FCC RF Test Report

APPLICANT	:	**SAMSUNG Electronics Co., LTD.**
EQUIPMENT	:	**Mobile Phone**
BRAND NAME	:	**Samsung**
MODEL NAME	:	**SC-03E**
MARKETING NAME	:	**GQ DCM**
FCC ID	:	**A3LSWDSC03E**
STANDARD	:	**FCC Part 15 Subpart E**
CLASSIFICATION	:	**(NII) Unlicensed National Information Infrastructure**

The product was received on Oct. 15, 2012 and completely tested on Oct. 29, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

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

Reviewed by:

Jones Tsai

Jones Tsai / Manager

Testing Laboratory
1190

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR2O1541C	Rev. 01	Initial issue of report	Oct. 31, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	A9.2	26dB Bandwidth	-	Pass	-
3.2	15.407(a)	A9.2	Maximum Conducted Output Power	≤ 17, 24, 30 dBm (depend on band)	Pass	-
3.3	15.407(a)	A9.2	Power Spectral Density	≤ 4, 11, 17 dBm (depend on band)	Pass	-
3.4	15.407(a)(6)	A9.3	Peak Excursion Ratio	≤ 13dB	Pass	-
3.5	15.407(b)	A9.3	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 7.74 dB at 5755.560 MHz
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 7.20 dB at 0.422 MHz
3.6	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	SC-03E
Marketing Name	GQ DCM
FCC ID	A3LSWDSC03E
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/ WLAN 11abgn / Bluetooth
HW Version	REV0.1
SW Version	SC03E.001
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 : 13.73 dBm / 0.0236 W 802.11n HT20 : 12.92 dBm / 0.0196 W 802.11n HT40 : 12.98 dBm / 0.0199 W **<5260 MHz ~ 5320 MHz>** 802.11a : 13.66 dBm / 0.0232 W 802.11n HT20 : 12.81 dBm / 0.0191 W 802.11n HT40 : 12.82 dBm / 0.0191 W **<5500 MHz ~ 5700 MHz>** 802.11a : 14.16 dBm / 0.0261 W 802.11n HT20 : 13.10 dBm / 0.0204 W 802.11n HT40 : 13.18 dBm / 0.0208 W
Antenna Type	PIFA Antenna with gain 1.67 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 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	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 v01r02
- 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-825	KA2DIR825A1	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 (Y 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.

2.3 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
Average Power (dBm)	14.16	14.14	14.15	14.11	14.13	14.14	14.13	14.15

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	13.10	13.08	13.08	13.08	13.09	13.09	13.09	13.09

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	13.18	13.16	13.16	13.16	13.16	13.16	13.17	13.16

2.4 Test Mode

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

Test Cases				
	Test Items	**Mode**	**Data rate**	**Test Channel**
Conducted TCs	**26dB 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			

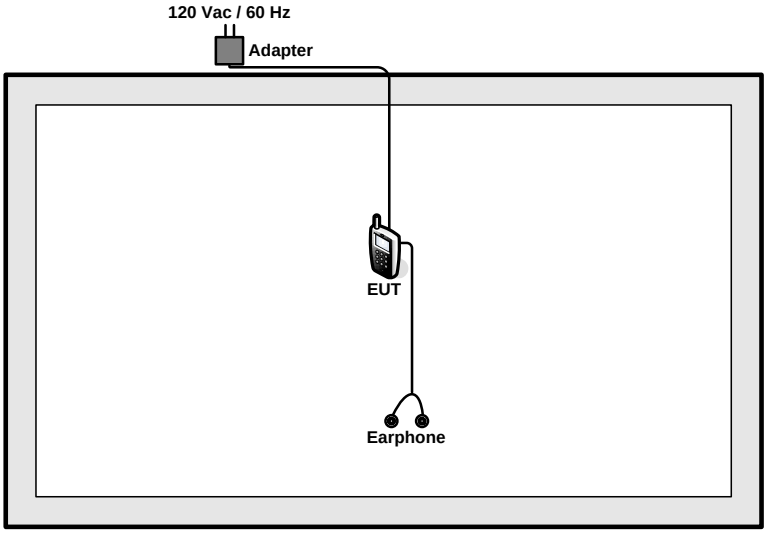
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725 MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

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

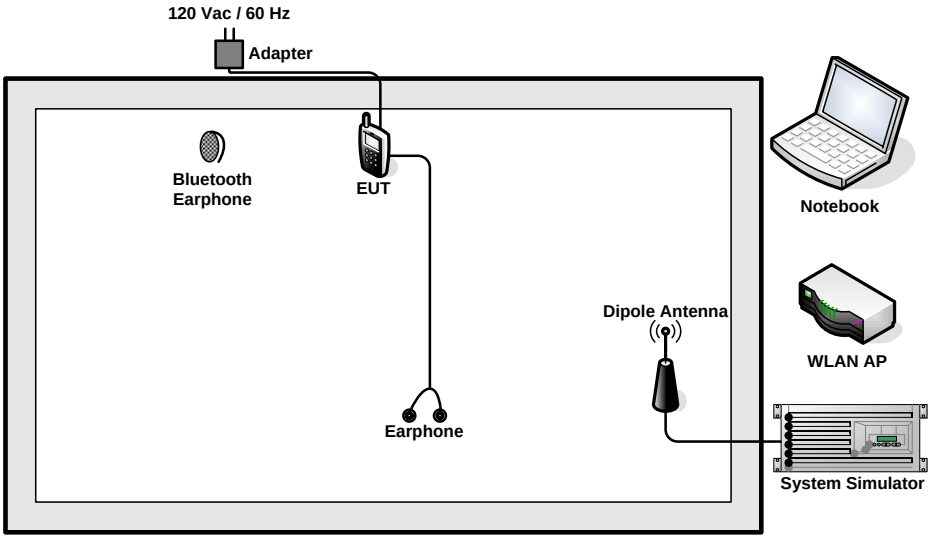
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725 MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	130

2.5 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.6 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.

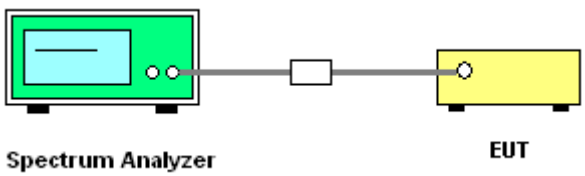
3.1.2 Measuring Instruments

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

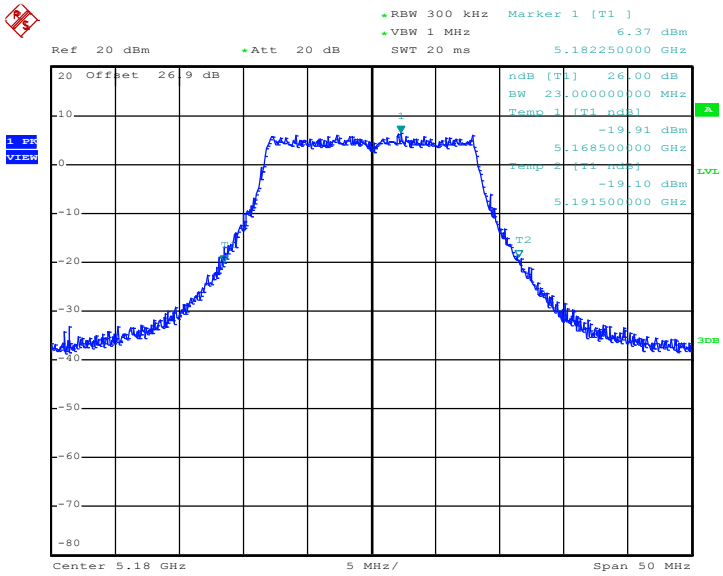


3.1.5 Test Result of 26dB Bandwidth Plots

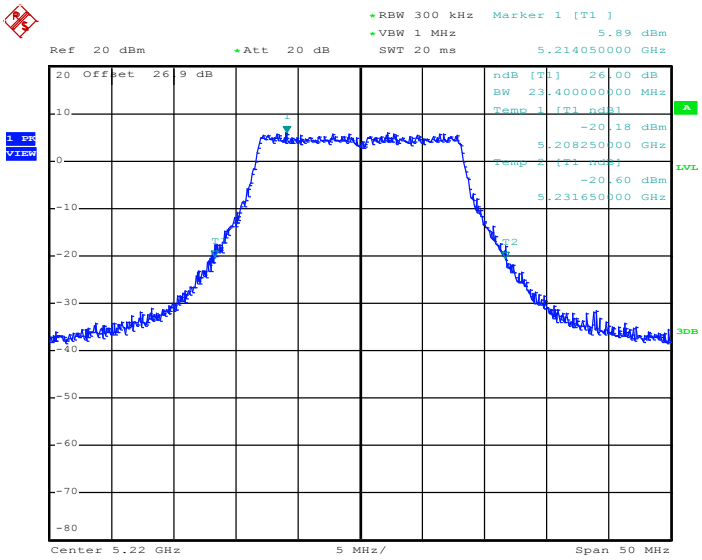
Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)	Pass/Fail
36	5180	23.000	N/A
44	5220	23.400	N/A
48	5240	22.900	N/A
52	5260	22.900	N/A
60	5300	22.950	N/A
64	5320	22.950	N/A
100	5500	23.000	N/A
116	5580	22.750	N/A
140	5700	22.900	N/A

26 dB Bandwidth Plot on 802.11a Channel 36



26 dB Bandwidth Plot on 802.11a Channel 44



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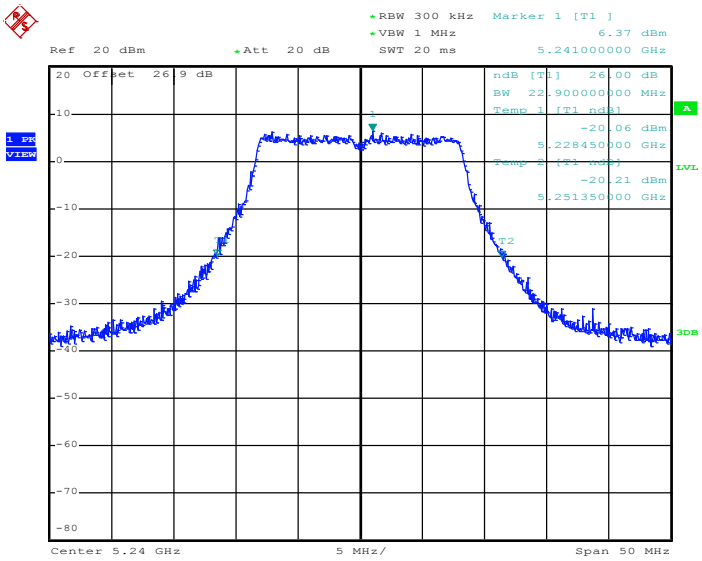
26 dB Bandwidth Plot on 802.11a Channel 48



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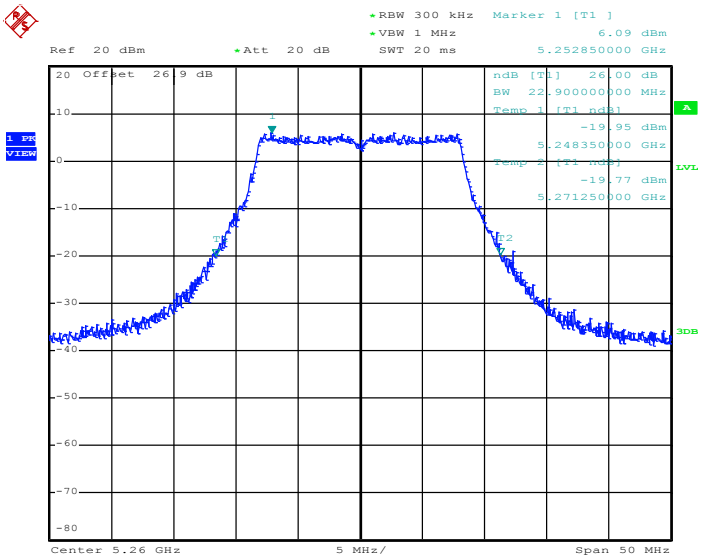
26 dB Bandwidth Plot on 802.11a Channel 52



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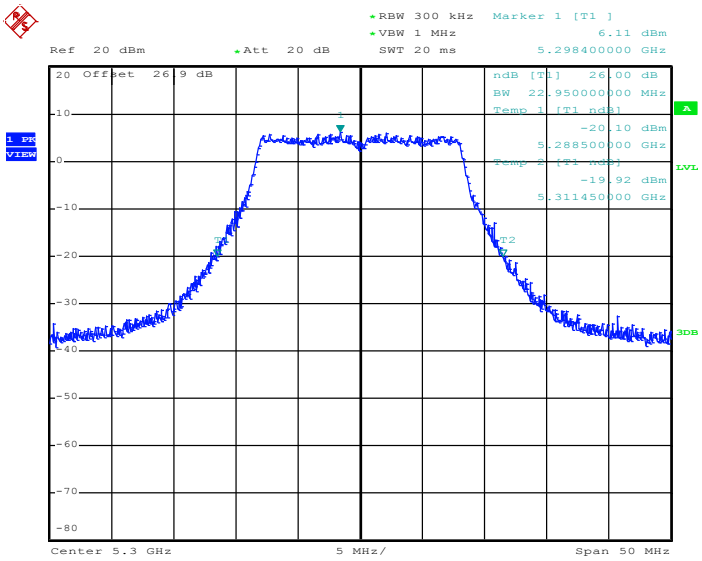
26 dB Bandwidth Plot on 802.11a Channel 60



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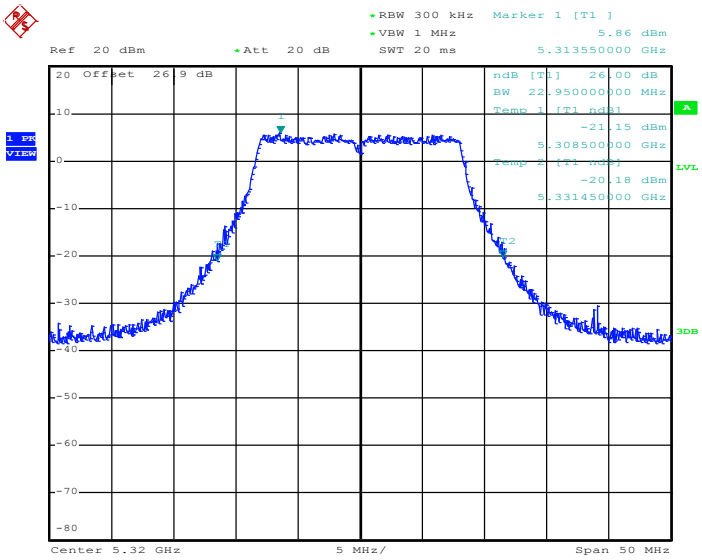
26 dB Bandwidth Plot on 802.11a Channel 64



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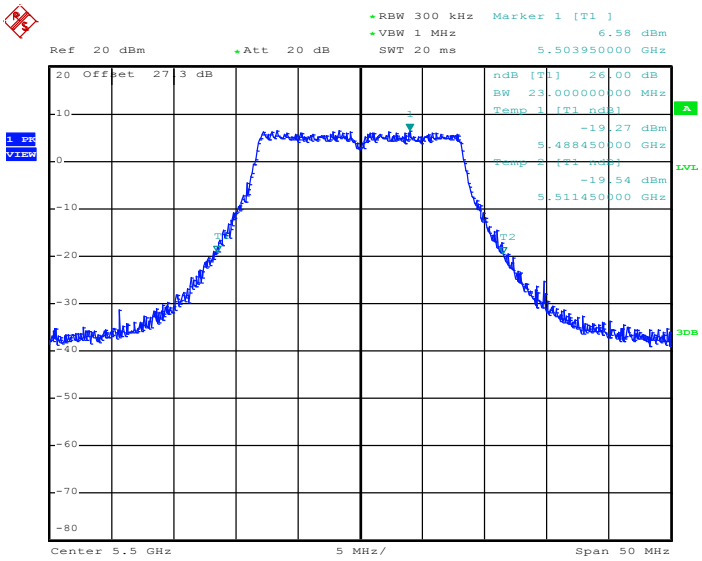
26 dB Bandwidth Plot on 802.11a Channel 100



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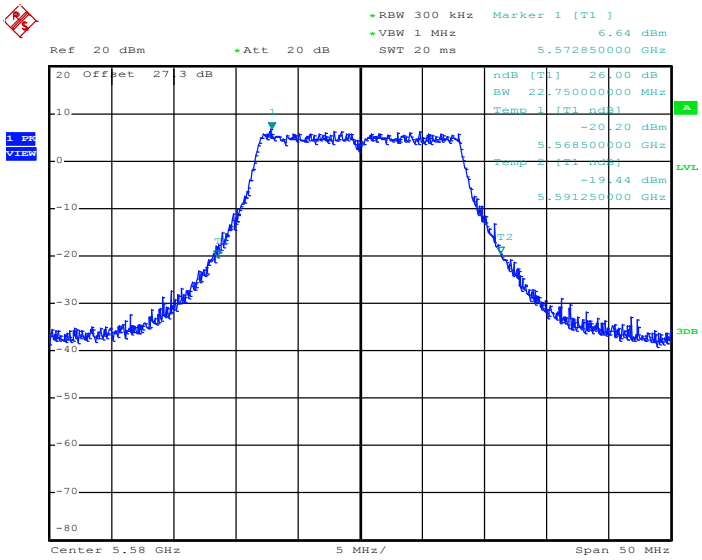
26 dB Bandwidth Plot on 802.11a Channel 116



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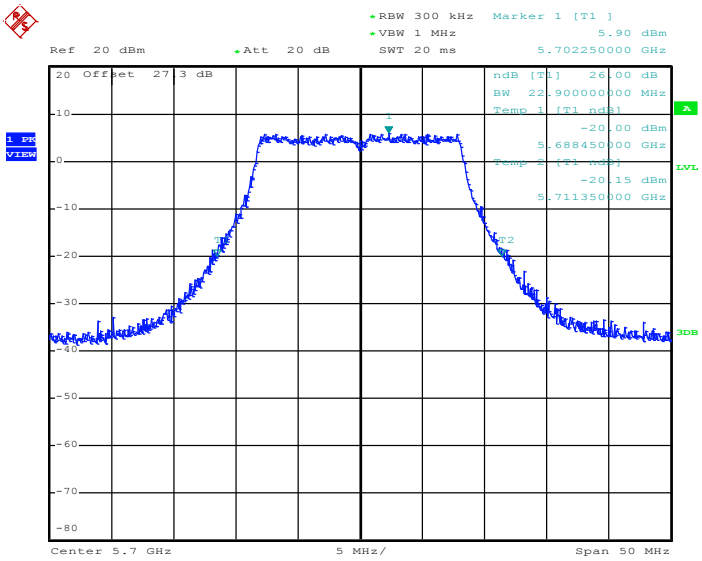
26 dB Bandwidth Plot on 802.11a Channel 140

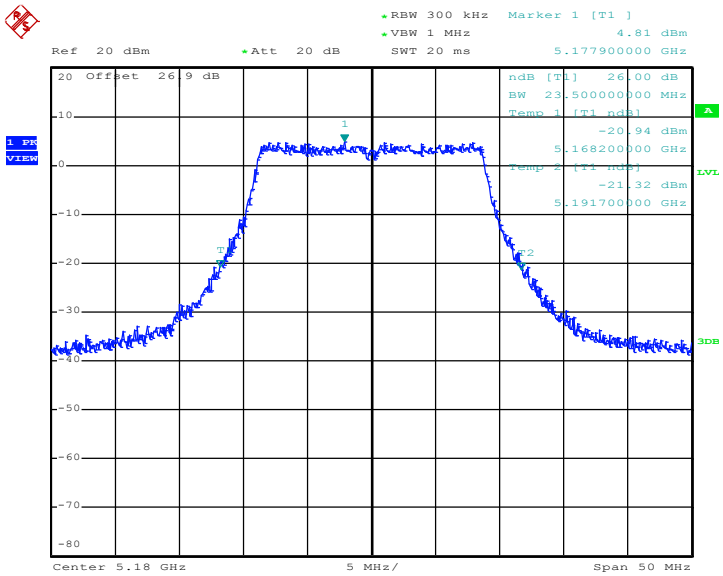


Date: 17.OCT.2012 19:56:51

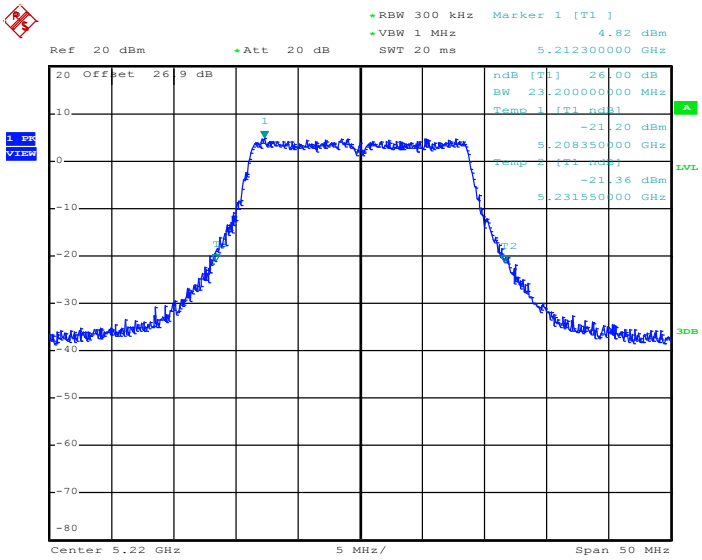
Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n HT20 26dB Bandwidth (MHz)	Pass/Fail
36	5180	23.500	N/A
44	5220	23.200	N/A
48	5240	23.600	N/A
52	5260	23.150	N/A
60	5300	23.450	N/A
64	5320	23.400	N/A
100	5500	23.250	N/A
116	5580	23.400	N/A
140	5700	23.350	N/A

