FCC RF Test Report

APPLICANT	:	**Fujitsu Limited**
EQUIPMENT	:	**802.11n 1x1 Wireless LAN USB module**
BRAND NAME	:	**Fujitsu Limited**
MODEL NAME	:	**WLU5110-D50(ROHS)**
FCC ID	:	**EJE-WL0025**
IC ID	:	**337J-WL0025**
STANDARD	:	**FCC Part 15 Subpart E** **IC RSS-210 Issue 8**
CLASSIFICATION	:	**Unlicensed National Information Infrastructure (UNII)**

The product was received on Feb. 17, 2011 and completely tested on Feb. 21, 2011. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown compliance with the applicable technical standards.

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

Reviewed by:

Wayne Hsu / Vice Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR121820	Rev. 01	Initial issue of report	Mar. 01, 2011

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	A9.2	26dB & 99% 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(b)	A9.3	Frequency Band Edges	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	-
3.5	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 13.40 dB at 1.771 MHz
3.6	15.407(b)	A9.3	Transmitter Radiated Emission	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 3.08 dB at 11340.000 MHz
3.7	15.407(b)	A9.3	Peak Excursion Ratio	≤ 13dB	Pass	-
3.8	15.407(c)	A9.5	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.9	15.407(g)	A9.5	Frequency Stability	Within Operation Band	Pass	-
3.10	15.203 & 15.407(a)	A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Fujitsu Limited
1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki 211-855, Japan

1.2 Manufacturer

1. ASKEY COMPUTER CORPORATION
10F, No. 119, Chienkang Rd., Chung-Ho, Taiwan, R.O.C.

2. ASKEY TECHNOLOGY (JIANG SU) LTD.
No. 1388, Jiao Tong Road, Wujiang Economic-Technological Development Area, Jiangsu Province, P.R. China

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	802.11n 1x1 Wireless LAN USB module
Brand Name	Fujitsu Limited
Model Name	WLU5110-D50(ROHS)
FCC ID	EJE-WL0025
IC ID	337J-WL0025
Tx/Rx Frequency Range	5150 MHz ~ 5250 MHz 5250 MHz ~ 5350 MHz 5470 MHz ~ 5725 MHz
Maximum Output Power to Antenna	**<5150 MHz ~ 5250 MHz>** 802.11a : 12.36 dBm / 0.0172 W 802.11n (BW 20MHz) : 11.36 dBm (0.0137 W) 802.11n (BW 40MHz) : 11.87 dBm (0.0154 W) **<5250 MHz ~ 5350 MHz>** 802.11a : 14.01 dBm / 0.0252 W 802.11n (BW 20MHz) : 12.56 dBm (0.0180 W) 802.11n (BW 40MHz) : 12.78 dBm (0.0190 W) **<5470 MHz ~ 5725 MHz>** 802.11a : 13.32 dBm / 0.0215 W 802.11n (BW 20MHz) : 12.99 dBm (0.0199 W) 802.11n (BW 40MHz) : 12.45 dBm (0.0176 W)
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

Remark:
1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results of Unlicensed National Information Infrastructure (UNII).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		Remark
					2.4G	5G	
A	NISSEI ELECTRIC CO., LTD.	CP492543	PIFA Antenna	U.FL	4.67	5.10	TX / RX
B	NISSEI ELECTRIC CO., LTD.	CP492542	PIFA Antenna	U.FL	-1.12	3.20	TX / RX

EUT may match the two antennas use. Performed the worst configuration for higher gain was test in final test report.

1.5 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: +886-3-327-0973	
Test Site No.	**Sporton Site No.**	**FCC/IC Registration No.**
	CO01-LK	486905/137405
	03CH02-HY	643075/137211

1.6 Applied Standards

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

- FCC Part 15 Subpart E
- FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
- ANSI C63.4-2003
- IC RSS-210 Issued 8

Remark:

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

1.7 Ancillary Equipment List

Support Unit	Brand	Model	FCC ID	Remark
Personal computer	DELL	T3500	DoC	Conducted
Monitor	COMPAQ	S510	DoC	
(PS/2) Keyboard	HP	KB-0133	DoC	
(PS/2) Mouse	COMPAQ	M-S69	DoC	
Printer	HP	DJ400	DoC	
Modem	ACEEX	DM1414	DoC	
AP Router (Remote Workstation)	BUFFALO	WD6400H1CS-00	N/A	
Notebook	DELL	PP19S	DoC	Radiated
Test Fixture	-	-	-	

Note：The test fixture provides is by customer.

2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency Channel

Frequency Band	Channel No.	Frequency (20MHz)	Channel No.	Frequency (40MHz)
5150~5250 MHz Band 1	36	5180 MHz	38	5190 MHz
	40	5200 MHz	46	5230 MHz
	44	5220 MHz	-	-
	48	5240 MHz	-	-

Frequency Band	Channel No.	Frequency (20MHz)	Channel No.	Frequency (40MHz)
5250~5350 MHz Band 2	52	5260 MHz	54	5270 MHz
	56	5280 MHz	62	5310 MHz
	60	5300 MHz	-	-
	64	5320 MHz	-	-

Frequency Band	Channel No.	Frequency (20MHz)
5470~5725 MHz Band 3	100	5500 MHz
	104	5520 MHz
	108	5540 MHz
	112	5560 MHz
	116	5580 MHz
	132	5660 MHz
	136	5680 MHz
	140	5700 MHz
	Channel No.	**Frequency (40MHz)**
	102	5510 MHz
	110	5550 MHz
	134	5670 MHz

2.2 Test Mode

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

Test Items	Mode	Data Rate	Channel
26dB & 99% Bandwidth Maximum Conducted Output Power Power Spectral Density Transmitter Radiated Emission Above 1GHz Peak Excursion Ratio	11a /BPSK	6Mbps	36/40/48/52/56 /64/100/116/140
	11n/BPSK (HT-20)	6.5 Mbps	
	11n/BPSK (HT-40)	13.5 Mbps	38/46/54/62/102/110/134
Frequency Stability	11a /BPSK	6Mbps	64
AC Conducted Emission Measurement Radiated Emissions Below 1GHz	Normal Mode		
Frequency Band Edges	11a /BPSK	6Mbps	36/40/48/52/56/64/100/ 116/140
	11n/BPSK (HT-20)	6.5 Mbps	
	11n/BPSK (HT-40)	13.5 Mbps	38/46/54/62/102/110/134

Remark:

Radiated band edge measurements were chosen from the highest RF output power of each chain, the n (HT-20/HT-40) modes and SISO, MIMO (chain A) modes. The worst modes from the legacy modes and n modes were used for the full radiated test measurement.

For conducted test cases, the high, middle, low channels of legacy modes (802.11an), and 802.11n mode (SISO, MIMO) were tested respectively by choosing the highest RF output power chain, and data rate from preliminary testing.

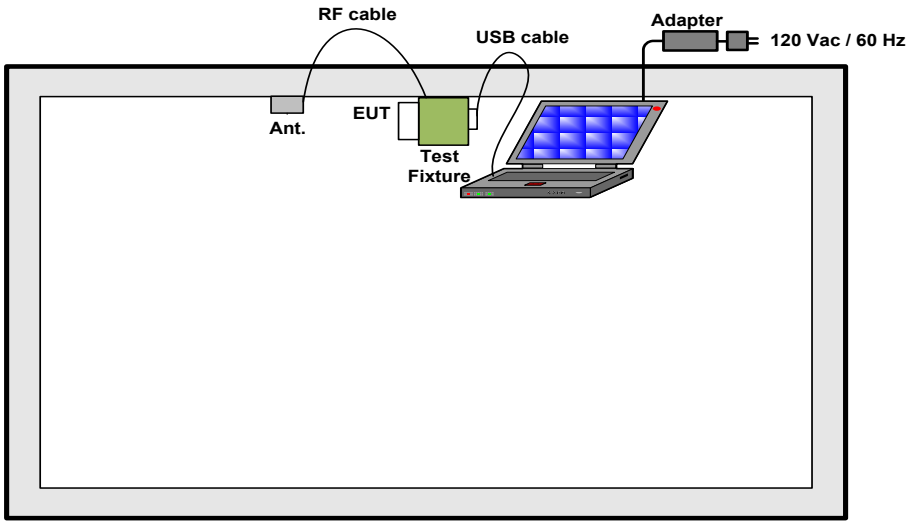
For the 26dB and 99% Bandwidth at MIMO mode were tested on chain A individually from preliminary testing.

For the power spectral density and conducted spurious emissions, the individual chain A was tested due to the maximum output power chosen from preliminary testing.

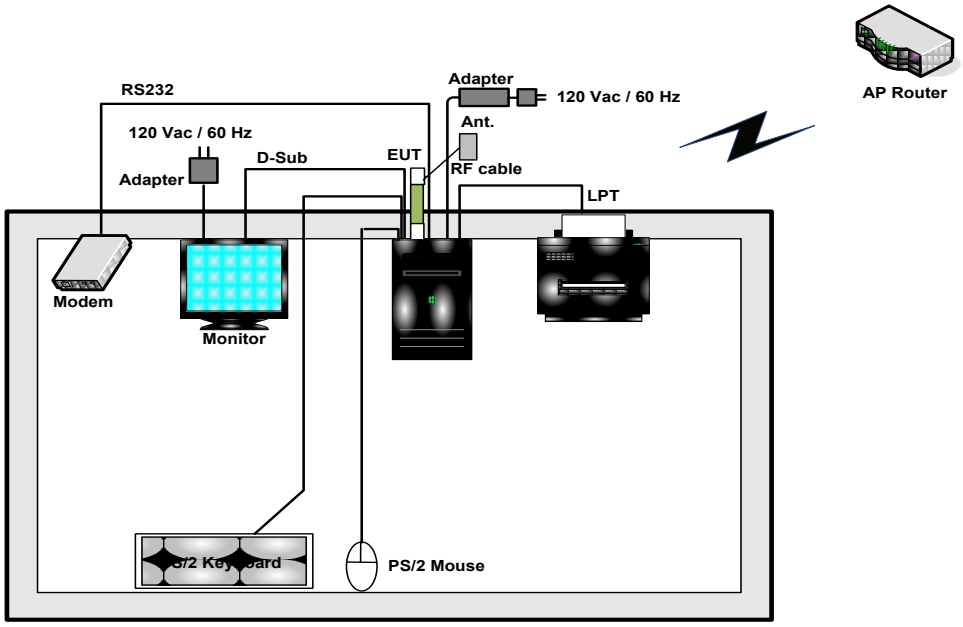
Note: SISO stands for single input and single output. It means that only one chain transmits signals at a time.

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 RF Utility

The programmed RF utility “RT 3x7x QA”, is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

3 Test Result

3.1 26dB & 99% Bandwidth Measurement

3.1.1 Limit of 26dB & 99% Bandwidth

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

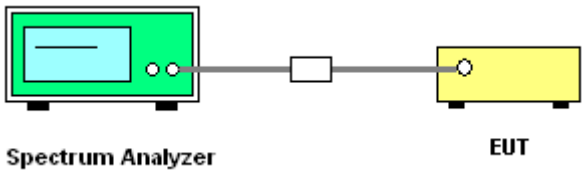
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Bandwidth

Test Mode :	802.11a	Temperature :	21℃
Test Engineer :	lan	Relative Humidity :	62%

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Pass/Fail
36	5180	20.27	16.83	Pass
40	5200	20.35	16.83	Pass
48	5240	20.35	16.91	Pass
52	5260	20.11	16.75	Pass
56	5280	20.19	16.75	Pass
64	5320	20.35	16.75	Pass
100	5500	20.43	16.91	Pass
116	5580	20.11	16.75	Pass
140	5700	20.35	16.91	Pass

Test Mode :	802.11n (HT-20)	Temperature :	21℃
Test Engineer :	lan	Relative Humidity :	62%

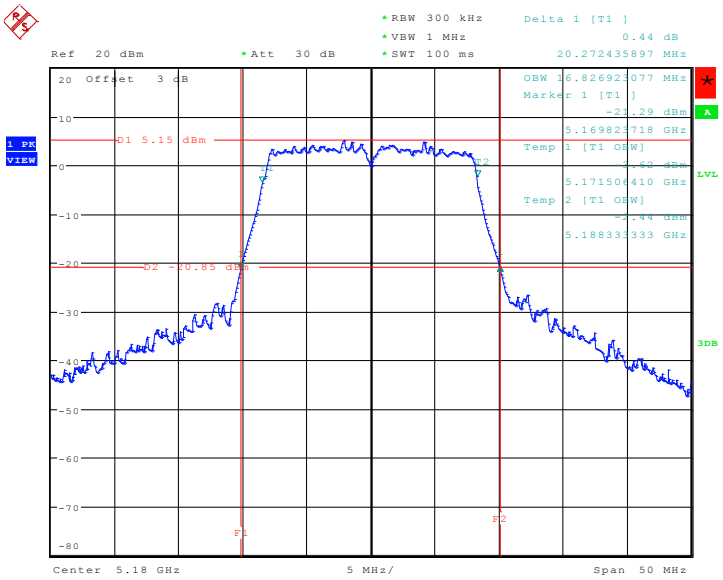
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Pass/Fail
36	5180	20.43	17.63	Pass
40	5200	20.43	17.55	Pass
48	5240	20.51	17.55	Pass
52	5260	20.51	17.55	Pass
56	5280	20.51	17.55	Pass
64	5320	20.35	17.55	Pass
100	5500	20.67	17.63	Pass
116	5580	20.75	17.63	Pass
140	5700	20.35	17.63	Pass

Test Mode :	802.11n (HT-40)	Temperature :	21℃
Test Engineer :	Ian	Relative Humidity :	62%

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Pass/Fail
38	5190	40.22	35.90	Pass
46	5230	40.06	36.06	Pass
54	5270	40.38	36.06	Pass
62	5310	40.38	36.06	Pass
102	5510	40.38	36.06	Pass
110	5550	40.38	36.06	Pass
134	5670	40.06	36.06	Pass

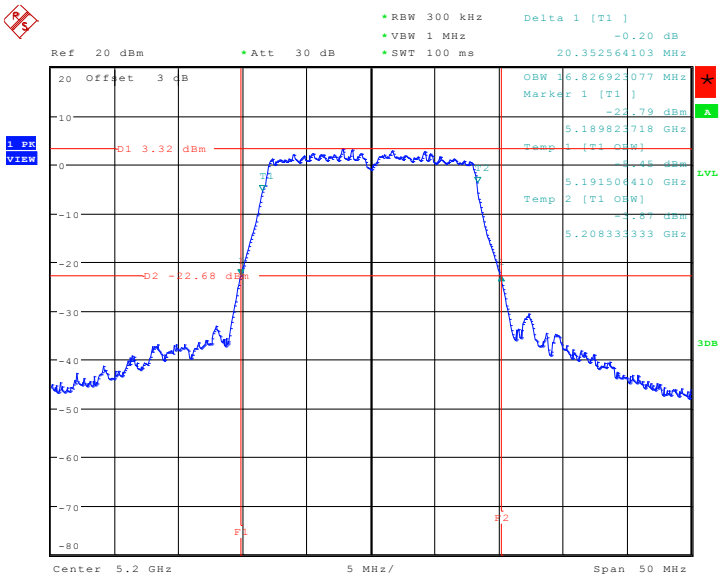
3.1.6 Test Result of 26dB and 99% Bandwidth Plots

26 dB and 99%Bandwidth Plot on 802.11a Channel 36 – Chain A



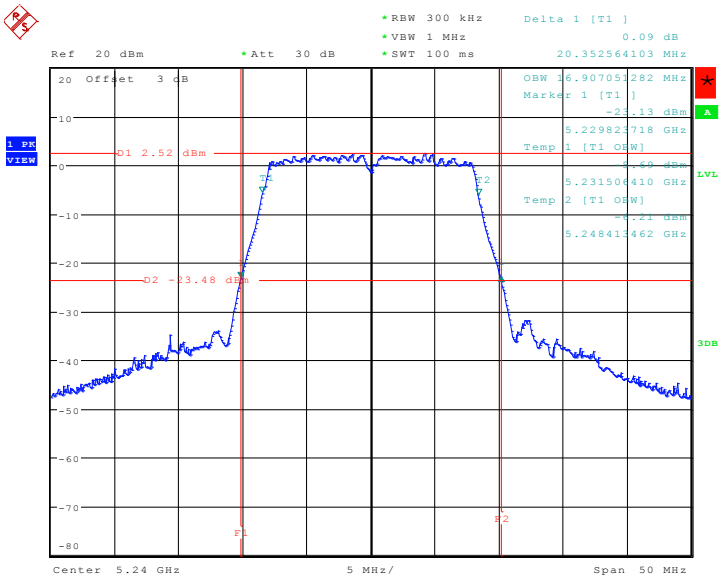
Date: 21.FEB.2011 20:54:48

26 dB and 99%Bandwidth Plot on 802.11a Channel 40– Chain A



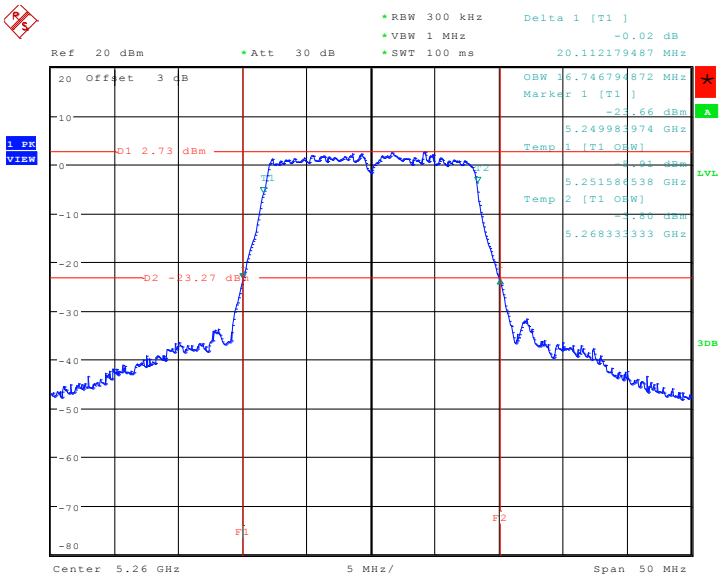
Date: 21.FEB.2011 20:56:02

26 dB and 99%Bandwidth Plot on 802.11a Channel 48 – Chain A



Date: 21.FEB.2011 20:57:20

26 dB and 99%Bandwidth Plot on 802.11a Channel 52 – Chain A



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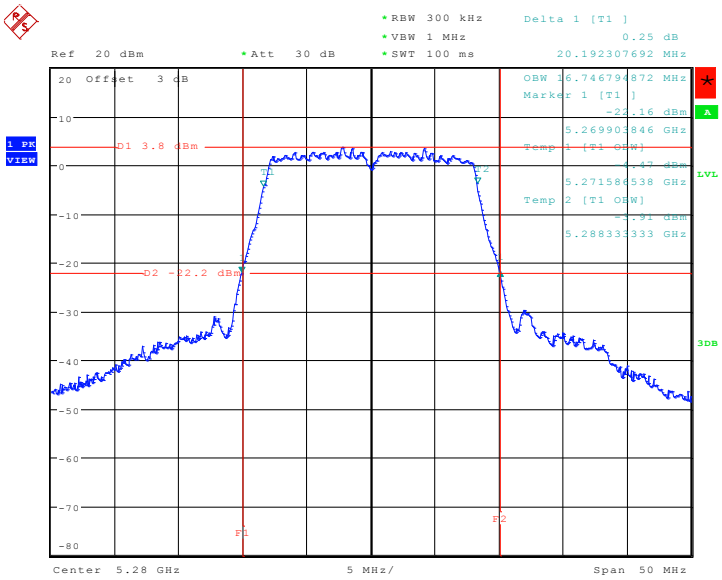
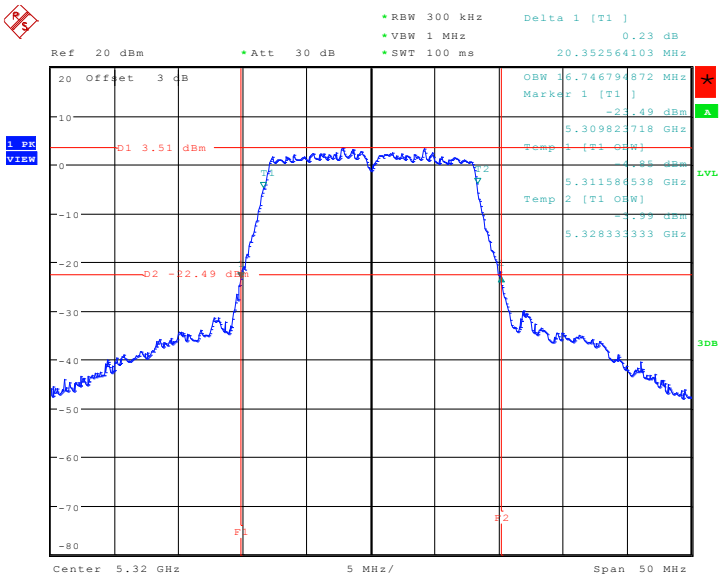
26 dB and 99%Bandwidth Plot on 802.11a Channel 56– Chain A



