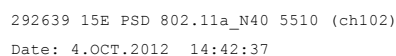


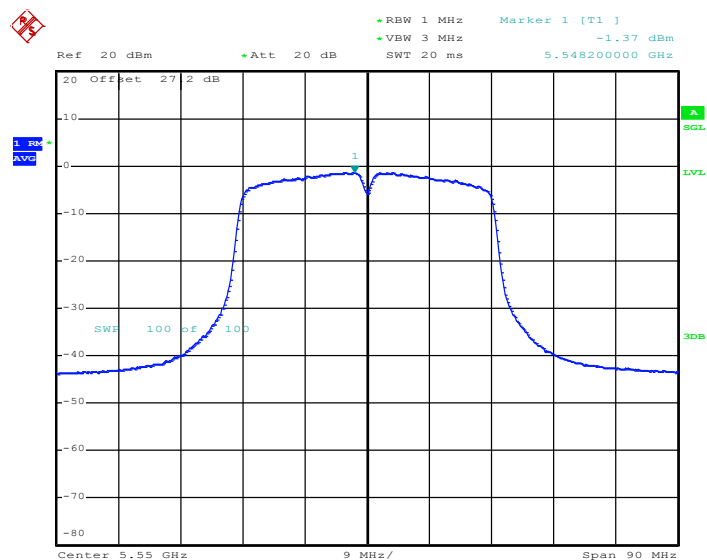
292639 15E PSD 802.11a_N40 5270 (ch54)

Date: 4.OCT.2012 14:35:23



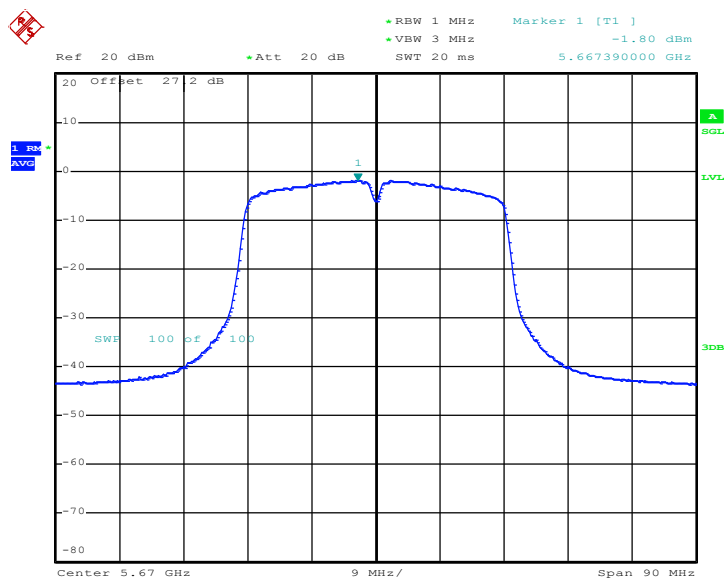
PSD Plot on 802.11n HT40 Channel 102



PSD Plot on 802.11n HT40 Channel 110


292639 15E PSD 802.11a_N40 5550

Date: 4.OCT.2012 14:46:56

PSD Plot on 802.11n HT40 Channel 134


292639 15E PSD 802.11a_N40 5670 (ch134)

Date: 4.OCT.2012 14:49:10

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.

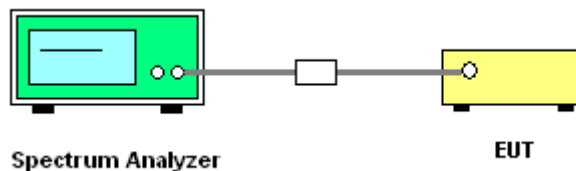
3.4.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r01.

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 $\geq$ 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.

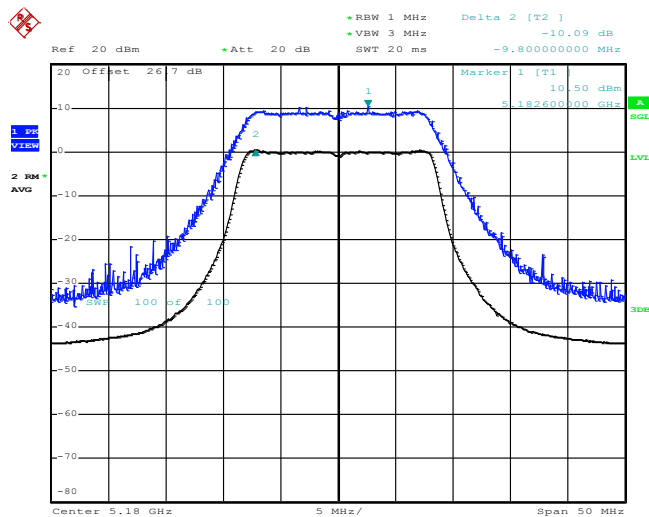
3.4.4 Test Setup



3.4.5 Test Result of Peak Excursion Ratio

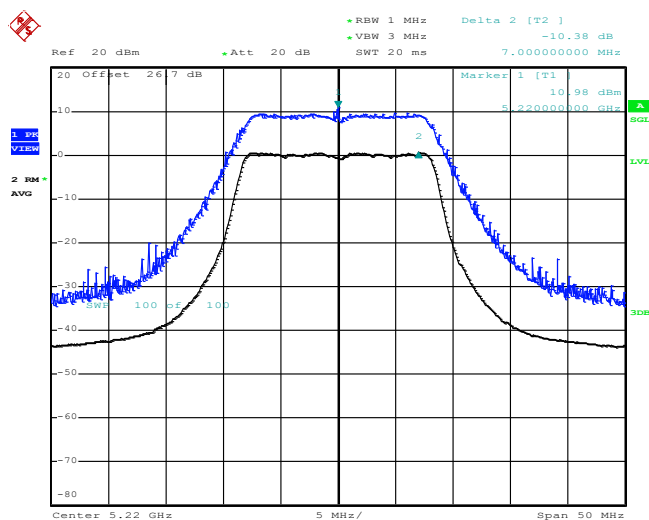
Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Peak Excursion Ratio Plot on 802.11a Channel 36



292639 15E PAR 802.11a 5180 (ch36)
Date: 4.OCT.2012 12:37:26

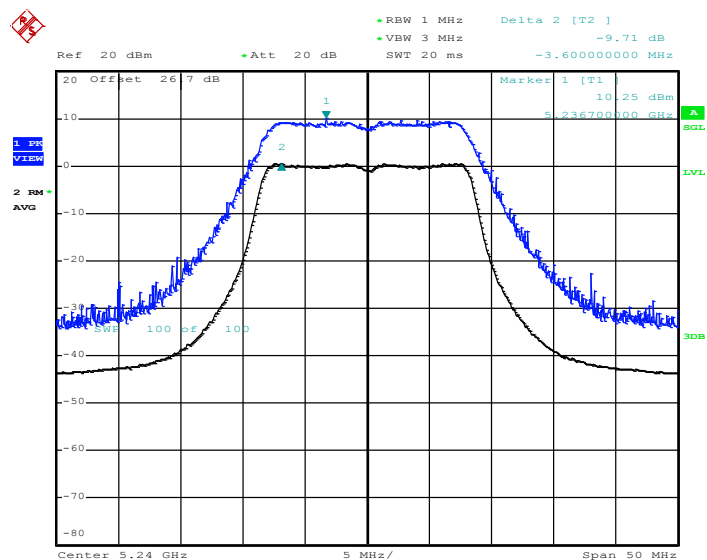
Peak Excursion Ratio Plot on 802.11a Channel 44



292639 15E PAR 802.11a 5220 (ch44)
Date: 4.OCT.2012 13:34:11



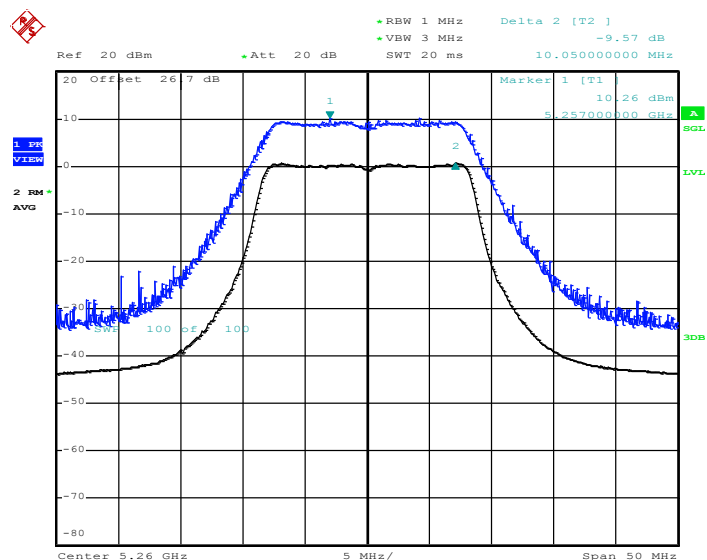
Peak Excursion Ratio Plot on 802.11a Channel 48



292639 15E PAR 802.11a 5240 (ch48)