26 dB Bandwidth Plot on 802.11n HT20 Channel 36



26 dB Bandwidth Plot on 802.11n HT20 Channel 44



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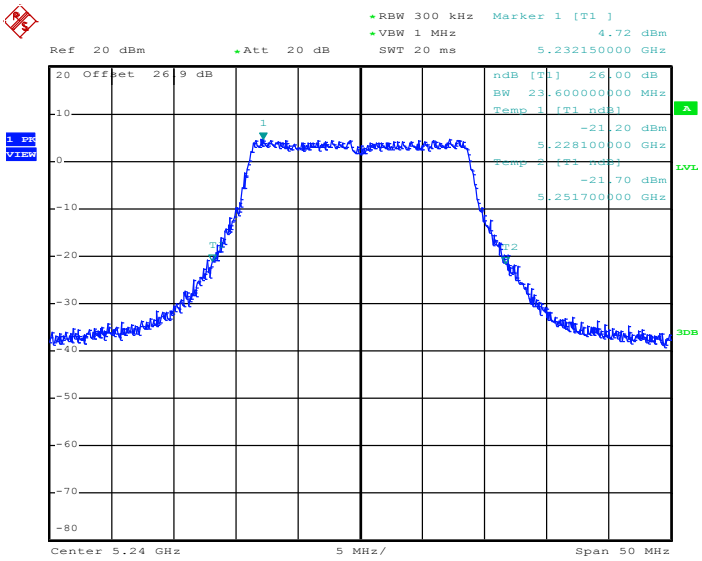
26 dB Bandwidth Plot on 802.11n HT20 Channel 48



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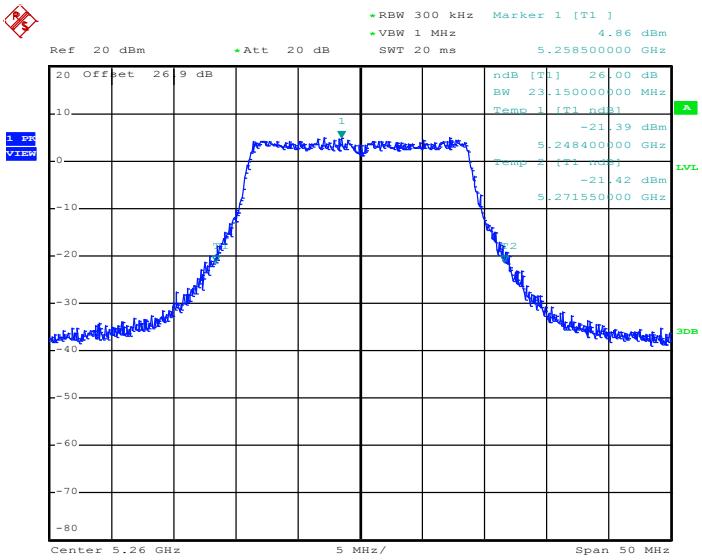
26 dB Bandwidth Plot on 802.11n HT20 Channel 52



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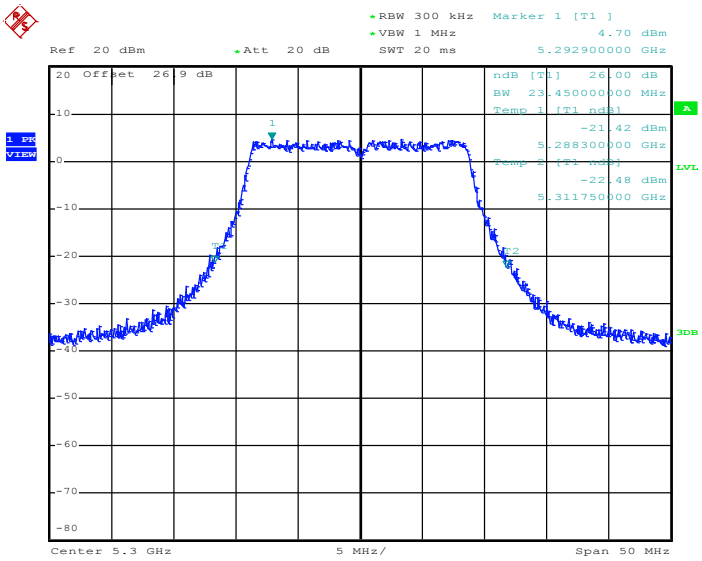
26 dB Bandwidth Plot on 802.11n HT20 Channel 60



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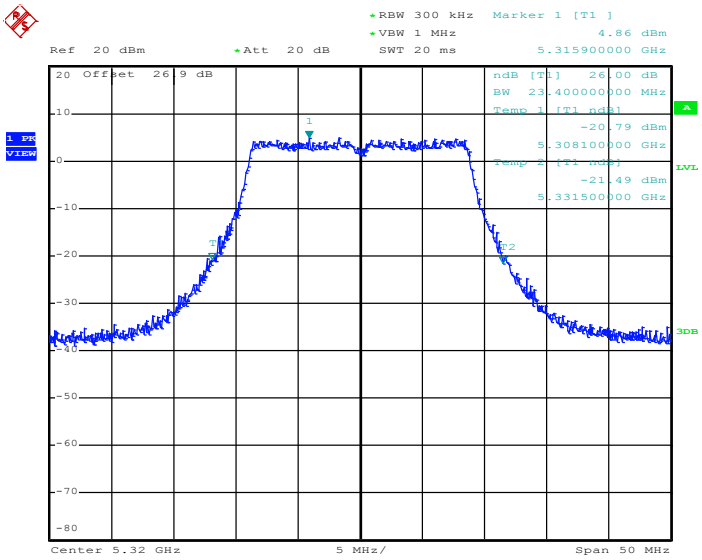
26 dB Bandwidth Plot on 802.11n HT20 Channel 64



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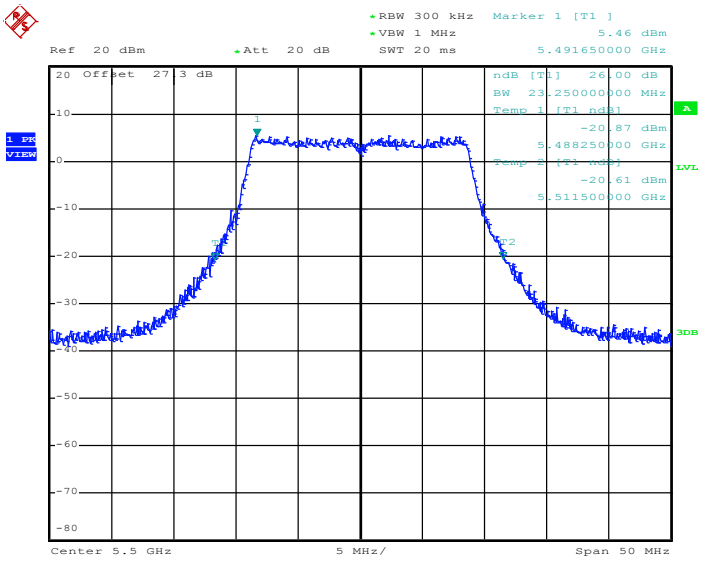
26 dB Bandwidth Plot on 802.11n HT20 Channel 100



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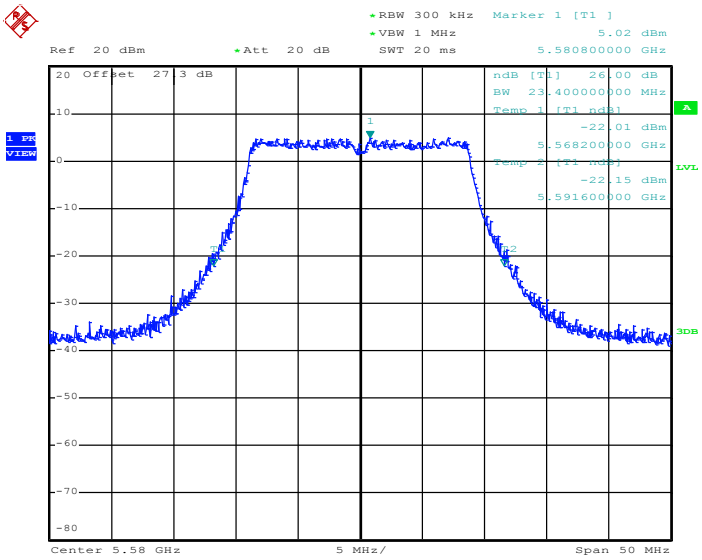
26 dB Bandwidth Plot on 802.11n HT20 Channel 116



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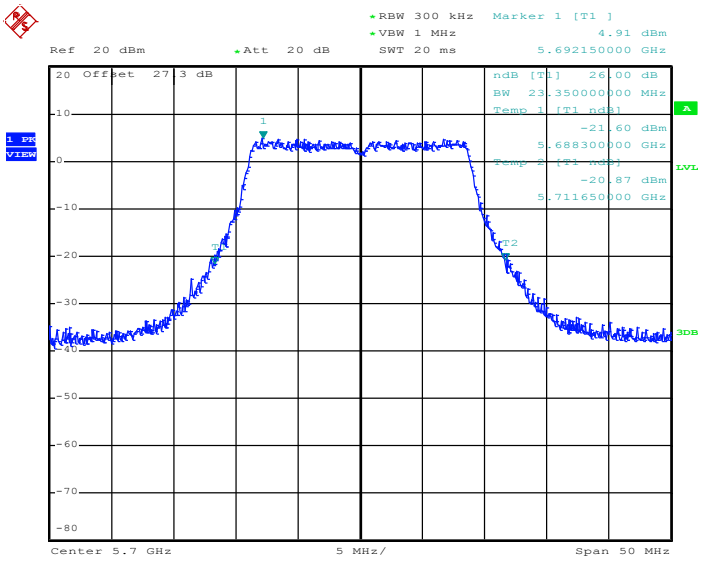
26 dB Bandwidth Plot on 802.11n HT20 Channel 140



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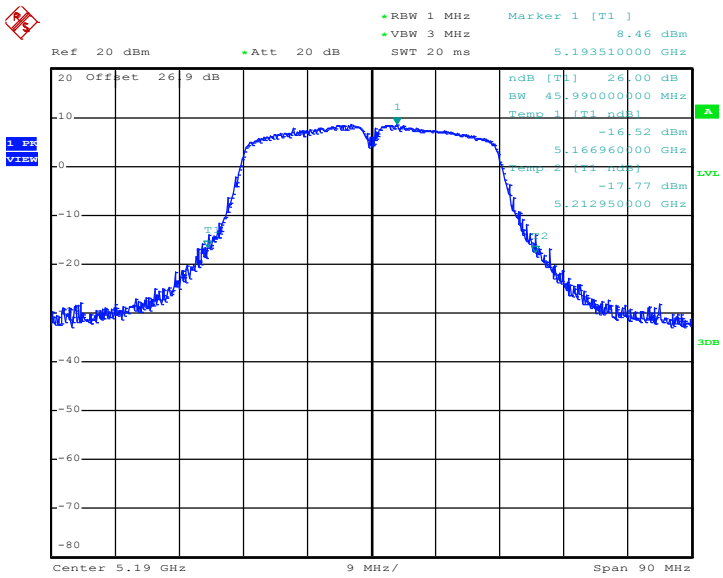
Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	802.11n HT40 26dB Bandwidth (MHz)	Pass/Fail
38	5190	45.990	N/A
46	5230	45.630	N/A
54	5270	45.450	N/A
62	5310	45.540	N/A
102	5510	45.990	N/A
110	5550	45.720	N/A
134	5670	45.900	N/A

26 dB Bandwidth Plot on 802.11n HT40 Channel 38



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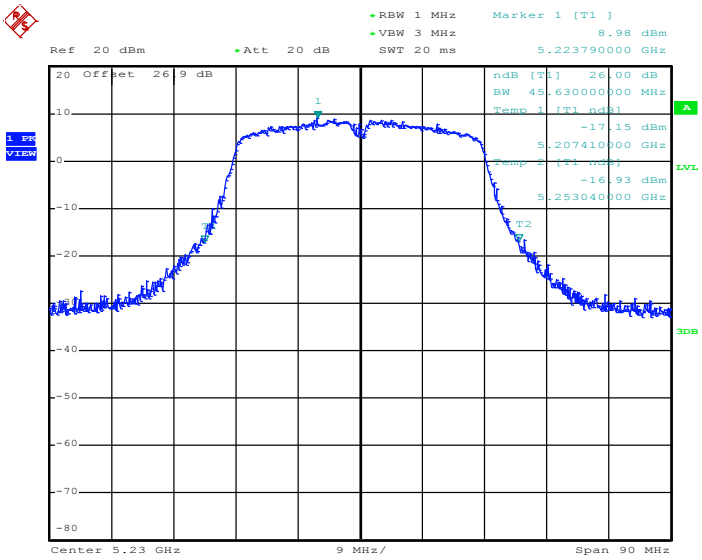
26 dB Bandwidth Plot on 802.11n HT40 Channel 46



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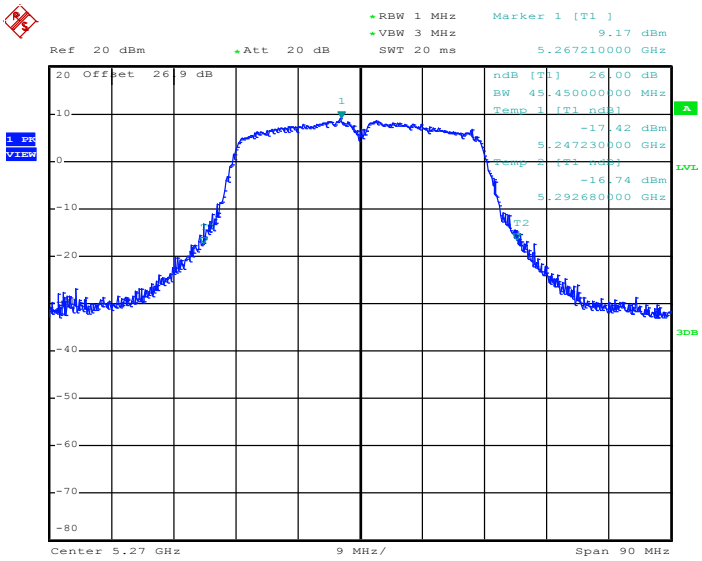
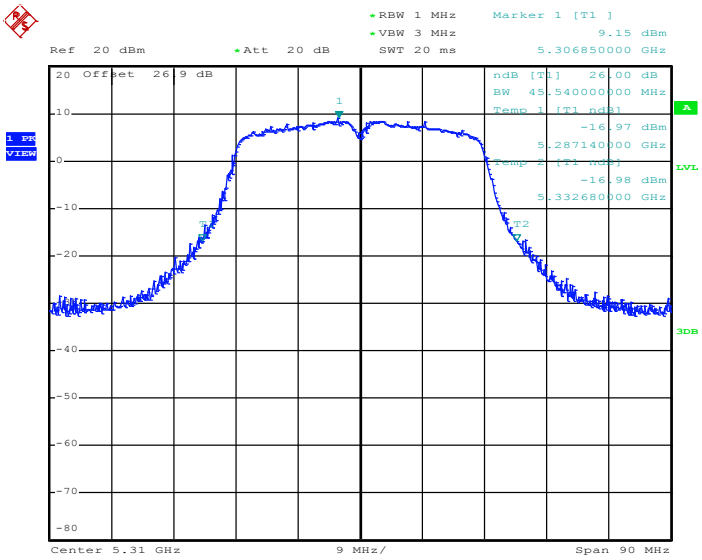
26 dB Bandwidth Plot on 802.11n HT40 Channel 54



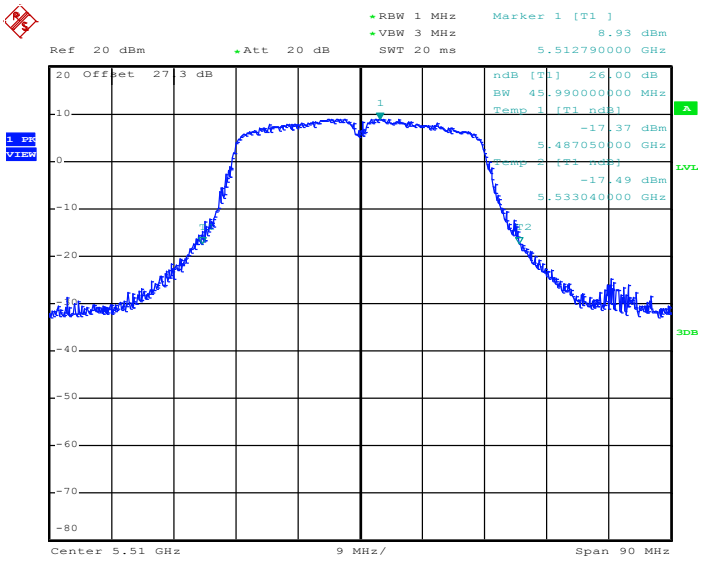
Date: 17.OCT.2012 20:35:43

26 dB Bandwidth Plot on 802.11n HT40 Channel 62



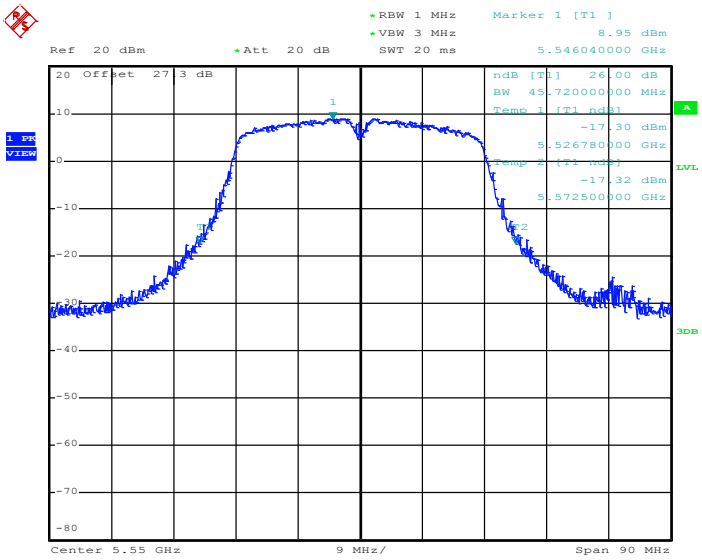
Date: 17.OCT.2012 20:37:42

26 dB Bandwidth Plot on 802.11n HT40 Channel 102



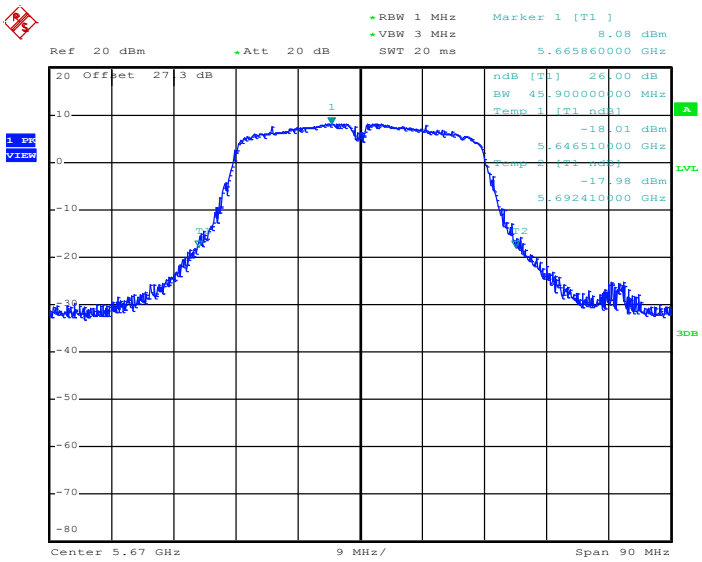
Date: 17.OCT.2012 20:39:52

26 dB Bandwidth Plot on 802.11n HT40 Channel 110



Date: 17.OCT.2012 20:42:12

26 dB Bandwidth Plot on 802.11n HT40 Channel 134



Date: 17.OCT.2012 20:44:29

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

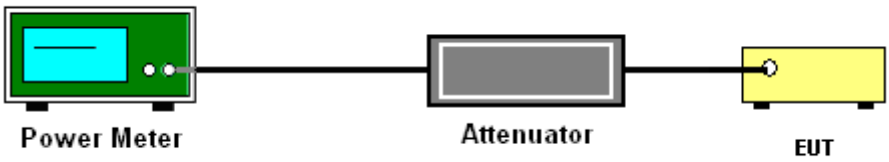
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures 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 :	Book Lin	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	13.43	13.73	17	Pass
44	5220	13.40	13.70	17	Pass
48	5240	13.33	13.63	17	Pass
52	5260	13.35	13.65	24	Pass
60	5300	13.36	13.66	24	Pass
64	5320	13.33	13.63	24	Pass
100	5500	13.86	14.16	24	Pass
116	5580	13.68	13.98	24	Pass
140	5700	13.24	13.54	24	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW)
3. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (26dB BW).

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%
Duty Cycle	93.33%	Duty Factor	0.30dB

Channel	Frequency (MHz)	802.11n HT20 Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	12.62	12.92	17	Pass
44	5220	12.38	12.68	17	Pass
48	5240	12.37	12.67	17	Pass
52	5260	12.51	12.81	24	Pass
60	5300	12.38	12.68	24	Pass
64	5320	12.33	12.63	24	Pass
100	5500	12.80	13.10	24	Pass
116	5580	12.51	12.81	24	Pass
140	5700	12.24	12.54	24	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the band 5.15~5.25 GHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log (26dB BW)
3. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (26dB BW)

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%
Duty Cycle	86.98%	Duty Factor	0.61dB

Channel	Frequency (MHz)	802.11n HT40 Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
38	5190	12.37	12.98	17	Pass
46	5230	12.22	12.83	17	Pass
54	5270	12.21	12.82	24	Pass
62	5310	12.13	12.74	24	Pass
102	5510	12.57	13.18	24	Pass
110	5550	12.55	13.16	24	Pass
134	5670	12.15	12.76	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.