Date: 21.FEB.2011 21:00:07

26 dB and 99%Bandwidth Plot on 802.11a Channel 64 – Chain A



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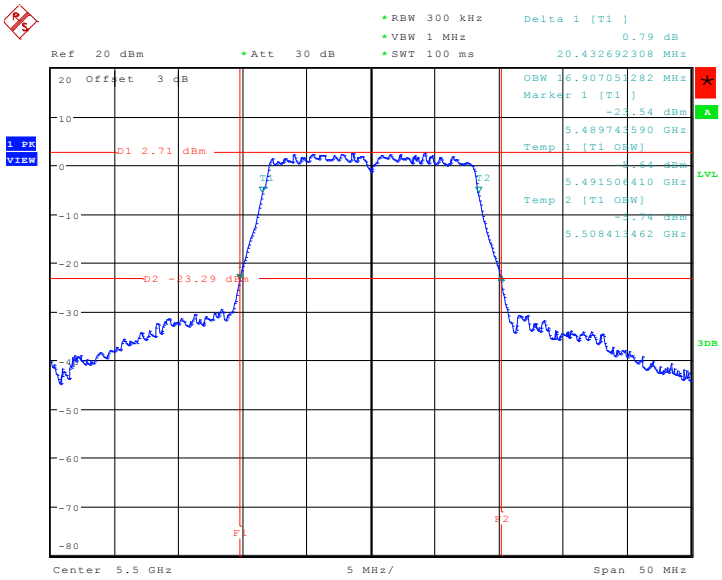
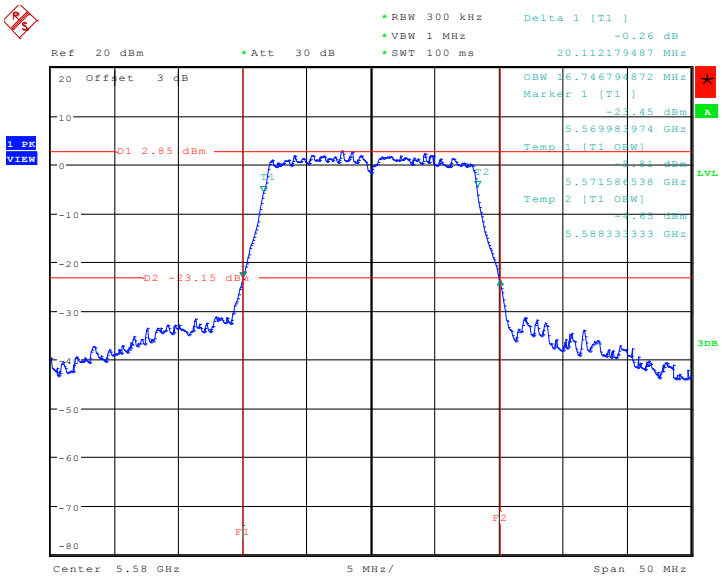
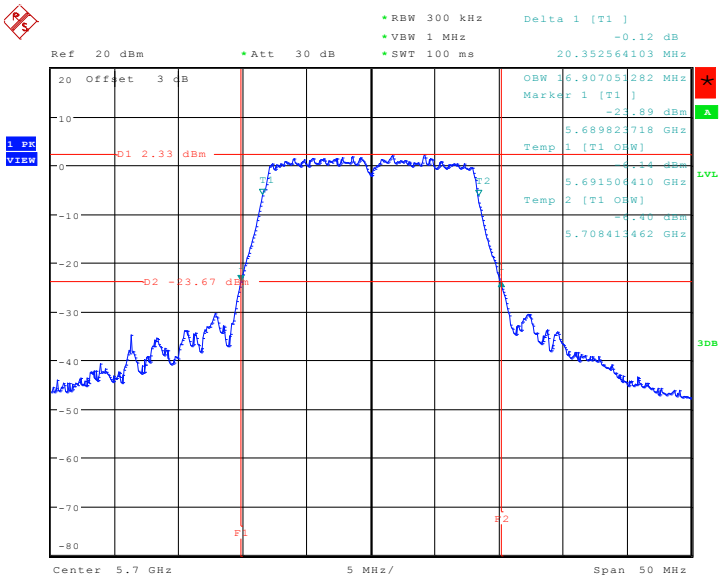
26 dB and 99%Bandwidth Plot on 802.11a Channel 100 – Chain A



26 dB and 99%Bandwidth Plot on 802.11a Channel 116– Chain A



26 dB and 99%Bandwidth Plot on 802.11a Channel 140 – Chain A



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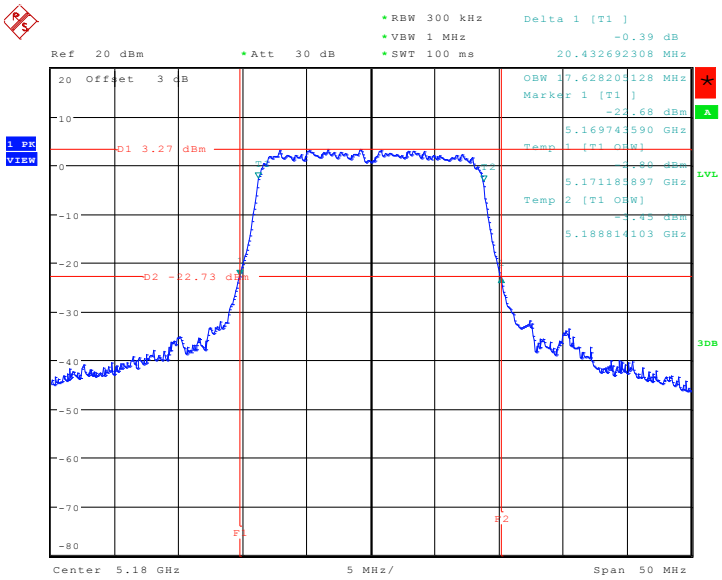
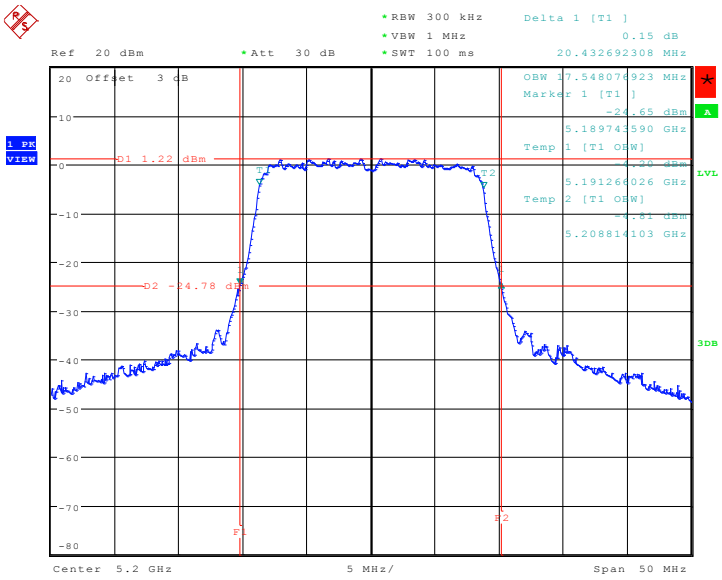
26 dB and 99%Bandwidth Plot on 802.11n Channel 36 – Chain A



Date: 22.FEB.2011 09:54:43

26 dB and 99%Bandwidth Plot on 802.11n Channel 40– Chain A



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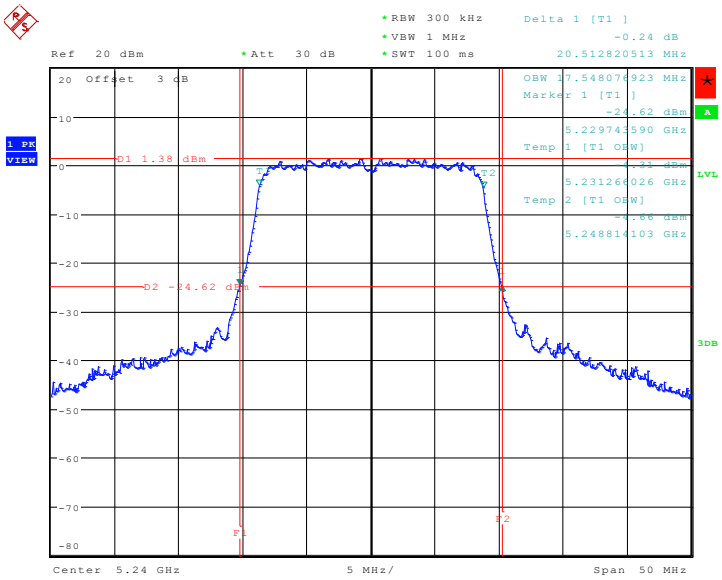
26 dB and 99%Bandwidth Plot on 802.11n Channel 48 – Chain A



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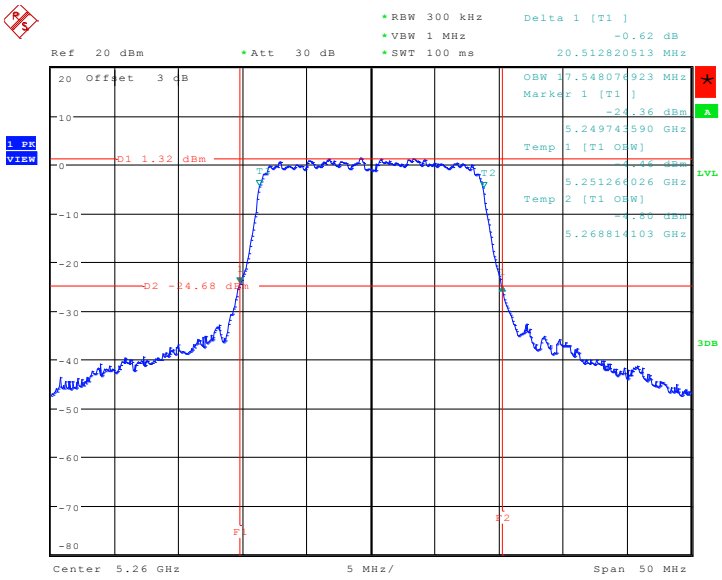
26 dB and 99%Bandwidth Plot on 802.11n Channel 52 – Chain A



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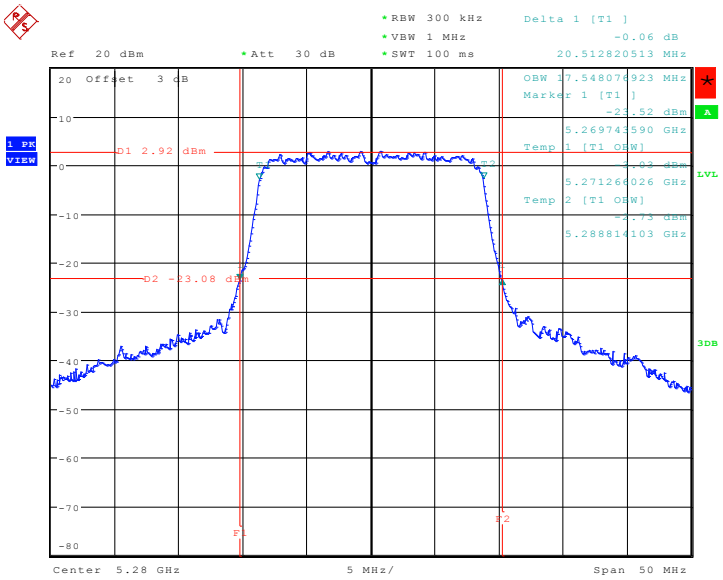
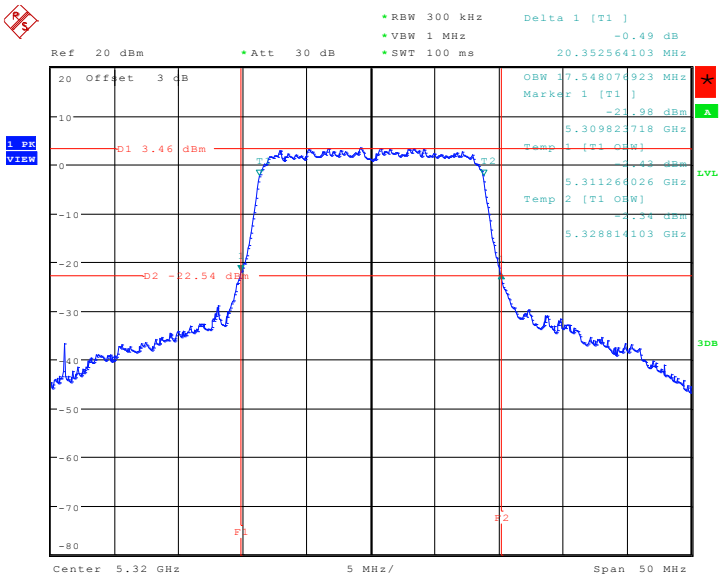
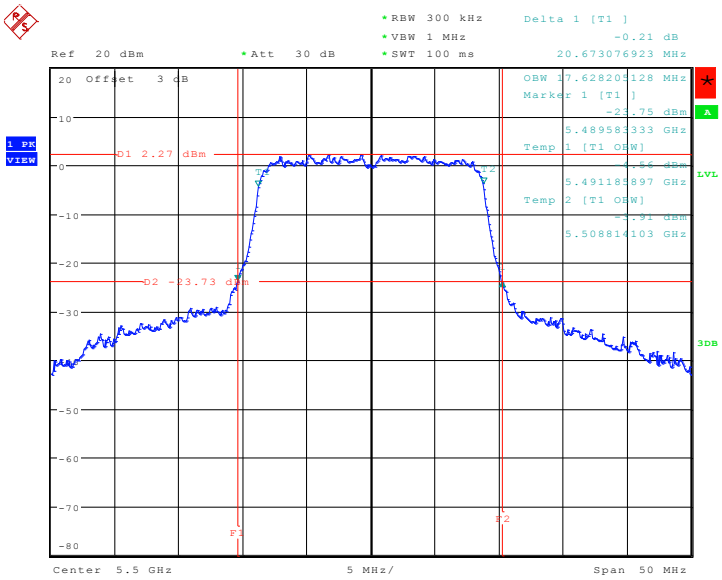
26 dB and 99%Bandwidth Plot on 802.11n Channel 56– Chain A



26 dB and 99%Bandwidth Plot on 802.11n Channel 64 – Chain A



26 dB and 99%Bandwidth Plot on 802.11n Channel 100 – Chain A



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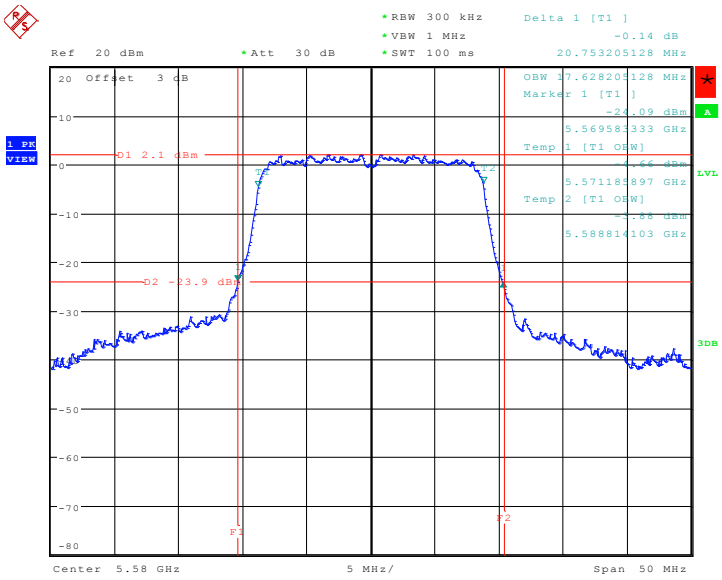
26 dB and 99%Bandwidth Plot on 802.11n Channel 116– Chain A



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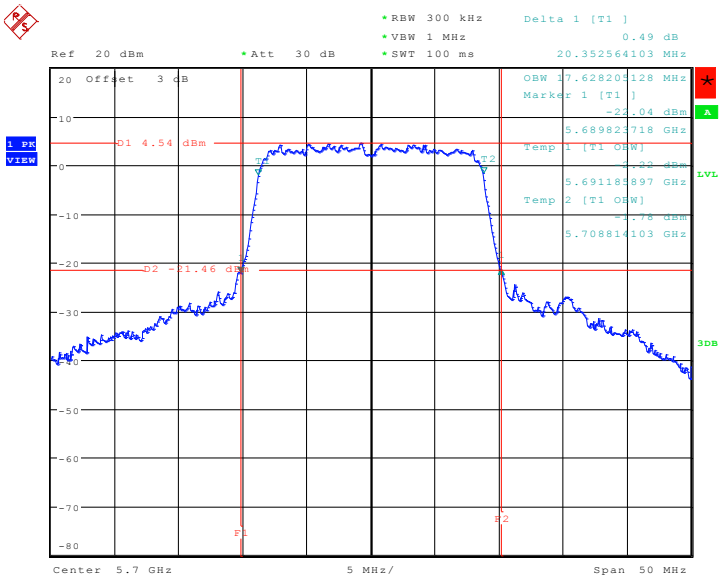
26 dB and 99%Bandwidth Plot on 802.11n Channel 140 – Chain A



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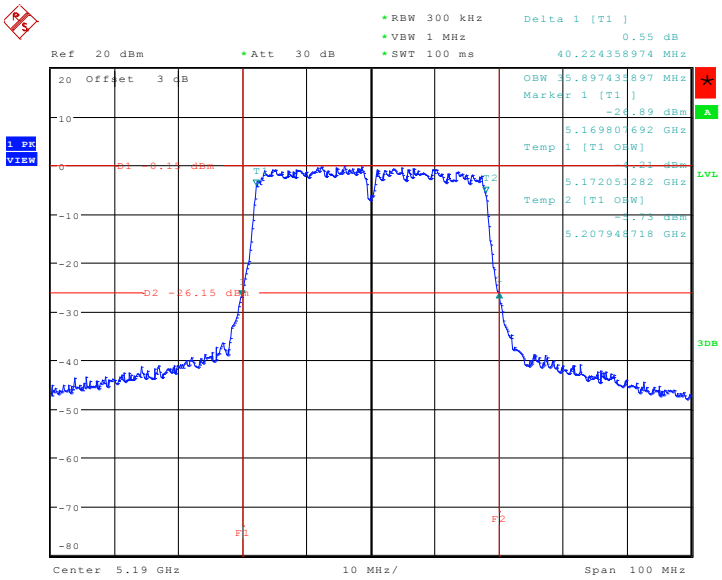
26 dB and 99%Bandwidth Plot on 802.11 n Channel 38 – Chain A