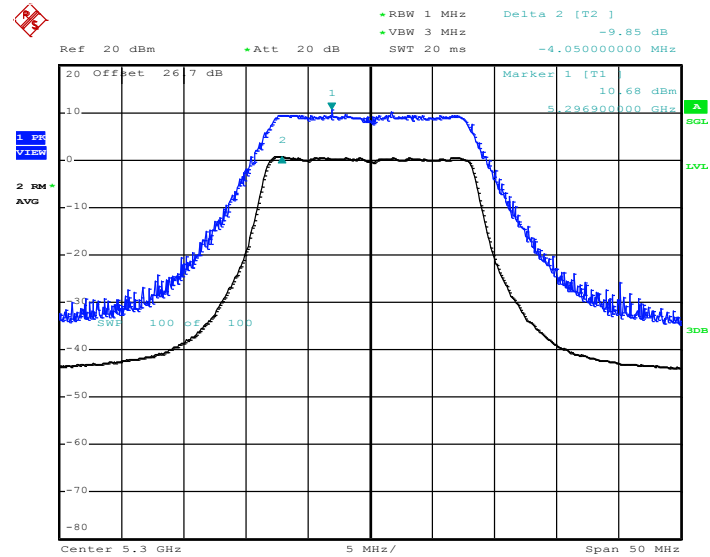
Date: 4.OCT.2012 13:37:02

Peak Excursion Ratio Plot on 802.11a Channel 52



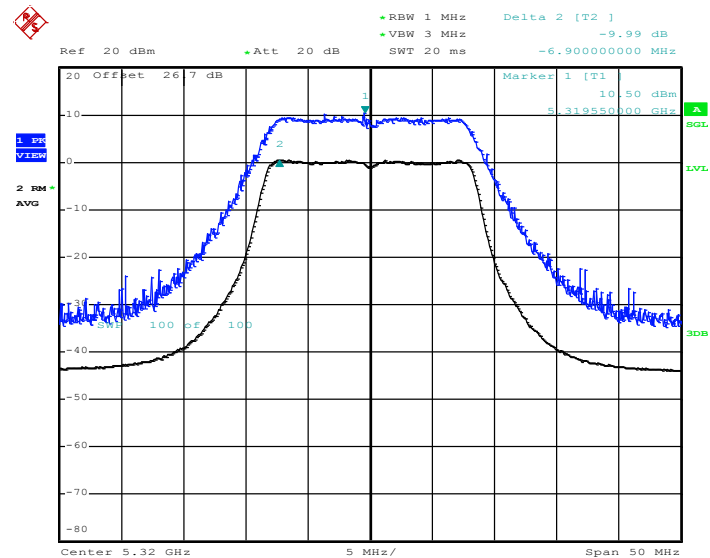
292639 15E PAR 802.11a 5260 (ch52)

Date: 4.OCT.2012 13:39:00

Peak Excursion Ratio Plot on 802.11a Channel 60


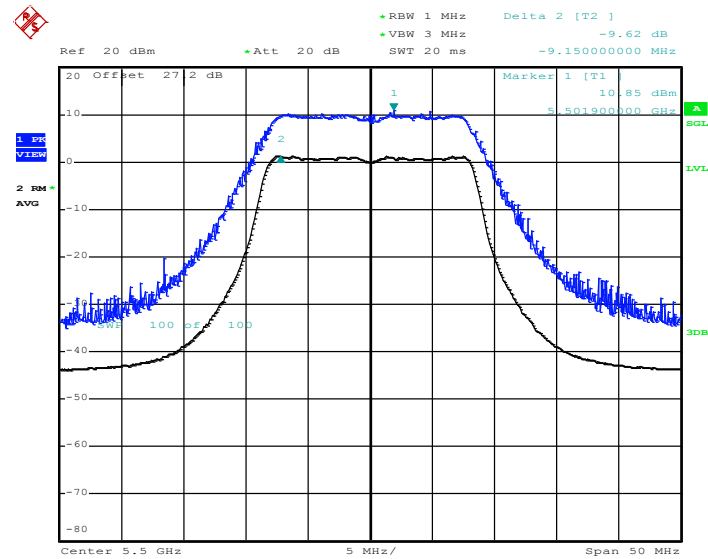
292639 15E PAR 802.11a 5300 (ch60)

Date: 4.OCT.2012 13:41:52

Peak Excursion Ratio Plot on 802.11a Channel 64


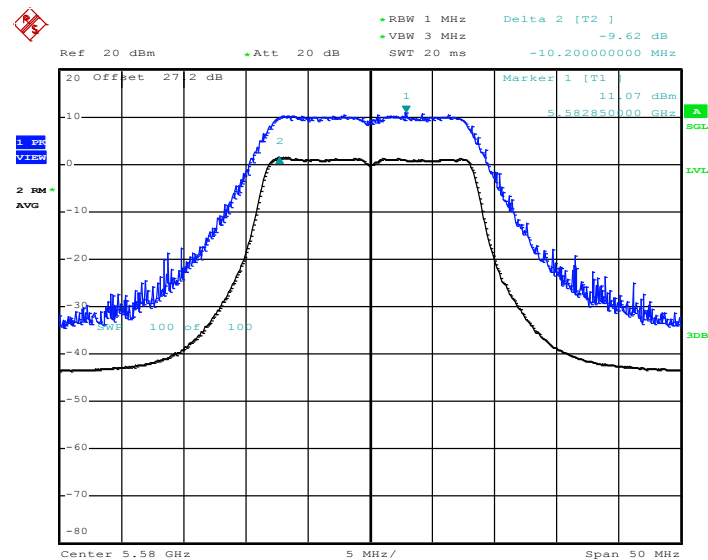
292639 15E PAR 802.11a 5320 (ch64)

Date: 4.OCT.2012 13:43:59

Peak Excursion Ratio Plot on 802.11a Channel 100


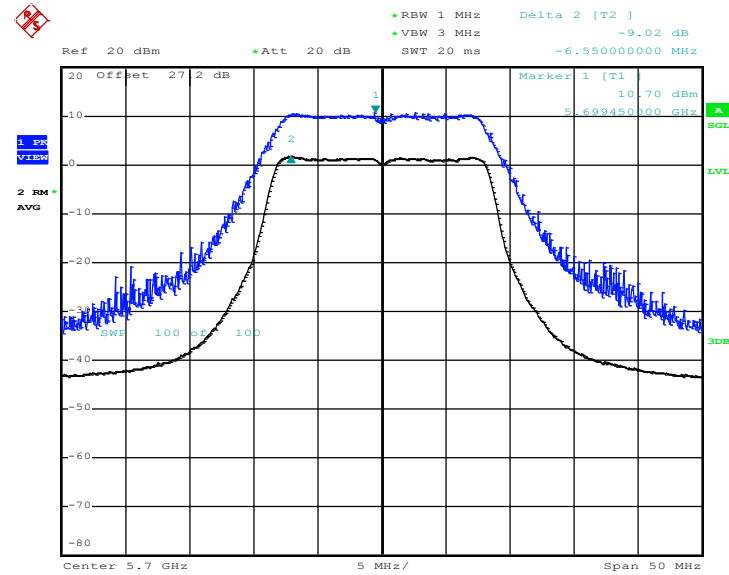
292639 15E PAR 802.11a 5500 (ch100)

Date: 4.OCT.2012 13:47:17

Peak Excursion Ratio Plot on 802.11a Channel 116


292639 15E PAR 802.11a 5580

Date: 4.OCT.2012 13:49:36

Peak Excursion Ratio Plot on 802.11a Channel 140


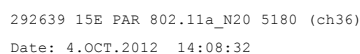
292639 15E PAR 802.11a 5700 (ch140)

Date: 4.OCT.2012 13:51:53

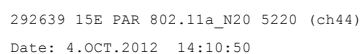


Report No. : FR292639C

Peak Excursion Ratio Plot on 802.11n HT20 Channel 36

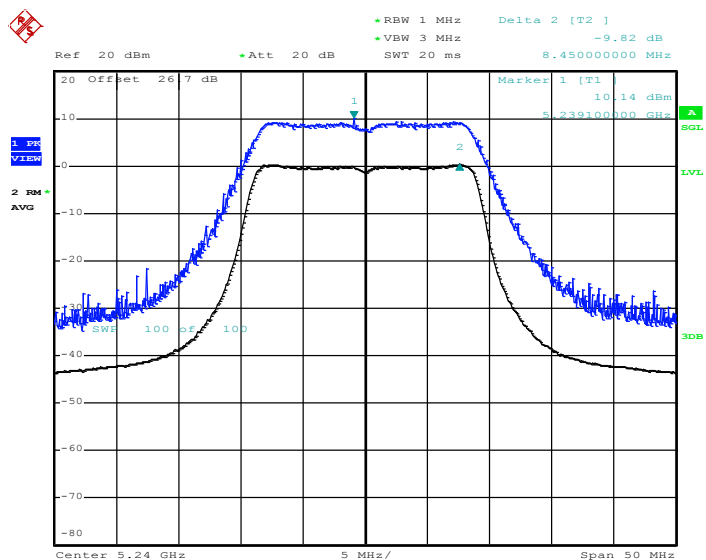


Peak Excursion Ratio Plot on 802.11n HT20 Channel 44





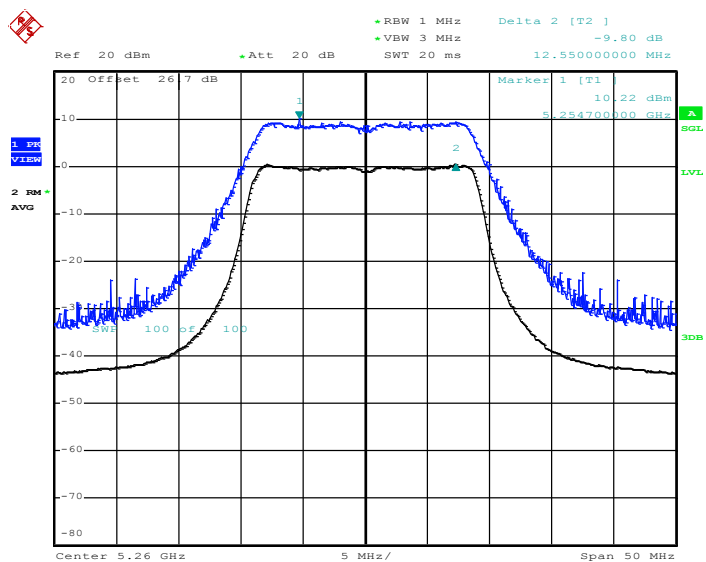
Peak Excursion Ratio Plot on 802.11n HT20 Channel 48