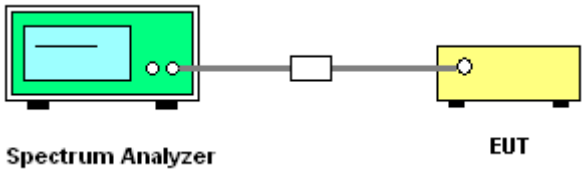
 # Method SA-2 #

(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 ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = sample
   - Trace average at least 100 traces in power averaging mode.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.

3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



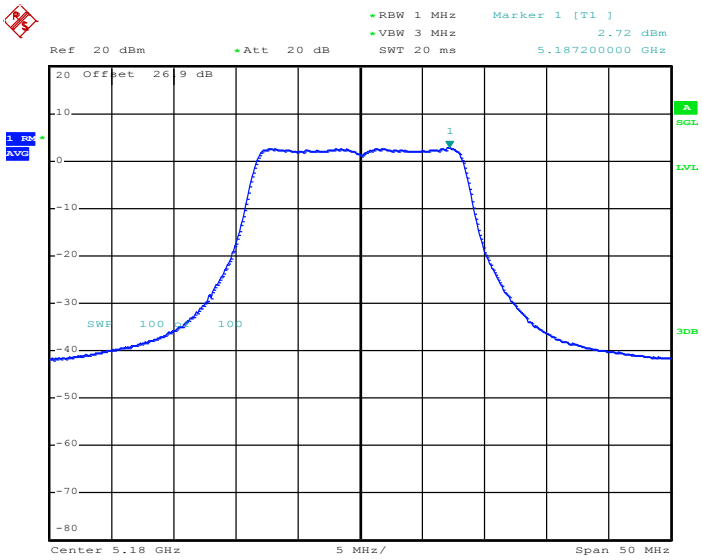
3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Book Lin	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	2.720	3.024	4	Pass
44	5220	2.720	3.024	4	Pass
48	5240	2.690	2.994	4	Pass
52	5260	2.690	2.994	11	Pass
60	5300	2.620	2.924	11	Pass
64	5320	2.620	2.924	11	Pass
100	5500	3.410	3.714	11	Pass
116	5580	3.230	3.534	11	Pass
140	5700	2.710	3.014	11	Pass

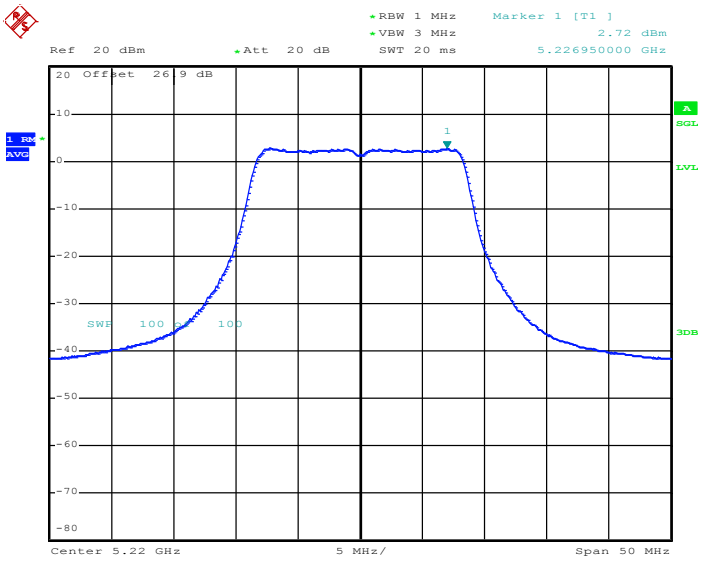
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11a Channel 36



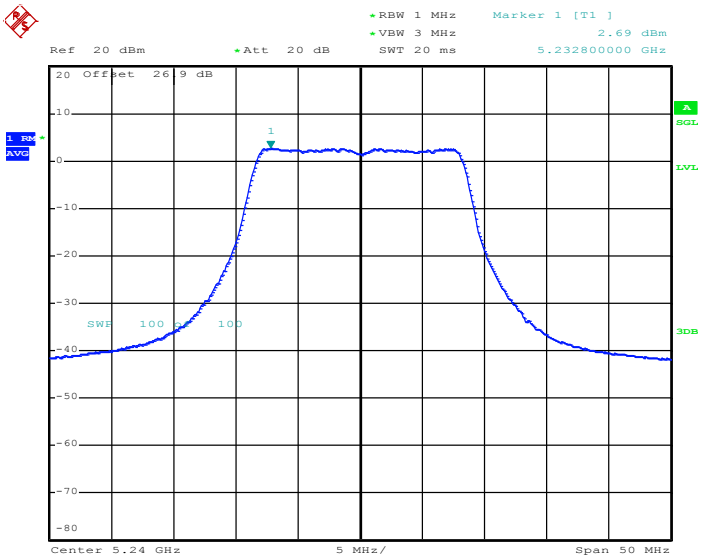
Date: 17.OCT.2012 19:28:22

PSD Plot on 802.11a Channel 44



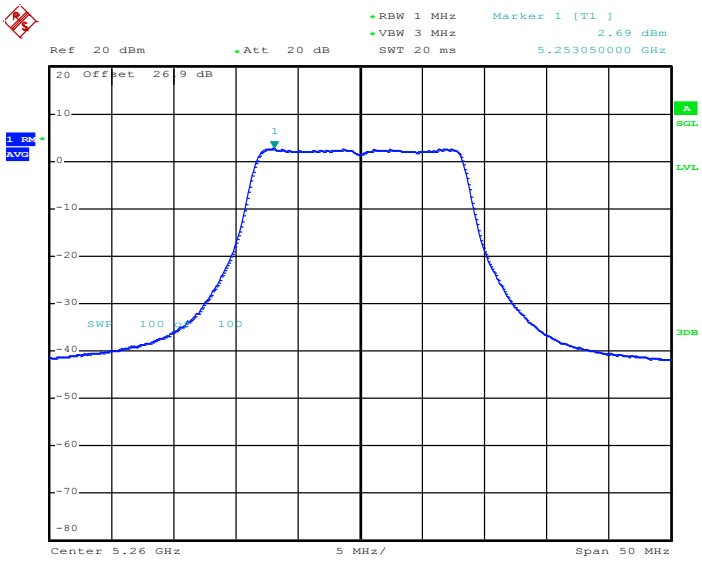
Date: 17.OCT.2012 19:35:29

PSD Plot on 802.11a Channel 48



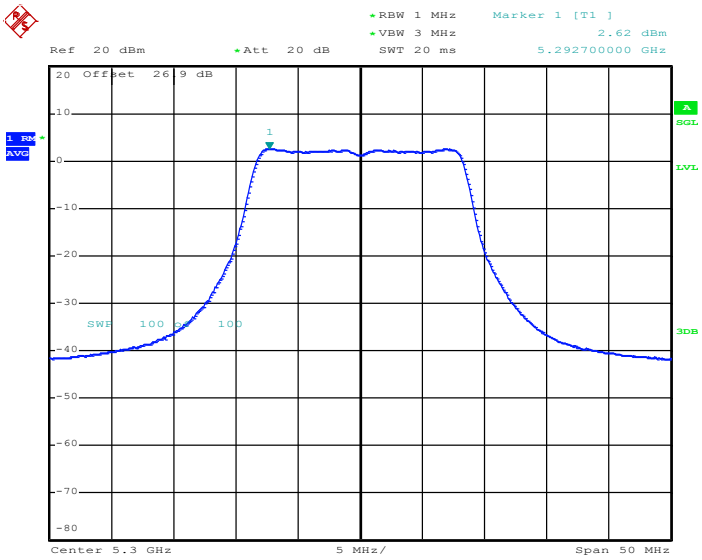
Date: 17.OCT.2012 19:37:49

PSD Plot on 802.11a Channel 52



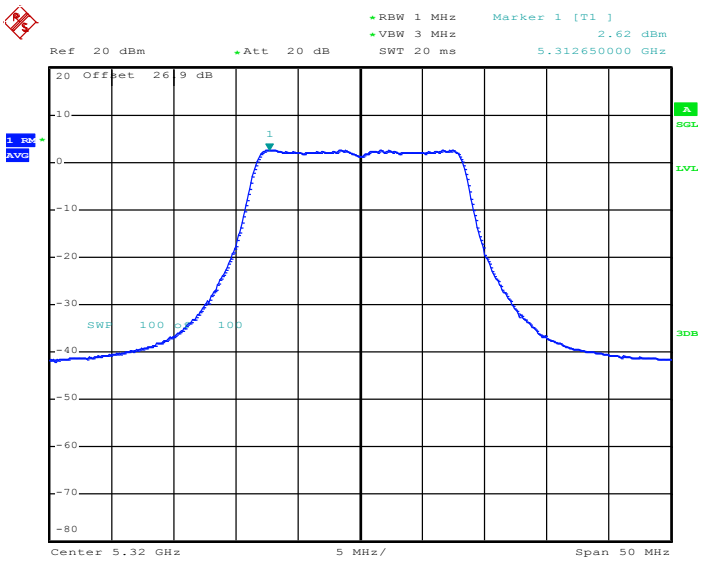
Date: 17.OCT.2012 19:40:54

PSD Plot on 802.11a Channel 60



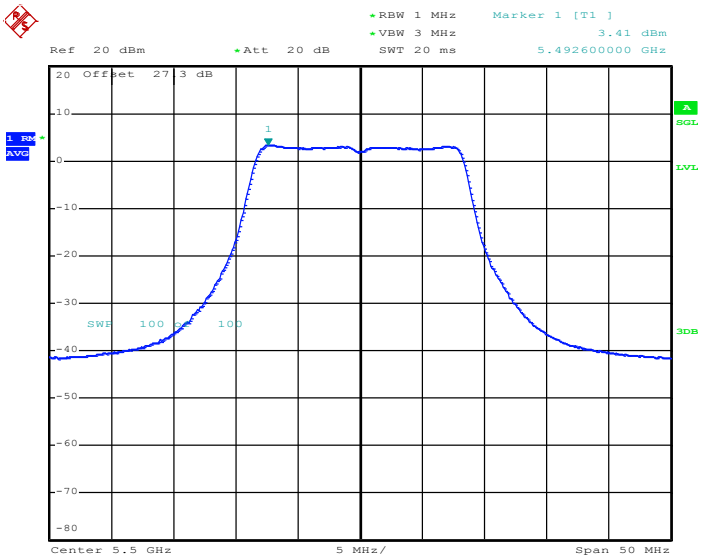
Date: 17.OCT.2012 19:44:45

PSD Plot on 802.11a Channel 64



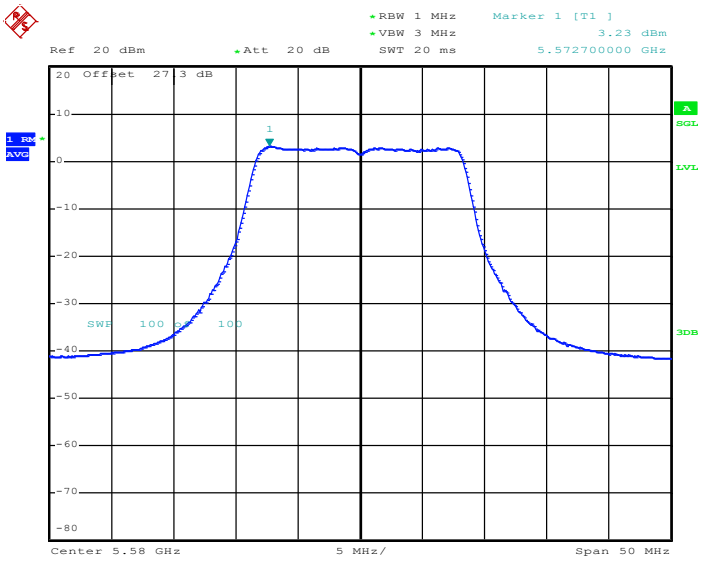
Date: 17.OCT.2012 19:47:51

PSD Plot on 802.11a Channel 100



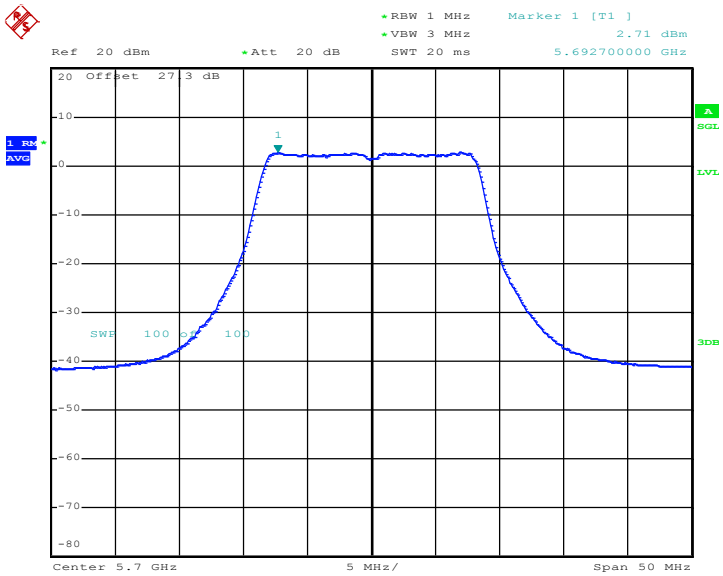
Date: 17.OCT.2012 19:52:04

PSD Plot on 802.11a Channel 116



Date: 17.OCT.2012 19:54:54

PSD Plot on 802.11a Channel 140



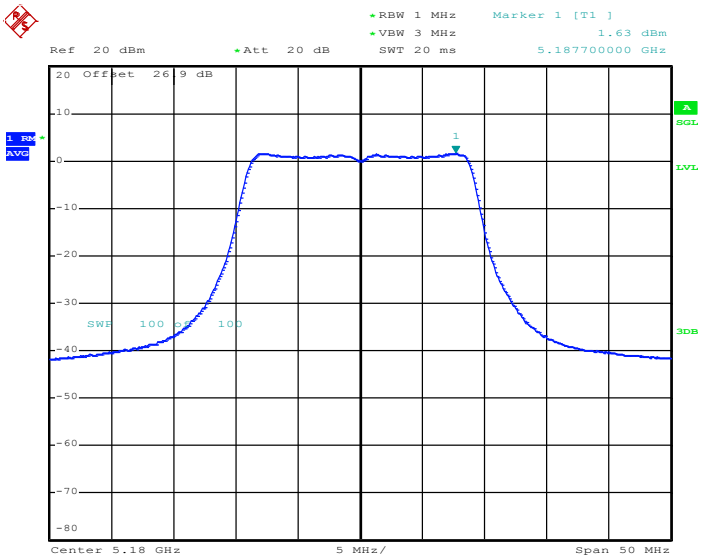
Date: 17.OCT.2012 19:57:24

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%
Duty Cycle:	93.33%	Duty Factor:	0.30dB

Channel	Frequency (MHz)	802.11n HT20 PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
36	5180	1.630	1.930	4	Pass
44	5220	1.610	1.910	4	Pass
48	5240	1.680	1.980	4	Pass
52	5260	1.560	1.860	11	Pass
60	5300	1.420	1.720	11	Pass
64	5320	1.570	1.870	11	Pass
100	5500	2.140	2.440	11	Pass
116	5580	1.990	2.290	11	Pass
140	5700	1.600	1.900	11	Pass

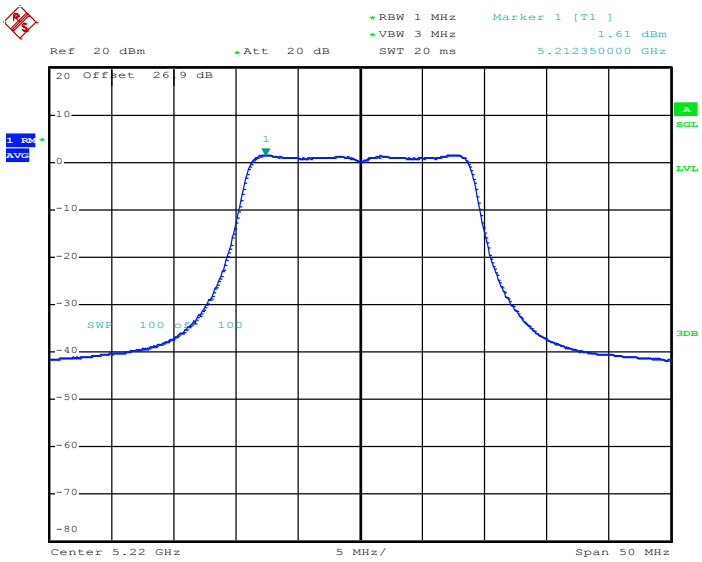
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11n HT20 channel 36