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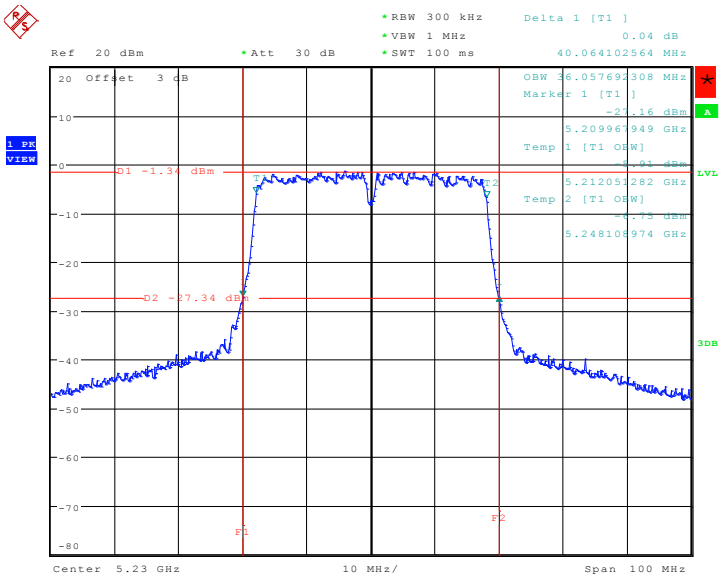
26 dB and 99%Bandwidth Plot on 802.11n Channel 46 – Chain A



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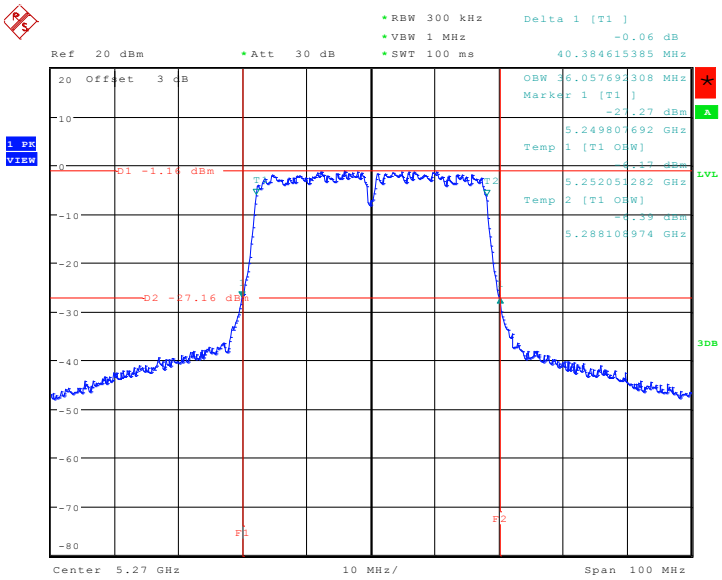
26 dB and 99%Bandwidth Plot on 802.11n Channel 54 – Chain A



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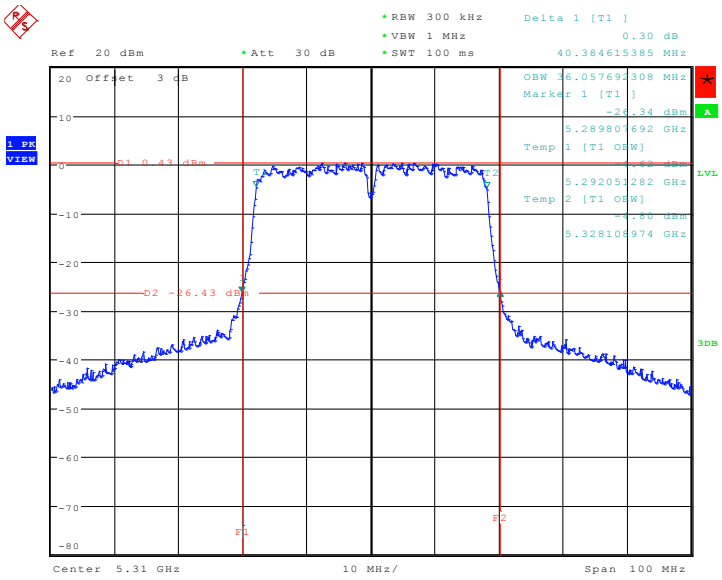
26 dB and 99%Bandwidth Plot on 802.11n Channel 62 – Chain A



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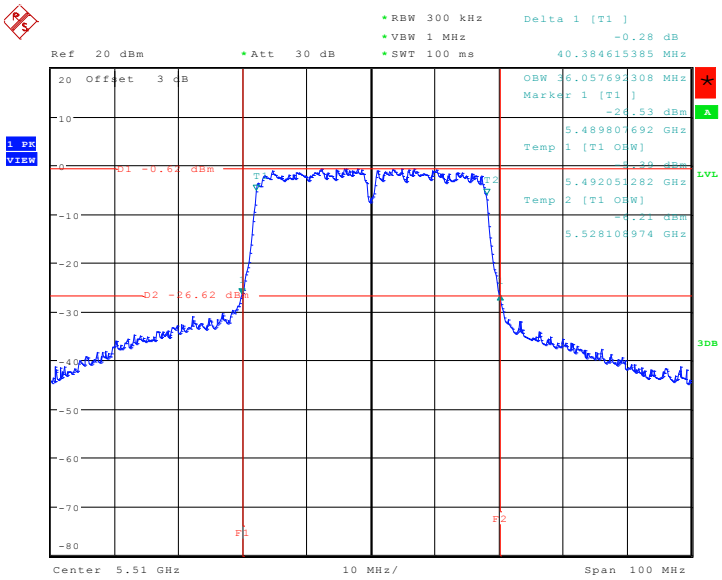
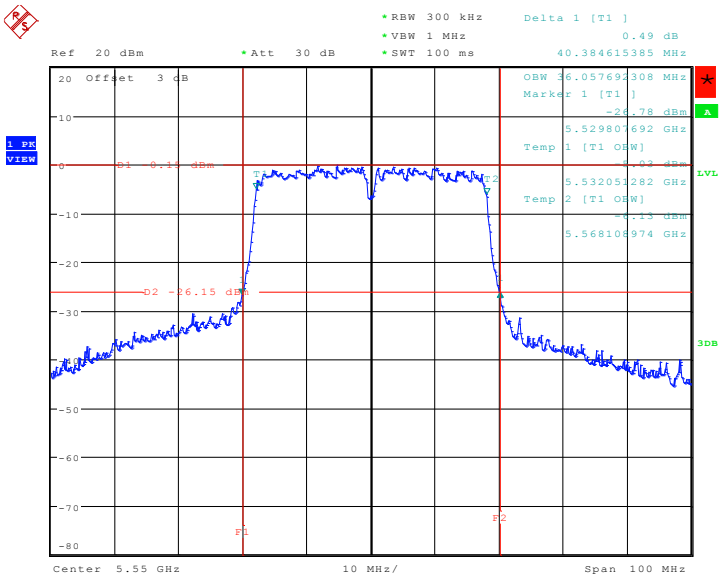
26 dB and 99%Bandwidth Plot on 802.11n Channel 102 – Chain A



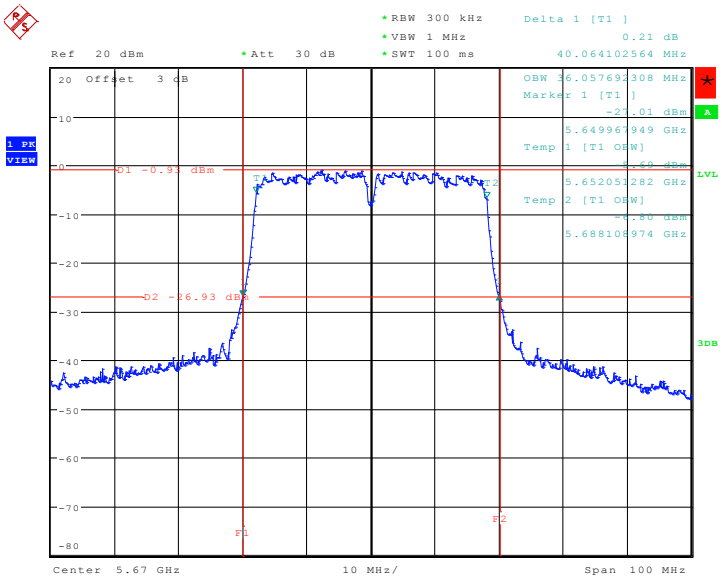
Date: 22.FEB.2011 13:43:55

26 dB and 99%Bandwidth Plot on 802.11n Channel 110 – Chain A



Date: 22.FEB.2011 13:45:11

26 dB and 99%Bandwidth Plot on 802.11n Channel 134 – Chain A



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

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

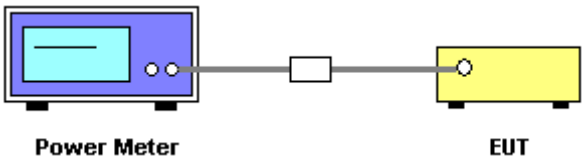
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows FCC Public Notice DA 02-2138 (Measurement Guidelines of UNII).
2. The RF output of EUT was connected to the Power Meter by a low loss cable.
3. Measure the power and record it.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Test Mode :	802.11 a	Temperature :	21℃
Test Engineer :	Ian	Relative Humidity :	62%

Channel	Frequency (MHz)	Measured Power Output (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	12.28	17	Pass
40	5200	11.74	17	Pass
48	5240	12.36	17	Pass
52	5260	13.69	24	Pass
56	5280	14.01	24	Pass
64	5320	13.78	24	Pass
100	5500	13.32	24	Pass
116	5580	12.78	24	Pass
140	5700	12.96	24	Pass

Test Mode :	802.11n (HT-20)	Temperature :	21℃
Test Engineer :	Ian	Relative Humidity :	62%

Channel	Frequency (MHz)	Measured Power Output (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	11.23	17	Pass
40	5200	11.36	17	Pass
48	5240	11.17	17	Pass
52	5260	11.12	24	Pass
56	5280	12.15	24	Pass
64	5320	12.56	24	Pass
100	5500	11.11	24	Pass
116	5580	11.86	24	Pass
140	5700	12.99	24	Pass

Test Mode :	802.11n (HT-40)	Temperature :	21℃
Test Engineer :	Ian	Relative Humidity :	62%

Channel	Frequency (MHz)	Measured Power Output (dBm)	Max. Limits (dBm)	Pass/Fail
38	5190	11.29	17	Pass
46	5230	11.87	17	Pass
54	5270	11.76	24	Pass
62	5310	12.78	24	Pass
102	5510	12.45	24	Pass
110	5550	12.18	24	Pass
134	5670	11.85	24	Pass

3.2.6 Test Result of Power Output Plots

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

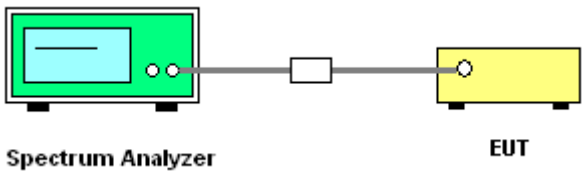
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

The transmitter output is connected to the spectrum analyzer. According to the method 3 of DA-02-2138, the resolution bandwidth is set to 1 MHz, video bandwidth is 3MHz, trace average 100 traces in power averaging mode, and sample detection is used, and the analyzer is set for video averaging.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11 a	Temperature :	21℃
Test Engineer :	Ian	Relative Humidity :	62%

Channel	Frequency (MHz)	Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	1.12	4	Pass
40	5200	0.47	4	Pass
48	5240	0.81	4	Pass
52	5260	1.43	11	Pass
56	5280	2.17	11	Pass
64	5320	1.81	11	Pass
100	5500	1.32	11	Pass
116	5580	0.63	11	Pass
140	5700	0.97	11	Pass

Test Mode :	802.11n (HT-20)	Temperature :	21℃
Test Engineer :	Ian	Relative Humidity :	62%

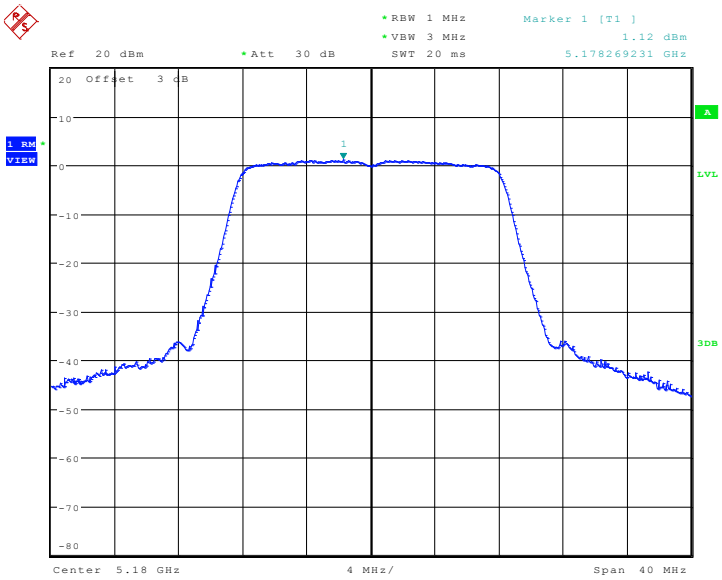
Channel	Frequency (MHz)	Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
36	5180	1.10	4	Pass
40	5200	0.45	4	Pass
48	5240	0.24	4	Pass
52	5260	0.58	11	Pass
56	5280	1.70	11	Pass
64	5320	2.22	11	Pass
100	5500	1.78	11	Pass
116	5580	1.63	11	Pass
140	5700	1.47	11	Pass

Test Mode :	802.11n (HT-40)	Temperature :	21℃
Test Engineer :	Ian	Relative Humidity :	62%

Channel	Frequency (MHz)	Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
38	5190	-2.15	4	Pass
46	5230	-1.99	4	Pass
54	5270	-1.79	11	Pass
62	5310	-0.58	11	Pass
102	5510	-1.45	11	Pass
110	5550	-1.64	11	Pass
134	5670	-2.23	11	Pass

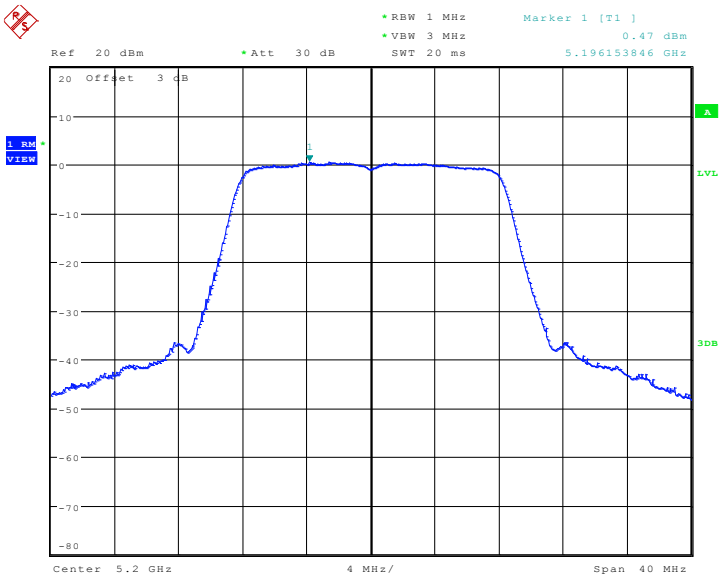
3.3.6 Test Result of Power Spectral Density Plots