292639 15E PAR 802.11a_N20 5240 (ch48)

Date: 4.OCT.2012 14:13:41

Peak Excursion Ratio Plot on 802.11n HT20 Channel 52

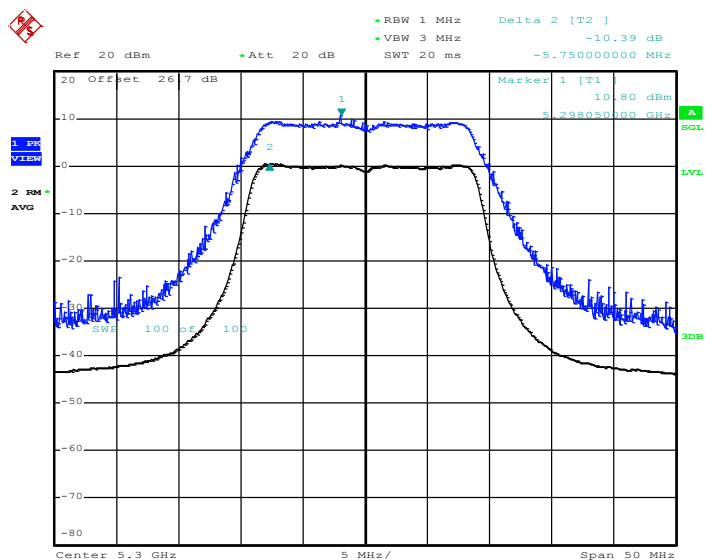


292639 15E PAR 802.11a_N20 5260 (ch52)

Date: 4.OCT.2012 14:17:13

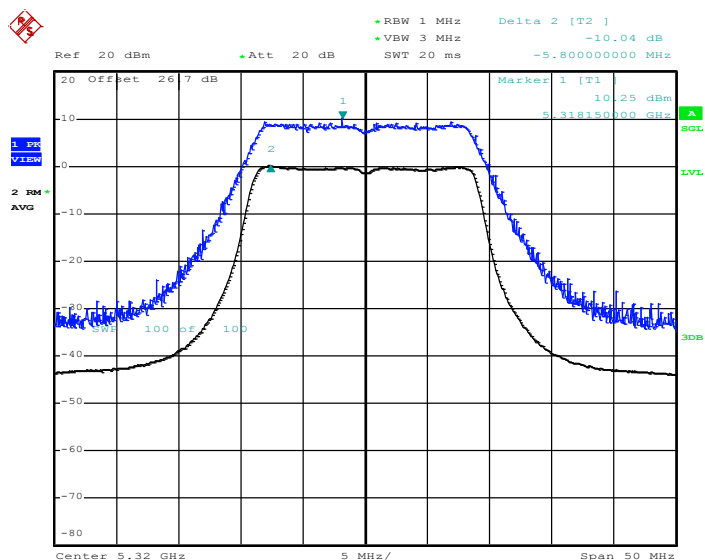


Peak Excursion Ratio Plot on 802.11n HT20 Channel 60



292639 15E PAR 802.11a_N20 5300 (ch60)
Date: 4.OCT.2012 14:19:30

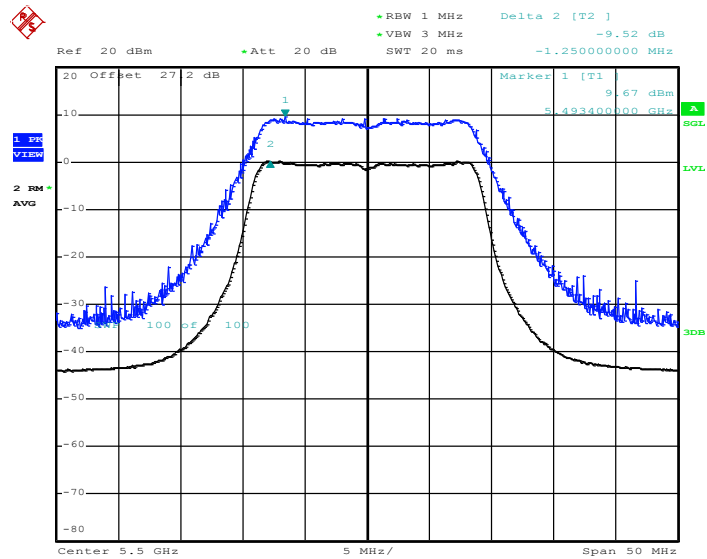
Peak Excursion Ratio Plot on 802.11n HT20 Channel 64



292639 15E PAR 802.11a_N20 5320 (ch64)
Date: 4.OCT.2012 14:23:01



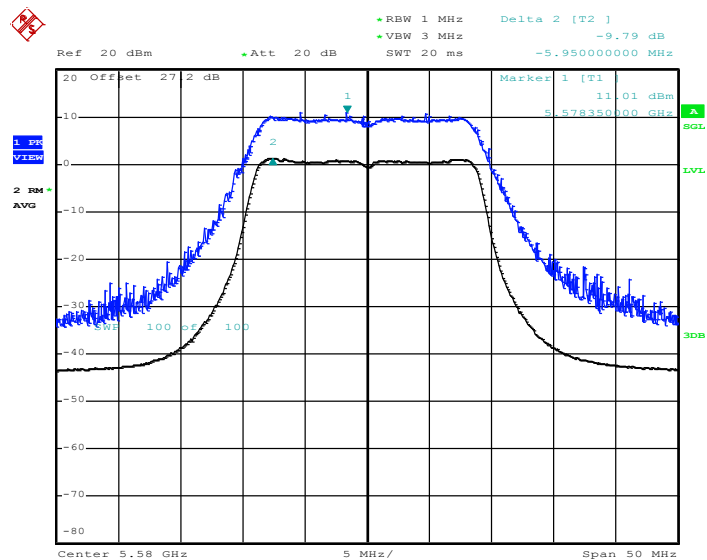
Peak Excursion Ratio Plot on 802.11n HT20 Channel 100



292639 15E PAR 802.11a_N20 5500 (ch100)

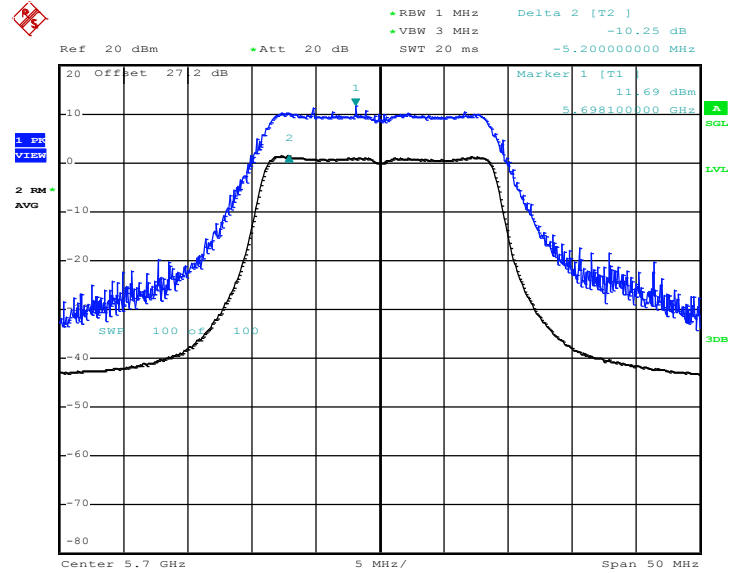
Date: 4.OCT.2012 14:05:59

Peak Excursion Ratio Plot on 802.11n HT20 Channel 116



292639 15E PAR 802.11a_N20 5580

Date: 4.OCT.2012 14:02:30

Peak Excursion Ratio Plot on 802.11n HT20 Channel 140


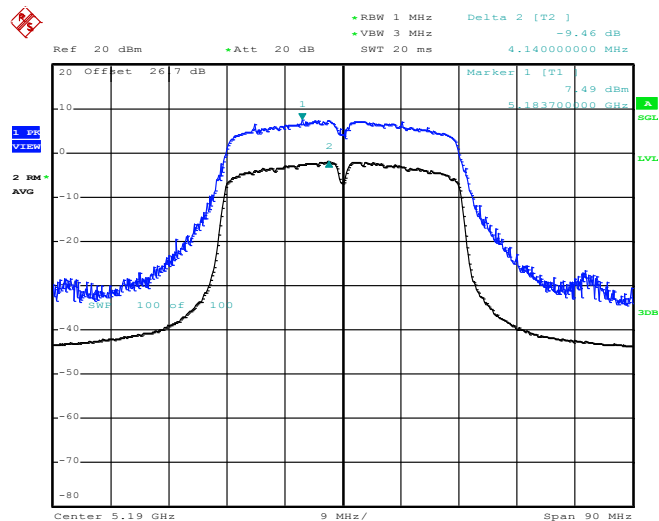
292639 15E PAR 802.11a_N20 5700 (ch140)

Date: 4.OCT.2012 13:59:53



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

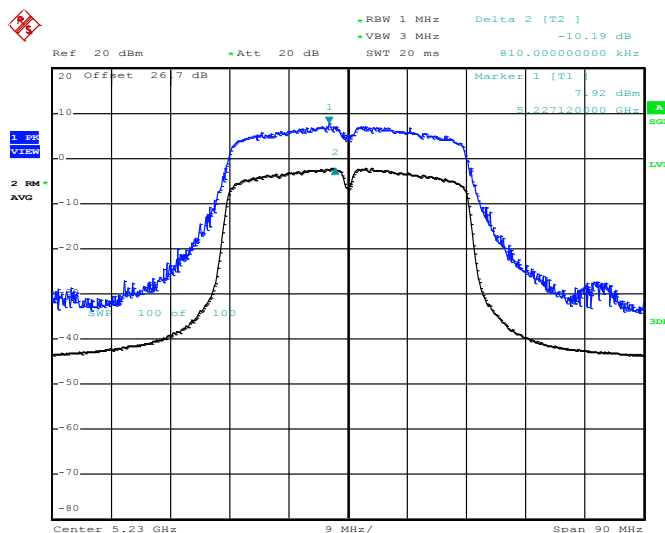
Peak Excursion Ratio Plot on 802.11n HT40 Channel 38