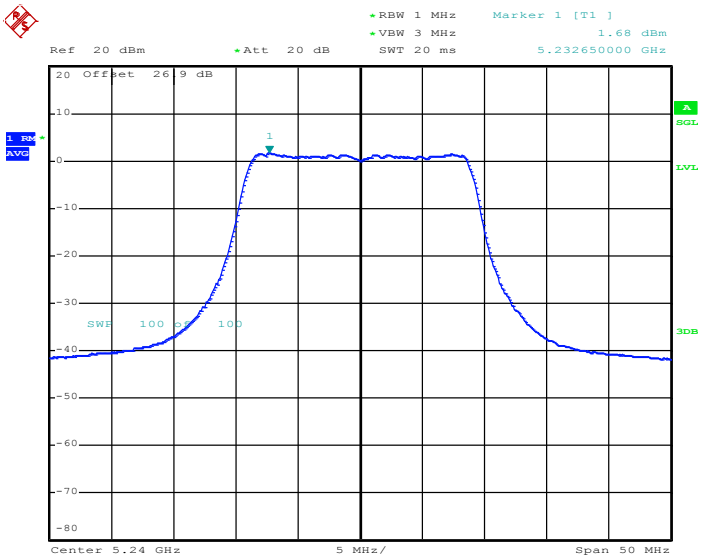
Date: 17.OCT.2012 20:09:58

PSD Plot on 802.11n HT20 Channel 44



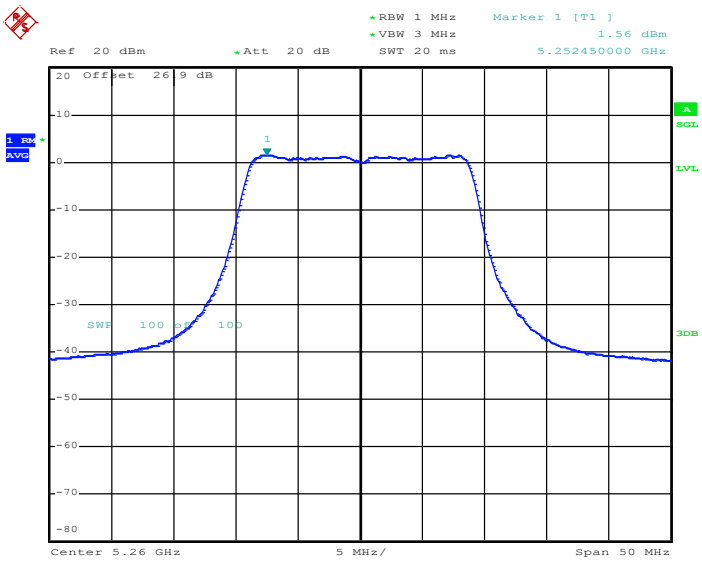
Date: 17.OCT.2012 20:12:00

PSD Plot on 802.11n HT20 Channel 48



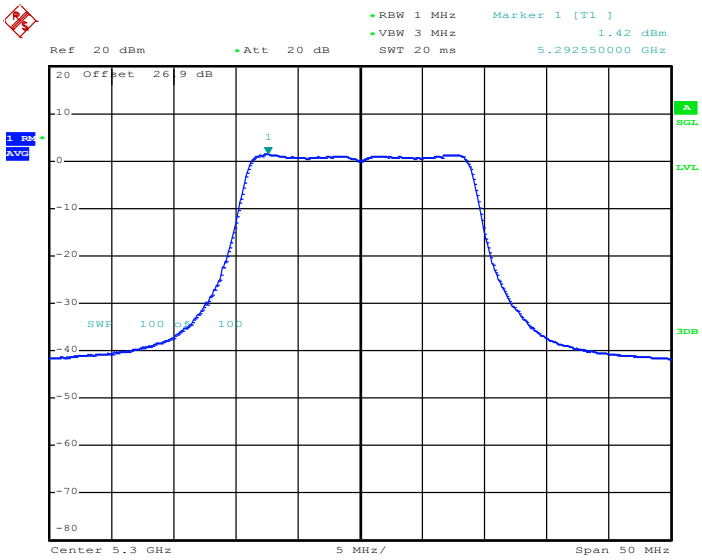
Date: 17.OCT.2012 20:13:58

PSD Plot on 802.11n HT20 Channel 52



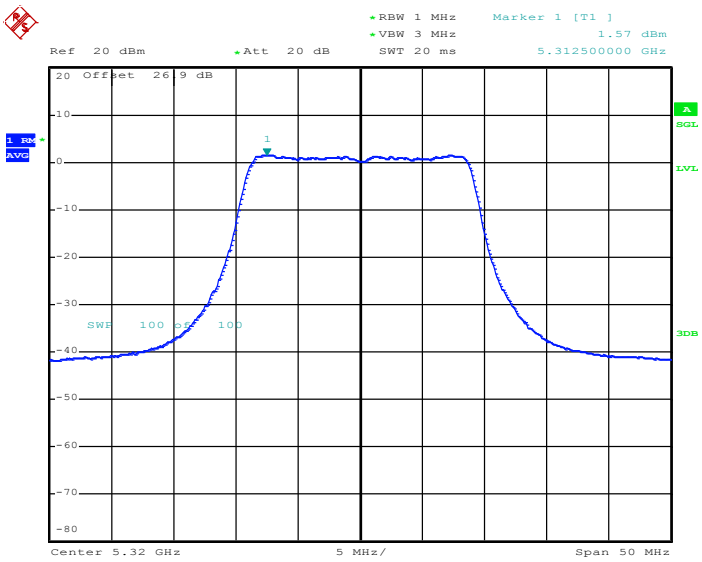
Date: 17.OCT.2012 20:16:11

PSD Plot on 802.11n HT20 Channel 60



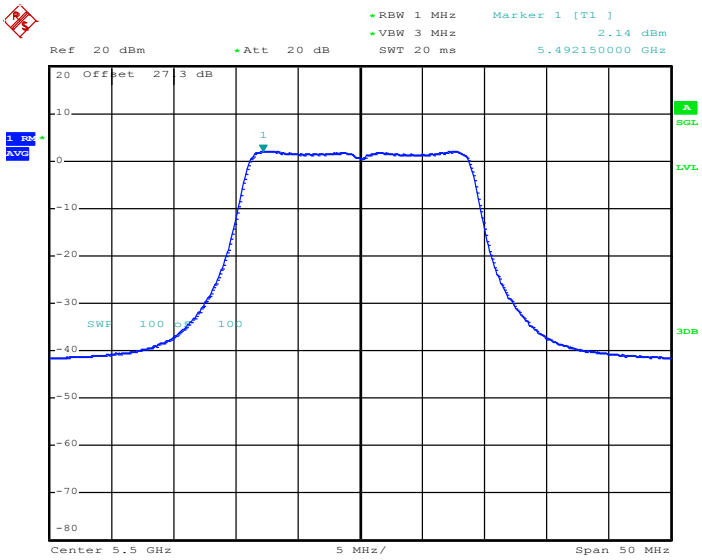
Date: 17.OCT.2012 20:21:18

PSD Plot on 802.11n HT20 Channel 64



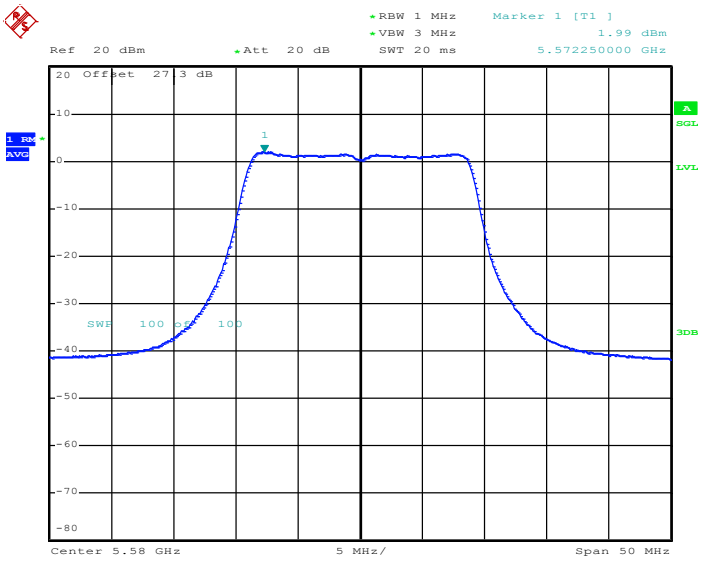
Date: 17.OCT.2012 20:25:41

PSD Plot on 802.11n HT20 Channel 100



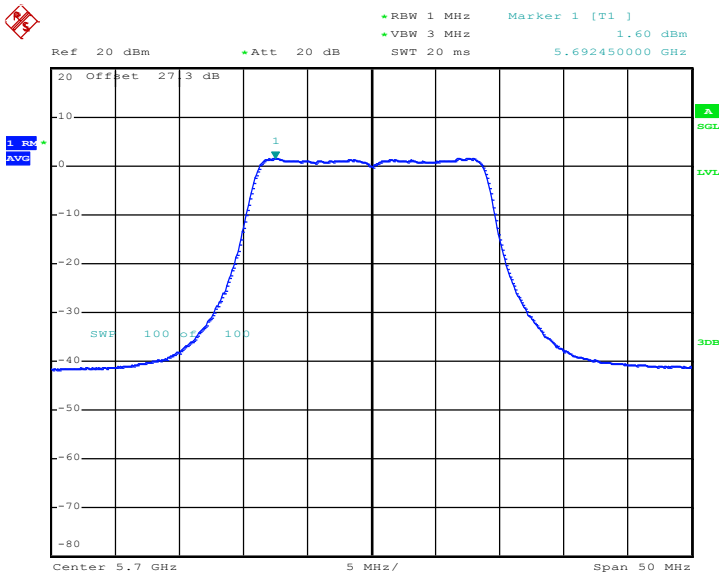
Date: 17.OCT.2012 20:20:30

PSD Plot on 802.11n HT20 Channel 116



Date: 17.OCT.2012 20:03:24

PSD Plot on 802.11n HT20 Channel 140



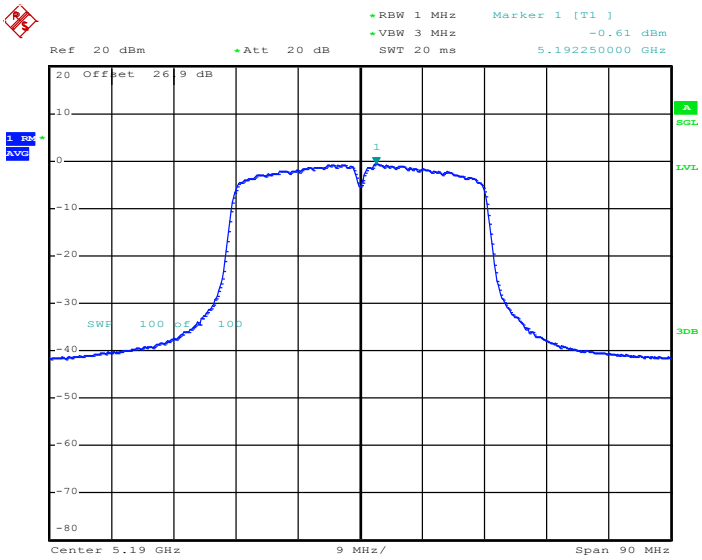
Date: 17.OCT.2012 20:01:00

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%
Duty Cycle:	86.98%	Duty Factor:	0.61dB

Channel	Frequency (MHz)	802.11n HT40 PSD (dBm)		Max. Limits (dBm)	Pass/Fail
		Measured	Final		
38	5190	-0.610	-0.004	4	Pass
46	5230	-0.510	0.096	4	Pass
54	5270	-0.580	0.026	11	Pass
62	5310	-0.770	-0.164	11	Pass
102	5510	-0.170	0.436	11	Pass
110	5550	-0.210	0.396	11	Pass
134	5670	-0.920	-0.314	11	Pass

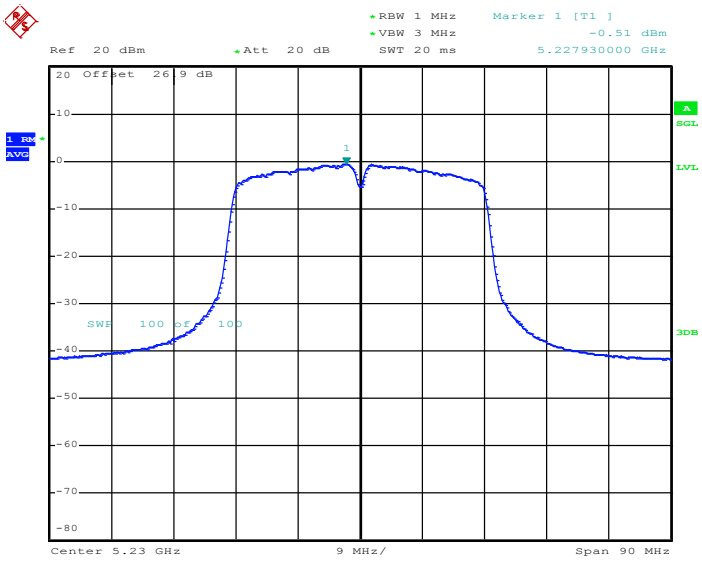
Note: Result of Final PSD equals to Measured PSD adds the duty factor.

PSD Plot on 802.11n HT40 Channel 38



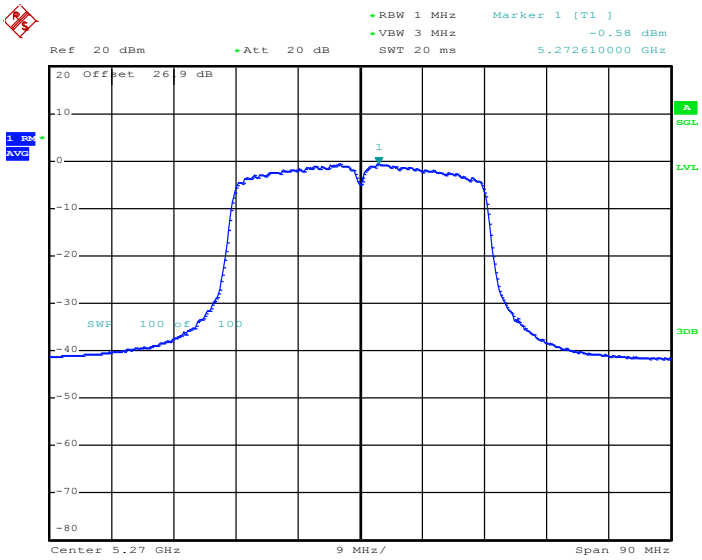
Date: 17.OCT.2012 20:30:50

PSD Plot on 802.11n HT40 Channel 46



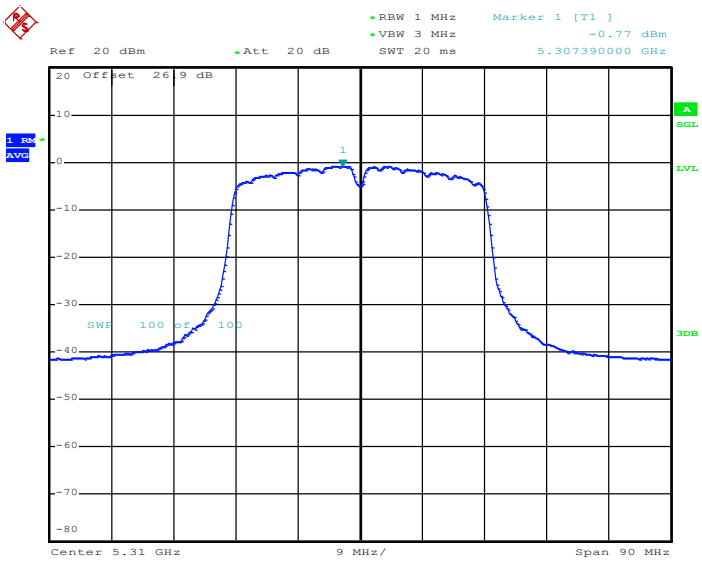
Date: 17.OCT.2012 20:33:52

PSD Plot on 802.11n HT40 Channel 54



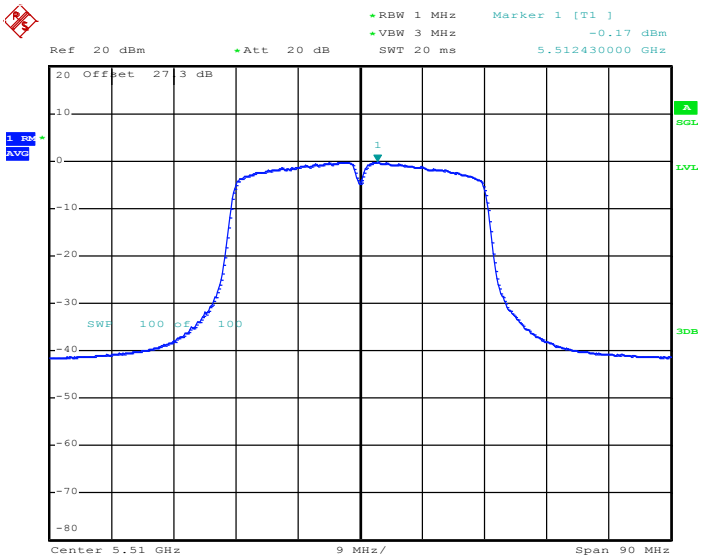
Date: 17.OCT.2012 20:36:02

PSD Plot on 802.11n HT40 Channel 62



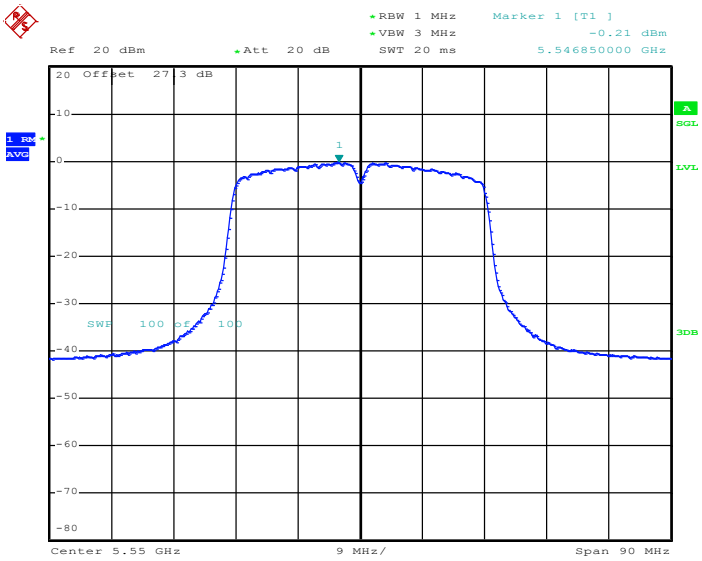
Date: 17.OCT.2012 20:38:10

PSD Plot on 802.11n HT40 Channel 102



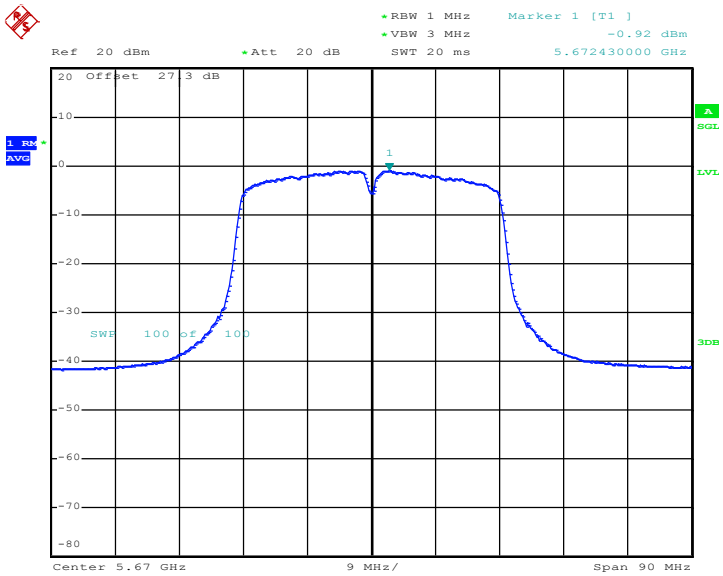
Date: 17.OCT.2012 20:40:14

PSD Plot on 802.11n HT40 Channel 110



Date: 17.OCT.2012 20:42:29

PSD Plot on 802.11n HT40 Channel 134



Date: 17.OCT.2012 20:45:07

3.4 Peak Excursion Ratio Measurement

3.4.1 Limit of Peak Excursion Ratio

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

T The testing follows FCC KDB 789033 D01 General UNII Test Procedures 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 ≥ 3MHz.

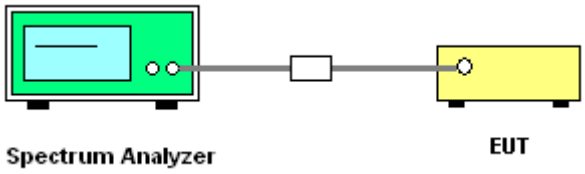
   *Detector = peak.

   *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.

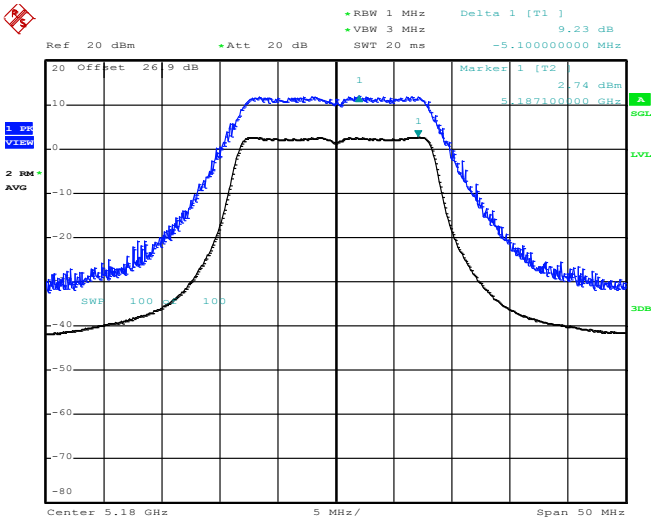
3.4.4 Test Setup



3.4.5 Test Result of Peak Excursion Ratio

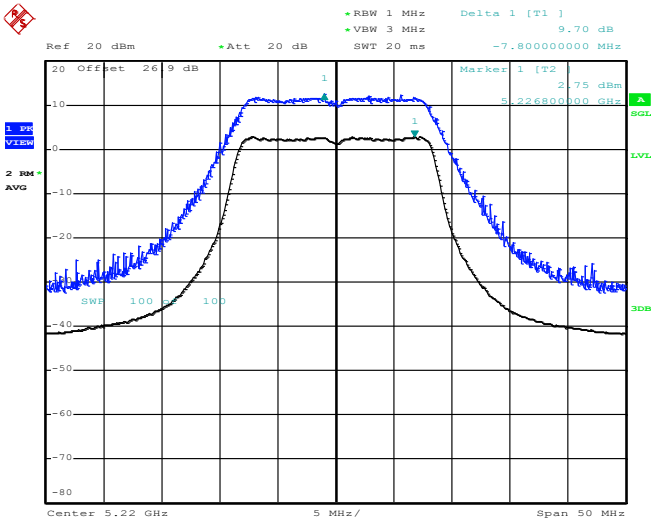
Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Peak Excursion Ratio Plot on 802.11a Channel 36