PSD Plot on 802.11a Channel 36 – Chain A



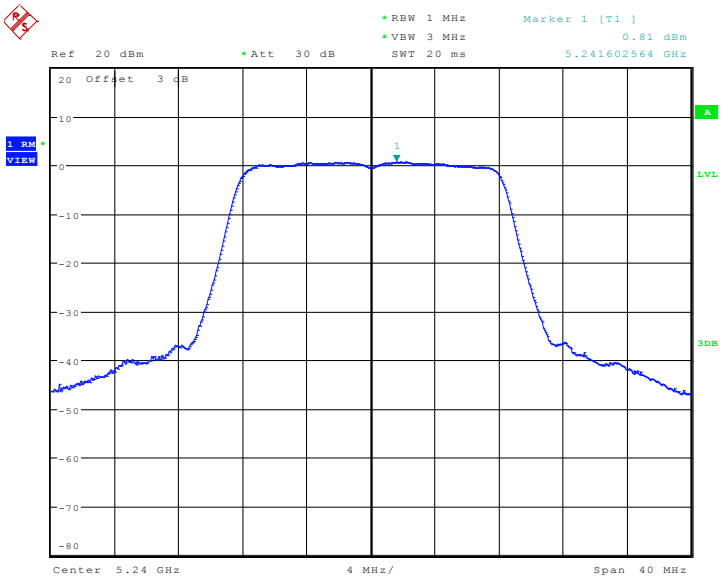
Date: 21.FEB.2011 19:54:50

PSD Plot on 802.11a Channel 40– Chain A



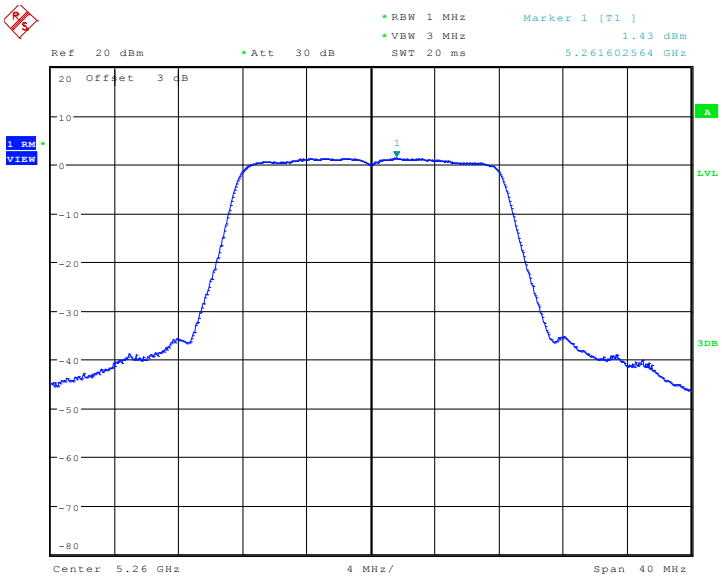
Date: 21.FEB.2011 19:57:11

PSD Plot on 802.11a Channel 48 – Chain A



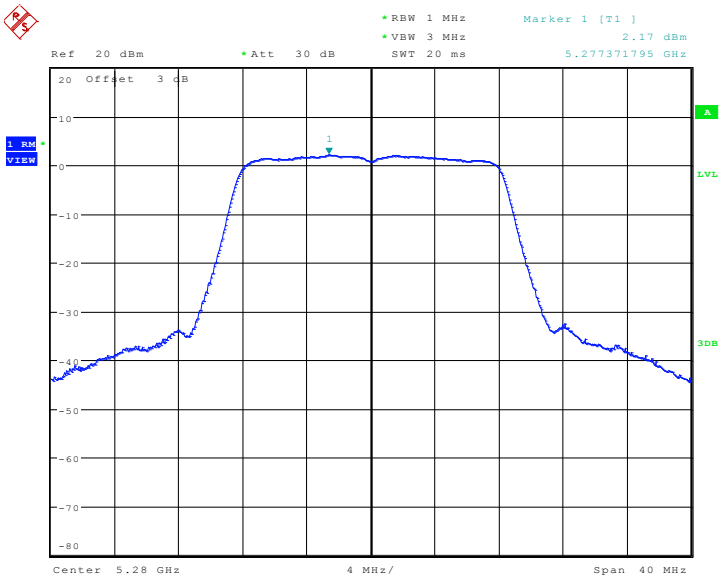
Date: 21.FEB.2011 20:08:31

PSD Plot on 802.11a Channel 52 – Chain A



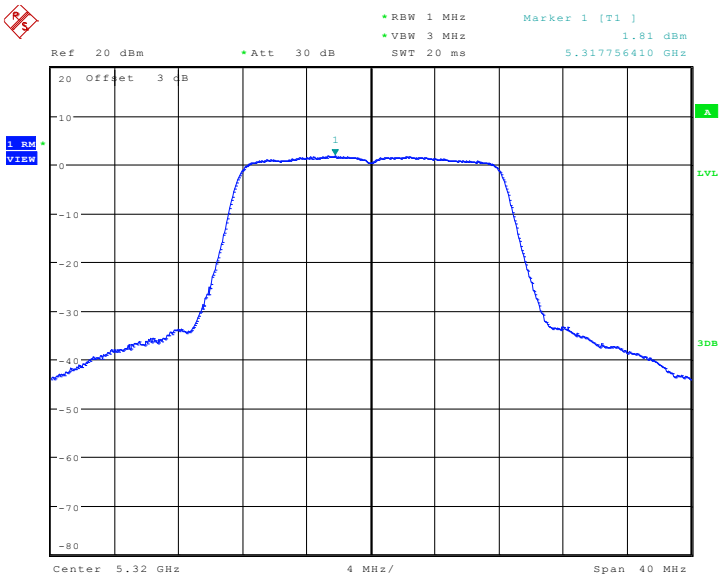
Date: 21.FEB.2011 20:18:27

PSD Plot on 802.11a Channel 56– Chain A



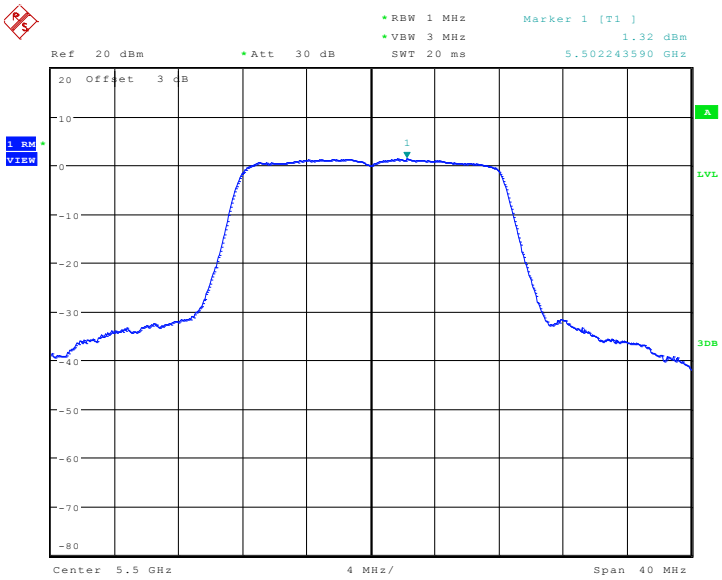
Date: 21.FEB.2011 20:21:00

PSD Plot on 802.11a Channel 64 – Chain A



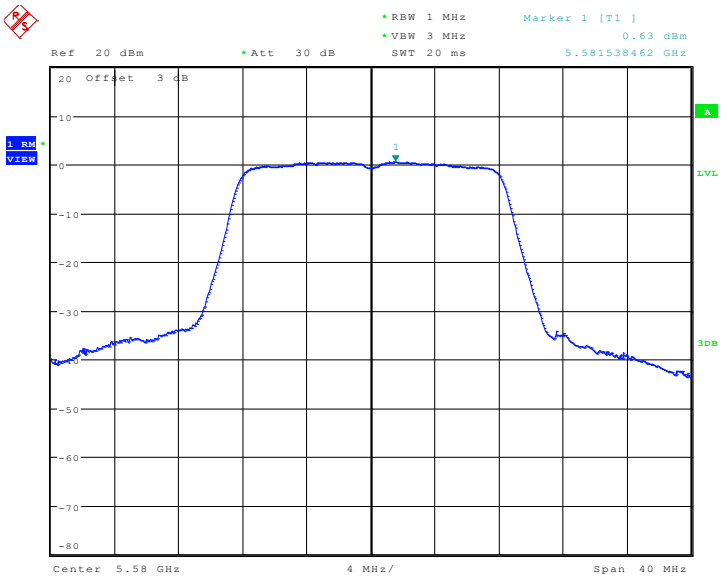
Date: 21.FEB.2011 20:23:18

PSD Plot on 802.11a Channel 100 – Chain A



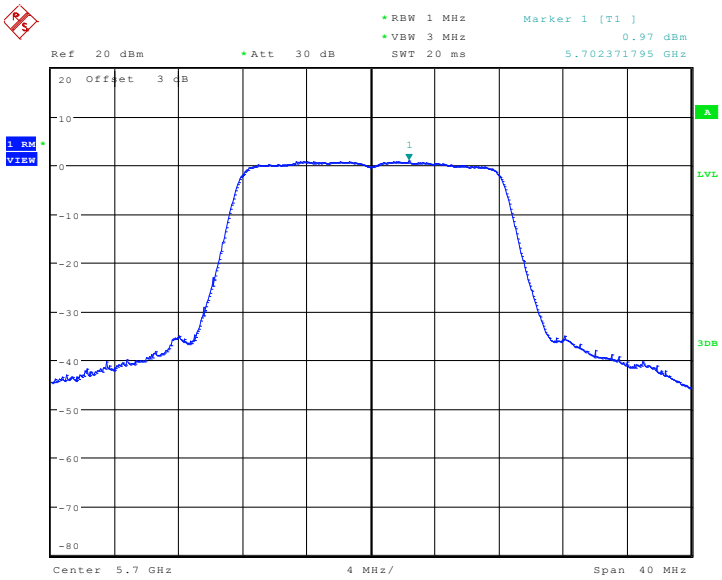
Date: 21.FEB.2011 20:24:50

PSD Plot on 802.11a Channel116– Chain A



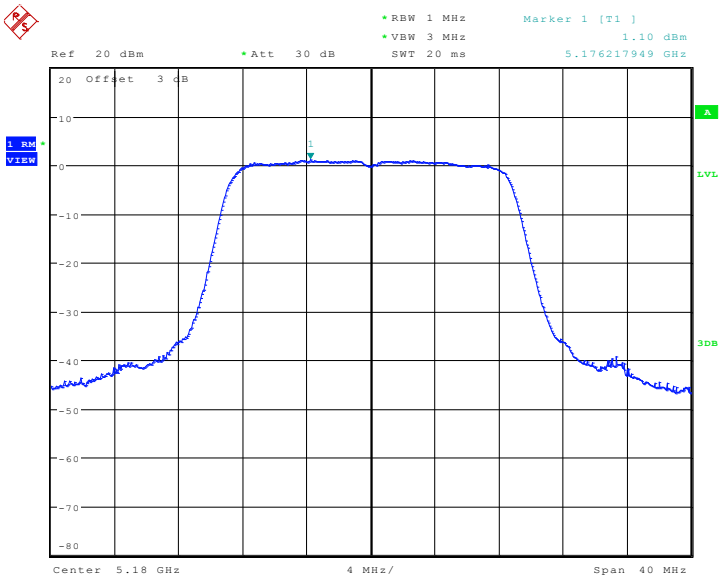
Date: 21.FEB.2011 20:26:16

PSD Plot on 802.11a Channel 140 – Chain A



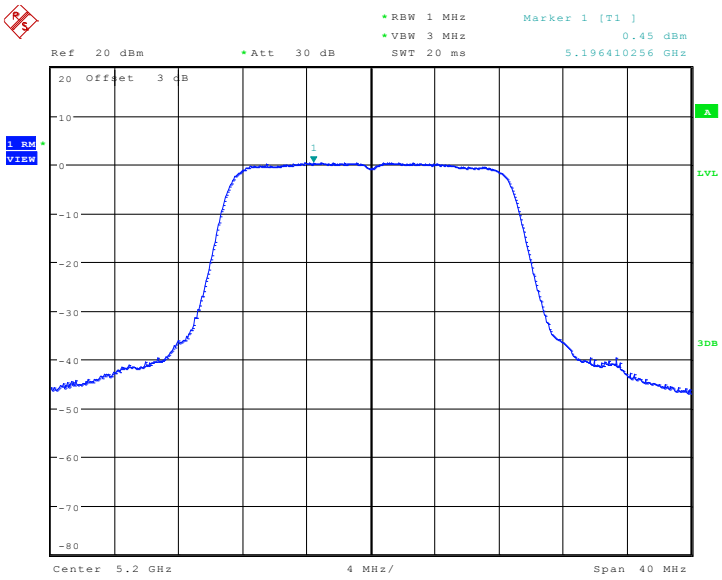
Date: 21.FEB.2011 20:28:13

PSD Plot on 802.11n Channel 36 – Chain A



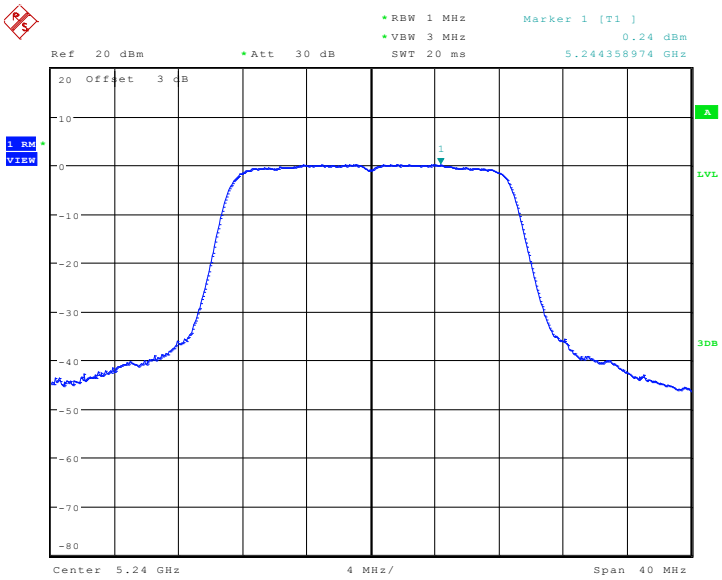
Date: 22.FEB.2011 09:29:09

PSD Plot on 802.11n Channel 40– Chain A



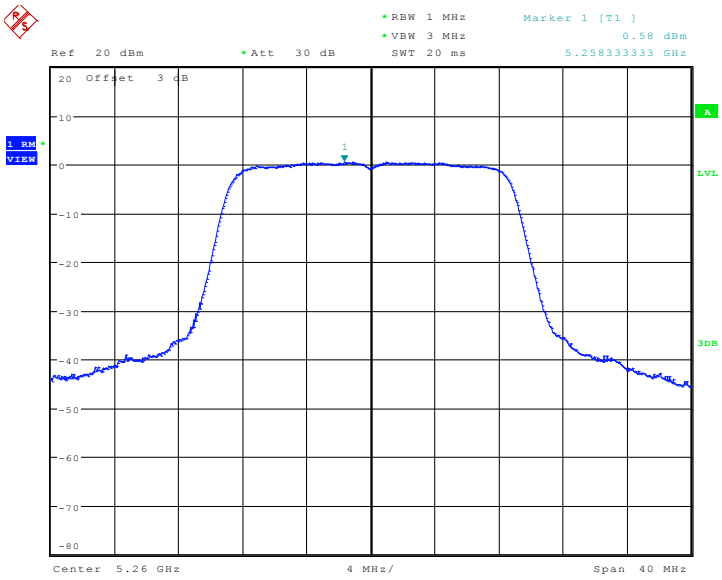
Date: 22.FEB.2011 09:29:47

PSD Plot on 802.11n Channel 48 – Chain A



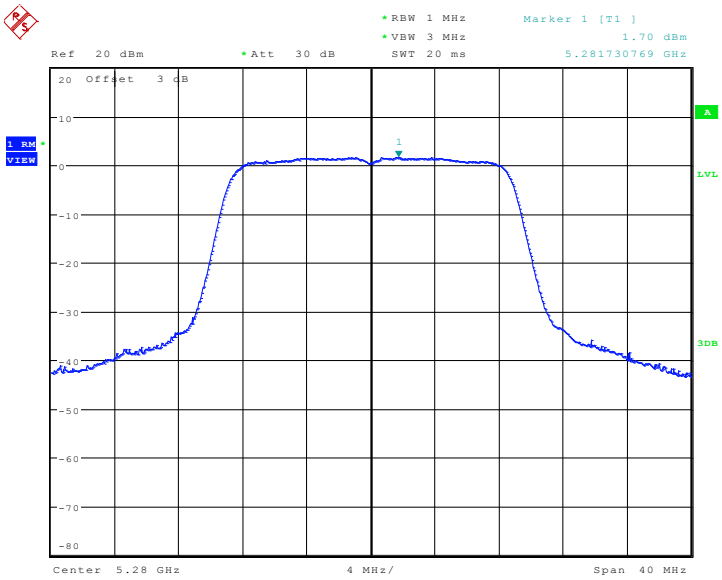
Date: 22.FEB.2011 09:30:17

PSD Plot on 802.11n Channel 52 – Chain A



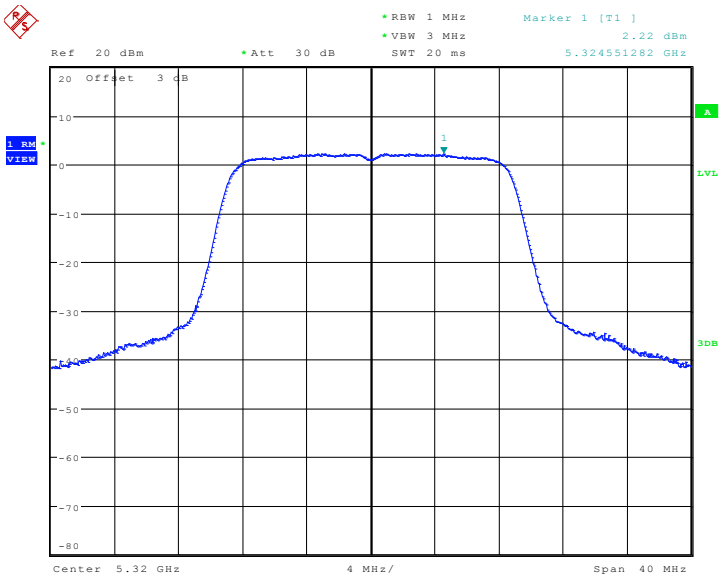
Date: 22.FEB.2011 09:30:48

PSD Plot on 802.11n Channel 56– Chain A



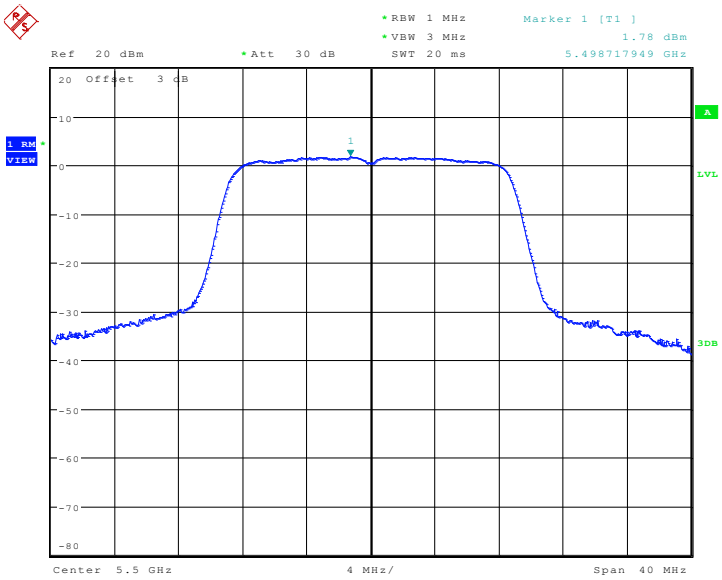
Date: 22.FEB.2011 09:31:17

PSD Plot on 802.11n Channel 64 – Chain A



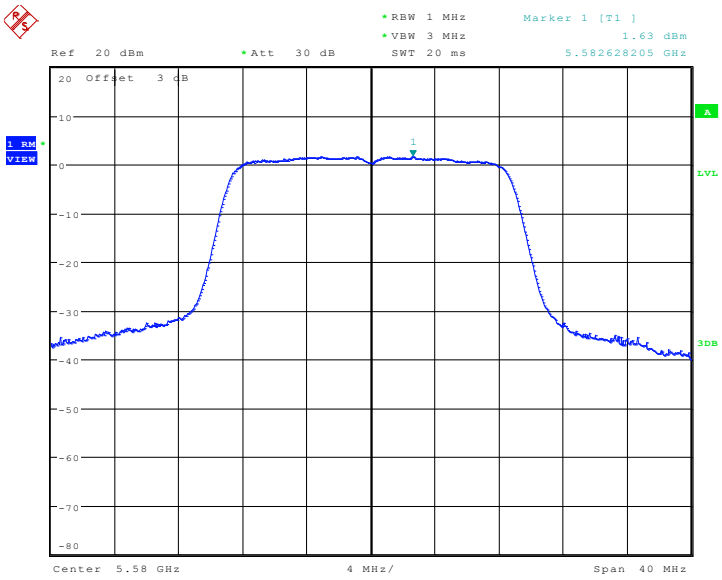
Date: 22.FEB.2011 09:31:43

PSD Plot on 802.11n Channel 100 – Chain A



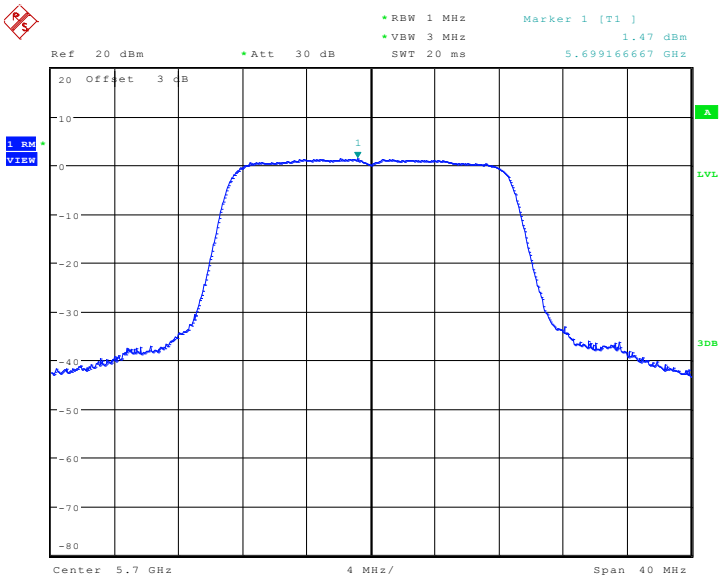
Date: 22.FEB.2011 09:32:23

PSD Plot on 802.11n Channel 116– Chain A



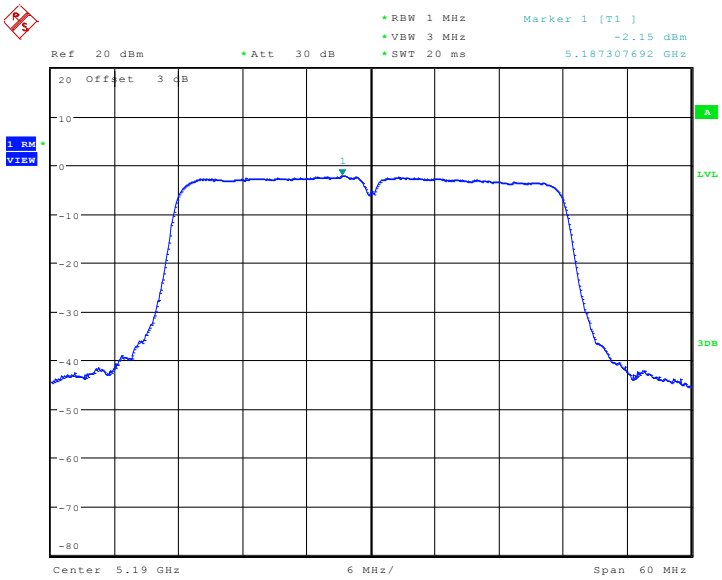
Date: 22.FEB.2011 09:32:50

PSD Plot on 802.11n Channel 140 – Chain A



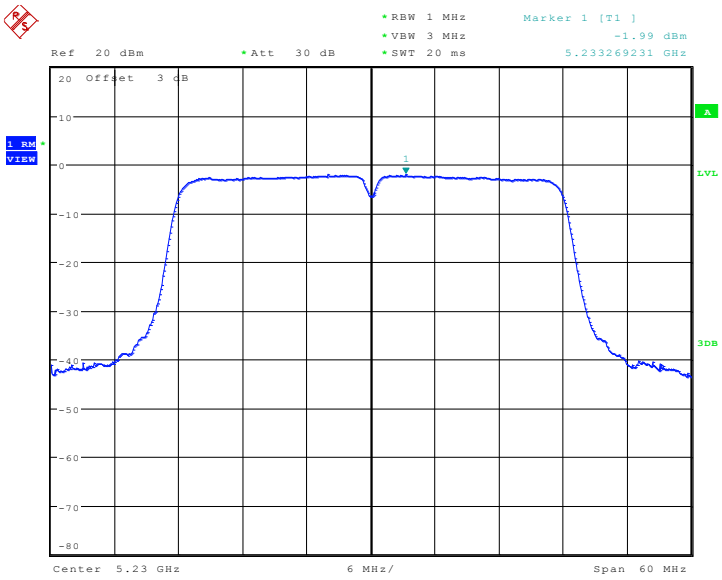
Date: 22.FEB.2011 09:33:17

PSD Plot on 802.11n Channel 38 – Chain A



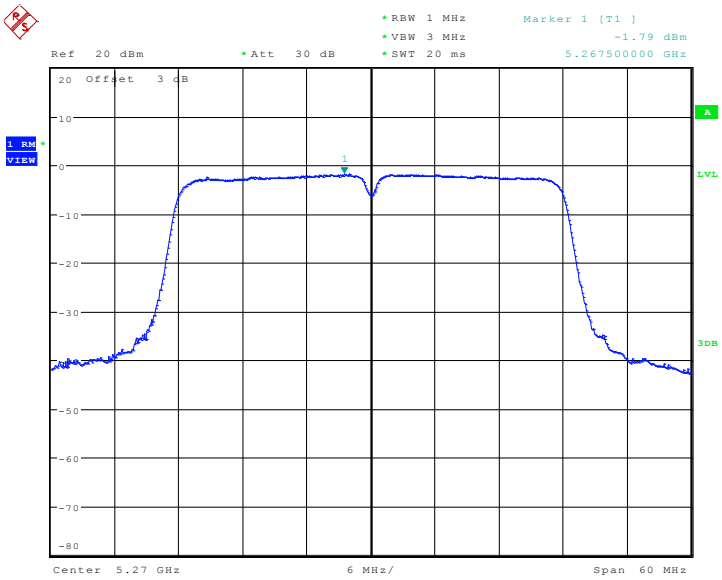
Date: 22.FEB.2011 10:43:27

PSD Plot on 802.11n Channel 46 – Chain A



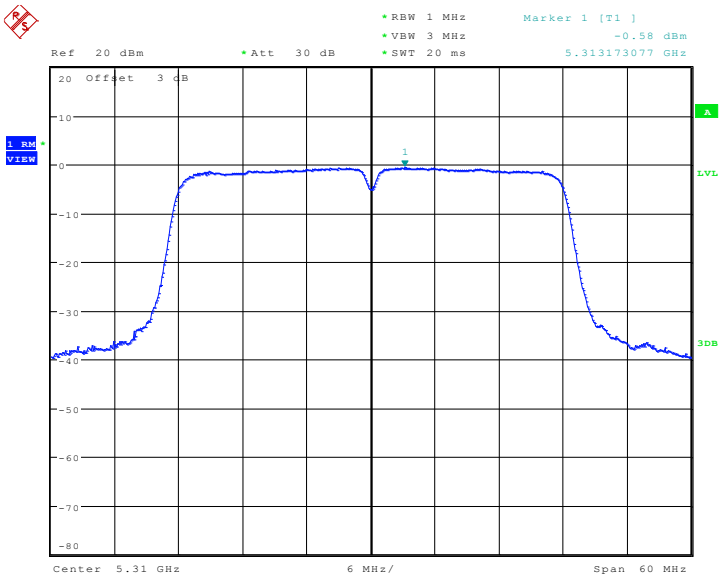
Date: 22.FEB.2011 10:43:58

PSD Plot on 802.11n Channel 54 – Chain A



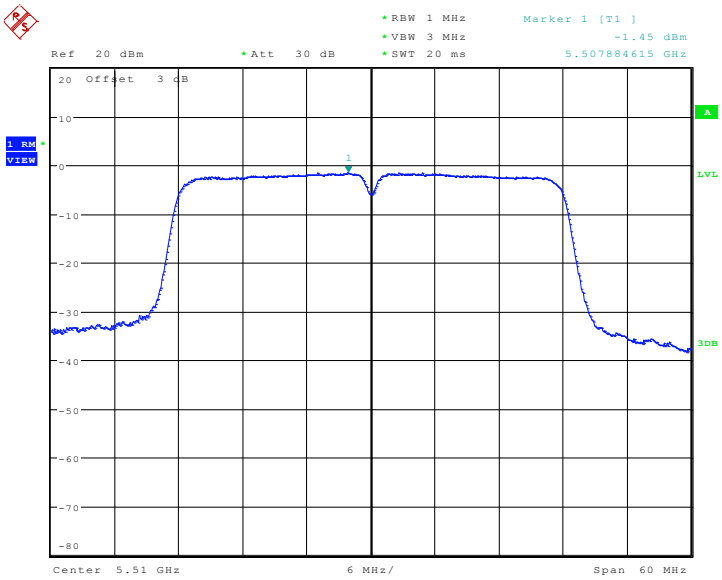
Date: 22.FEB.2011 10:44:27

PSD Plot on 802.11n Channel 62 – Chain A



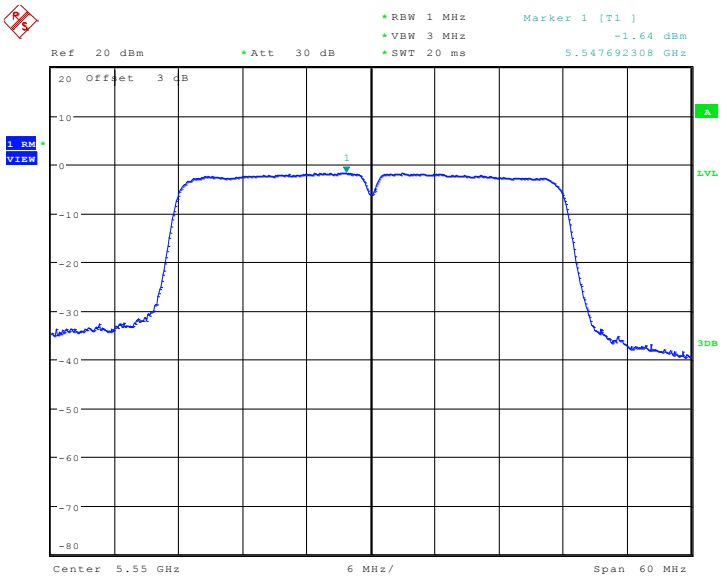
Date: 22.FEB.2011 10:44:53

PSD Plot on 802.11n Channel 102 – Chain A



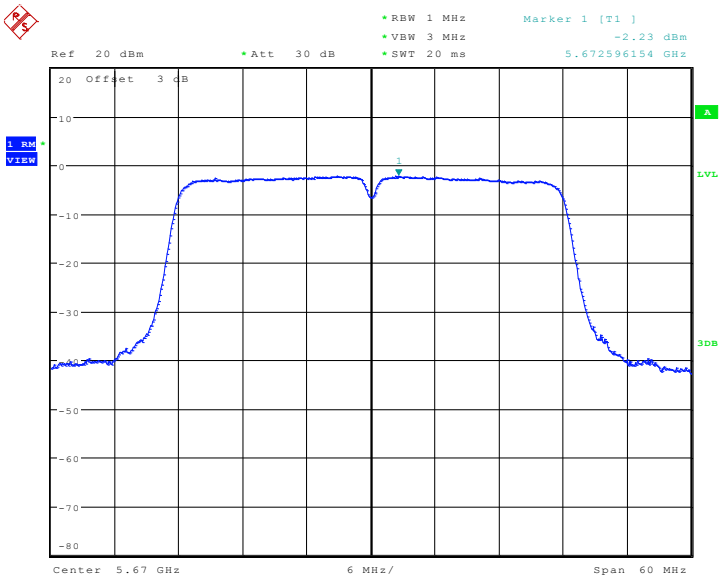
Date: 22.FEB.2011 10:45:18

PSD Plot on 802.11n Channel 110 – Chain A



Date: 22.FEB.2011 10:45:45

PSD Plot on 802.11n Channel 134 – Chain A



Date: 22.FEB.2011 10:46:17

3.4 Band Edges Measurement

3.4.1 Limit of Band Edges

(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz (68.3dBuV/m at 3m Average / 88.3 Peak limit). 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 (68.3dBuV/m at 3m Average / 88.3 Peak limit). 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 (68.3dBuV/m at 3m Average / 88.3 Peak limit). 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 (68.3dBuV/m at 3m Average / 88.3 Peak limit). The provisions of Section 15.205 restricted bands of operation of this part apply to intentional radiators operating under this section.

3.4.2 Measuring Instruments

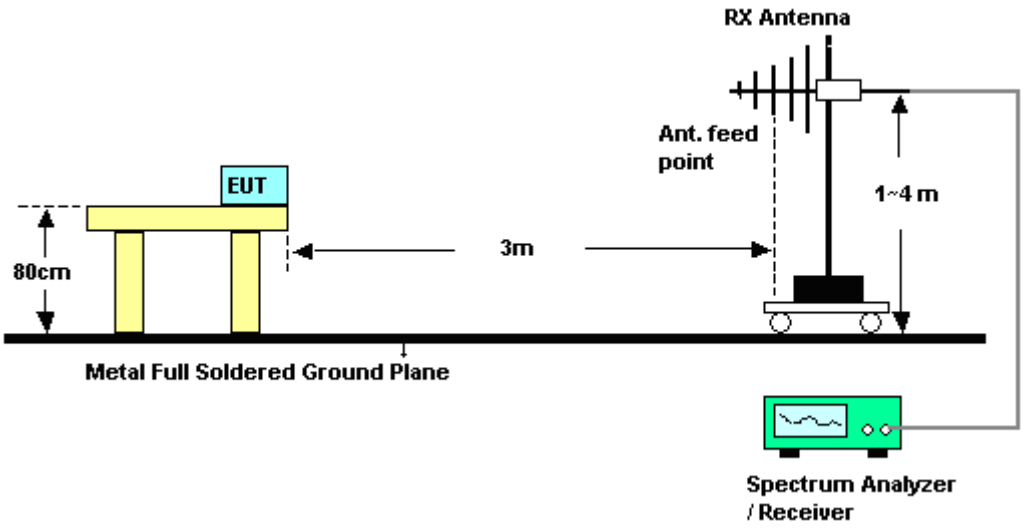
See list of measuring instruments of this test report.

3.4.3 Test Procedures

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

3.4.4 Test Setup

<Radiated>



Above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

3.4.5 Test Result of Radiated Band Edges

Test Mode :	802.11a L channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	36	Test Engineer :	Daniel
Remark	5181.800 MHz and 5183.400 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5113.100	73.27	-10.27	83.54	32.34	36.16	4.77	0.00	Peak
2 X	5181.800	112.95			71.89	36.26	4.80	0.00	Peak
1	5127.500	59.77	-3.77	63.54	18.80	36.19	4.78	0.00	Average
2 X	5183.400	102.05			60.99	36.26	4.80	0.00	Average

Test Mode :	802.11a L channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	40	Test Engineer :	Daniel
Remark	5196.900 MHz and 5197.800 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5146.500	72.64	-10.90	83.54	31.65	36.21	4.78	0.00	Peak
2 X	5196.900	112.64			71.55	36.28	4.81	0.00	Peak
3	5352.600	72.51	-11.03	83.54	31.15	36.49	4.87	0.00	Peak
1	5147.400	59.57	-3.97	63.54	18.58	36.21	4.78	0.00	Average
2 X	5197.800	102.11			61.02	36.28	4.81	0.00	Average
3	5388.600	58.80	-4.74	63.54	17.38	36.54	4.88	0.00	Average

Test Mode :	802.11a H channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	48	Test Engineer :	Daniel
Remark	5236.500 MHz and 5238.600 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5146.200	73.23	-10.31	83.54	32.24	36.21	4.78	0.00	Peak
2 X	5236.500	112.54			71.39	36.33	4.82	0.00	Peak
3	5396.100	72.55	-10.99	83.54	31.11	36.56	4.88	0.00	Peak
1	5105.400	58.93	-4.61	63.54	18.02	36.14	4.77	0.00	Average
2 X	5238.600	101.92			60.77	36.33	4.82	0.00	Average
3	5397.000	58.86	-4.68	63.54	17.42	36.56	4.88	0.00	Average

Test Mode :	802.11a L channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	52	Test Engineer :	Daniel