292639 15E PAR 802.11a_N40 5190 (ch38)

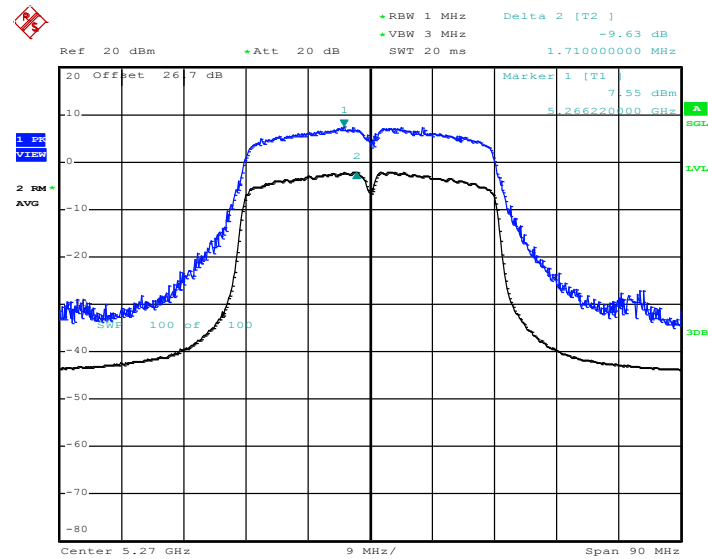
Date: 4.OCT.2012 14:26:27

Peak Excursion Ratio Plot on 802.11n HT40 Channel 46



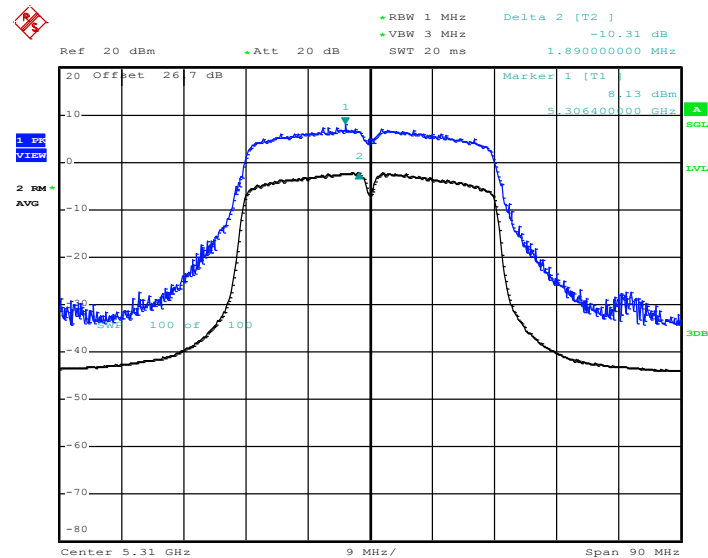
292639 15E PAR 802.11a_N40 5230 (ch46)

Date: 4.OCT.2012 14:31:17

Peak Excursion Ratio Plot on 802.11n HT40 Channel 54


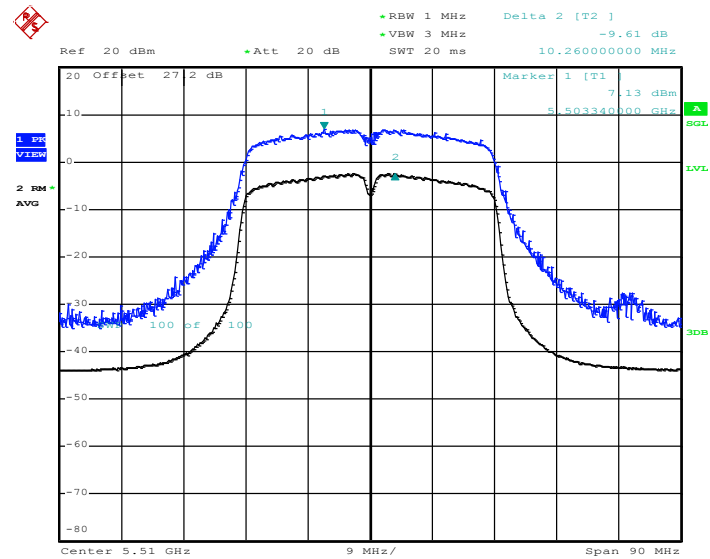
292639 15E PAR 802.11a_N40 5270 (ch54)

Date: 4.OCT.2012 14:35:43

Peak Excursion Ratio Plot on 802.11n HT40 Channel 62


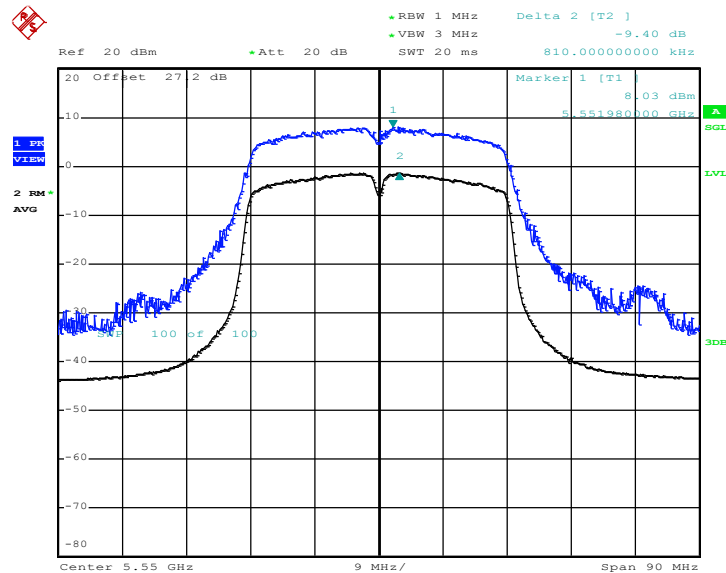
292639 15E PAR 802.11a_N40 5310 (ch62)

Date: 4.OCT.2012 14:40:30

Peak Excursion Ratio Plot on 802.11n HT40 Channel 102


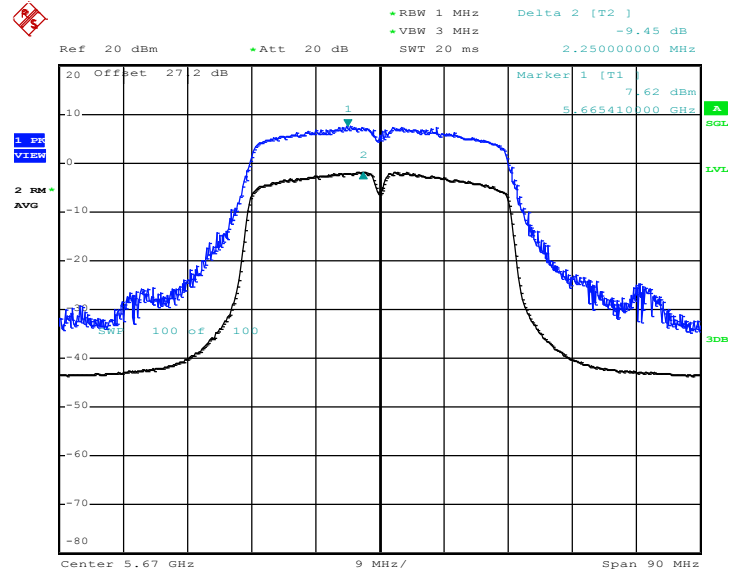
292639 15E PAR 802.11a_N40 5510 (ch102)

Date: 4.OCT.2012 14:42:59

Peak Excursion Ratio Plot on 802.11n HT40 Channel 110


292639 15E PAR 802.11a_N40 5550

Date: 4.OCT.2012 14:47:19

Peak Excursion Ratio Plot on 802.11n HT40 Channel 134


292639 15E PAR 802.11a_N40 5670 (ch134)

Date: 4.OCT.2012 14:49:31

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 Part 15.205.

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 Part 15.205 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.

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

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 v01r01.

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 $\geq$ 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 $\geq$ 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	93.23	1432	0.698	1KHz
802.11n HT20	92.95	1344	0.744	1KHz
802.11n HT40	87.50	672	1.488	3KHz

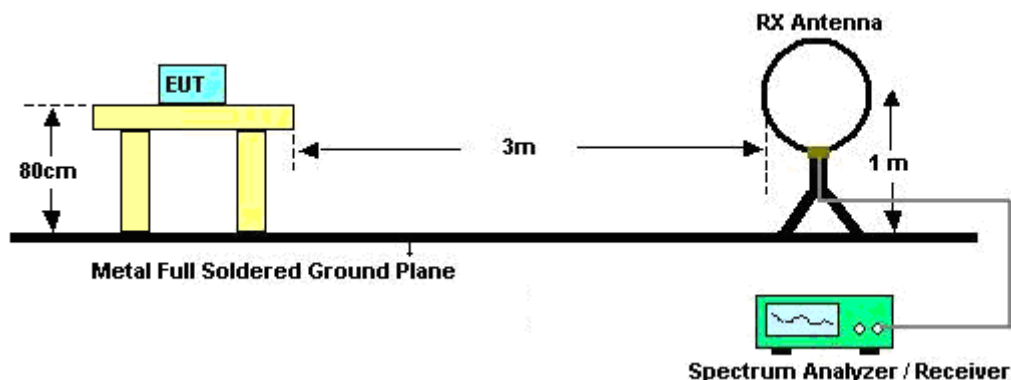
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four

meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.