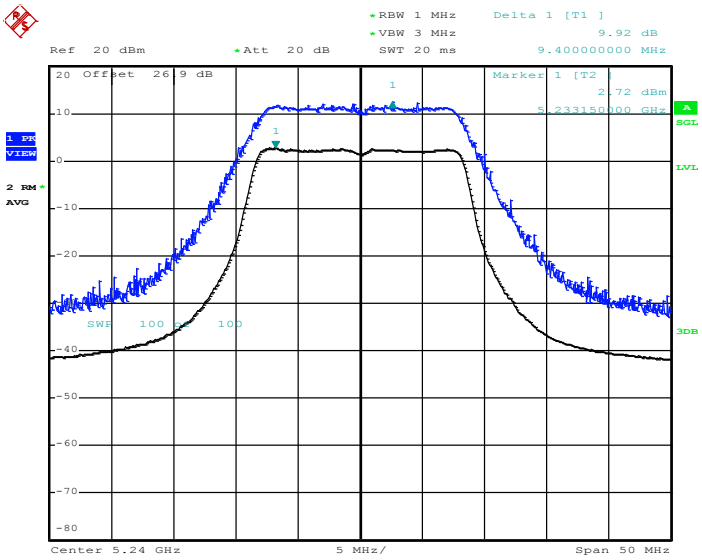
Date: 17.OCT.2012 19:28:45

Peak Excursion Ratio Plot on 802.11a Channel 44



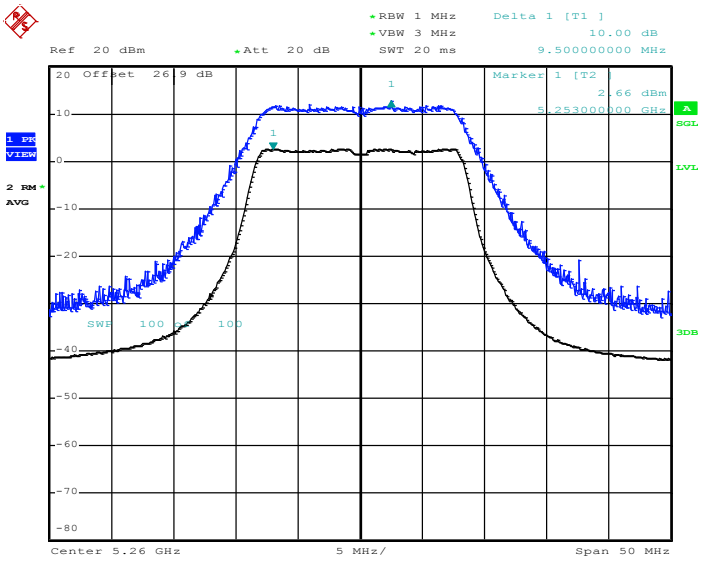
Date: 17.OCT.2012 19:35:48

Peak Excursion Ratio Plot on 802.11a Channel 48



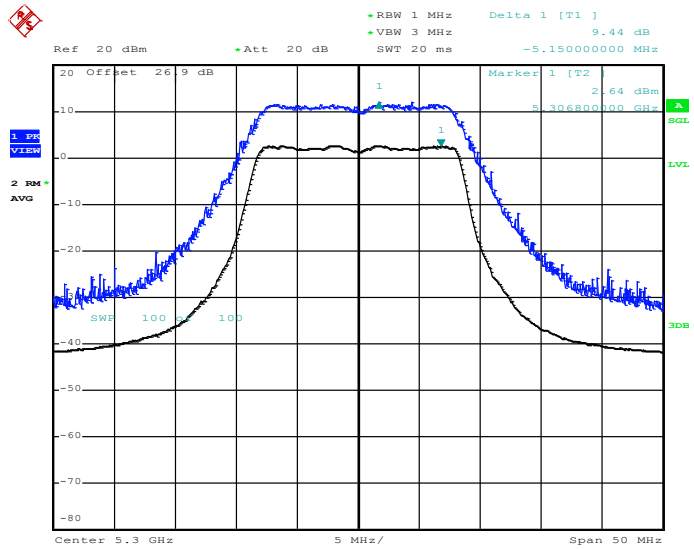
Date: 17.OCT.2012 19:38:08

Peak Excursion Ratio Plot on 802.11a Channel 52



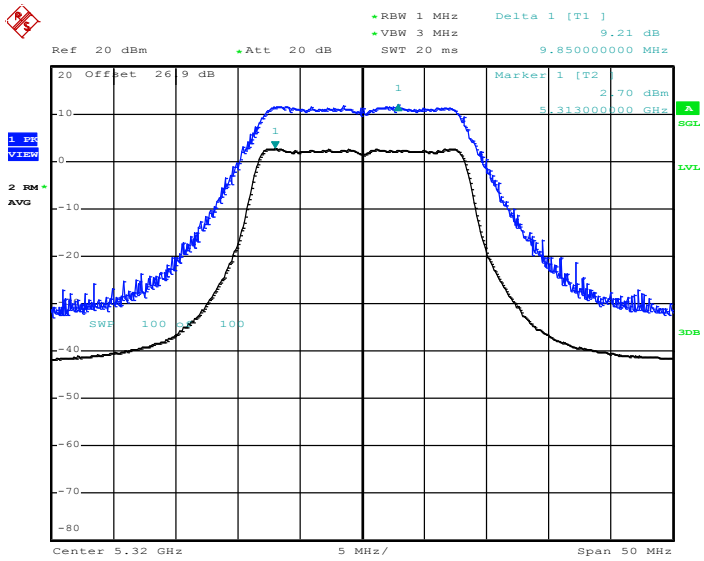
Date: 17.OCT.2012 19:41:14

Peak Excursion Ratio Plot on 802.11a Channel 60



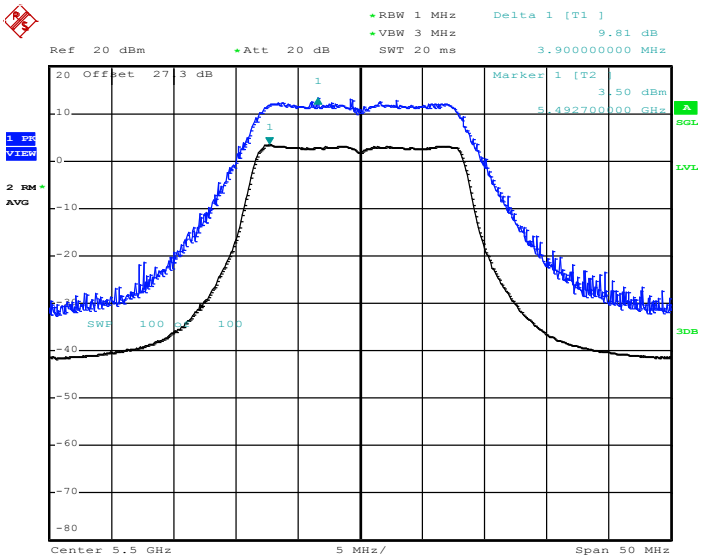
Date: 17.OCT.2012 19:45:02

Peak Excursion Ratio Plot on 802.11a Channel 64



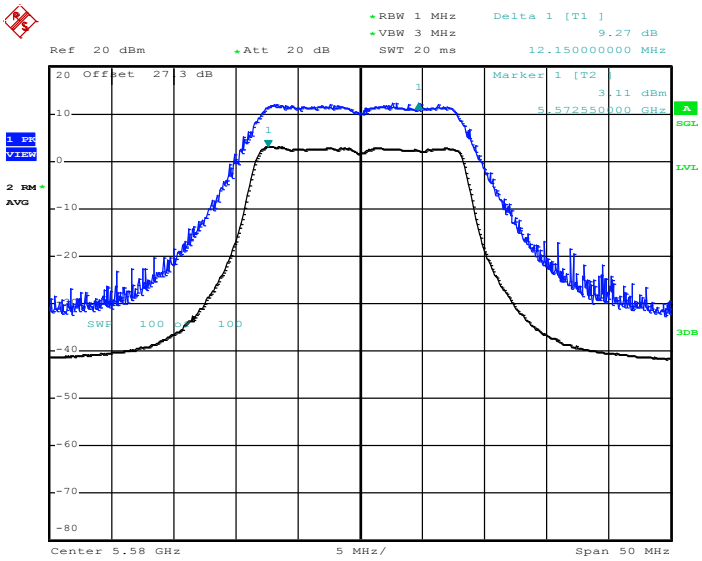
Date: 17.OCT.2012 19:48:09

Peak Excursion Ratio Plot on 802.11a Channel 100



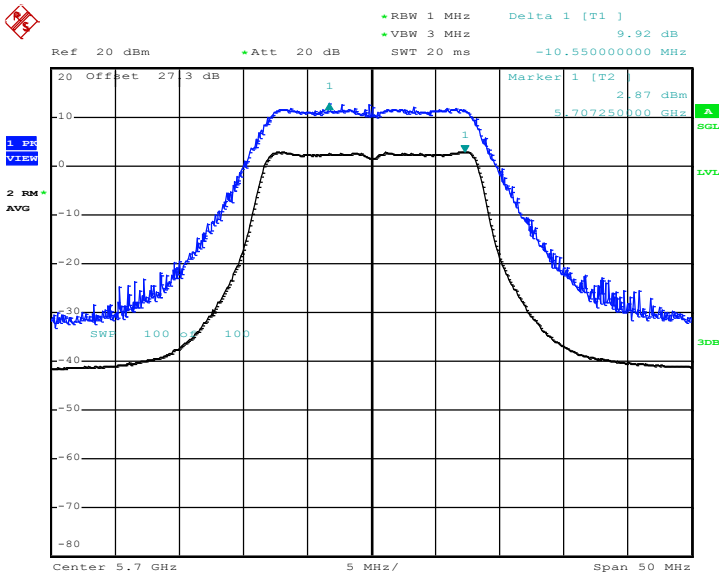
Date: 17.OCT.2012 19:52:23

Peak Excursion Ratio Plot on 802.11a Channel 116



Date: 17.OCT.2012 19:55:15

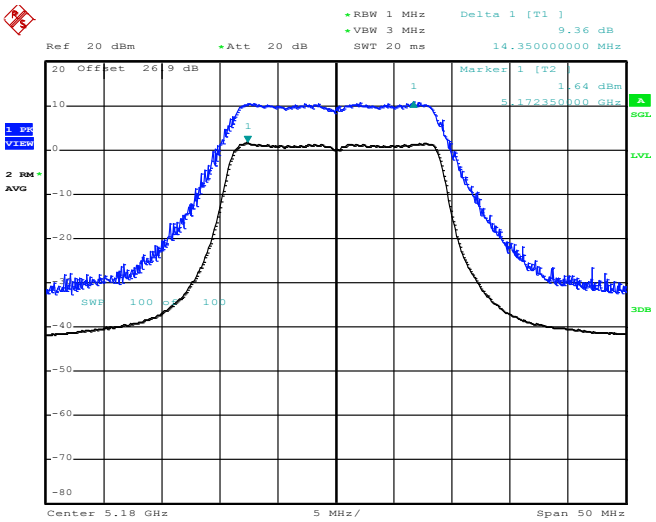
Peak Excursion Ratio Plot on 802.11a Channel 140



Date: 17.OCT.2012 20:55:51

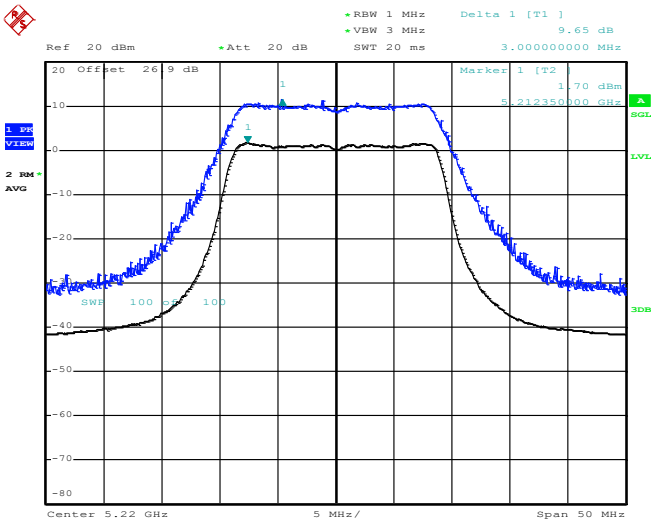
Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Peak Excursion Ratio Plot on 802.11n HT20 Channel 36



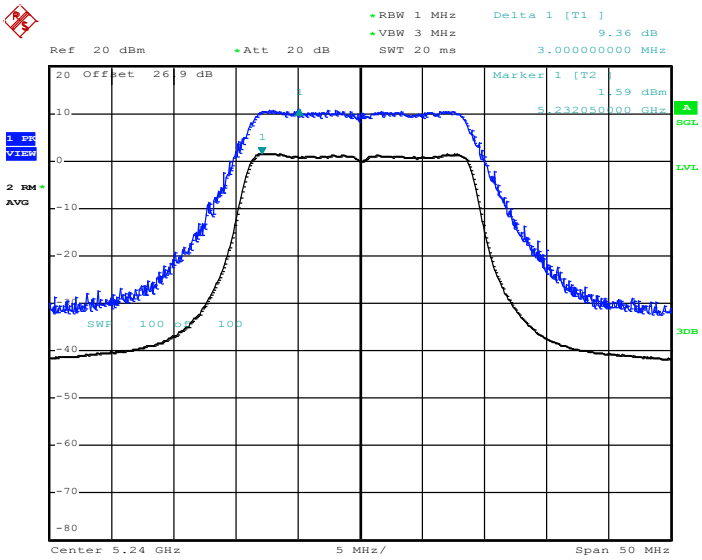
Date: 17.OCT.2012 20:10:21

Peak Excursion Ratio Plot on 802.11n HT20 Channel 44



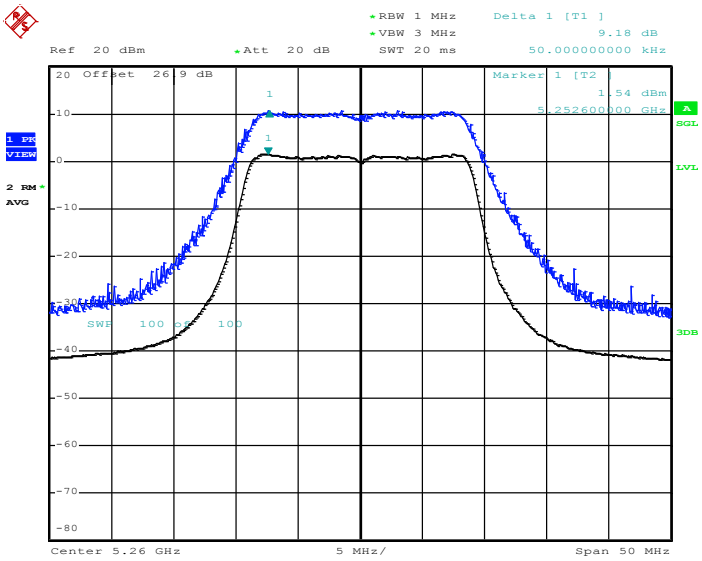
Date: 17.OCT.2012 20:12:18

Peak Excursion Ratio Plot on 802.11n HT20 Channel 48



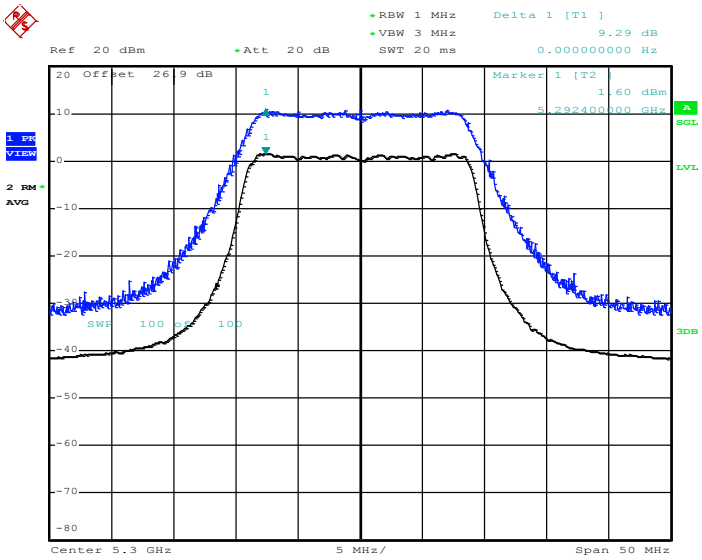
Date: 17.OCT.2012 20:14:19

Peak Excursion Ratio Plot on 802.11n HT20 Channel 52



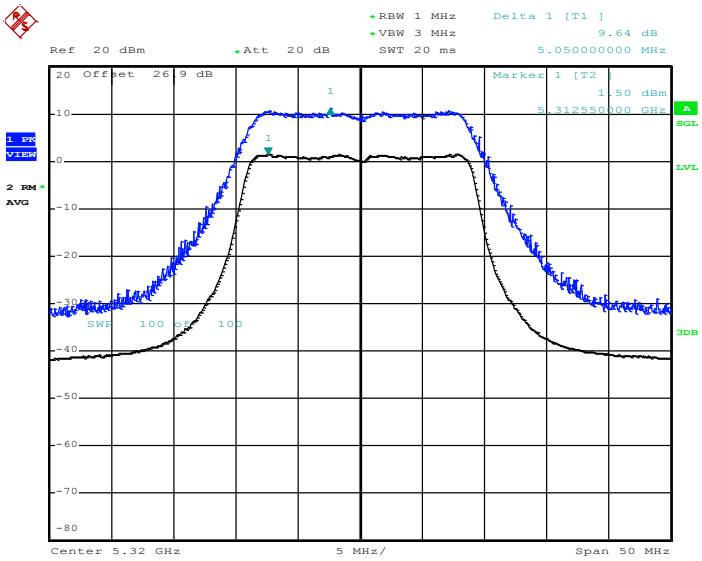
Date: 17.OCT.2012 20:16:30

Peak Excursion Ratio Plot on 802.11n HT20 Channel 60



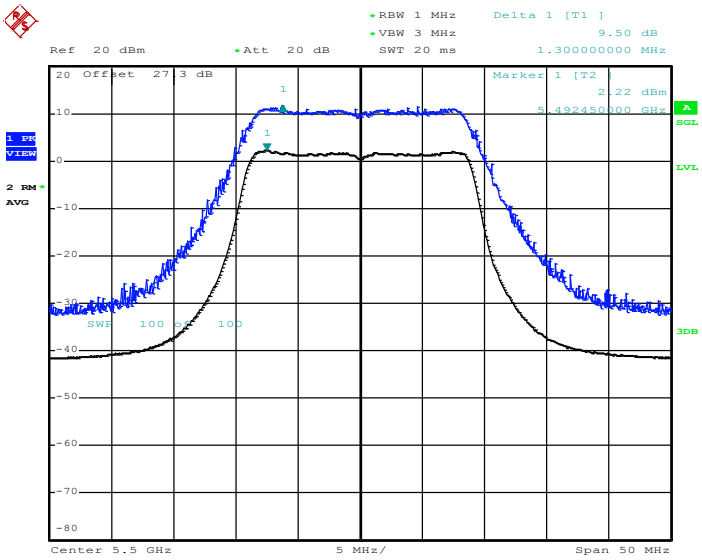
Date: 17.OCT.2012 20:21:56

Peak Excursion Ratio Plot on 802.11n HT20 Channel 64



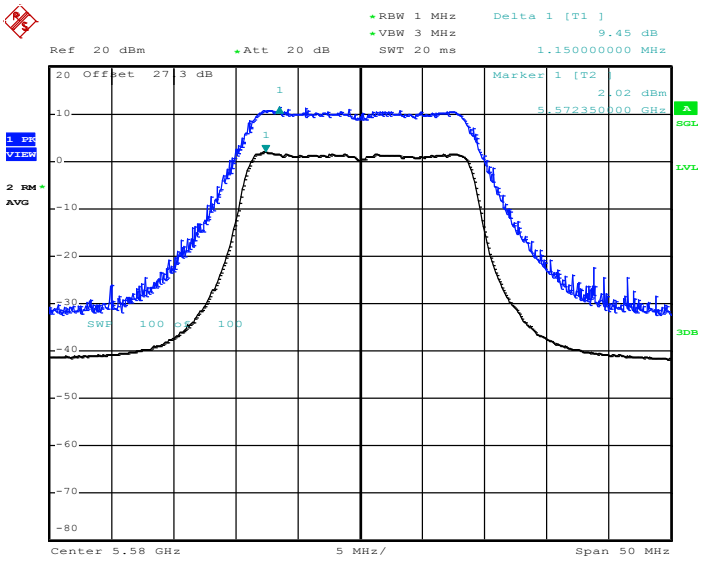
Date: 17.OCT.2012 20:25:59

Peak Excursion Ratio Plot on 802.11n HT20 Channel 100



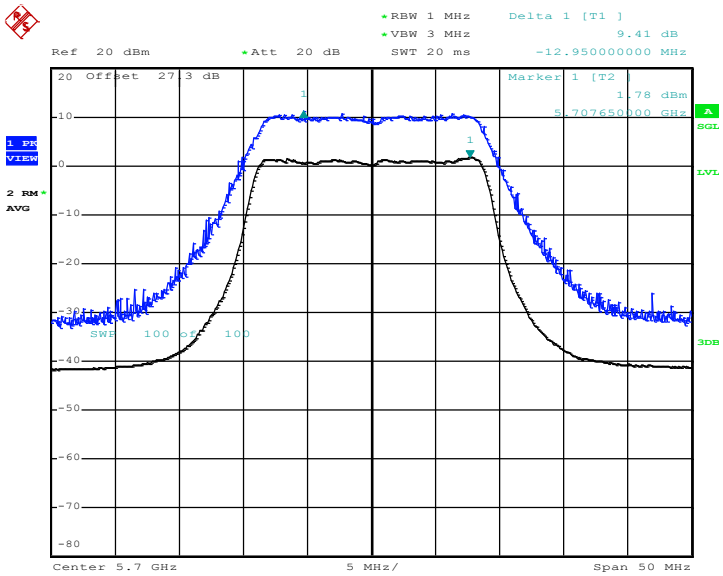
Date: 17.OCT.2012 20:06:59

Peak Excursion Ratio Plot on 802.11n HT20 Channel 116



Date: 17.OCT.2012 20:03:41

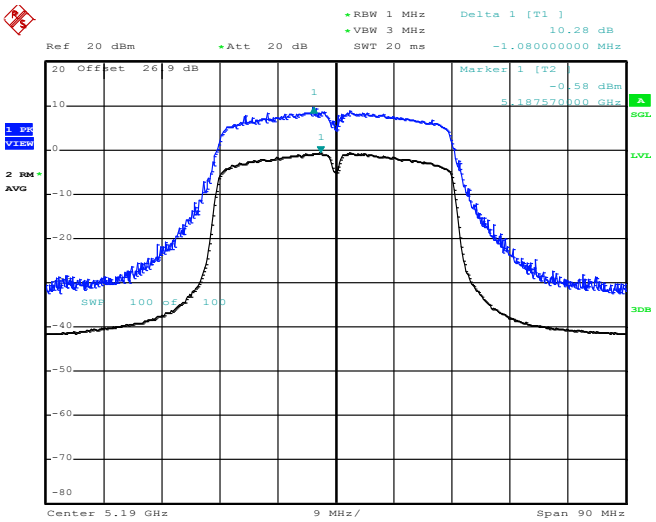
Peak Excursion Ratio Plot on 802.11n HT20 Channel 140



Date: 17.OCT.2012 20:01:30

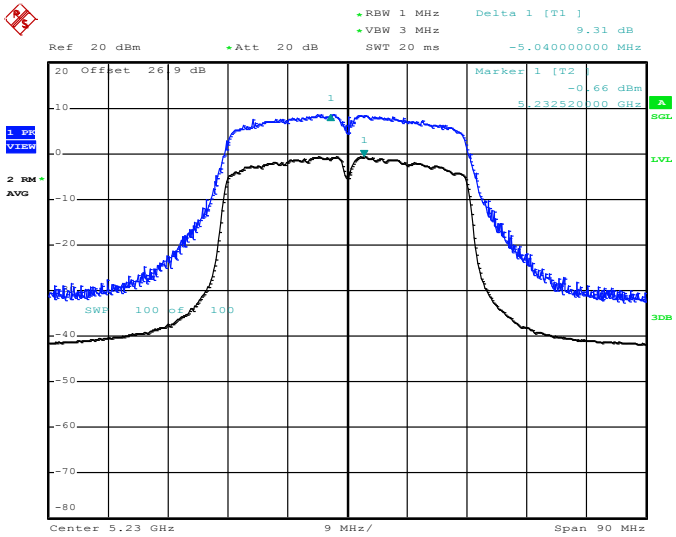
Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Book Lin	Relative Humidity :	45~49%