Remark	5263.800 MHz and 5262.900 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5122.200	72.63	-10.91	83.54	31.69	36.16	4.78	0.00	Peak
2 X	5263.800	116.71			75.52	36.37	4.82	0.00	Peak
3	5364.600	72.18	-11.36	83.54	30.80	36.51	4.87	0.00	Peak
1	5113.800	58.91	-4.63	63.54	17.98	36.16	4.77	0.00	Average
2 X	5262.900	106.22			65.03	36.37	4.82	0.00	Average
3	5398.200	58.86	-4.68	63.54	17.42	36.56	4.88	0.00	Average

Test Mode :	802.11a H channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	56	Test Engineer :	Daniel
Remark	5278.500 MHz and 5278.500 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5125.800	72.81	-10.73	83.54	31.84	36.19	4.78	0.00	Peak
2 X	5278.500	117.28			76.04	36.40	4.84	0.00	Peak
3	5353.800	72.90	-10.64	83.54	31.54	36.49	4.87	0.00	Peak
1	5108.100	58.92	-4.62	63.54	17.99	36.16	4.77	0.00	Average
2 X	5278.500	106.58			65.34	36.40	4.84	0.00	Average
3	5397.000	58.80	-4.74	63.54	17.36	36.56	4.88	0.00	Average

Test Mode :	802.11a H channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	64	Test Engineer :	Daniel
Remark	5321.690 MHz and 5321.060 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 X	5321.690	112.57			71.28	36.44	4.85	0.00	Peak
2	5363.900	72.71	-10.83	83.54	31.33	36.51	4.87	0.00	Peak
1 X	5321.060	101.79			60.50	36.44	4.85	0.00	Average
2	5372.370	59.34	-4.20	63.54	17.96	36.51	4.87	0.00	Average

Test Mode :	802.11a L channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	100	Test Engineer :	Daniel
Remark	5496.890 MHz and 5497.010 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5459.750	73.11	-10.43	83.54	31.58	36.63	4.90	0.00	Peak
2 X	5496.890	110.85			69.24	36.70	4.91	0.00	Peak
1	5447.670	59.78	-3.76	63.54	18.25	36.63	4.90	0.00	Average
2 X	5497.010	100.15			58.54	36.70	4.91	0.00	Average

Test Mode :	802.11a L channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	116	Test Engineer :	Daniel
Remark	5576.560 MHz is the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5457.520	72.49	-11.05	83.54	30.96	36.63	4.90	0.00	Peak
2 X	5576.560	111.36			69.63	36.78	4.95	0.00	Peak
3	5746.800	73.26	-24.58	97.84	31.20	36.99	5.07	0.00	Peak
1	5439.920	59.15	-4.39	63.54	17.64	36.61	4.90	0.00	Average
2 X	5576.560	100.60			58.87	36.78	4.95	0.00	Average
3	5745.520	59.94	-17.90	77.84	17.88	36.99	5.07	0.00	Average

Test Mode :	802.11a H channel	Temperature :	23°C
Test Band :	802.11a	Relative Humidity :	51%
Test Channel :	140	Test Engineer :	Daniel
Remark	5701.640 MHz and 5696.840 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 X	5701.640	111.39			69.40	36.95	5.04	0.00	Peak
2	5737.940	74.28	-23.56	97.84	32.25	36.99	5.04	0.00	Peak
1 X	5696.840	100.68			58.73	36.93	5.02	0.00	Average
2	5726.360	60.04	-17.80	77.84	18.03	36.97	5.04	0.00	Average

Test Mode :	802.11n (HT-20) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	36	Test Engineer :	Daniel
Remark	5183.400 MHz is the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5111.400	73.08	-10.46	83.54	32.15	36.16	4.77	0.00	Peak
2 X	5183.400	113.77			72.71	36.26	4.80	0.00	Peak
1	5127.800	60.17	-3.37	63.54	19.20	36.19	4.78	0.00	Average
2 X	5183.400	103.01			61.95	36.26	4.80	0.00	Average

Test Mode :	802.11n (HT-20) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	40	Test Engineer :	Daniel
Remark	5197.800 MHz and 5196.600 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5121.000	72.82	-10.72	83.54	31.88	36.16	4.78	0.00	Peak
2 X	5197.800	115.69			74.60	36.28	4.81	0.00	Peak
3	5390.100	72.01	-11.53	83.54	30.59	36.54	4.88	0.00	Peak
1	5147.700	60.54	-3.00	63.54	19.55	36.21	4.78	0.00	Average
2 X	5196.600	105.06			63.97	36.28	4.81	0.00	Average
3	5397.000	58.86	-4.68	63.54	17.42	36.56	4.88	0.00	Average

Test Mode :	802.11n (HT-20) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	48	Test Engineer :	Daniel
Remark	5237.700 MHz and 5237.400 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5111.400	72.85	-10.69	83.54	31.92	36.16	4.77	0.00	Peak
2 X	5237.700	116.06			74.91	36.33	4.82	0.00	Peak
3	5350.200	72.52	-11.02	83.54	31.16	36.49	4.87	0.00	Peak
1	5119.800	59.00	-4.54	63.54	18.06	36.16	4.78	0.00	Average
2 X	5237.400	105.35			64.20	36.33	4.82	0.00	Average
3	5394.600	58.89	-4.65	63.54	17.45	36.56	4.88	0.00	Average

Test Mode :	802.11n (HT-20) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	52	Test Engineer :	Daniel
Remark	5262.900 MHz is the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5141.700	72.36	-11.18	83.54	31.37	36.21	4.78	0.00	Peak
2 X	5262.900	117.27			76.08	36.37	4.82	0.00	Peak
3	5394.600	73.00	-10.54	83.54	31.56	36.56	4.88	0.00	Peak
1	5107.800	58.99	-4.55	63.54	18.06	36.16	4.77	0.00	Average
2 X	5262.900	106.48			65.29	36.37	4.82	0.00	Average
3	5395.800	58.88	-4.66	63.54	17.44	36.56	4.88	0.00	Average

Test Mode :	802.11n (HT-20) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	56	Test Engineer :	Daniel
Remark	5278.200 MHz and 5277.000 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5110.200	72.67	-10.87	83.54	31.74	36.16	4.77	0.00	Peak
2 X	5278.200	114.56			73.32	36.40	4.84	0.00	Peak
3	5350.200	72.03	-11.51	83.54	30.67	36.49	4.87	0.00	Peak
1	5127.000	58.95	-4.59	63.54	17.98	36.19	4.78	0.00	Average
2 X	5277.000	103.76			62.52	36.40	4.84	0.00	Average
3	5391.300	58.87	-4.67	63.54	17.45	36.54	4.88	0.00	Average