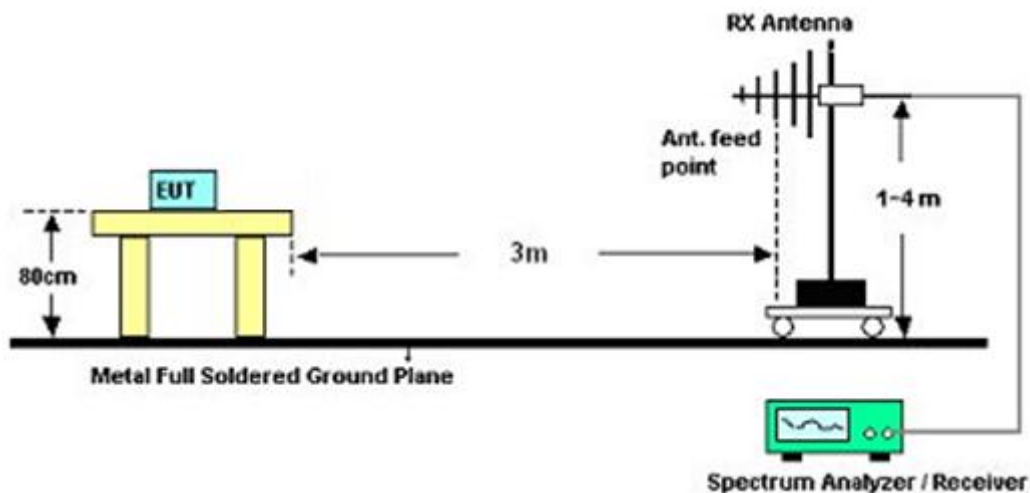
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, 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

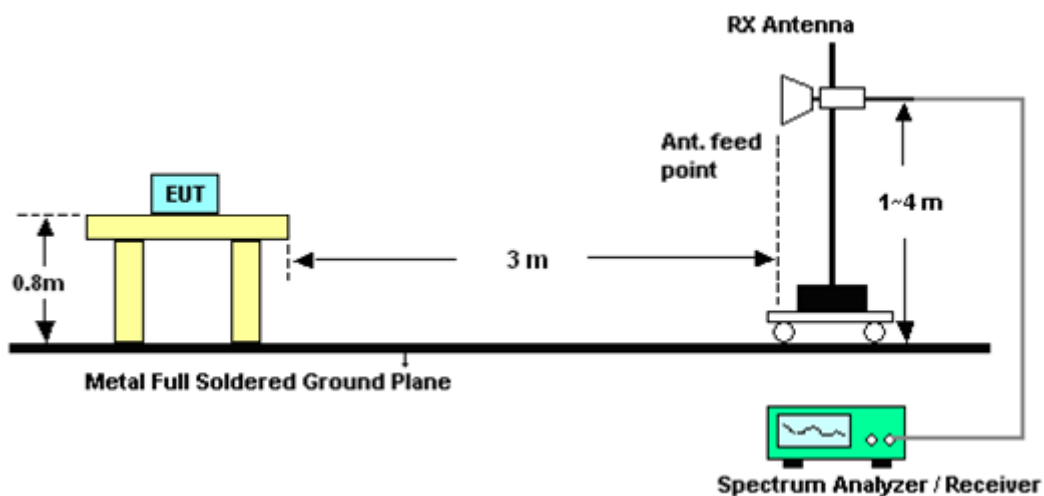
For radiated emissions below 30MHz



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

3.5.7 Test Result of Radiated Band Edges

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5143.3	58.62	-15.38	74	47.14	34.89	10.44	33.85	100	298	Peak
5149.85	41	-13	54	29.52	34.89	10.44	33.85	100	298	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
5131.45	56.47	-17.53	74	45.04	34.88	10.4	33.85	129	268	Peak
5146.3	39.6	-14.4	54	28.12	34.89	10.44	33.85	129	268	Average

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5125.95	57.53	-16.47	74	46.1	34.88	10.4	33.85	100	292	Peak
5145.1	40.35	-13.65	54	28.87	34.89	10.44	33.85	100	292	Average
5387.2	55.51	-18.49	74	43.53	35.03	10.79	33.84	100	292	Peak
5387.55	39.24	-14.76	54	27.26	35.03	10.79	33.84	100	292	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
5126.1	56.25	-17.75	74	44.82	34.88	10.4	33.85	126	260	Peak
5125.65	39.19	-14.81	54	27.76	34.88	10.4	33.85	126	260	Average
5367.5	54.94	-19.06	74	43.01	35.02	10.75	33.84	126	260	Peak
5371.95	39.11	-14.89	54	27.18	35.02	10.75	33.84	126	260	Average



Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5120.1	58.46	-15.54	74	47.04	34.87	10.4	33.85	100	293	Peak
5149.95	39.11	-14.89	54	27.63	34.89	10.44	33.85	100	293	Average
5365.5	58.81	-15.19	74	46.88	35.02	10.75	33.84	100	293	Peak
5364.2	39.47	-14.53	54	27.54	35.02	10.75	33.84	100	293	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
5118.5	57.32	-16.68	74	45.9	34.87	10.4	33.85	124	259	Peak
5144.9	38.92	-15.08	54	27.44	34.89	10.44	33.85	124	259	Average
5389.85	58.11	-15.89	74	46.13	35.03	10.79	33.84	124	259	Peak
5368.85	39.35	-14.65	54	27.42	35.02	10.75	33.84	124	259	Average

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5354.9	58.42	-15.58	74	46.53	35.01	10.72	33.84	109	287	Peak
5373.9	41.63	-12.37	54	29.7	35.02	10.75	33.84	109	287	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
5370.2	55.56	-18.44	74	43.63	35.02	10.75	33.84	123	261	Peak
5359.75	39.61	-14.39	54	27.69	35.01	10.75	33.84	123	261	Average



Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5457.52	61.1	-12.9	74	48.98	35.07	10.89	33.84	105	293	Peak
5470	60.66	-7.64	68.3	48.53	35.08	10.89	33.84	105	293	Peak
5457.6	42.23	-11.77	54	30.11	35.07	10.89	33.84	105	293	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
5442.16	58.25	-15.75	74	46.17	35.06	10.86	33.84	100	301	Peak
5470	56.35	-11.95	68.3	44.22	35.08	10.89	33.84	100	301	Peak
5451.6	40.79	-13.21	54	28.7	35.07	10.86	33.84	100	301	Average

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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	62.15	-6.15	68.3	49.24	35.41	11.34	33.84	101	44	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	55.96	-12.34	68.3	43.05	35.41	11.34	33.84	113	271	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5133.85	59.18	-14.82	74	47.75	34.88	10.4	33.85	100	293	Peak
5148.35	40.7	-13.3	54	29.22	34.89	10.44	33.85	100	293	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
5138.35	56.79	-17.21	74	45.36	34.88	10.4	33.85	125	266	Peak
5149.45	39.54	-14.46	54	28.06	34.89	10.44	33.85	125	266	Average

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5120.8	57.69	-16.31	74	46.27	34.87	10.4	33.85	100	293	Peak
5144.4	39.4	-14.6	54	27.92	34.89	10.44	33.85	100	293	Average
5391.05	55.09	-18.91	74	43.11	35.03	10.79	33.84	100	293	Peak
5359.85	40.16	-13.84	54	28.24	35.01	10.75	33.84	100	293	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
5105.95	56.14	-17.86	74	44.75	34.87	10.37	33.85	102	269	Peak
5138.9	38.96	-15.04	54	27.53	34.88	10.4	33.85	102	269	Average
5353	55.3	-18.7	74	43.41	35.01	10.72	33.84	102	269	Peak
5369.75	39.26	-14.74	54	27.33	35.02	10.75	33.84	102	269	Average



Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5148.15	57.01	-16.99	74	45.53	34.89	10.44	33.85	100	294	Peak
5145.05	39.27	-14.73	54	27.79	34.89	10.44	33.85	100	294	Average
5372.75	55.93	-18.07	74	44	35.02	10.75	33.84	100	294	Peak
5354.45	40.3	-13.7	54	28.41	35.01	10.72	33.84	100	294	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
5101.7	56.27	-17.73	74	44.89	34.86	10.37	33.85	101	270	Peak
5126.15	38.9	-15.1	54	27.47	34.88	10.4	33.85	101	270	Average
5379.95	55.07	-18.93	74	43.13	35.03	10.75	33.84	101	270	Peak
5364.1	39.35	-14.65	54	27.42	35.02	10.75	33.84	101	270	Average

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5357.4	57.19	-16.81	74	45.27	35.01	10.75	33.84	100	218	Peak
5370.3	40.31	-13.69	54	28.38	35.02	10.75	33.84	100	218	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
5360.55	56.29	-17.71	74	44.36	35.02	10.75	33.84	100	46	Peak
5363	39.7	-14.3	54	27.77	35.02	10.75	33.84	100	46	Average



Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5452.08	58.34	-15.66	74	46.22	35.07	10.89	33.84	100	90	Peak
5470	56.99	-11.31	68.3	44.86	35.08	10.89	33.84	100	90	Peak
5451.6	40.53	-13.47	54	28.44	35.07	10.86	33.84	100	90	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
5458.96	56.69	-17.31	74	44.57	35.07	10.89	33.84	100	321	Peak
5470	53.56	-14.74	68.3	41.43	35.08	10.89	33.84	100	321	Peak
5458.16	39.96	-14.04	54	27.84	35.07	10.89	33.84	100	321	Average

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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	61.3	-7	68.3	48.39	35.41	11.34	33.84	100	6	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	54.68	-13.62	68.3	41.77	35.41	11.34	33.84	100	236	Peak



Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	38	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5147.7	63.36	-10.64	74	51.88	34.89	10.44	33.85	100	301	Peak
5150	43.18	-10.82	54	31.7	34.89	10.44	33.85	100	301	Average
5379	55.19	-18.81	74	43.25	35.03	10.75	33.84	100	301	Peak
5395.45	39.54	-14.46	54	27.55	35.04	10.79	33.84	100	301	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
5148.05	60.42	-13.58	74	48.94	34.89	10.44	33.85	103	270	Peak
5149.8	41.79	-12.21	54	30.31	34.89	10.44	33.85	103	270	Average
5385.6	53.44	-20.56	74	41.46	35.03	10.79	33.84	103	270	Peak
5376.35	39.73	-14.27	54	27.8	35.02	10.75	33.84	103	270	Average



Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	46	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5111.3	56.49	-17.51	74	45.1	34.87	10.37	33.85	100	302	Peak
5133.05	40	-14	54	28.57	34.88	10.4	33.85	100	302	Average
5352.1	54.89	-19.11	74	43	35.01	10.72	33.84	100	302	Peak
5383.9	39.61	-14.39	54	27.63	35.03	10.79	33.84	100	302	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
5129.55	56.57	-17.43	74	45.14	34.88	10.4	33.85	100	266	Peak
5138.85	39.65	-14.35	54	28.22	34.88	10.4	33.85	100	266	Average
5392.65	55.08	-18.92	74	43.1	35.03	10.79	33.84	100	266	Peak
5385.4	39.91	-14.09	54	27.93	35.03	10.79	33.84	100	266	Average



Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	54	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5118.9	56.61	-17.39	74	45.19	34.87	10.4	33.85	100	290	Peak
5137.8	39.91	-14.09	54	28.48	34.88	10.4	33.85	100	290	Average
5384.65	55.38	-18.62	74	43.4	35.03	10.79	33.84	100	290	Peak
5369	40.11	-13.89	54	28.18	35.02	10.75	33.84	100	290	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
5113.15	56.68	-17.32	74	45.29	34.87	10.37	33.85	100	268	Peak
5144.8	39.63	-14.37	54	28.15	34.89	10.44	33.85	100	268	Average
5355.9	55.32	-18.68	74	43.43	35.01	10.72	33.84	100	268	Peak
5389.25	40.12	-13.88	54	28.14	35.03	10.79	33.84	100	268	Average



Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	62	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5137.45	56.69	-17.31	74	45.26	34.88	10.4	33.85	100	290	Peak
5126.8	39.75	-14.25	54	28.32	34.88	10.4	33.85	100	290	Average
5352.25	56.59	-17.41	74	44.7	35.01	10.72	33.84	100	290	Peak
5350	41.72	-12.28	54	29.83	35.01	10.72	33.84	100	290	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
5104.5	55.99	-18.01	74	44.61	34.86	10.37	33.85	100	276	Peak
5125.65	39.55	-14.45	54	28.12	34.88	10.4	33.85	100	276	Average
5350.6	58.77	-15.23	74	46.88	35.01	10.72	33.84	100	276	Peak
5350.05	41.46	-12.54	54	29.57	35.01	10.72	33.84	100	276	Average



Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	102	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5447.76	58.77	-15.23	74	46.68	35.07	10.86	33.84	115	44	Peak
5470	55.33	-12.97	68.3	43.2	35.08	10.89	33.84	115	44	Peak
5444.64	41.54	-12.46	54	29.46	35.06	10.86	33.84	115	44	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
5457.12	58.86	-15.14	74	46.74	35.07	10.89	33.84	100	347	Peak
5470	55.18	-13.12	68.3	43.05	35.08	10.89	33.84	100	347	Peak
5456.96	41.53	-12.47	54	29.41	35.07	10.89	33.84	100	347	Peak
5725	53.75	-14.55	68.3	40.84	35.41	11.34	33.84	100	347	Peak



Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	134	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang		

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
5448.16	55.69	-18.31	74	43.6	35.07	10.86	33.84	100	40	Peak
5470	53.1	-15.2	68.3	40.97	35.08	10.89	33.84	100	40	Peak
5460	40.91	-13.09	54	28.79	35.07	10.89	33.84	100	40	Average
5725	55.46	-12.84	68.3	42.55	35.41	11.34	33.84	100	40	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
5450.4	55.16	-18.84	74	43.07	35.07	10.86	33.84	124	255	Peak
5470	53.93	-14.37	68.3	41.8	35.08	10.89	33.84	124	255	Peak
5459.92	41.11	-12.89	54	28.99	35.07	10.89	33.84	124	255	Average
5725	54.1	-14.2	68.3	41.19	35.41	11.34	33.84	124	255	Peak

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

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	94.55	-	-	83.02	34.91	10.47	33.85	100	298	Average
5180	105.11	-	-	93.58	34.91	10.47	33.85	100	298	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.63	-	-	78.1	34.91	10.47	33.85	129	268	Average
5180	100.33	-	-	88.8	34.91	10.47	33.85	129	268	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	95.18	-	-	83.56	34.93	10.54	33.85	100	290	Average
5220	105.8	-	-	94.17	34.94	10.54	33.85	100	290	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	90.1	-	-	78.48	34.93	10.54	33.85	128	268	Average
5220	100.73	-	-	89.11	34.93	10.54	33.85	128	268	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	94.59	-	-	82.92	34.94	10.58	33.85	100	292	Average
5240	105.19	-	-	93.5	34.95	10.58	33.84	100	292	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	90.19	-	-	78.52	34.94	10.58	33.85	126	260	Average
5240	100.87	-	-	89.19	34.95	10.58	33.85	126	260	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	94.58	-	-	82.85	34.96	10.61	33.84	100	293	Average
5260	105.21	-	-	93.52	34.95	10.58	33.84	100	293	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.65	-	-	77.92	34.96	10.61	33.84	124	259	Average
5260	100.34	-	-	88.65	34.95	10.58	33.84	124	259	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	94.06	-	-	82.27	34.98	10.65	33.84	100	272	Average
5300	104.63	-	-	92.85	34.97	10.65	33.84	100	272	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	88.88	-	-	77.09	34.98	10.65	33.84	129	269	Average
5300	99.52	-	-	87.73	34.98	10.65	33.84	129	269	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	94.69	-	-	82.86	34.99	10.68	33.84	109	287	Average
5320	105.29	-	-	93.46	34.99	10.68	33.84	109	287	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.96	-	-	78.13	34.99	10.68	33.84	123	261	Average
5320	100.64	-	-	88.81	34.99	10.68	33.84	123	261	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	96.12	-	-	83.9	35.1	10.96	33.84	105	293	Average
5500	106.63	-	-	94.45	35.09	10.93	33.84	105	293	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	92.03	-	-	79.81	35.1	10.96	33.84	100	301	Average
5500	102.84	-	-	90.66	35.09	10.93	33.84	100	301	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	95.97	-	-	83.52	35.2	11.09	33.84	101	30	Average
5580	106.51	-	-	94.1	35.2	11.05	33.84	101	30	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	91.64	-	-	79.19	35.2	11.09	33.84	100	287	Average
5580	102.35	-	-	89.9	35.2	11.09	33.84	100	287	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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
40.8	28.1	-11.9	40	46.74	12.12	0.74	31.5	100	174	Peak
124.5	25.64	-17.86	43.5	43.87	11.82	1.24	31.29	-	-	Peak
260.85	31.06	-14.94	46	46.78	13.62	1.79	31.13	-	-	Peak
324.5	28.21	-17.79	46	43.52	13.65	1.97	30.93	-	-	Peak
646.5	28.25	-17.75	46	37.34	19.2	2.8	31.09	-	-	Peak
923	29.27	-16.73	46	36.03	20.7	3.36	30.82	-	-	Peak
5700	97.3	-	-	84.47	35.37	11.3	33.84	101	44	Average
5700	107.85	-	-	95.02	35.37	11.3	33.84	101	44	Peak

Test Mode :	802.11a	Temperature :	30~31°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	26.17	-13.83	40	38.28	18.8	0.64	31.55	100	128	Peak
51.06	22.73	-17.27	40	45.55	8.1	0.81	31.73	-	-	Peak
256.53	23.06	-22.94	46	39.1	13.31	1.77	31.12	-	-	Peak
405	24.84	-21.16	46	38.19	16.12	2.2	31.67	-	-	Peak
646.5	25.26	-20.74	46	34.35	19.2	2.8	31.09	-	-	Peak
923	26.17	-19.83	46	32.93	20.7	3.36	30.82	-	-	Peak
5700	93.04	-	-	80.21	35.37	11.3	33.84	113	271	Average
5700	103.76	-	-	90.93	35.37	11.3	33.84	113	271	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	93.99	-	-	82.46	34.91	10.47	33.85	100	293	Average
5180	104.23	-	-	92.7	34.91	10.47	33.85	100	293	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.55	-	-	78.02	34.91	10.47	33.85	125	266	Average
5180	99.29	-	-	87.76	34.91	10.47	33.85	125	266	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	93.71	-	-	82.09	34.93	10.54	33.85	100	294	Average
5220	103.96	-	-	92.33	34.94	10.54	33.85	100	294	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5220 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	88.62	-	-	77	34.93	10.54	33.85	125	268	Average
5220	98.37	-	-	86.75	34.93	10.54	33.85	125	268	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	93.38	-	-	81.71	34.94	10.58	33.85	100	293	Average
5240	103.6	-	-	91.93	34.94	10.58	33.85	100	293	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.26	-	-	77.59	34.94	10.58	33.85	102	269	Average
5240	99.06	-	-	87.38	34.95	10.58	33.85	102	269	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	93.26	-	-	81.53	34.96	10.61	33.84	100	294	Average
5260	103.47	-	-	91.78	34.95	10.58	33.84	100	294	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.33	-	-	77.6	34.96	10.61	33.84	101	270	Average
5260	99.14	-	-	87.41	34.96	10.61	33.84	101	270	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	93.38	-	-	81.59	34.98	10.65	33.84	100	276	Average
5300	103.59	-	-	91.8	34.98	10.65	33.84	100	276	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.38	-	-	77.59	34.98	10.65	33.84	125	267	Average
5300	99.18	-	-	87.39	34.98	10.65	33.84	125	267	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	92.24	-	-	80.41	34.99	10.68	33.84	100	218	Average
5320	101.92	-	-	90.09	34.99	10.68	33.84	100	218	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.54	-	-	77.71	34.99	10.68	33.84	100	46	Average
5320	99.77	-	-	87.94	34.99	10.68	33.84	100	46	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	91.05	-	-	78.83	35.1	10.96	33.84	100	90	Average
5500	101.18	-	-	88.96	35.1	10.96	33.84	100	90	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	88.85	-	-	76.63	35.1	10.96	33.84	100	321	Average
5500	99.09	-	-	86.87	35.1	10.96	33.84	100	321	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	94.19	-	-	81.74	35.2	11.09	33.84	121	86	Average
5580	105.05	-	-	92.6	35.2	11.09	33.84	121	86	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	92.18	-	-	79.73	35.2	11.09	33.84	102	345	Average
5580	101.01	-	-	88.56	35.2	11.09	33.84	102	345	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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
112.35	21.71	-21.79	43.5	40.45	11.8	1.17	31.71	-	-	Peak
233.04	26.47	-19.53	46	45.37	10.53	2.18	31.61	-	-	Peak
292.44	25.1	-20.9	46	41.44	13.06	2.24	31.64	-	-	Peak
361.6	26.4	-19.6	46	40.95	14.64	2.38	31.57	-	-	Peak
522.6	26.62	-19.38	46	37.71	17.79	2.95	31.83	-	-	Peak
669.6	27.95	-18.05	46	37.37	19.11	3.46	31.99	100	85	Peak
5700	95.57	-	-	82.74	35.37	11.3	33.84	100	6	Average
5700	106.24	-	-	93.41	35.37	11.3	33.84	100	6	Peak