Peak Excursion Ratio Plot on 802.11n HT40 Channel 38



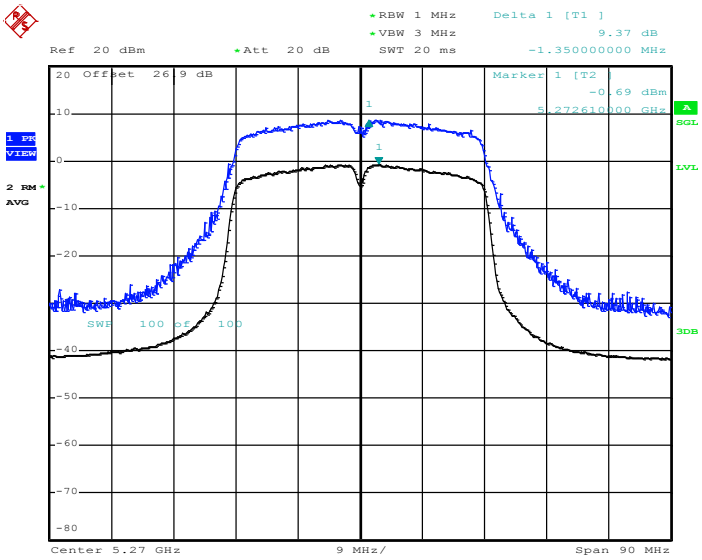
Date: 17.OCT.2012 20:31:10

Peak Excursion Ratio Plot on 802.11n HT40 Channel 46



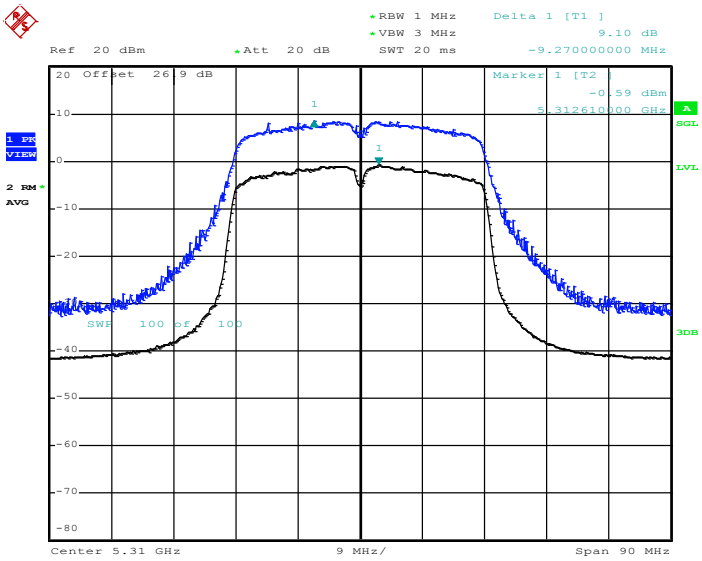
Date: 17.OCT.2012 20:34:12

Peak Excursion Ratio Plot on 802.11n HT40 Channel 54



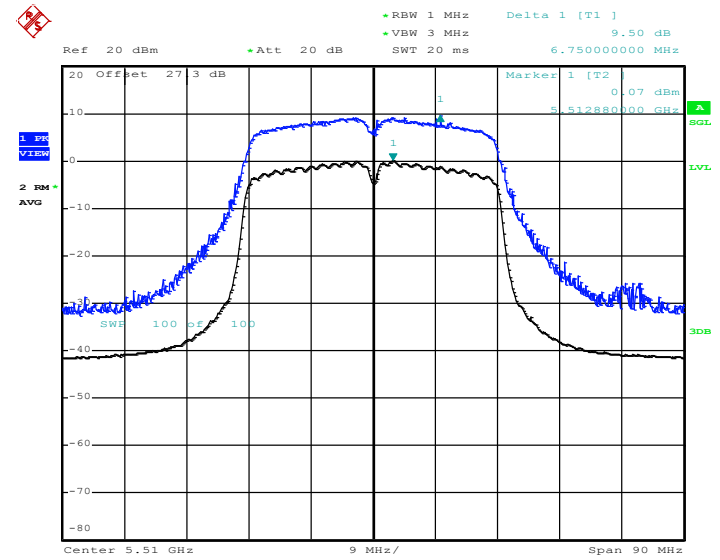
Date: 17.OCT.2012 20:36:20

Peak Excursion Ratio Plot on 802.11n HT40 Channel 62



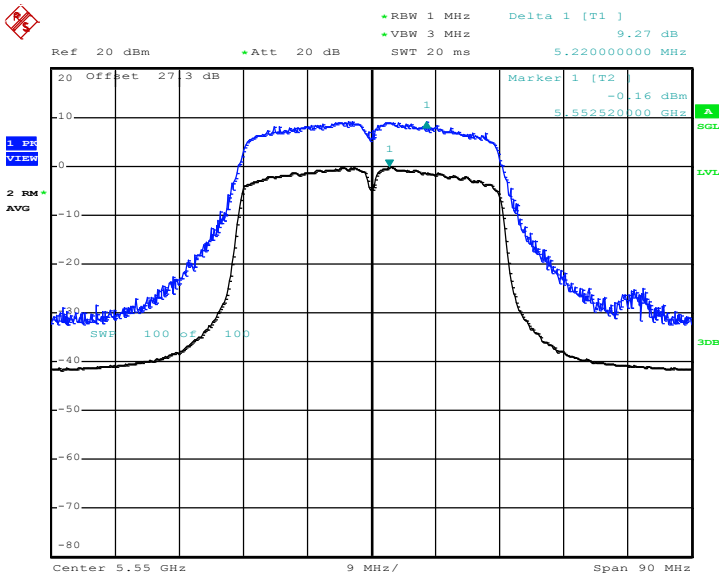
Date: 17.OCT.2012 20:38:28

Peak Excursion Ratio Plot on 802.11n HT40 Channel 102



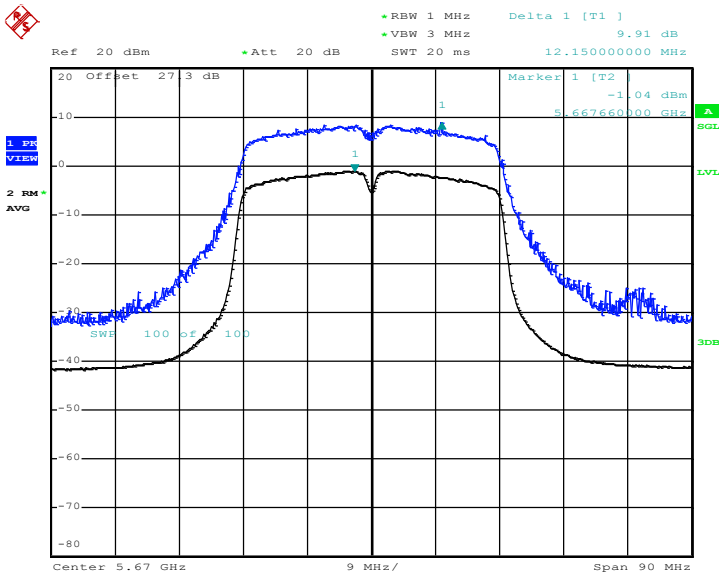
Date: 17.OCT.2012 20:40:32

Peak Excursion Ratio Plot on 802.11n HT40 Channel 110



Date: 17.OCT.2012 20:42:47

Peak Excursion Ratio Plot on 802.11n HT40 Channel 134



Date: 17.OCT.2012 20:45:37

3.5 Unwanted Radiated Emission Measurement

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

3.5.1 Limit of Unwanted Emissions

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

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

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

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

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

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

EIRP (dBm)	Field Strength at 3m (dBuV/m)
-17	78.3
- 27	68.3

3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The testing follows the guidelines in fulfills ANSI C63.4-2003 and the guidelines in ANSI C63.10-2009 test site requirement and FCC KDB 789033 D01 General UNII Test Procedures 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 ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

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

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

Band	Duty Cycle (%)	T(us)	1/T(KHz)	VBW Setting
802.11a	93.23	1432.00	0.698	1kHz
802.11n HT20	93.33	1344.00	0.744	1kHz
802.11n HT40	86.98	668.00	1.453	3kHz

2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the

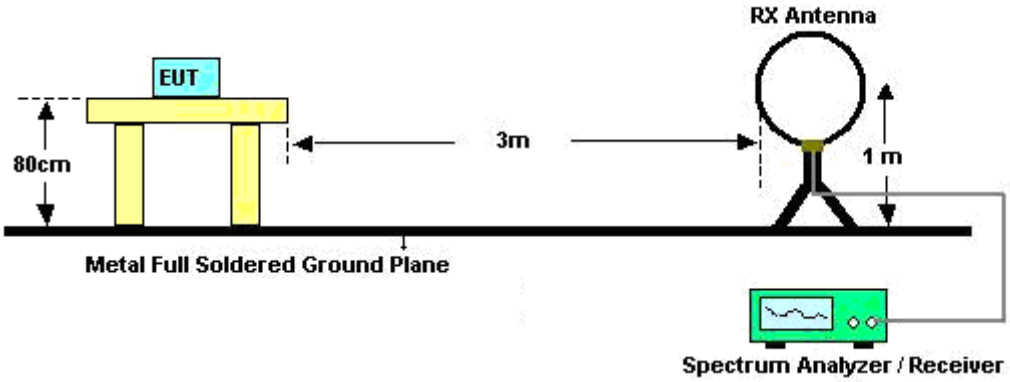
top of a variable height antenna tower.

4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.

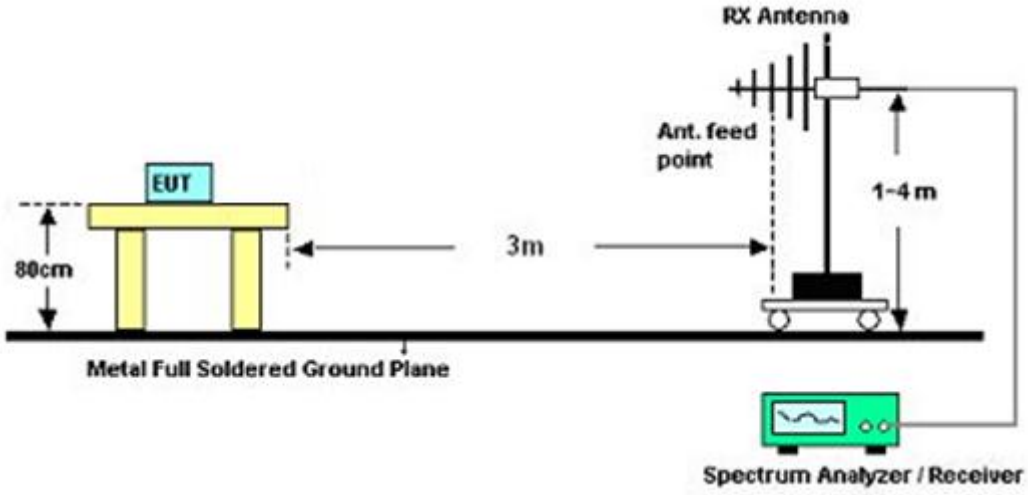
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.5.4 Test Setup

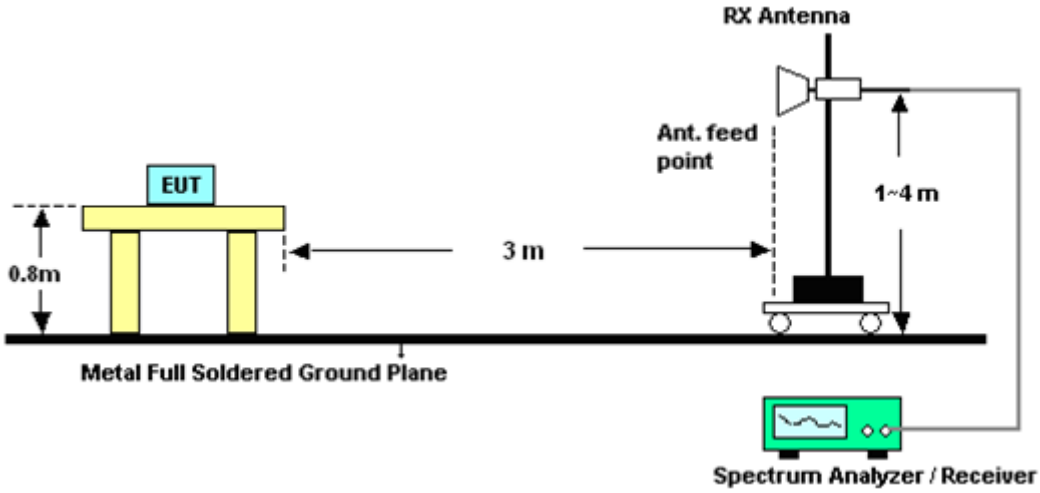
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.5.6 Test Result

3.5.6.1 Test Result of Radiated Band Edges

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	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
5116.55	54.02	-19.98	74	42.6	34.87	10.4	33.85	109	335	Peak
5148.5	41.4	-12.6	54	29.92	34.89	10.44	33.85	109	335	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5005.7	54.12	-19.88	74	42.93	34.81	10.23	33.85	101	310	Peak
5147.9	41.18	-12.82	54	29.7	34.89	10.44	33.85	101	310	Average

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	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
5084.75	53.86	-20.14	74	42.53	34.85	10.33	33.85	107	345	Peak
5147.3	41.02	-12.98	54	29.54	34.89	10.44	33.85	107	345	Average
5394.66	55.51	-18.49	74	43.52	35.04	10.79	33.84	107	345	Peak
5373.65	42.2	-11.8	54	30.27	35.02	10.75	33.84	107	345	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
5105.9	54.25	-19.75	74	42.86	34.87	10.37	33.85	100	306	Peak
5048	41	-13	54	29.72	34.83	10.3	33.85	100	306	Average
5371.23	55.32	-18.68	74	43.39	35.02	10.75	33.84	100	306	Peak
5384.54	41.97	-12.03	54	29.99	35.03	10.79	33.84	100	306	Average

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	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
5137.1	53.97	-20.03	74	42.54	34.88	10.4	33.85	106	346	Peak
5018.6	40.84	-13.16	54	29.65	34.81	10.23	33.85	106	346	Average
5380.36	55.19	-18.81	74	43.21	35.03	10.79	33.84	106	346	Peak
5378.05	42.3	-11.7	54	30.36	35.03	10.75	33.84	106	346	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
5000.9	53.66	-20.34	74	42.48	34.8	10.23	33.85	100	306	Peak
5150	40.97	-13.03	54	29.49	34.89	10.44	33.85	100	306	Average
5394.11	55.18	-18.82	74	43.2	35.03	10.79	33.84	100	306	Peak
5375.08	41.99	-12.01	54	30.06	35.02	10.75	33.84	100	306	Average

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	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
5354.07	60.64	-13.36	74	48.75	35.01	10.72	33.84	106	346	Peak
5399.39	42.84	-11.16	54	30.85	35.04	10.79	33.84	106	346	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
5357.92	56.57	-17.43	74	44.65	35.01	10.75	33.84	100	306	Peak
5359.46	42.2	-11.8	54	30.28	35.01	10.75	33.84	100	306	Average

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	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
5469.84	60.55	-13.45	74	48.42	35.08	10.89	33.84	100	5	Peak
5457.36	43.48	-10.52	54	31.36	35.07	10.89	33.84	100	5	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
5462.8	59.63	-14.37	74	47.5	35.08	10.89	33.84	108	314	Peak
5467.12	43.07	-10.93	54	30.94	35.08	10.89	33.84	108	314	Average

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	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
5727.4	62.16	-11.84	74	49.25	35.41	11.34	33.84	100	20	Peak
5726.36	44.54	-9.46	54	31.63	35.41	11.34	33.84	100	20	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
5728.36	61.4	-12.6	74	48.49	35.41	11.34	33.84	103	314	Peak
5726.04	44.66	-9.34	54	31.75	35.41	11.34	33.84	103	314	Average

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	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
5149.4	54.68	-19.32	74	43.2	34.89	10.44	33.85	108	346	Peak
5148.35	41.39	-12.61	54	29.91	34.89	10.44	33.85	108	346	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
5142.8	53.65	-20.35	74	42.17	34.89	10.44	33.85	101	306	Peak
5148.2	40.99	-13.01	54	29.51	34.89	10.44	33.85	101	306	Average

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	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
5051.9	53.88	-20.12	74	42.6	34.83	10.3	33.85	108	336	Peak
5149.4	40.97	-13.03	54	29.49	34.89	10.44	33.85	108	336	Average
5409.51	55.22	-18.78	74	43.2	35.04	10.82	33.84	108	336	Peak
5376.51	41.9	-12.1	54	29.97	35.02	10.75	33.84	108	336	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
5072.3	53.43	-20.57	74	42.1	34.85	10.33	33.85	100	306	Peak
5147.75	40.9	-13.1	54	29.42	34.89	10.44	33.85	100	306	Average
5401.15	55.29	-18.71	74	43.3	35.04	10.79	33.84	100	306	Peak
5359.02	41.92	-12.08	54	30	35.01	10.75	33.84	100	306	Average

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	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
5130.05	53.91	-20.09	74	42.48	34.88	10.4	33.85	133	344	Peak
5131.55	40.93	-13.07	54	29.5	34.88	10.4	33.85	133	344	Average
5361.22	55.2	-18.8	74	43.27	35.02	10.75	33.84	133	344	Peak
5367.82	42.11	-11.89	54	30.18	35.02	10.75	33.84	133	344	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
5051.45	54.37	-19.63	74	43.09	34.83	10.3	33.85	100	327	Peak
5131.55	40.84	-13.16	54	29.41	34.88	10.4	33.85	100	327	Average
5396.97	54.94	-19.06	74	42.95	35.04	10.79	33.84	100	327	Peak
5367.49	42.2	-11.8	54	30.27	35.02	10.75	33.84	100	327	Average

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	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
5353.41	57.57	-16.43	74	45.68	35.01	10.72	33.84	105	346	Peak
5394.99	42.48	-11.52	54	30.49	35.04	10.79	33.84	105	346	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
5355.5	56.78	-17.22	74	44.89	35.01	10.72	33.84	100	325	Peak
5385.97	42.14	-11.86	54	30.16	35.03	10.79	33.84	100	325	Average

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	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
5470	59.63	-14.37	74	47.5	35.08	10.89	33.84	100	4	Peak
5467.44	43.16	-10.84	54	31.03	35.08	10.89	33.84	100	4	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
5464.24	58.36	-15.64	74	46.23	35.08	10.89	33.84	108	314	Peak
5466.96	42.65	-11.35	54	30.52	35.08	10.89	33.84	108	314	Average

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	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
5727.32	60.93	-13.07	74	48.02	35.41	11.34	33.84	100	20	Peak
5731.88	44.26	-9.74	54	31.35	35.41	11.34	33.84	100	20	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
5726.2	59.98	-14.02	74	47.07	35.41	11.34	33.84	104	316	Peak
5725	43.79	-10.21	54	30.88	35.41	11.34	33.84	104	316	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	38	Relative Humidity :	42~43%
Test Engineer :	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
5149.25	57.73	-16.27	74	46.25	34.89	10.44	33.85	108	4	Peak
5150	42.51	-11.49	54	31.03	34.89	10.44	33.85	108	4	Average
5363.2	54.89	-19.11	74	42.96	35.02	10.75	33.84	108	4	Peak
5403.46	42.54	-11.46	54	30.55	35.04	10.79	33.84	108	4	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
5148.2	57.35	-16.65	74	45.87	34.89	10.44	33.85	101	296	Peak
5149.85	41.98	-12.02	54	30.5	34.89	10.44	33.85	101	296	Average
5354.51	55.53	-18.47	74	43.64	35.01	10.72	33.84	101	296	Peak
5383.99	42.4	-11.6	54	30.42	35.03	10.79	33.84	101	296	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	46	Relative Humidity :	42~43%
Test Engineer :	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
5038.55	54.43	-19.57	74	43.19	34.83	10.26	33.85	108	4	Peak
5131.55	41.72	-12.28	54	30.29	34.88	10.4	33.85	108	4	Average
5380.14	54.9	-19.1	74	42.92	35.03	10.79	33.84	108	4	Peak
5406.98	42.58	-11.42	54	30.56	35.04	10.82	33.84	108	4	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
5123.9	53.94	-20.06	74	42.51	34.88	10.4	33.85	101	311	Peak
5001.65	41.7	-12.3	54	30.52	34.8	10.23	33.85	101	311	Average
5452.52	55.65	-18.35	74	43.53	35.07	10.89	33.84	101	311	Peak
5402.91	42.69	-11.31	54	30.7	35.04	10.79	33.84	101	311	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	54	Relative Humidity :	42~43%
Test Engineer :	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
5052.8	53.96	-20.04	74	42.68	34.83	10.3	33.85	107	346	Peak
5044.1	41.55	-12.45	54	30.27	34.83	10.3	33.85	107	346	Average
5350.44	55.53	-18.47	74	43.64	35.01	10.72	33.84	107	346	Peak
5372.66	42.93	-11.07	54	31	35.02	10.75	33.84	107	346	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
5115.5	54.46	-19.54	74	43.07	34.87	10.37	33.85	100	319	Peak
5146.7	41.54	-12.46	54	30.06	34.89	10.44	33.85	100	319	Average
5399.72	55.35	-18.65	74	43.36	35.04	10.79	33.84	100	319	Peak
5393.01	42.63	-11.37	54	30.65	35.03	10.79	33.84	100	319	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	62	Relative Humidity :	42~43%
Test Engineer :	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
5136.65	54.79	-19.21	74	43.36	34.88	10.4	33.85	106	345	Peak
5050.4	41.5	-12.5	54	30.22	34.83	10.3	33.85	106	345	Average
5358.03	58.43	-15.57	74	46.51	35.01	10.75	33.84	106	345	Peak
5350.11	44.32	-9.68	54	32.43	35.01	10.72	33.84	106	345	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
5091.35	54.5	-19.5	74	43.16	34.86	10.33	33.85	100	314	Peak
5000	41.51	-12.49	54	30.33	34.8	10.23	33.85	100	314	Average
5352.2	57.59	-16.41	74	45.7	35.01	10.72	33.84	100	314	Peak
5350.66	43.19	-10.81	54	31.3	35.01	10.72	33.84	100	314	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	102	Relative Humidity :	42~43%
Test Engineer :	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
5465.84	59.54	-14.46	74	47.41	35.08	10.89	33.84	100	5	Peak
5469.84	45.23	-8.77	54	33.1	35.08	10.89	33.84	100	5	Average
5728.44	55.58	-18.42	74	42.67	35.41	11.34	33.84	100	5	Peak
5757.32	42.84	-11.16	54	29.83	35.46	11.39	33.84	100	5	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
5465.04	58.41	-15.59	74	46.28	35.08	10.89	33.84	107	314	Peak
5469.84	44.35	-9.65	54	32.22	35.08	10.89	33.84	107	314	Average
5731.16	55.87	-18.13	74	42.96	35.41	11.34	33.84	107	314	Peak
5743.56	42.46	-11.54	54	29.47	35.44	11.39	33.84	107	314	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	134	Relative Humidity :	42~43%
Test Engineer :	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
5460.08	55.34	-18.66	74	43.22	35.07	10.89	33.84	100	20	Peak
5460.08	44.51	-9.49	54	32.39	35.07	10.89	33.84	100	20	Average
5725.08	59.67	-14.33	74	46.76	35.41	11.34	33.84	100	20	Peak
5733.4	44.64	-9.36	54	31.73	35.41	11.34	33.84	100	20	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
5393.04	54.71	-19.29	74	42.73	35.03	10.79	33.84	105	315	Peak
5459.92	43	-11	54	30.88	35.07	10.89	33.84	105	315	Average
5727.88	57.78	-16.22	74	44.87	35.41	11.34	33.84	105	315	Peak
5725.08	43.37	-10.63	54	30.46	35.41	11.34	33.84	105	315	Average