Test Mode :	802.11n (HT-20) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	64	Test Engineer :	Daniel
Remark	5323.300 MHz and 5318.540 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 X	5323.300	116.26			74.97	36.44	4.85	0.00	Peak
2	5372.650	73.61	-9.93	83.54	32.23	36.51	4.87	0.00	Peak
1 X	5318.540	105.56			64.27	36.44	4.85	0.00	Average
2	5372.580	60.29	-3.25	63.54	18.91	36.51	4.87	0.00	Average

Test Mode :	802.11n (HT-20) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	100	Test Engineer :	Daniel
Remark	5497.040 MHz is the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5446.480	73.68	-9.86	83.54	32.15	36.63	4.90	0.00	Peak
2 X	5497.040	114.62			73.01	36.70	4.91	0.00	Peak
1	5448.080	60.81	-2.73	63.54	19.28	36.63	4.90	0.00	Average
2 X	5497.040	103.77			62.16	36.70	4.91	0.00	Average

Test Mode :	802.11n (HT-20) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	116	Test Engineer :	Daniel
Remark	5576.560 MHz is the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5446.320	71.96	-11.58	83.54	30.43	36.63	4.90	0.00	Peak
2 X	5576.560	111.41			69.68	36.78	4.95	0.00	Peak
3	5749.680	73.28	-24.56	97.84	31.22	36.99	5.07	0.00	Peak
1	5436.080	59.19	-4.35	63.54	17.68	36.61	4.90	0.00	Average
2 X	5576.560	100.62			58.89	36.78	4.95	0.00	Average
3	5745.520	59.92	-17.92	77.84	17.86	36.99	5.07	0.00	Average

Test Mode :	802.11n (HT-20) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	140	Test Engineer :	Daniel
Remark	5696.900 MHz is the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 X	5696.900	115.18	-----	-----	73.23	36.93	5.02	0.00	Peak
2	5732.120	74.70	-23.14	97.84	32.69	36.97	5.04	0.00	Peak
1 X	5696.900	104.27			62.32	36.93	5.02	0.00	Average
2	5725.000	60.31	-17.53	77.84	18.30	36.97	5.04	0.00	Average

Test Mode :	802.11n (HT-40) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	38	Test Engineer :	Daniel
Remark	5193.390 MHz and 5194.490 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1		5149.940	72.01	-11.53	83.54	31.02	36.21	4.78	0.00	Peak
2	@	5193.390	108.16			67.07	36.28	4.81	0.00	Peak
1		5149.500	59.32	-4.22	63.54	18.33	36.21	4.78	0.00	Average
2	@	5194.490	98.16			57.07	36.28	4.81	0.00	Average

Test Mode :	802.11n (HT-40) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	46	Test Engineer :	Daniel
Remark	5234.500 MHz and 5226.500 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1		5126.750	72.82	-10.72	83.54	31.85	36.19	4.78	0.00	Peak
2	X	5234.500	109.78			68.63	36.33	4.82	0.00	Peak
3		5364.500	72.73	-10.81	83.54	31.35	36.51	4.87	0.00	Peak
1		5126.750	59.38	-4.16	63.54	18.41	36.19	4.78	0.00	Average
2	X	5226.500	99.23			58.09	36.33	4.81	0.00	Average
3		5351.750	58.74	-4.80	63.54	17.38	36.49	4.87	0.00	Average

Test Mode :	802.11n (HT-40) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	54	Test Engineer :	Daniel
Remark	5267.700 MHz and 5264.100 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5123.700	72.33	-11.21	83.54	31.36	36.19	4.78	0.00	Peak
2 X	5267.700	114.39			73.20	36.37	4.82	0.00	Peak
3	5382.600	73.01	-10.53	83.54	31.60	36.54	4.87	0.00	Peak
1	5116.200	58.97	-4.57	63.54	18.03	36.16	4.78	0.00	Average
2 X	5264.100	103.77			62.58	36.37	4.82	0.00	Average
3	5373.000	59.22	-4.32	63.54	17.84	36.51	4.87	0.00	Average

Test Mode :	802.11n (HT-40) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	62	Test Engineer :	Daniel
Remark	5307.800 MHz and 5308.200 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 X	5307.800	110.45			69.19	36.42	4.84	0.00	Peak
2	5378.700	72.58	-10.96	83.54	31.17	36.54	4.87	0.00	Peak
1 X	5308.200	99.64			58.38	36.42	4.84	0.00	Average
2	5351.400	59.21	-4.33	63.54	17.85	36.49	4.87	0.00	Average

Test Mode :	802.11n (HT-40) L channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	102	Test Engineer :	Daniel
Remark	5507.800 MHz and 5512.200 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5448.200	73.36	-10.18	83.54	31.83	36.63	4.90	0.00	Peak
2 X	5507.800	108.72			67.09	36.70	4.93	0.00	Peak
1	5445.000	59.21	-4.33	63.54	17.70	36.61	4.90	0.00	Average
2 X	5512.200	97.90			56.27	36.70	4.93	0.00	Average

Test Mode :	802.11n (HT-40) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	110	Test Engineer :	Daniel
Remark	5547.400 MHz and 5547.700 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5444.200	73.16	-10.38	83.54	31.65	36.61	4.90	0.00	Peak
2 X	5547.400	112.14			70.45	36.74	4.95	0.00	Peak
3	5737.300	73.48	-24.36	97.84	31.45	36.99	5.04	0.00	Peak
1	5446.600	59.65	-3.89	63.54	18.12	36.63	4.90	0.00	Average
2 X	5547.700	101.23			59.52	36.76	4.95	0.00	Average
3	5734.900	59.95	-17.89	77.84	17.92	36.99	5.04	0.00	Average

Test Mode :	802.11n (HT-40) H channel	Temperature :	23°C
Test Band :	802.11n	Relative Humidity :	51%
Test Channel :	134	Test Engineer :	Daniel
Remark	5673.000 MHz and 5673.500 MHz are the Fundamental Signals which can be ignored.		

HORIZONTAL

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 X	5673.000	108.62			66.69	36.91	5.02	0.00	Peak
2	5744.700	73.62	-24.22	97.84	31.56	36.99	5.07	0.00	Peak
1 X	5673.500	97.81			55.88	36.91	5.02	0.00	Average
2	5749.500	60.00	-17.84	77.84	17.94	36.99	5.07	0.00	Average

3.5 AC Conducted Emission Measurement

3.5.1 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.

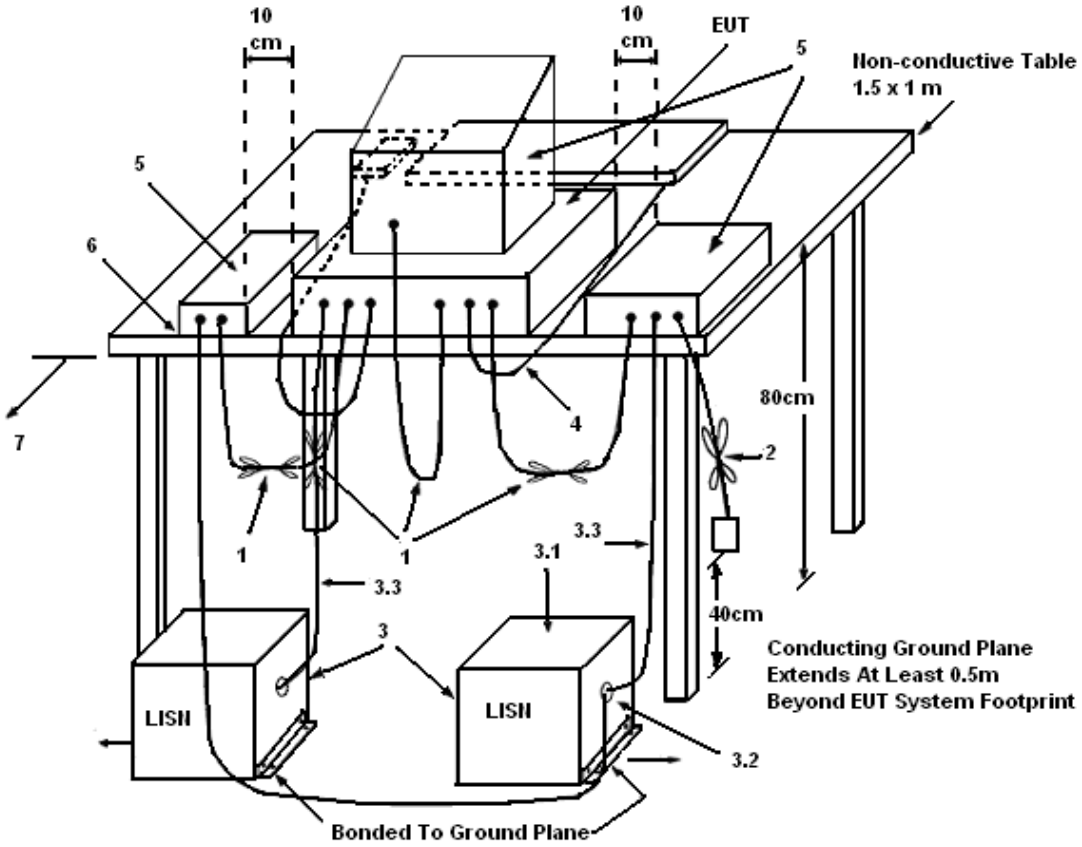
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

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

3.5.4 Test Setup



LEGEND:

(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

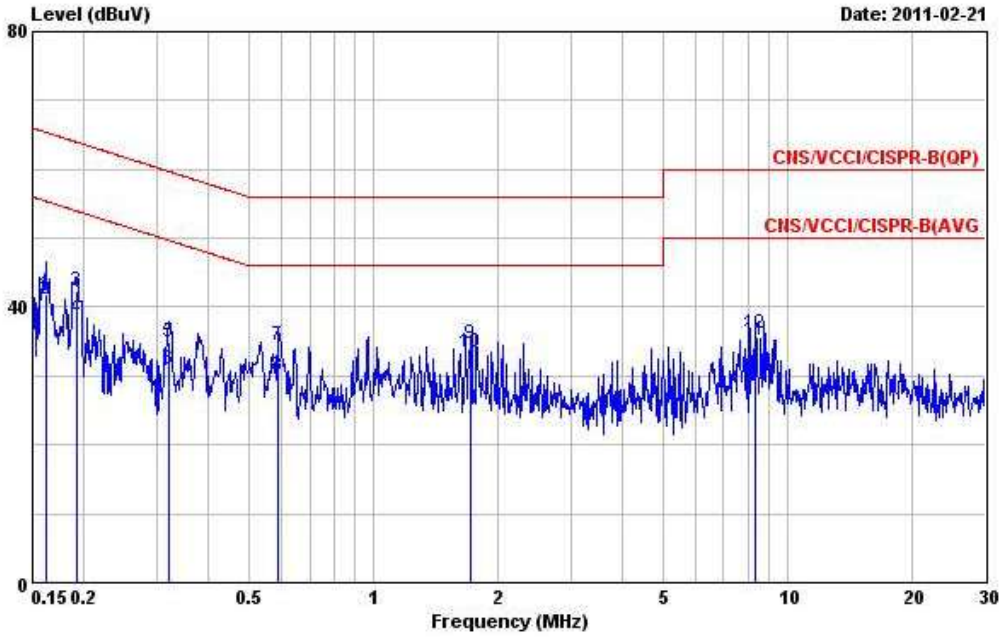
(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

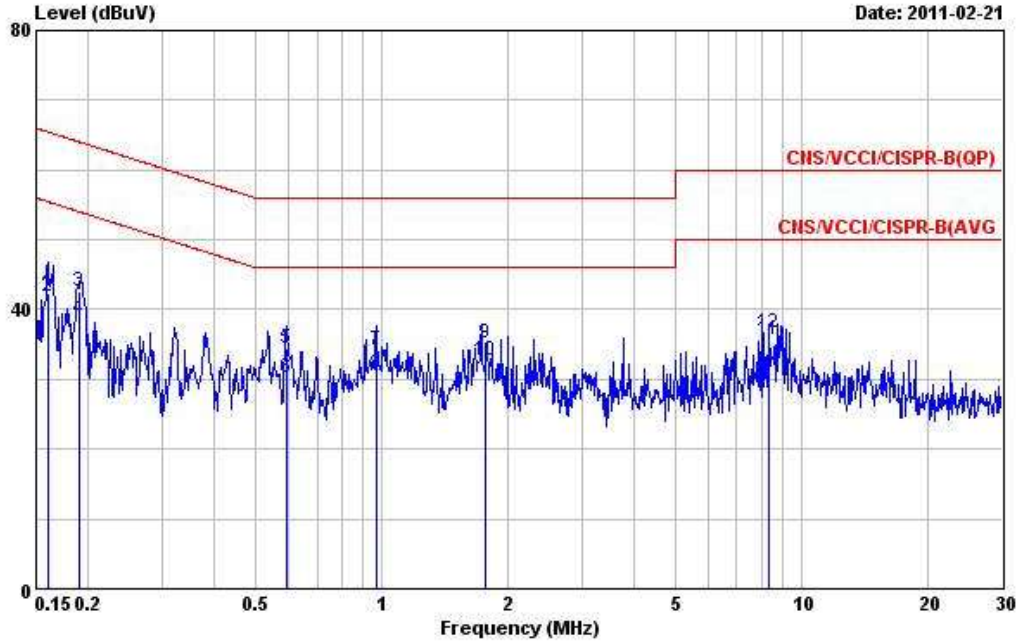
3.5.5 Test Result of AC Conducted Emission

Function Type :	Normal Mode	Temperature :	20℃
Test Engineer :	Wilson	Relative Humidity :	60%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.162	41.80	-23.56	65.36	31.74	10.01	0.05	QP
2	0.162	41.08	-14.28	55.36	31.02	10.01	0.05	Average
3	0.192	42.28	-21.67	63.95	32.22	10.00	0.06	QP
4	0.192	38.38	-15.57	53.95	28.32	10.00	0.06	Average
5	0.320	34.93	-24.78	59.71	24.83	10.01	0.09	QP
6	0.320	30.96	-18.75	49.71	20.86	10.01	0.09	Average
7	0.589	34.53	-21.47	56.00	24.44	10.01	0.08	QP
8	0.589	29.94	-16.06	46.00	19.85	10.01	0.08	Average
9	1.718	34.69	-21.31	56.00	24.57	10.03	0.09	QP
10 @	1.718	33.42	-12.58	46.00	23.30	10.03	0.09	Average
11	8.320	35.25	-14.75	50.00	24.92	10.11	0.22	Average
12	8.320	36.22	-23.78	60.00	25.89	10.11	0.22	QP

Function Type :	Normal Mode	Temperature :	20℃
Test Engineer :	Wilson	Relative Humidity :	60%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.160	42.30	-23.16	65.46	32.10	10.15	0.05	QP
2 @	0.160	41.76	-13.70	55.46	31.56	10.15	0.05	Average
3	0.191	42.52	-21.47	63.99	32.32	10.14	0.06	QP
4	0.191	38.69	-15.30	53.99	28.49	10.14	0.06	Average
5	0.592	34.43	-21.57	56.00	24.22	10.13	0.08	QP
6	0.592	30.11	-15.89	46.00	19.90	10.13	0.08	Average
7	0.968	34.29	-21.71	56.00	24.09	10.14	0.06	QP
8	0.968	30.68	-15.32	46.00	20.48	10.14	0.06	Average
9	1.771	35.05	-20.95	56.00	24.81	10.15	0.09	QP
10 @	1.771	32.60	-13.40	46.00	22.36	10.15	0.09	Average
11	8.320	35.65	-14.35	50.00	25.16	10.27	0.22	Average
12	8.320	36.72	-23.28	60.00	26.23	10.27	0.22	QP

3.6 Radiated Emission Measurement

3.6.1 Limit of Radiated Emission

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

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

(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz (68.3dBuV/m at 3m Average / 88.3 Peak limit).

(2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz (68.3dBuV/m at 3m Average / 88.3 Peak limit). 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 (68.3dBuV/m at 3m) in the 5.15–5.25 GHz band.

(3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m Average / 88.3 Peak limit).

(4) The provisions of Section 15.205 Restricted bands of operation of this part apply to intentional radiators operating under this section.

3.6.2 Measuring Instruments

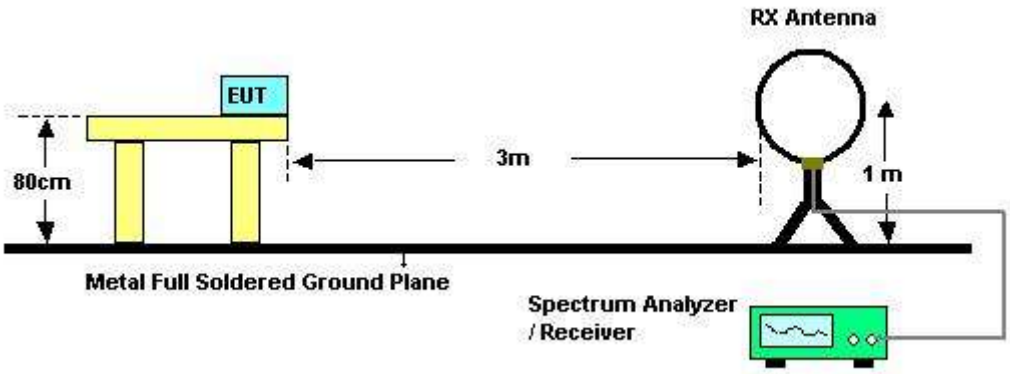
See list of measuring instruments of this test report.