Test Mode :	802.11n HT20	Temperature :	30~31°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5700 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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
40.8	24.46	-15.54	40	43.52	12.12	0.52	31.7	100	22	Peak
51.06	18.73	-21.27	40	41.68	8.1	0.65	31.7	-	-	Peak
102.9	19.87	-23.63	43.5	39.08	11.44	1.04	31.69	-	-	Peak
389.6	22.16	-23.84	46	36.29	15.3	2.34	31.77	-	-	Peak
529.6	23.59	-22.41	46	34.47	18	2.96	31.84	-	-	Peak
779.5	23.7	-22.3	46	32.34	19.9	3.49	32.03	-	-	Peak
5700	92.59	-	-	79.76	35.37	11.3	33.84	100	236	Average
5700	102.51	-	-	89.68	35.37	11.3	33.84	100	236	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	38	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5190 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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
112.35	21.71	-21.79	43.5	40.45	11.8	1.17	31.71	-	-	Peak
233.04	26.47	-19.53	46	45.37	10.53	2.18	31.61	-	-	Peak
292.44	25.1	-20.9	46	41.44	13.06	2.24	31.64	-	-	Peak
361.6	26.4	-19.6	46	40.95	14.64	2.38	31.57	-	-	Peak
522.6	26.62	-19.38	46	37.71	17.79	2.95	31.83	-	-	Peak
669.6	27.95	-18.05	46	37.37	19.11	3.46	31.99	100	85	Peak
5190	88.13	-	-	76.56	34.91	10.51	33.85	100	301	Average
5190	97.95	-	-	86.38	34.91	10.51	33.85	100	301	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	38	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5190 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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
40.8	24.46	-15.54	40	43.52	12.12	0.52	31.7	100	22	Peak
102.9	19.87	-23.63	43.5	39.08	11.44	1.04	31.69	-	-	Peak
233.04	20.42	-25.58	46	39.32	10.53	2.18	31.61	-	-	Peak
478.5	21.58	-24.42	46	33.21	17.36	2.79	31.78	-	-	Peak
529.6	23.59	-22.41	46	34.47	18	2.96	31.84	-	-	Peak
779.5	23.7	-22.3	46	32.34	19.9	3.49	32.03	-	-	Peak
5190	86.38	-	-	74.81	34.91	10.51	33.85	103	270	Average
5190	96	-	-	84.43	34.91	10.51	33.85	103	270	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	46	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5230 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	88.44	-	-	76.81	34.94	10.54	33.85	100	302	Average
5230	98.15	-	-	86.52	34.94	10.54	33.85	100	302	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	46	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5230 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	86.61	-	-	74.98	34.94	10.54	33.85	100	266	Average
5230	96.82	-	-	85.19	34.94	10.54	33.85	100	266	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	54	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5270 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	89.15	-	-	77.42	34.96	10.61	33.84	100	290	Average
5270	98.79	-	-	87.06	34.96	10.61	33.84	100	290	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	54	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5270 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	86.75	-	-	75.02	34.96	10.61	33.84	100	268	Average
5270	96.05	-	-	84.32	34.96	10.61	33.84	100	268	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	62	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5310 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	88.12	-	-	76.29	34.99	10.68	33.84	100	290	Average
5310	97.42	-	-	85.59	34.99	10.68	33.84	100	290	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	62	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5310 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	87.54	-	-	75.71	34.99	10.68	33.84	100	276	Average
5310	97.12	-	-	85.3	34.98	10.68	33.84	100	276	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	102	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5510 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	100.34	-	-	88.12	35.1	10.96	33.84	115	44	Peak
5510	90.84	-	-	78.62	35.1	10.96	33.84	115	44	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	102	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5510 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	90.1	-	-	77.88	35.1	10.96	33.84	100	347	Average
5510	100.21	-	-	87.99	35.1	10.96	33.84	100	347	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	110	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5550 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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
5550	93.55	-	-	81.17	35.17	11.05	33.84	114	31	Average
5550	103.27	-	-	90.89	35.17	11.05	33.84	114	31	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	110	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5550 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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
5550	91.61	-	-	79.23	35.17	11.05	33.84	100	350	Average
5550	101.39	-	-	89.01	35.17	11.05	33.84	100	350	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	134	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Horizontal
Remark :	1. 5670 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	103.6	-	-	90.84	35.34	11.26	33.84	100	40	Peak
5670	94.31	-	-	81.55	35.34	11.26	33.84	100	40	Peak

Test Mode :	802.11n HT40	Temperature :	30~31°C
Test Channel :	134	Relative Humidity :	42~43%
Test Engineer :	Kai Wang, Timberland Lin, and Ivan Chiang	Polarization :	Vertical
Remark :	1. 5670 MHz is fundamental signal which can be ignored. 2. All other emission found more than 20dB below limit line is not reported.		

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	91.15	-	-	78.39	35.34	11.26	33.84	124	255	Average
5670	100.9	-	-	88.2	35.32	11.22	33.84	124	255	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.

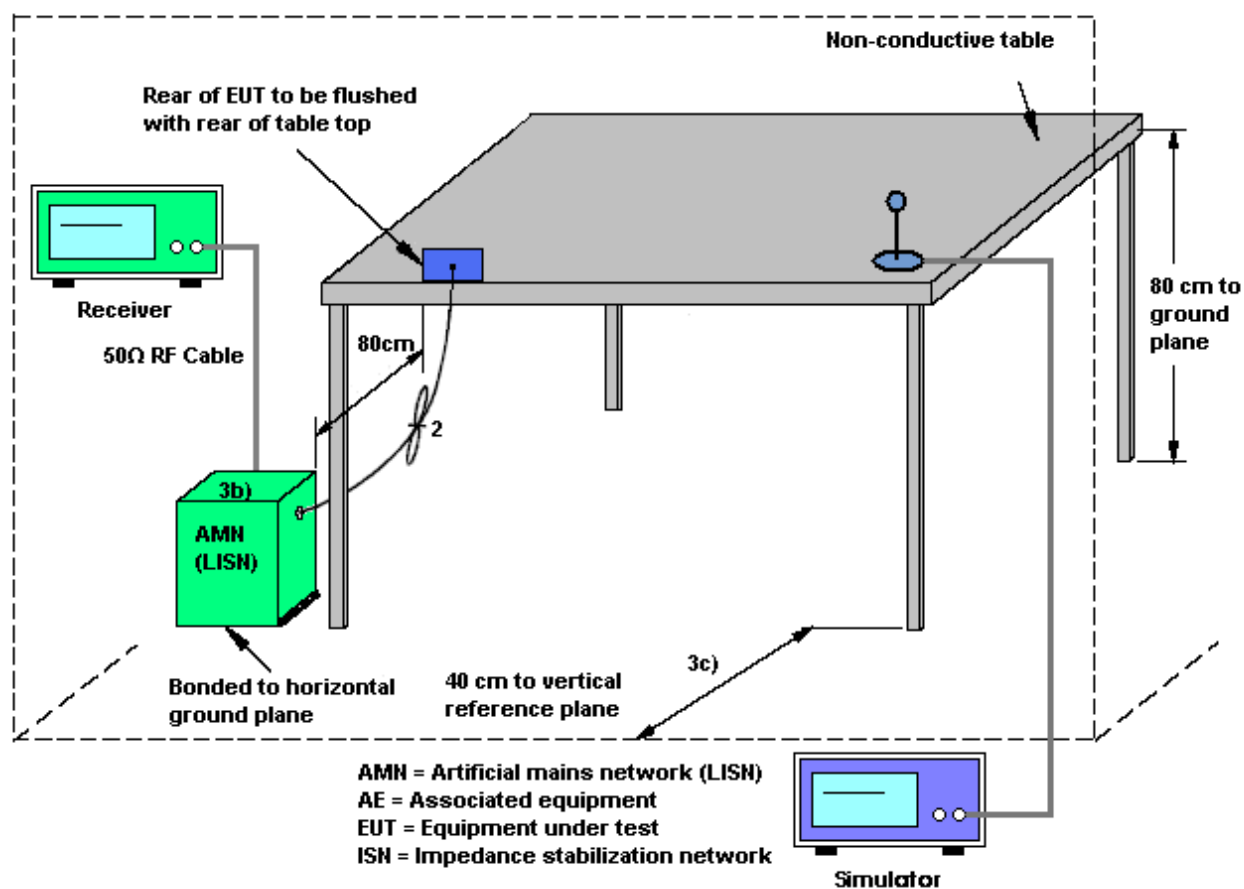
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