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

Test Mode :	802.11a	**Temperature :**	23~24°C
Test Channel :	36	**Relative Humidity :**	42~43%
Test Engineer :	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	89.9	-	-	78.37	34.91	10.47	33.85	109	335	Average
5180	100.44	-	-	88.91	34.91	10.47	33.85	109	335	Peak

Test Mode :	802.11a	**Temperature :**	23~24°C
Test Channel :	36	**Relative Humidity :**	42~43%
Test Engineer :	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	87.77	-	-	76.24	34.91	10.47	33.85	101	310	Average
5180	98.1	-	-	86.57	34.91	10.47	33.85	101	310	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	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	90.08	-	-	78.46	34.93	10.54	33.85	108	338	Average
5220	100.66	-	-	89.04	34.93	10.54	33.85	108	338	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	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	88.95	-	-	77.33	34.93	10.54	33.85	100	305	Average
5220	99.36	-	-	87.74	34.93	10.54	33.85	100	305	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	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	91.66	-	-	79.99	34.94	10.58	33.85	107	345	Average
5240	102.09	-	-	90.42	34.94	10.58	33.85	107	345	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	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	89.29	-	-	77.62	34.94	10.58	33.85	100	306	Average
5240	99.53	-	-	87.86	34.94	10.58	33.85	100	306	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	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	91.1	-	-	79.37	34.96	10.61	33.84	106	346	Average
5260	101.49	-	-	89.76	34.96	10.61	33.84	106	346	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	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	89.6	-	-	77.87	34.96	10.61	33.84	100	306	Average
5260	99.33	-	-	87.6	34.96	10.61	33.84	100	306	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	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	92.07	-	-	80.28	34.98	10.65	33.84	106	345	Average
5300	102.43	-	-	90.64	34.98	10.65	33.84	106	345	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	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	89.69	-	-	77.9	34.98	10.65	33.84	100	308	Average
5300	99.99	-	-	88.2	34.98	10.65	33.84	100	308	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	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	92.28	-	-	80.45	34.99	10.68	33.84	106	346	Average
5320	102.28	-	-	90.45	34.99	10.68	33.84	106	346	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	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	89.65	-	-	77.82	34.99	10.68	33.84	100	306	Average
5320	99.77	-	-	87.94	34.99	10.68	33.84	100	306	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	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	98.52	-	-	86.30	35.10	10.96	33.84	100	5	Average
5500	108.51	-	-	96.29	35.10	10.96	33.84	100	5	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	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	95.01	-	-	82.79	35.1	10.96	33.84	108	314	Average
5500	104.99	-	-	92.77	35.1	10.96	33.84	108	314	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	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	98.86	-	-	86.41	35.2	11.09	33.84	100	4	Average
5580	108.54	-	-	96.09	35.2	11.09	33.84	100	4	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	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	95.89	-	-	83.44	35.2	11.09	33.84	108	314	Average
5580	105.75	-	-	93.3	35.2	11.09	33.84	108	314	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	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
30	21.72	-18.28	40	34.24	18.8	0.4	31.72	-	-	Peak
145.56	23.29	-20.21	43.5	42.84	10.7	1.45	31.7	-	-	Peak
254.64	29.29	-16.71	46	45.7	13.05	2.22	31.68	100	25	Peak
319.6	18.76	-27.24	46	34.45	13.6	2.32	31.61	-	-	Peak
676.6	21.39	-24.61	46	30.79	19.1	3.49	31.99	-	-	Peak
918.1	23.97	-22.03	46	30.91	20.7	3.78	31.42	-	-	Peak
5700	100.3	-	-	87.47	35.37	11.3	33.84	100	20	Average
5700	109.77	-	-	96.94	35.37	11.3	33.84	100	20	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	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	26.8	-13.2	40	38.81	18.9	0.64	31.55	-	-	Peak
51.6	26.87	-13.13	40	49.91	7.88	0.81	31.73	100	248	Peak
291.09	23.87	-22.13	46	40.1	13.02	1.87	31.12	-	-	Peak
317.5	21.12	-24.88	46	36.84	13.57	2.33	31.62	-	-	Peak
681.5	22.87	-23.13	46	32.31	19.06	3.5	32	-	-	Peak
944	25.1	-20.9	46	31.62	20.84	3.82	31.18	-	-	Peak
5700	96.29	-	-	83.46	35.37	11.3	33.84	103	314	Average
5700	106.5	-	-	93.67	35.37	11.3	33.84	103	314	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	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	89.63	-	-	78.1	34.91	10.47	33.85	108	346	Average
5180	99.95	-	-	88.42	34.91	10.47	33.85	108	346	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	36	Relative Humidity :	42~43%
Test Engineer :	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	86.37	-	-	74.84	34.91	10.47	33.85	101	306	Average
5180	96.68	-	-	85.15	34.91	10.47	33.85	101	306	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	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	89.13	-	-	77.51	34.93	10.54	33.85	109	335	Average
5220	98.97	-	-	87.35	34.93	10.54	33.85	109	335	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	44	Relative Humidity :	42~43%
Test Engineer :	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	86.92	-	-	75.3	34.93	10.54	33.85	101	312	Average
5220	96.28	-	-	84.66	34.93	10.54	33.85	101	312	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	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	89.8	-	-	78.13	34.94	10.58	33.85	108	336	Average
5240	100.3	-	-	88.63	34.94	10.58	33.85	108	336	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	48	Relative Humidity :	42~43%
Test Engineer :	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	87.88	-	-	76.21	34.94	10.58	33.85	100	306	Average
5240	98.28	-	-	86.61	34.94	10.58	33.85	100	306	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	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	89.45	-	-	77.72	34.96	10.61	33.84	133	344	Average
5260	99.87	-	-	88.14	34.96	10.61	33.84	133	344	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	52	Relative Humidity :	42~43%
Test Engineer :	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	88.13	-	-	76.4	34.96	10.61	33.84	100	327	Average
5260	97.8	-	-	86.07	34.96	10.61	33.84	100	327	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	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	89.96	-	-	78.17	34.98	10.65	33.84	107	337	Average
5300	100.43	-	-	88.64	34.98	10.65	33.84	107	337	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	60	Relative Humidity :	42~43%
Test Engineer :	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	88.2	-	-	76.41	34.98	10.65	33.84	100	307	Average
5300	98.4	-	-	86.61	34.98	10.65	33.84	100	307	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	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	91.02	-	-	79.19	34.99	10.68	33.84	105	346	Average
5320	101.6	-	-	89.77	34.99	10.68	33.84	105	346	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	64	Relative Humidity :	42~43%
Test Engineer :	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	89.03	-	-	77.2	34.99	10.68	33.84	100	325	Average
5320	99.24	-	-	87.41	34.99	10.68	33.84	100	325	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	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	96.65	-	-	84.43	35.1	10.96	33.84	100	4	Average
5500	106.74	-	-	94.52	35.1	10.96	33.84	100	4	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	100	Relative Humidity :	42~43%
Test Engineer :	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	92.97	-	-	80.75	35.1	10.96	33.84	108	314	Average
5500	103.07	-	-	90.85	35.1	10.96	33.84	108	314	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	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	97.89	-	-	85.44	35.2	11.09	33.84	100	4	Average
5580	107.74	-	-	95.29	35.2	11.09	33.84	100	4	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	116	Relative Humidity :	42~43%
Test Engineer :	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	95.09	-	-	82.64	35.2	11.09	33.84	107	315	Average
5580	104.78	-	-	92.33	35.2	11.09	33.84	107	315	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	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
30	21.72	-18.28	40	34.24	18.8	0.4	31.72	-	-	Peak
145.56	23.29	-20.21	43.5	42.84	10.7	1.45	31.7	-	-	Peak
254.64	29.29	-16.71	46	45.7	13.05	2.22	31.68	100	25	Peak
319.6	18.76	-27.24	46	34.45	13.6	2.32	31.61	-	-	Peak
676.6	21.39	-24.61	46	30.79	19.1	3.49	31.99	-	-	Peak
918.1	23.97	-22.03	46	30.91	20.7	3.78	31.42	-	-	Peak
5700	97.22	-	-	84.39	35.37	11.3	33.84	100	20	Average
5700	107.55	-	-	94.72	35.37	11.3	33.84	100	20	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	140	Relative Humidity :	42~43%
Test Engineer :	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	26.8	-13.2	40	38.81	18.9	0.64	31.55	-	-	Peak
51.6	26.87	-13.13	40	49.91	7.88	0.81	31.73	100	248	Peak
291.09	23.87	-22.13	46	40.1	13.02	1.87	31.12	-	-	Peak
317.5	21.12	-24.88	46	36.84	13.57	2.33	31.62	-	-	Peak
681.5	22.87	-23.13	46	32.31	19.06	3.5	32	-	-	Peak
944	25.1	-20.9	46	31.62	20.84	3.82	31.18	-	-	Peak
5700	94.84	-	-	82.01	35.37	11.3	33.84	104	316	Average
5700	105.1	-	-	92.27	35.37	11.3	33.84	104	316	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	38	Relative Humidity :	42~43%
Test Engineer :	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
5190	87	-	-	75.43	34.91	10.51	33.85	108	4	Average
5190	97.13	-	-	85.56	34.91	10.51	33.85	108	4	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	38	Relative Humidity :	42~43%
Test Engineer :	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
5190	85.51	-	-	73.94	34.91	10.51	33.85	101	296	Average
5190	95.29	-	-	83.72	34.91	10.51	33.85	101	296	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	46	Relative Humidity :	42~43%
Test Engineer :	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	88.12	-	-	76.49	34.94	10.54	33.85	108	4	Average
5230	98.05	-	-	86.42	34.94	10.54	33.85	108	4	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	46	Relative Humidity :	42~43%
Test Engineer :	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	86.3	-	-	74.67	34.94	10.54	33.85	101	311	Average
5230	96.39	-	-	84.76	34.94	10.54	33.85	101	311	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	54	Relative Humidity :	42~43%
Test Engineer :	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	88.74	-	-	77.01	34.96	10.61	33.84	107	346	Average
5270	98.45	-	-	86.72	34.96	10.61	33.84	107	346	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	54	Relative Humidity :	42~43%
Test Engineer :	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	86.99	-	-	75.26	34.96	10.61	33.84	100	319	Average
5270	97.05	-	-	85.32	34.96	10.61	33.84	100	319	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	62	Relative Humidity :	42~43%
Test Engineer :	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	89.4	-	-	77.57	34.99	10.68	33.84	106	345	Average
5310	99.47	-	-	87.64	34.99	10.68	33.84	106	345	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	62	Relative Humidity :	42~43%
Test Engineer :	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	86.82	-	-	74.99	34.99	10.68	33.84	100	314	Average
5310	96.57	-	-	84.74	34.99	10.68	33.84	100	314	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	102	Relative Humidity :	42~43%
Test Engineer :	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	94.38	-	-	82.16	35.1	10.96	33.84	100	5	Average
5510	103.64	-	-	91.42	35.1	10.96	33.84	100	5	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	102	Relative Humidity :	42~43%
Test Engineer :	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	91.22	-	-	79	35.1	10.96	33.84	107	314	Average
5510	100.43	-	-	88.21	35.1	10.96	33.84	107	314	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	110	Relative Humidity :	42~43%
Test Engineer :	Ivan Chiang	Polarization :	Horizontal
Remark :	5550 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.72	-18.28	40	34.24	18.8	0.4	31.72	-	-	Peak
145.56	23.29	-20.21	43.5	42.84	10.7	1.45	31.7	-	-	Peak
254.64	29.29	-16.71	46	45.7	13.05	2.22	31.68	100	25	Peak
319.6	18.76	-27.24	46	34.45	13.6	2.32	31.61	-	-	Peak
676.6	21.39	-24.61	46	30.79	19.1	3.49	31.99	-	-	Peak
918.1	23.97	-22.03	46	30.91	20.7	3.78	31.42	-	-	Peak
5469.52	57.45	-16.55	74	45.32	35.08	10.89	33.84	100	4	Peak
5456.72	44.21	-9.79	54	32.09	35.07	10.89	33.84	100	4	Average
5550	95.82	-	-	83.44	35.17	11.05	33.84	100	4	Average
5550	105.47	-	-	93.09	35.17	11.05	33.84	100	4	Peak
5733.4	56.51	-17.49	74	43.6	35.41	11.34	33.84	100	4	Peak
5755.56	46.26	-7.74	54	33.25	35.46	11.39	33.84	100	4	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	110	Relative Humidity :	42~43%
Test Engineer :	Ivan Chiang	Polarization :	Vertical
Remark :	5550 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	26.8	-13.2	40	38.81	18.9	0.64	31.55	-	-	Peak
51.6	26.87	-13.13	40	49.91	7.88	0.81	31.73	100	248	Peak
291.09	23.87	-22.13	46	40.1	13.02	1.87	31.12	-	-	Peak
317.5	21.12	-24.88	46	36.84	13.57	2.33	31.62	-	-	Peak
681.5	22.87	-23.13	46	32.31	19.06	3.5	32	-	-	Peak
944	25.1	-20.9	46	31.62	20.84	3.82	31.18	-	-	Peak
5456.56	55.2	-18.8	74	43.08	35.07	10.89	33.84	106	316	Peak
5457.84	43.02	-10.98	54	30.9	35.07	10.89	33.84	106	316	Average
5550	92.89	-	-	80.51	35.17	11.05	33.84	106	316	Average
5550	102.37	-	-	89.99	35.17	11.05	33.84	106	316	Peak
5747.96	55.74	-18.26	74	42.75	35.44	11.39	33.84	106	316	Peak
5755.48	43.5	-10.5	54	30.49	35.46	11.39	33.84	106	316	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	134	Relative Humidity :	42~43%
Test Engineer :	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	96.28	-	-	83.52	35.34	11.26	33.84	100	20	Average
5670	106.12	-	-	93.36	35.34	11.26	33.84	100	20	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	134	Relative Humidity :	42~43%
Test Engineer :	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	94.16	-	-	81.4	35.34	11.26	33.84	105	315	Average
5670	103.65	-	-	90.89	35.34	11.26	33.84	105	315	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.

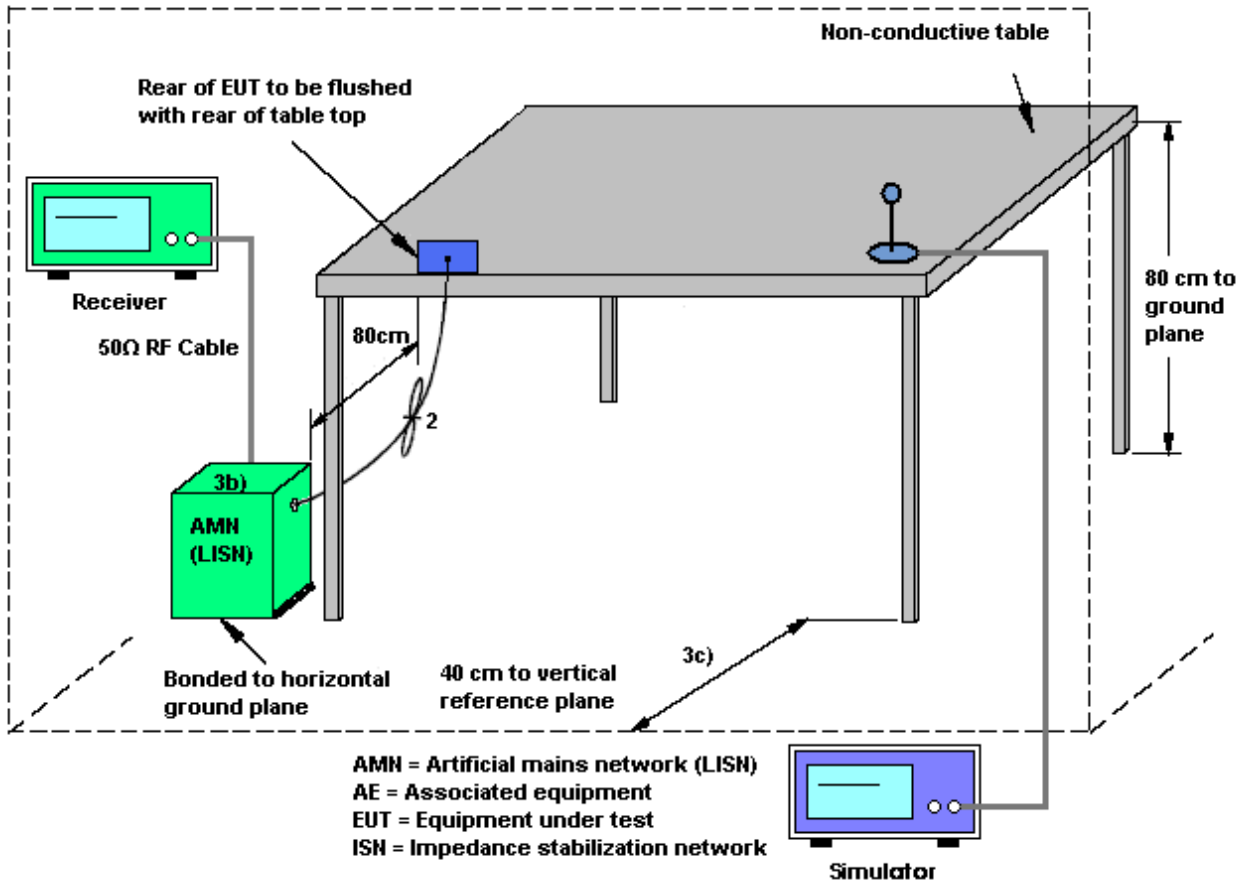
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

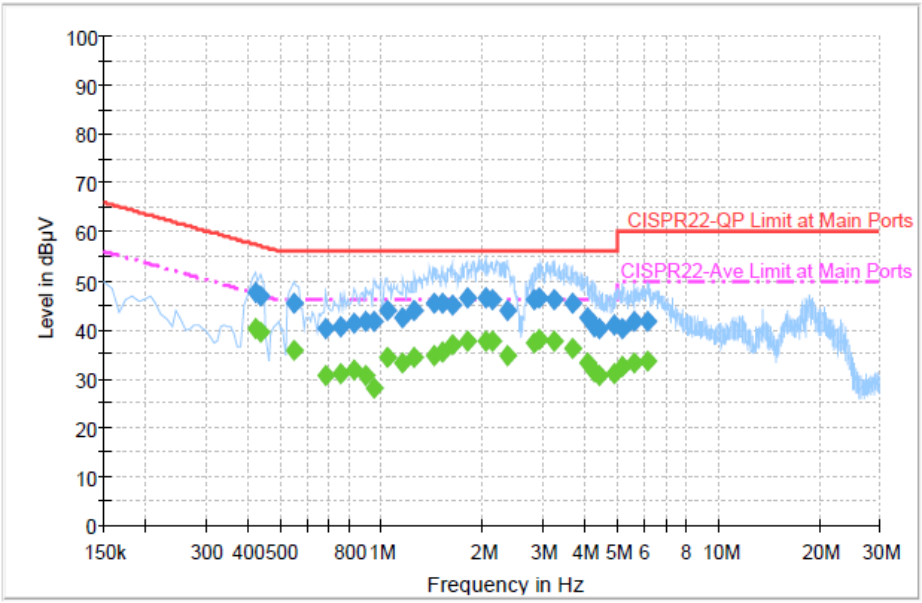
1. The testing follows the guidelines in FCC KDB 789033 D01 General UNII Test Procedures v01r02
2. ANSI C63.4-2003 and ANSI C63.10-2009 test site requirement.
3. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
4. Connect EUT to the power mains through a line impedance stabilization network (LISN).
5. All the support units are connecting to the other LISN.
6. The LISN provides 50 ohm coupling impedance for the measuring instrument.
7. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
8. Both sides of AC line were checked for maximum conducted interference.
9. The frequency range from 150 kHz to 30 MHz was searched.
10. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