3.6.3 Test Procedures

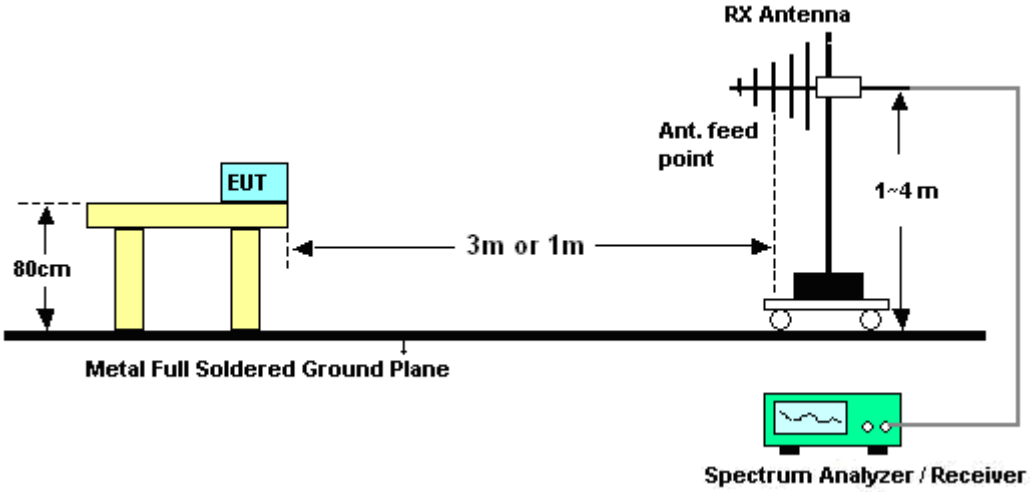
1. The testing follows the guidelines in FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest radiation.
5. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
6. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
7. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
8. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
9. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.6.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

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

Test Engineer :	Daniel	Temperature :	23°C
		Relative Humidity :	51%

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

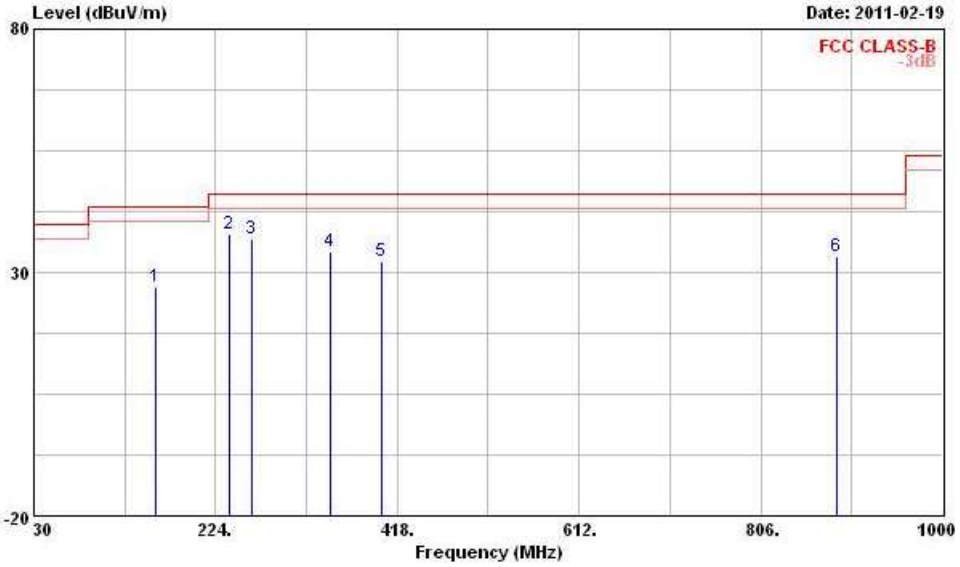
The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

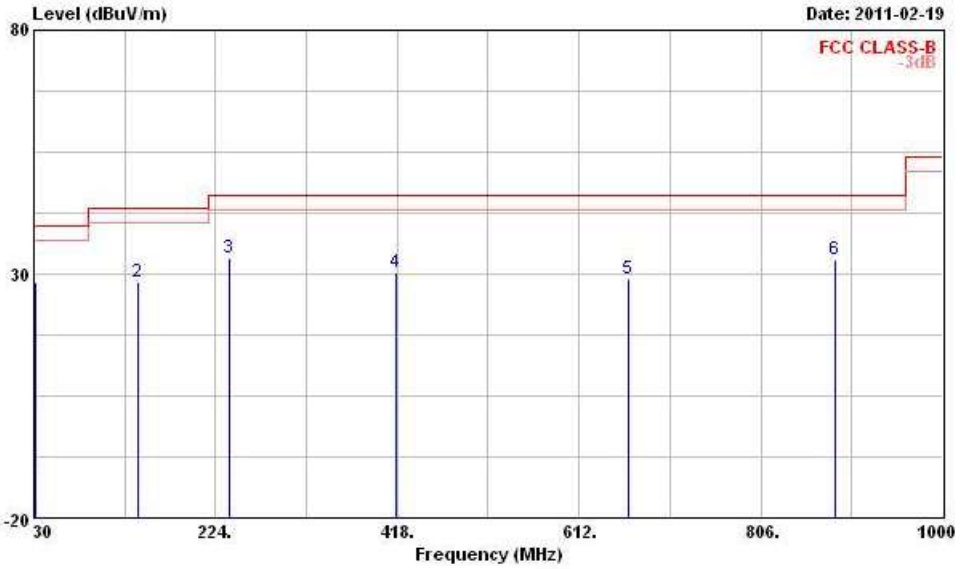
3.6.7 Test Result of Radiated Emission (30MHz ~ 1GHz)

Function Type :	Normal Mode	Temperature :	23°C
Test Engineer :	Daniel	Relative Humidity :	51%
		Polarization :	Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	159.980	27.15	-16.35	43.50	41.88	10.55	2.09	27.37	Peak
2	238.550	38.00	-8.00	46.00	49.65	12.62	2.60	26.87	Peak
3	261.830	36.87	-9.13	46.00	47.78	13.16	2.74	26.81	Peak
4	347.190	34.21	-11.79	46.00	43.93	14.43	3.00	27.15	Peak
5	400.540	32.21	-13.79	46.00	41.27	15.27	3.34	27.67	Peak
6	886.510	33.23	-12.77	46.00	35.61	20.06	4.96	27.40	Peak

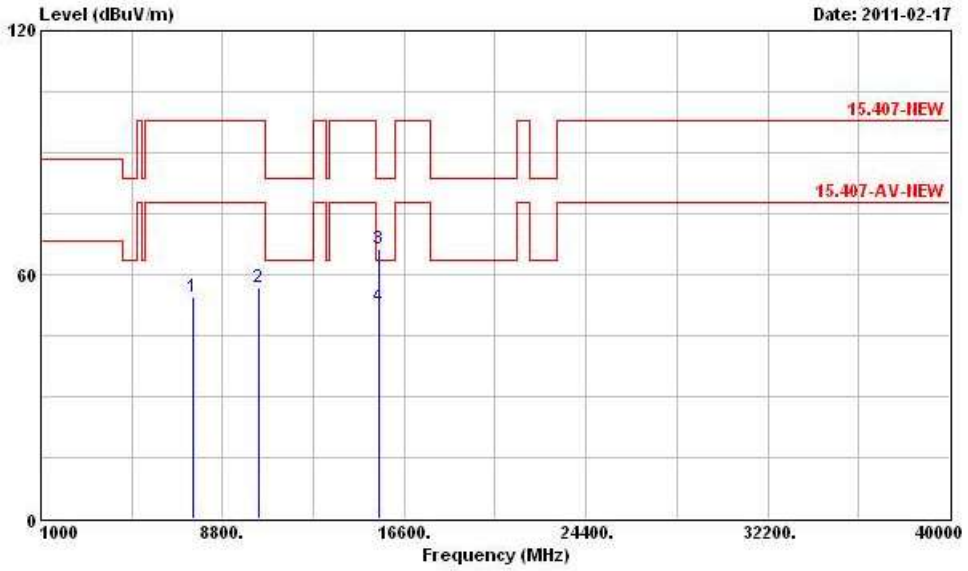
Function Type :	Normal Mode	Temperature :	23°C
Test Engineer :	Daniel	Relative Humidity :	51%
		Polarization :	Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	31.940	28.36	-11.64	40.00	39.96	15.48	0.78	27.86	Peak
2	141.550	28.28	-15.22	43.50	42.01	11.78	1.96	27.47	Peak
3	238.550	33.23	-12.77	46.00	44.88	12.62	2.60	26.87	Peak
4	417.030	30.29	-15.71	46.00	39.04	15.61	3.39	27.75	Peak
5	664.380	28.99	-17.01	46.00	33.45	19.32	4.29	28.07	Peak
6	885.540	33.03	-12.97	46.00	35.41	20.06	4.96	27.40	Peak

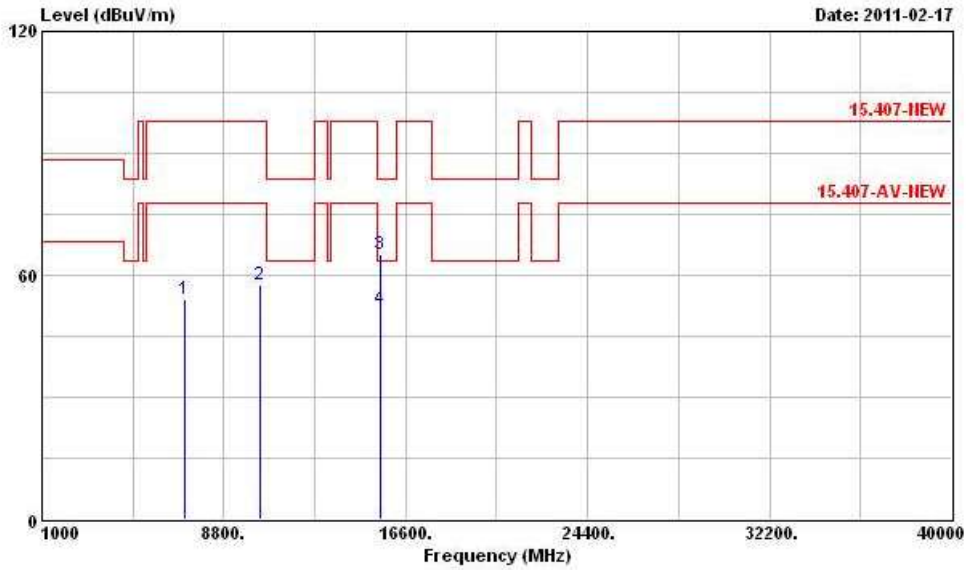
3.6.8 Test Result of Radiated Emission (30MHz ~ 40GHz)

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	36	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



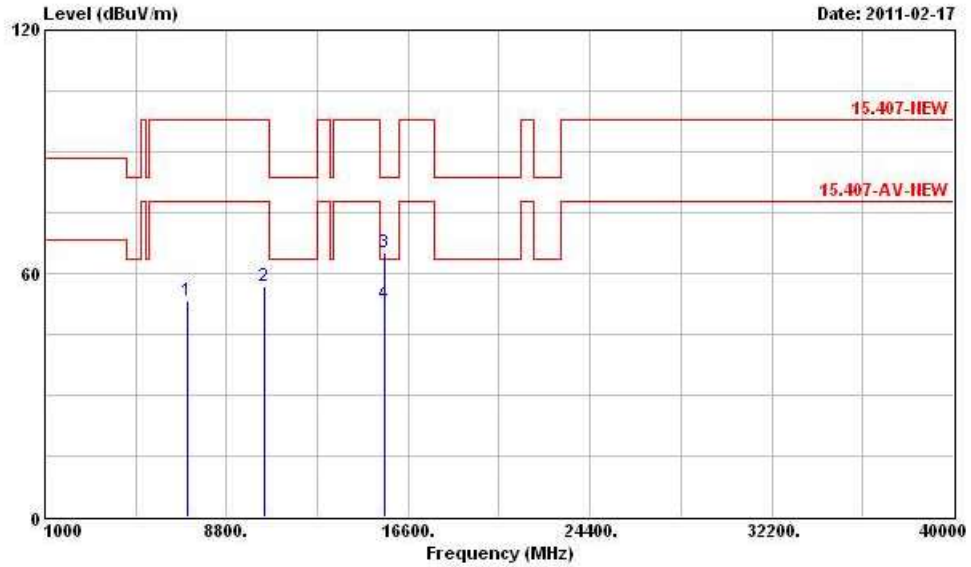
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7522.000	54.52	-23.32	77.84	45.24	37.92	5.66	34.30	PK
2	10360.000	56.84	-41.00	97.84	44.25	40.02	6.71	34.14	Peak
3	15540.000	66.22	-17.32	83.54	47.80	42.81	8.45	32.84	Peak
4	15540.000	52.12	-11.42	63.54	33.70	42.81	8.45	32.84	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	36	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



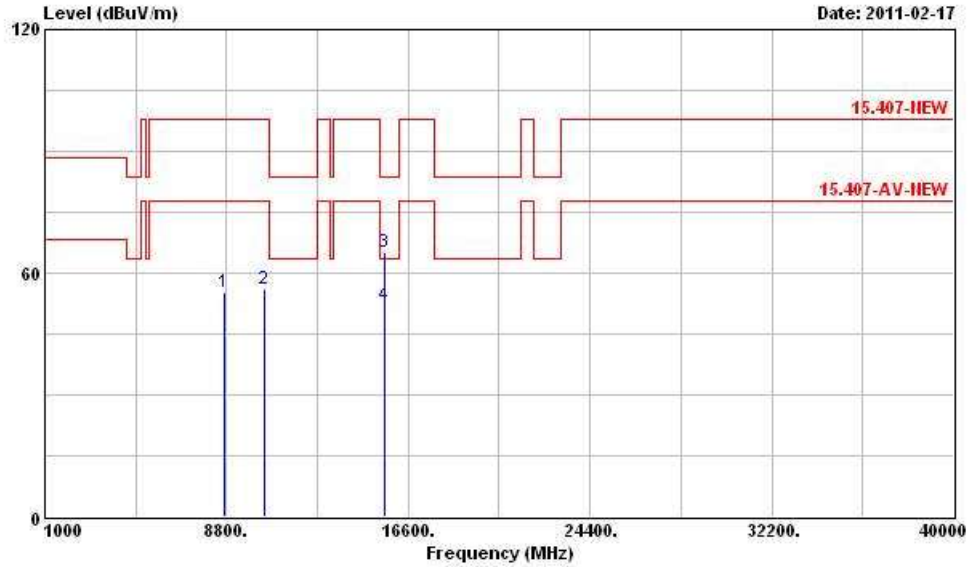
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7104.000	53.96	-43.88	97.84	44.81	37.82	5.61	34.28	Peak
2	10360.000	57.67	-40.17	97.84	45.08	40.02	6.71	34.14	Peak
3	15540.000	65.24	-18.30	83.54	46.82	42.81	8.45	32.84	Peak
4	15540.000	51.90	-11.64	63.54	33.48	42.81	8.45	32.84	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	40	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



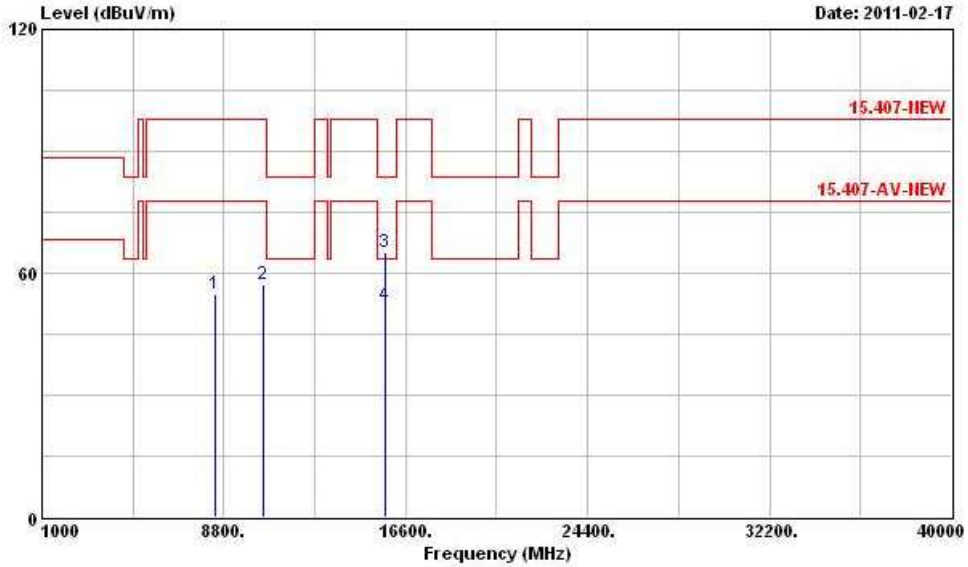
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7108.000	53.45	-44.39	97.84	44.30	37.82	5.61	34.28	Peak
2	10400.000	56.94	-40.90	97.84	44.25	40.04	6.75	34.10	Peak
3	15600.000	65.21	-18.33	83.54	46.86	42.82	8.45	32.92	Peak
4	15600.000	52.56	-10.98	63.54	34.21	42.82	8.45	32.92	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	40	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



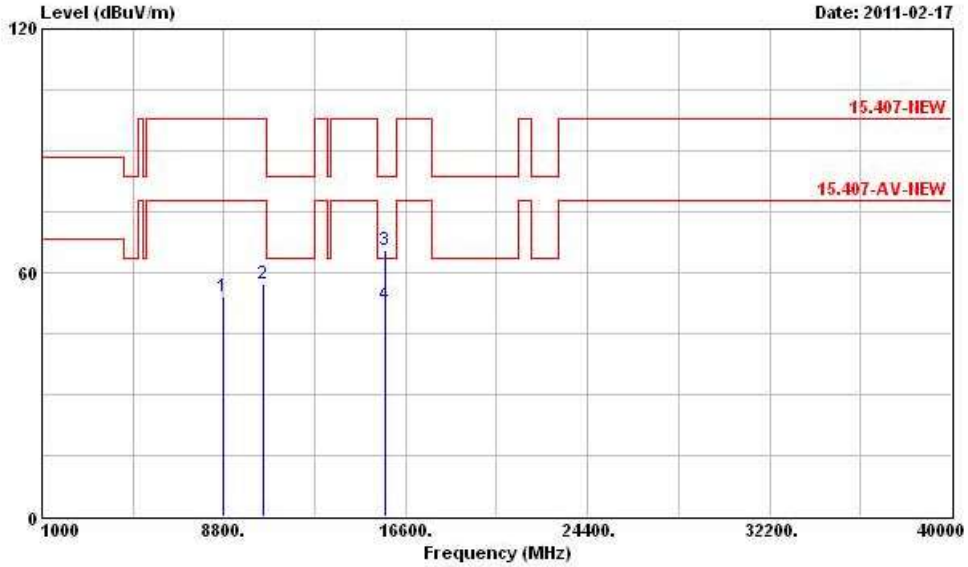
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8724.000	55.08	-42.76	97.84	45.15	38.33	6.04	34.44	Peak
2	10400.000	56.20	-41.64	97.84	43.51	40.04	6.75	34.10	Peak
3	15600.000	65.28	-18.26	83.54	46.93	42.82	8.45	32.92	Peak
4	15600.000	52.25	-11.29	63.54	33.90	42.82	8.45	32.92	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	48	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



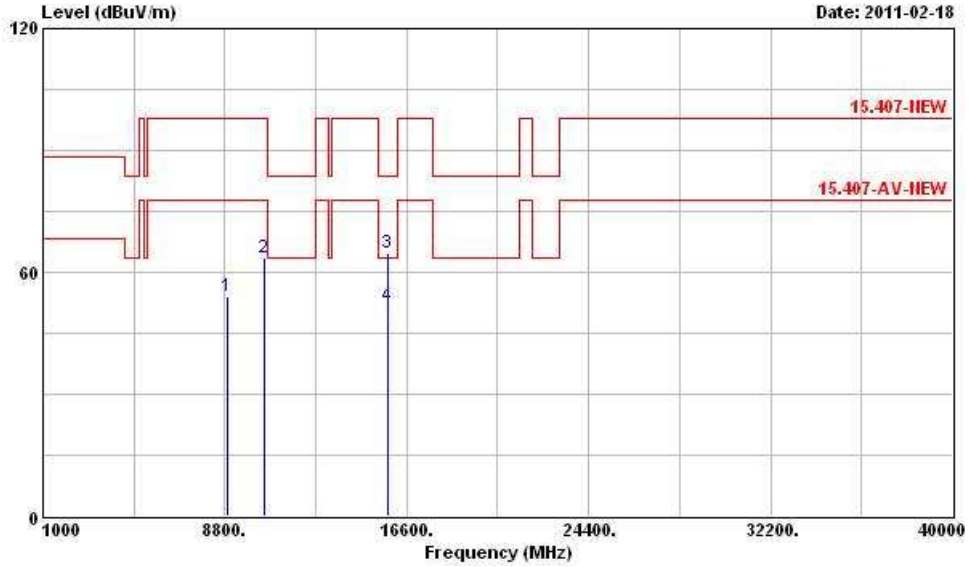
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8446.000	54.99	-22.85	77.84	44.81	38.47	5.93	34.22	PK
2	10480.000	57.30	-40.54	97.84	44.42	40.09	6.82	34.03	Peak
3	15720.000	64.99	-18.55	83.54	46.72	42.84	8.46	33.03	Peak
4	15720.000	52.03	-11.51	63.54	33.76	42.84	8.46	33.03	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	48	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