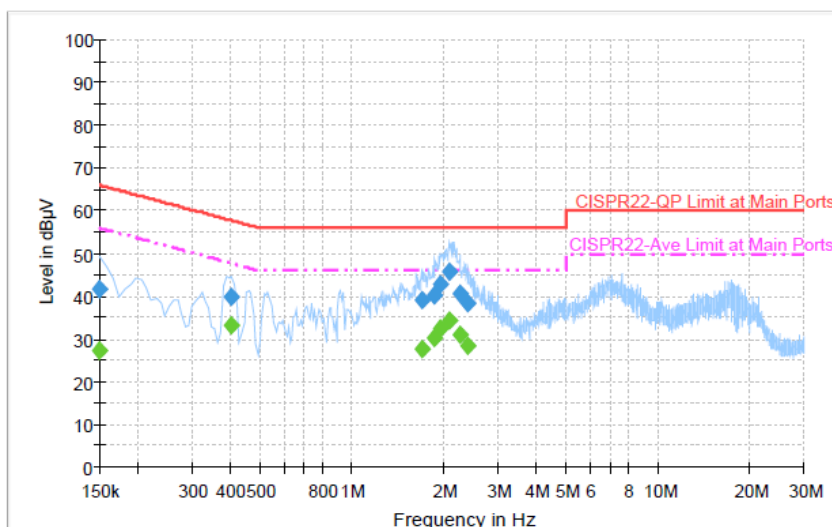
1. The testing follows the guidelines in ANSI C63.4-2003 and ANSI C63.10-2009 test site requirement.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a 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°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3 + Battery		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



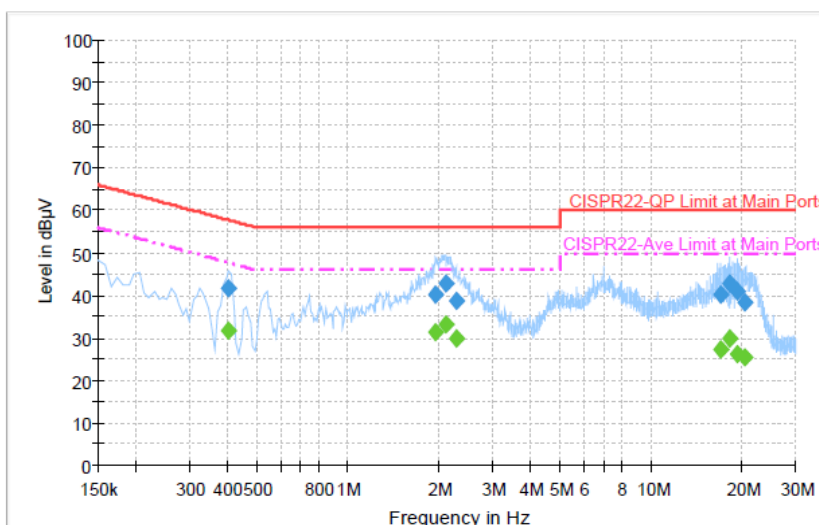
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	41.8	Off	L1	19.4	24.2	66.0
0.406000	39.7	Off	L1	19.4	18.0	57.7
1.694000	39.1	Off	L1	19.5	16.9	56.0
1.870000	40.2	Off	L1	19.5	15.8	56.0
1.950000	42.8	Off	L1	19.5	13.2	56.0
2.078000	45.6	Off	L1	19.6	10.4	56.0
2.262000	40.8	Off	L1	19.6	15.2	56.0
2.382000	38.2	Off	L1	19.6	17.8	56.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	27.4	Off	L1	19.4	28.6	56.0
0.406000	33.3	Off	L1	19.4	14.4	47.7
1.694000	27.5	Off	L1	19.5	18.5	46.0
1.870000	30.4	Off	L1	19.5	15.6	46.0
1.950000	32.5	Off	L1	19.5	13.5	46.0
2.078000	34.3	Off	L1	19.6	11.7	46.0
2.262000	30.9	Off	L1	19.6	15.1	46.0
2.382000	28.3	Off	L1	19.6	17.7	46.0

Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3 + Battery		
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)
0.406000	41.6	Off	N	19.4	16.1	57.7
1.942000	40.4	Off	N	19.5	15.6	56.0
2.102000	42.8	Off	N	19.6	13.2	56.0
2.278000	38.7	Off	N	19.6	17.3	56.0
16.926000	40.2	Off	N	19.9	19.8	60.0
18.222000	42.8	Off	N	20.0	17.2	60.0
19.166000	41.1	Off	N	19.9	18.9	60.0
20.478000	38.5	Off	N	20.0	21.5	60.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.406000	31.6	Off	N	19.4	16.1	47.7
1.942000	31.3	Off	N	19.5	14.7	46.0
2.102000	33.2	Off	N	19.6	12.8	46.0
2.278000	29.7	Off	N	19.6	16.3	46.0
16.926000	27.4	Off	N	19.9	22.6	50.0
18.222000	29.9	Off	N	20.0	20.1	50.0
19.166000	26.3	Off	N	19.9	23.7	50.0
20.478000	25.5	Off	N	20.0	24.5	50.0

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.

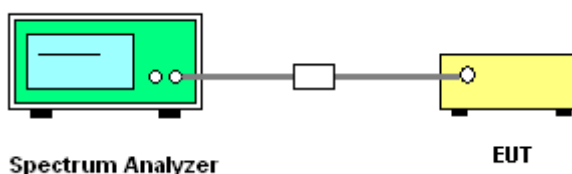
3.7.2 Measuring Instruments

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 :	Reece Li	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.70	5188.30	0.00
48	5240	5231.70	5248.30	0.00
52	5260	5251.70	5268.30	0.00
64	5320	5311.70	5328.30	0.00
100	5500	5491.70	5508.30	0.00
140	5700	5691.70	5708.30	0.00

Test Mode :	802.11n HT-20	Temperature :	24~26℃
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.10	5188.90	0.00
48	5240	5231.10	5248.90	0.00
52	5260	5251.10	5268.90	0.00
64	5320	5311.10	5328.90	0.00
100	5500	5491.10	5508.90	0.00
140	5700	5691.10	5708.90	0.00

Test Mode :	802.11n HT-40	Temperature :	24~26℃
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
38	5190	5171.82	5208.18	0.00
46	5230	5211.82	5248.18	0.00
54	5270	5251.91	5288.18	8.54
62	5310	5291.82	5328.18	0.00
102	5510	5491.82	5528.18	0.00
134	5670	5651.82	5688.18	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. 28, 2012 ~ Oct. 04, 2012	Jun. 05, 2013	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Sep. 28, 2012 ~ Oct. 04, 2012	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Sep. 28, 2012 ~ Oct. 04, 2012	Sep. 07, 2013	Conducted (TH02-HY)
EMI Test Receiver	R&S	ESCS 30	100356	9KHz ~ 2.75GHz	Oct. 27, 2011	Oct. 02, 2012	Oct. 26, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz ~ 30MHz	Dec. 09, 2011	Oct. 02, 2012	Dec. 08, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz ~ 30MHz	Dec. 06, 2011	Oct. 02, 2012	Dec. 05, 2012	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Oct. 02, 2012	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	117995	N/A	Jul. 28, 2011	Oct. 02, 2012	Jul. 27, 2013	Conduction (CO05-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9KHz ~ 26.5GHz	Nov. 23, 2011	Sep. 29, 2012 ~ Oct. 02, 2012	Nov. 22, 2012	Radiation (03CH06-HY)
Spectrum Analyzer	R&S	FSP30	101352	9KHz-30GHz	Nov. 03, 2011	Sep. 29, 2012 ~ Oct. 02, 2012	Nov. 02, 2012	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/003	20MHz ~ 1000MHz	May 04, 2012	Sep. 29, 2012 ~ Oct. 02, 2012	May. 03, 2013	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz ~ 2GHz	Oct. 22, 2011	Sep. 29, 2012 ~ Oct. 02, 2012	Oct. 21, 2012	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Aug. 01, 2012	Sep. 29, 2012 ~ Oct. 02, 2012	Jul. 31, 2013	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Oct. 20, 2011	Sep. 29, 2012 ~ Oct. 02, 2012	Oct. 19, 2012	Radiation (03CH06-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz ~ 26.5GHz	Apr. 13, 2012	Sep. 29, 2012 ~ Oct. 02, 2012	Apr. 12, 2013	Radiation (03CH06-HY)
Amplifier	Agilent	310N	186713	9KHz ~ 1GHz	Apr. 11, 2012	Sep. 29, 2012 ~ Oct. 02, 2012	Apr. 10, 2013	Radiation (03CH06-HY)
Pre Amplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 21, 2012	Sep. 29, 2012 ~ Oct. 02, 2012	Jul. 20, 2013	Radiation (03CH06-HY)
Pre Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	159087	1GHz~18GHz	Feb. 27, 2012	Sep. 29, 2012 ~ Oct. 02, 2012	Feb. 26, 2013	Radiation (03CH06-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9KHz ~ 30MHz	Jul. 03, 2012	Sep. 29, 2012 ~ Oct. 02, 2012	Jul. 02, 2014	Radiation (03CH06-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
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Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

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