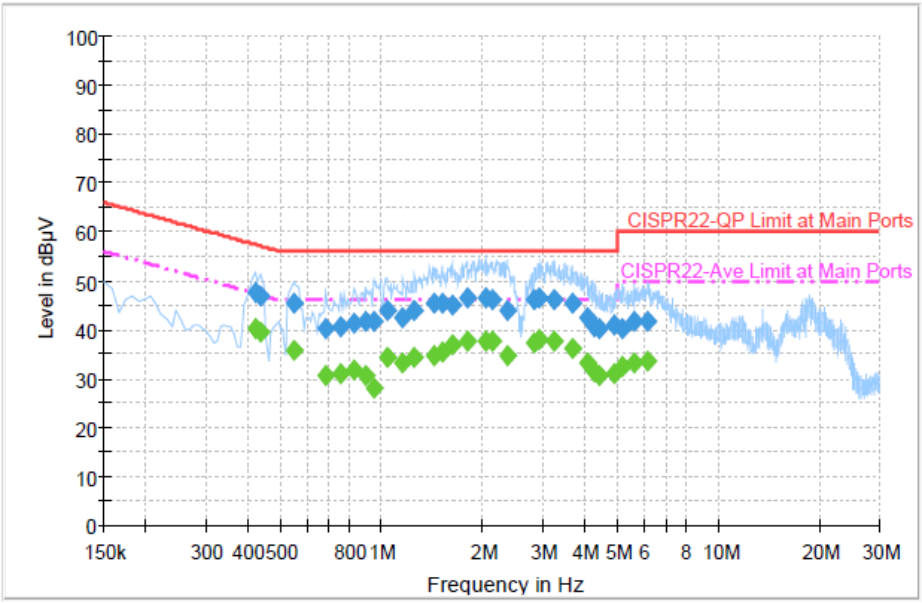
Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~47%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.422000	47.7	Off	L1	19.4	9.7	57.4
0.438000	46.8	Off	L1	19.4	10.3	57.1
0.550000	45.5	Off	L1	19.4	10.5	56.0
0.686000	40.0	Off	L1	19.5	16.0	56.0
0.758000	40.4	Off	L1	19.4	15.6	56.0
0.830000	41.5	Off	L1	19.5	14.5	56.0
0.894000	41.7	Off	L1	19.4	14.3	56.0
0.950000	41.8	Off	L1	19.4	14.2	56.0
1.038000	43.9	Off	L1	19.4	12.1	56.0
1.158000	42.4	Off	L1	19.5	13.6	56.0
1.254000	43.8	Off	L1	19.5	12.2	56.0
1.438000	45.2	Off	L1	19.5	10.8	56.0
1.510000	45.4	Off	L1	19.4	10.6	56.0
1.614000	45.0	Off	L1	19.4	11.0	56.0
1.790000	46.5	Off	L1	19.5	9.5	56.0

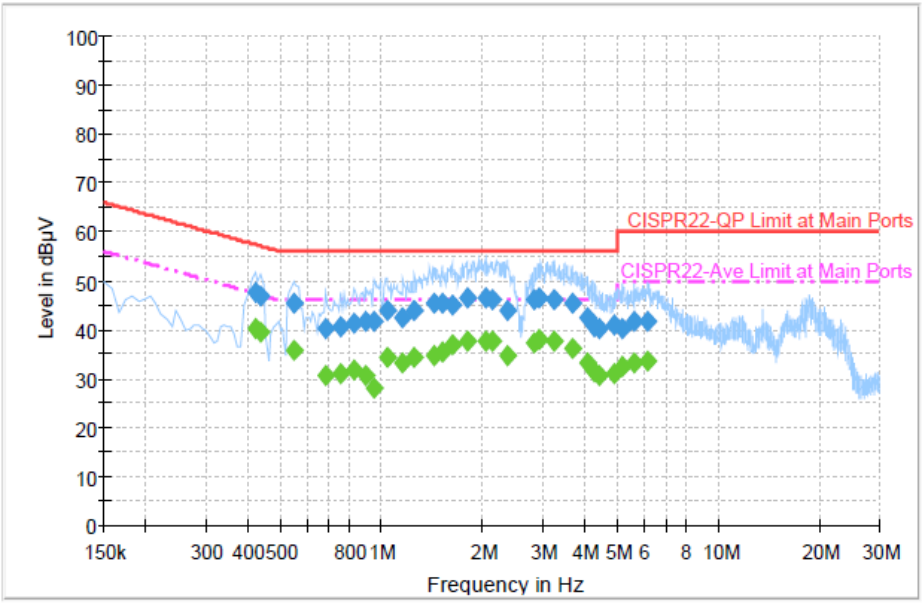
Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.030000	46.7	Off	L1	19.5	9.3	56.0
2.134000	46.3	Off	L1	19.5	9.7	56.0
2.366000	43.9	Off	L1	19.6	12.1	56.0
2.830000	46.2	Off	L1	19.6	9.8	56.0
2.950000	46.4	Off	L1	19.5	9.6	56.0
3.270000	46.2	Off	L1	19.6	9.8	56.0
3.678000	45.3	Off	L1	19.6	10.7	56.0
4.070000	42.3	Off	L1	19.6	13.7	56.0
4.294000	40.6	Off	L1	19.6	15.4	56.0
4.430000	40.1	Off	L1	19.6	15.9	56.0
4.886000	40.8	Off	L1	19.6	15.2	56.0
5.214000	40.3	Off	L1	19.5	19.7	60.0
5.614000	41.7	Off	L1	19.6	18.3	60.0
6.174000	41.8	Off	L1	19.6	18.2	60.0

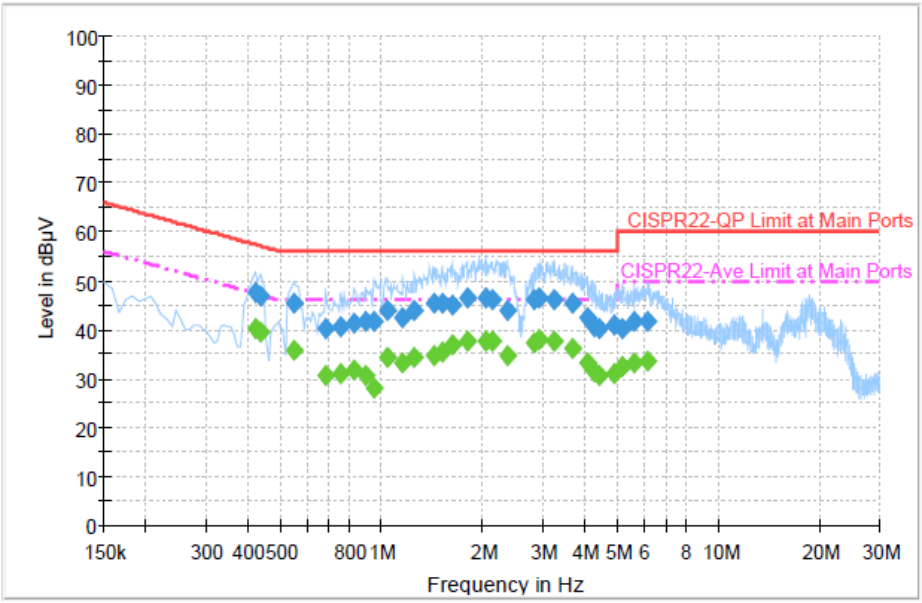
Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.422000	40.2	Off	L1	19.4	7.2	47.4
0.438000	39.3	Off	L1	19.4	7.8	47.1
0.550000	36.0	Off	L1	19.4	10.0	46.0
0.686000	30.5	Off	L1	19.5	15.5	46.0
0.758000	31.0	Off	L1	19.4	15.0	46.0
0.830000	31.7	Off	L1	19.5	14.3	46.0
0.894000	30.7	Off	L1	19.4	15.3	46.0
0.950000	28.0	Off	L1	19.4	18.0	46.0
1.038000	34.3	Off	L1	19.4	11.7	46.0
1.158000	33.3	Off	L1	19.5	12.7	46.0
1.254000	34.3	Off	L1	19.5	11.7	46.0
1.438000	34.8	Off	L1	19.5	11.2	46.0
1.510000	35.3	Off	L1	19.4	10.7	46.0
1.614000	36.8	Off	L1	19.4	9.2	46.0
1.790000	37.6	Off	L1	19.5	8.4	46.0

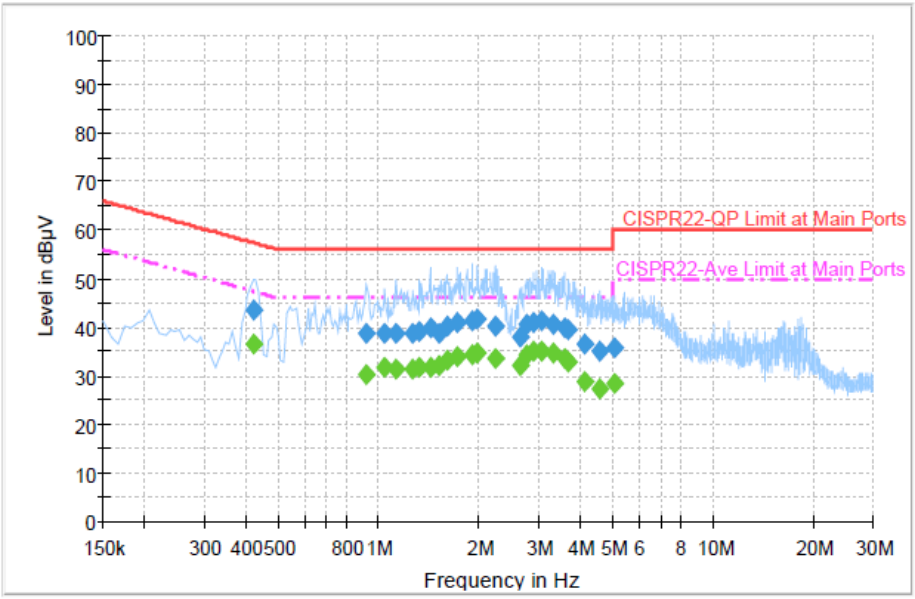
Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.030000	37.7	Off	L1	19.5	8.3	46.0
2.134000	37.5	Off	L1	19.5	8.5	46.0
2.366000	34.6	Off	L1	19.6	11.4	46.0
2.830000	37.2	Off	L1	19.6	8.8	46.0
2.950000	37.8	Off	L1	19.5	8.2	46.0
3.270000	37.5	Off	L1	19.6	8.5	46.0
3.678000	36.3	Off	L1	19.6	9.7	46.0
4.070000	33.3	Off	L1	19.6	12.7	46.0
4.294000	31.5	Off	L1	19.6	14.5	46.0
4.430000	30.6	Off	L1	19.6	15.4	46.0
4.886000	31.2	Off	L1	19.6	14.8	46.0
5.214000	32.4	Off	L1	19.5	17.6	50.0
5.614000	33.3	Off	L1	19.6	16.7	50.0
6.174000	33.7	Off	L1	19.6	16.3	50.0

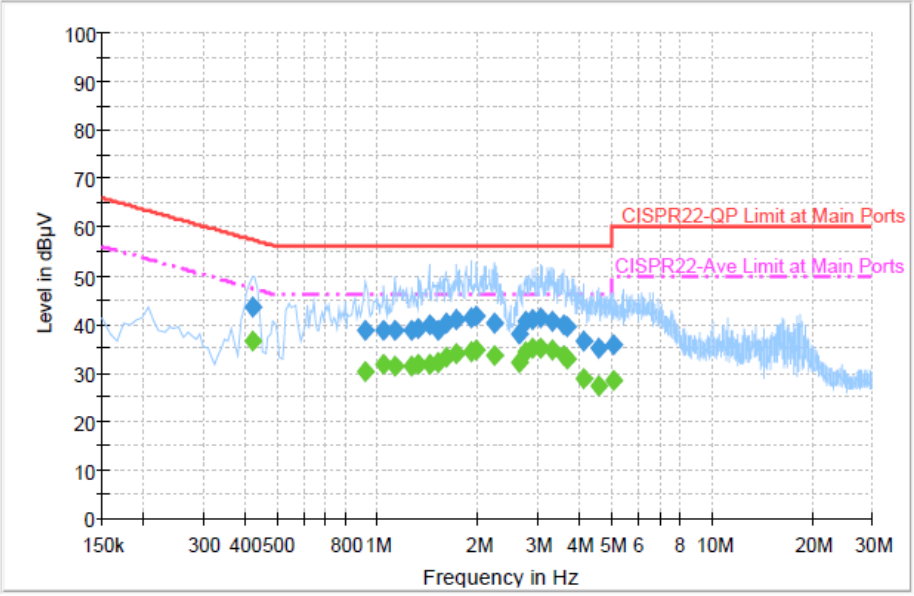
Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.422000	43.4	Off	N	19.4	14.0	57.4
0.918000	38.9	Off	N	19.4	17.1	56.0
1.046000	38.8	Off	N	19.5	17.2	56.0
1.126000	38.6	Off	N	19.5	17.4	56.0
1.270000	38.8	Off	N	19.5	17.2	56.0
1.326000	39.2	Off	N	19.5	16.8	56.0
1.430000	39.9	Off	N	19.5	16.1	56.0
1.510000	38.8	Off	N	19.4	17.2	56.0
1.598000	40.3	Off	N	19.5	15.7	56.0
1.718000	40.9	Off	N	19.5	15.1	56.0
1.902000	41.4	Off	N	19.5	14.6	56.0
1.974000	41.7	Off	N	19.5	14.3	56.0

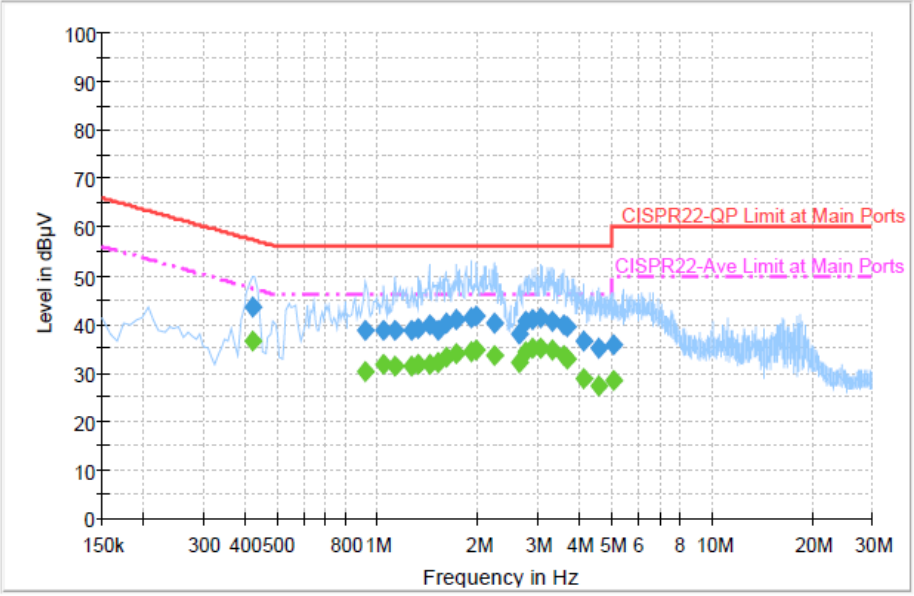
Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Slash Huang	**Relative Humidity :**	45~47%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.222000	40.4	Off	N	19.6	15.6	56.0
2.638000	37.8	Off	N	19.6	18.2	56.0
2.758000	40.4	Off	N	19.6	15.6	56.0
2.894000	41.1	Off	N	19.7	14.9	56.0
3.078000	41.2	Off	N	19.6	14.8	56.0
3.326000	40.6	Off	N	19.7	15.4	56.0
3.614000	39.8	Off	N	19.6	16.2	56.0
3.702000	39.5	Off	N	19.6	16.5	56.0
4.126000	36.4	Off	N	19.6	19.6	56.0
4.574000	34.9	Off	N	19.7	21.1	56.0
5.062000	35.8	Off	N	19.6	24.2	60.0

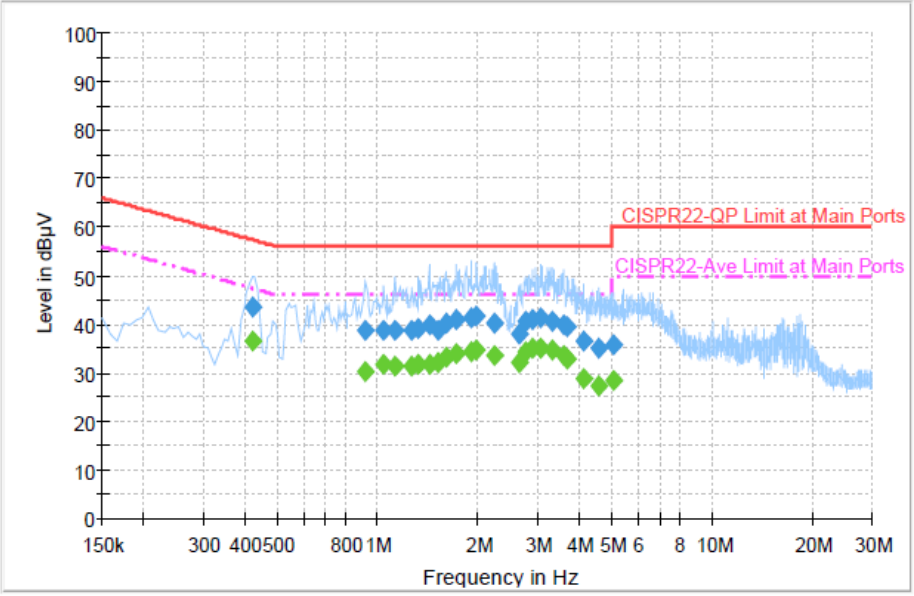
Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.422000	36.6	Off	N	19.4	10.8	47.4
0.918000	30.4	Off	N	19.4	15.6	46.0
1.046000	31.8	Off	N	19.5	14.2	46.0
1.126000	31.4	Off	N	19.5	14.6	46.0
1.270000	31.5	Off	N	19.5	14.5	46.0
1.326000	31.7	Off	N	19.5	14.3	46.0
1.430000	31.8	Off	N	19.5	14.2	46.0
1.510000	32.2	Off	N	19.4	13.8	46.0
1.598000	33.3	Off	N	19.5	12.7	46.0
1.718000	34.1	Off	N	19.5	11.9	46.0
1.902000	34.3	Off	N	19.5	11.7	46.0
1.974000	34.7	Off	N	19.5	11.3	46.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + Adapter + Earphone + MP3		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.222000	33.4	Off	N	19.6	12.6	46.0
2.638000	32.2	Off	N	19.6	13.8	46.0
2.758000	34.2	Off	N	19.6	11.8	46.0
2.894000	35.0	Off	N	19.7	11.0	46.0
3.078000	35.2	Off	N	19.6	10.8	46.0
3.326000	34.5	Off	N	19.7	11.5	46.0
3.614000	33.5	Off	N	19.6	12.5	46.0
3.702000	33.0	Off	N	19.6	13.0	46.0
4.126000	28.8	Off	N	19.6	17.2	46.0
4.574000	27.3	Off	N	19.7	18.7	46.0
5.062000	28.5	Off	N	19.6	21.5	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.

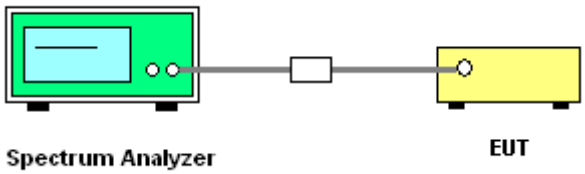
3.7.2 Measuring Instruments

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 :	Book Lin	Relative Humidity :	45~49%

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.65	5188.30	-4.83
44	5220	5211.65	5228.30	-4.79
48	5240	5231.65	5248.30	-4.77
52	5260	5251.65	5268.30	-4.75
60	5300	5291.65	5308.30	-4.72
64	5320	5311.65	5328.30	-4.70
100	5500	5491.65	5508.30	-4.55
116	5580	5571.65	5588.30	-4.48
140	5700	5691.65	5708.30	-4.39

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

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
36	5180	5171.05	5188.90	-4.83
44	5220	5211.05	5228.90	-4.79
48	5240	5231.05	5248.90	-4.77
52	5260	5251.05	5268.90	-4.75
60	5300	5291.05	5308.90	-4.72
64	5320	5311.05	5328.90	-4.70
100	5500	5491.05	5508.90	-4.55
116	5580	5571.05	5588.90	-4.48
140	5700	5691.05	5708.90	-4.39

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

Channel	Frequency (MHz)	Low Frequency (Fl)	High Frequency (Fh)	Frequency Stability (ppm)
38	5190	5171.82	5208.18	0.00
46	5230	5211.82	5248.18	0.00
54	5270	5251.82	5288.18	0.00
62	5310	5291.82	5328.18	0.00
102	5510	5491.82	5528.18	0.00
134	5670	5531.82	5568.18	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	Oct. 16, 2012 ~ Oct. 17, 2012	Jun. 05, 2013	Conducted (TH02-HY)
Power Meter	Agilent	E4416A	GB41292344	300MHz~40GHz	Feb. 21, 2012	Oct. 16, 2012 ~ Oct. 17, 2012	Feb. 20, 2013	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US40441548	300MHz~40GHz	Feb. 21, 2012	Oct. 16, 2012 ~ Oct. 17, 2012	Feb. 20, 2013	Conducted (TH02-HY)
EMI Test Receiver	R&S	ESCS 30	100356	9KHz ~ 2.75GHz	Oct. 27, 2011	Oct. 17, 2012	Oct. 26, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz ~ 30MHz	Dec. 09, 2011	Oct. 17, 2012	Dec. 08, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz ~ 30MHz	Dec. 06, 2011	Oct. 17, 2012	Dec. 05, 2012	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Oct. 17, 2012	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	117995	N/A	Jul. 28, 2011	Oct. 17, 2012	Jul. 27, 2013	Conduction (CO05-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9KHz ~ 26.5GHz	Nov. 23, 2011	Oct. 25, 2012 ~ Oct. 29, 2012	Nov. 22, 2012	Radiation (03CH06-HY)
Spectrum Analyzer	R&S	FSP30	101352	9KHz-30GHz	Nov. 03, 2011	Oct. 25, 2012 ~ Oct. 29, 2012	Nov. 02, 2012	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/003	20MHz ~ 1000MHz	May 04, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	May. 03, 2013	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz ~ 2GHz	Oct. 06, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	May. 03, 2013	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Aug. 01, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	Jul. 31, 2013	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Sep. 28, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	Sep. 27, 2013	Radiation (03CH06-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz ~ 26.5GHz	Apr. 13, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	Apr. 12, 2013	Radiation (03CH06-HY)
Amplifier	Agilent	310N	186713	9KHz ~ 1GHz	Apr. 11, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	Apr. 10, 2013	Radiation (03CH06-HY)
Pre Amplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 21, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	Jul. 20, 2013	Radiation (03CH06-HY)
Pre Amplifier	MITEQ	AMF-7D-00101800-30-10P	159087	1GHz~18GHz	Feb. 27, 2012	Oct. 25, 2012 ~ Oct. 29, 2012	Feb. 26, 2013	Radiation (03CH06-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9KHz ~ 30MHz	Jul. 03, 2012	Oct. 25, 2012 ~ Oct. 29, 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**

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

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

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

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