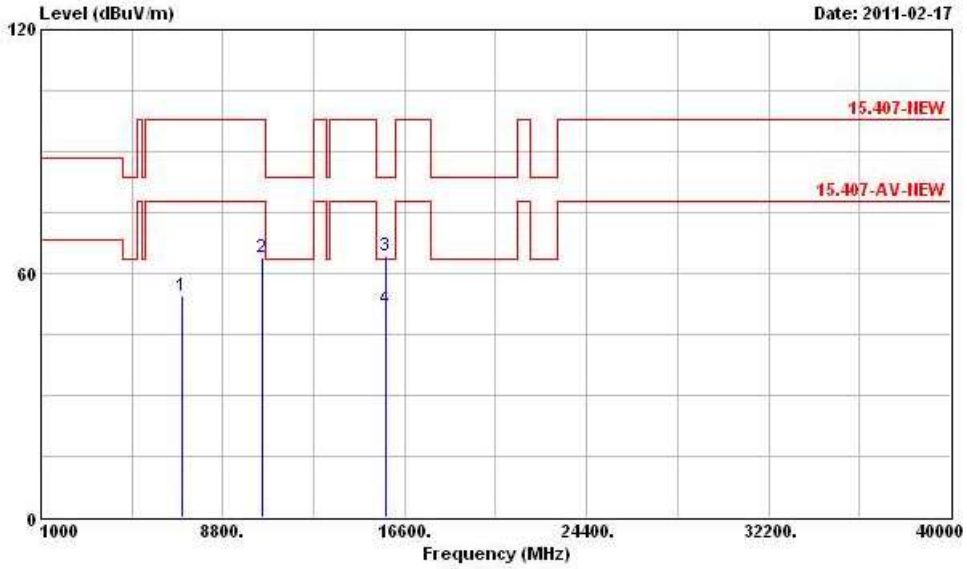
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8760.000	54.09	-43.75	97.84	44.20	38.30	6.06	34.47	Peak
2	10480.000	57.08	-40.76	97.84	44.20	40.09	6.82	34.03	Peak
3	15720.000	65.40	-18.14	83.54	47.13	42.84	8.46	33.03	Peak
4	15720.000	52.04	-11.50	63.54	33.77	42.84	8.46	33.03	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	52	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



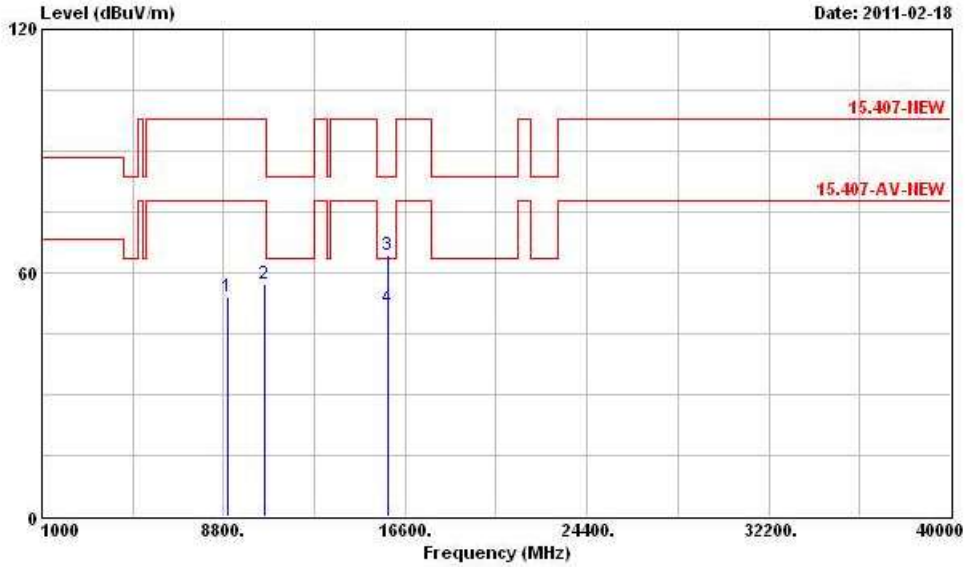
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8932.000	54.27	-43.57	97.84	44.65	38.15	6.13	34.66	Peak
2	10520.000	63.36	-34.48	97.84	50.40	40.11	6.85	34.00	Peak
3	15780.000	64.76	-18.78	83.54	46.55	42.86	8.46	33.11	Peak
4	15780.000	51.90	-11.64	63.54	33.69	42.86	8.46	33.11	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	52	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



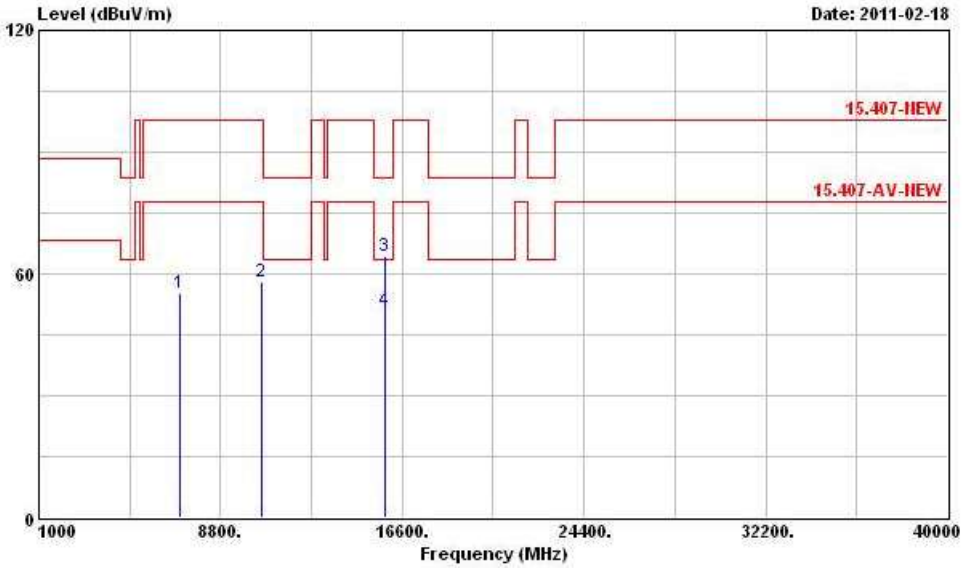
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7050.000	54.47	-43.37	97.84	45.34	37.81	5.60	34.28	Peak
2	10520.000	63.83	-34.01	97.84	50.87	40.11	6.85	34.00	Peak
3	15780.000	64.46	-19.08	83.54	46.25	42.86	8.46	33.11	Peak
4	15780.000	51.27	-12.27	63.54	33.06	42.86	8.46	33.11	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	56	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



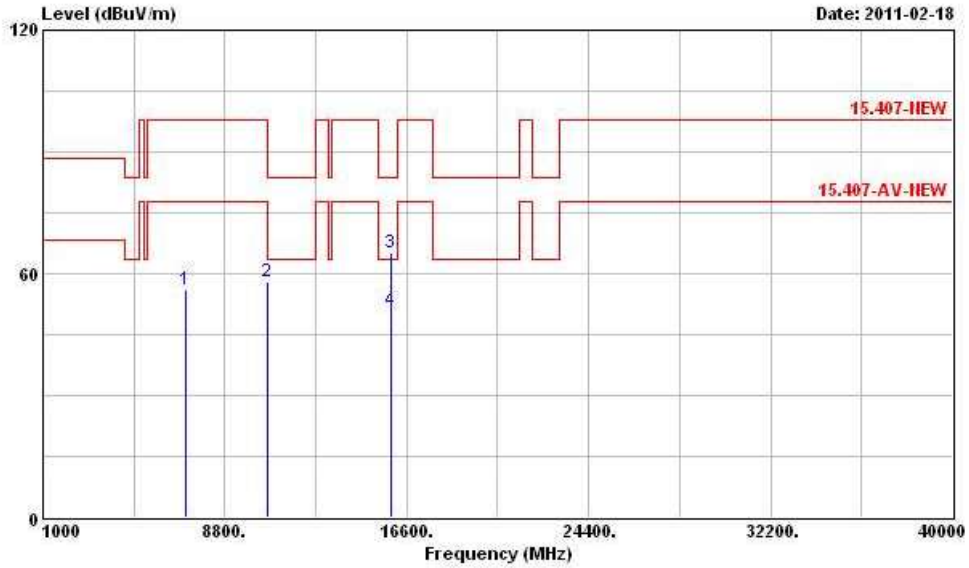
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8958.000	54.12	-43.72	97.84	44.52	38.14	6.14	34.68	Peak
2	10560.000	57.16	-40.68	97.84	44.09	40.13	6.88	33.94	Peak
3	15840.000	64.36	-19.18	83.54	46.19	42.87	8.46	33.16	Peak
4	15840.000	51.27	-12.27	63.54	33.10	42.87	8.46	33.16	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	56	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



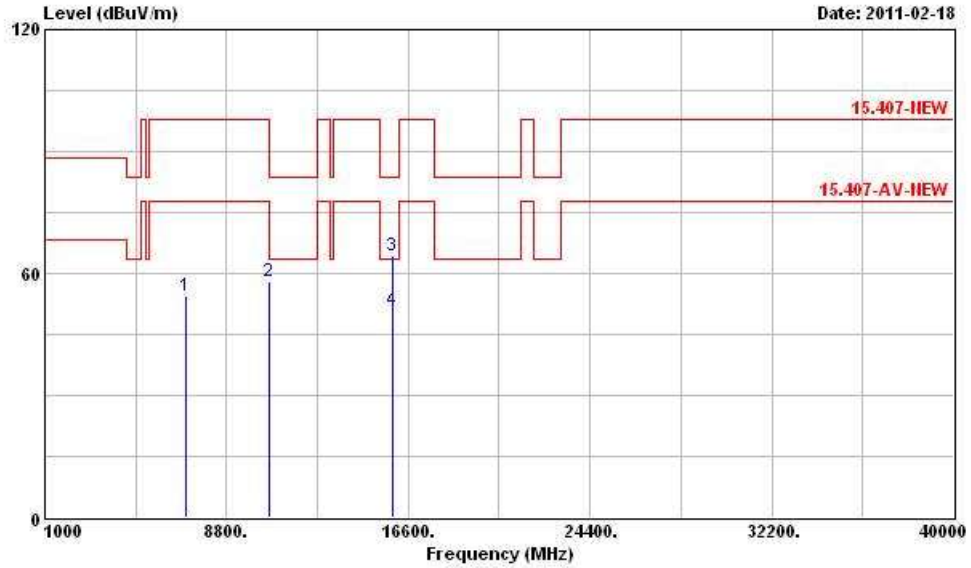
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7032.000	55.18	-42.66	97.84	46.05	37.81	5.60	34.28	Peak
2	10560.000	57.90	-39.94	97.84	44.83	40.13	6.88	33.94	Peak
3	15840.000	64.43	-19.11	83.54	46.26	42.87	8.46	33.16	Peak
4	15840.000	51.01	-12.53	63.54	32.84	42.87	8.46	33.16	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	64	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



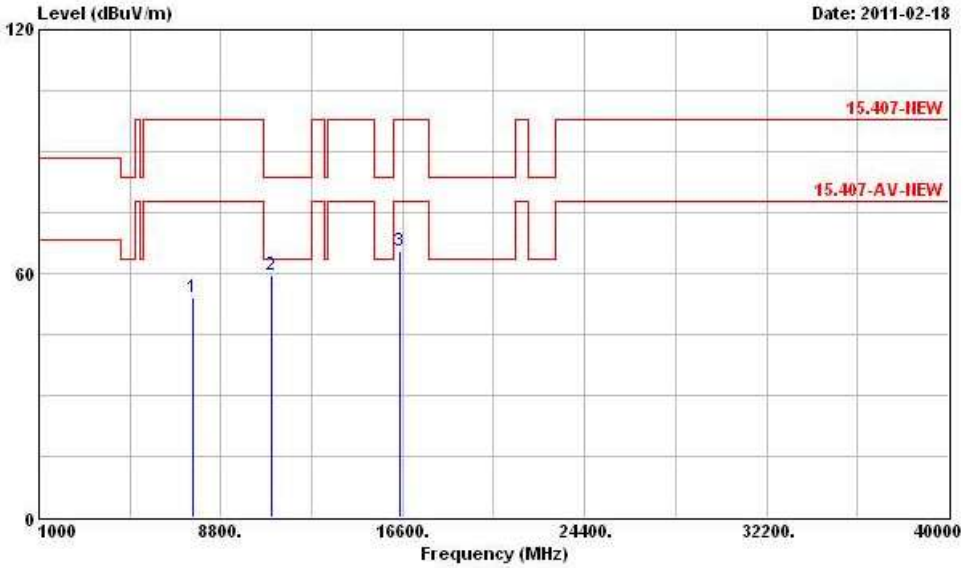
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7092.000	55.87	-41.97	97.84	46.72	37.82	5.61	34.28	Peak
2	10640.000	58.12	-5.42	63.54	44.85	40.18	6.93	33.84	PK
3	15960.000	65.17	-18.37	83.54	47.10	42.89	8.47	33.29	Peak
4	15960.000	51.11	-12.43	63.54	33.04	42.89	8.47	33.29	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	64	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



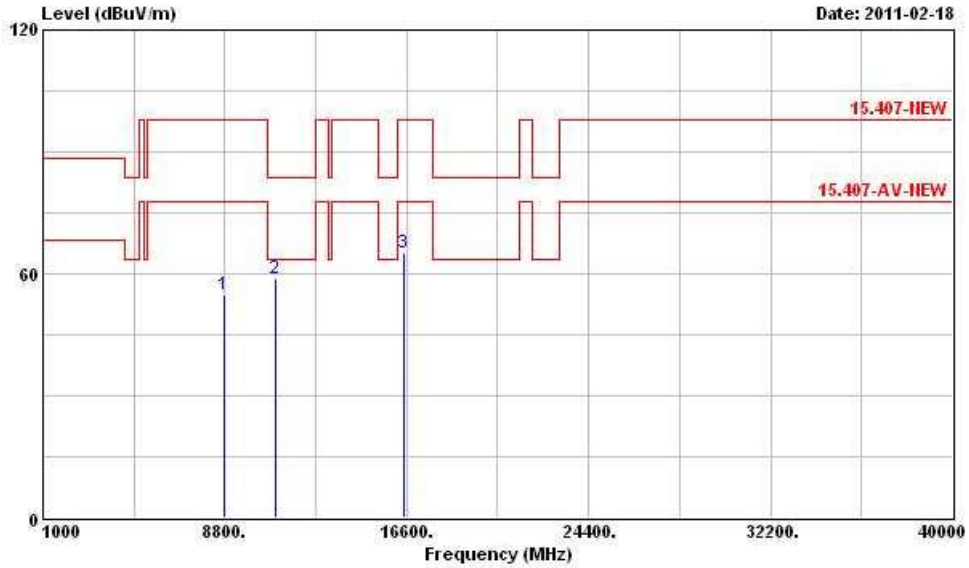
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7086.000	54.37	-43.47	97.84	45.22	37.82	5.61	34.28	Peak
2	10640.000	58.21	-5.33	63.54	44.94	40.18	6.93	33.84	PK
3	15960.000	64.45	-19.09	83.54	46.38	42.89	8.47	33.29	Peak
4	15960.000	51.03	-12.51	63.54	32.96	42.89	8.47	33.29	Average

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	100	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



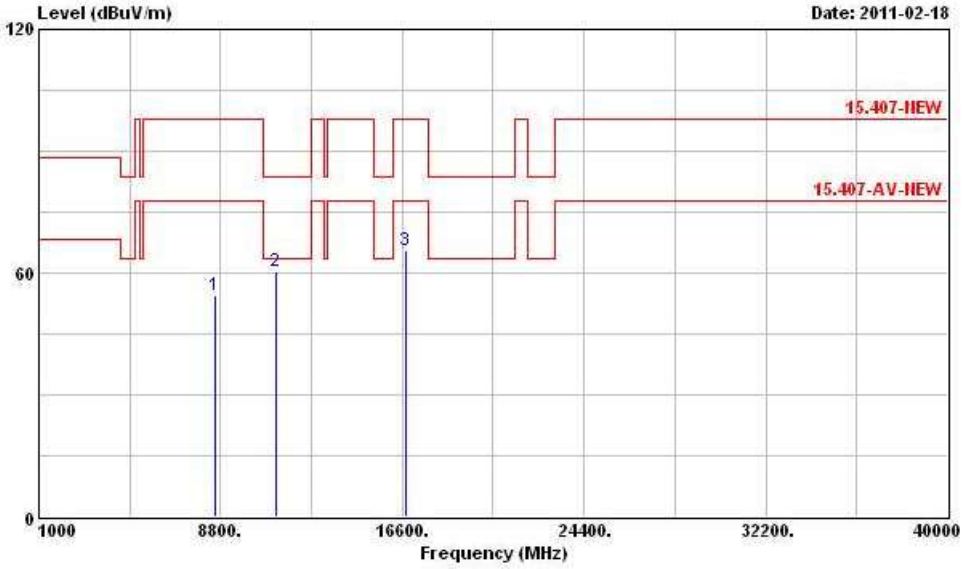
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7620.000	53.93	-23.91	77.84	44.58	37.97	5.69	34.31	PK
2	11000.000	59.46	-4.08	63.54	45.28	40.40	7.17	33.39	PK
3	16500.000	65.41	-32.43	97.84	46.45	43.50	8.24	32.78	Peak

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	100	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



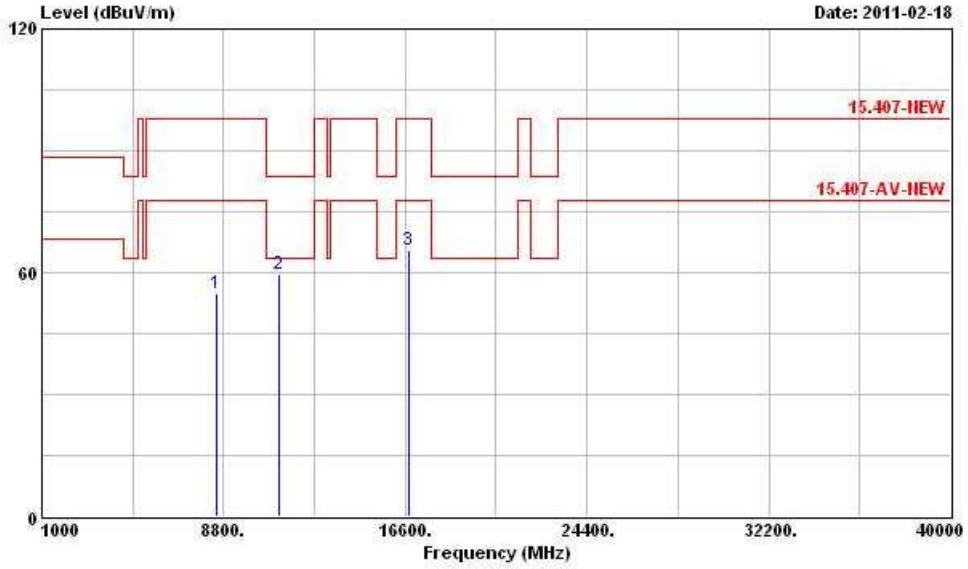
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8800.000	55.04	-42.80	97.84	45.22	38.26	6.08	34.52	Peak
2	11000.000	58.79	-4.75	63.54	44.61	40.40	7.17	33.39	PK
3	16500.000	65.09	-32.75	97.84	46.13	43.50	8.24	32.78	Peak

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	116	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8560.000	54.37	-43.47	97.84	44.21	38.45	5.97	34.26	Peak
2	11160.000	60.43	-3.11	63.54	46.47	40.47	6.96	33.47	PK
3	16740.000	65.41	-32.43	97.84	45.90	43.60	8.47	32.56	Peak

Test Mode :	802.11a	Temperature :	23°C
Test Channel :	116	Relative Humidity :	51%
Test Engineer :	Daniel	Polarization :	Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8520.000	54.84	-43.00	97.84	44.62	38.49	5.96	34.23	Peak
2	11160.000	59.60	-3.94	63.54	45.64	40.47	6.96	33.47	PK
3	16740.000	65.66	-32.18	97.84	46.15	43.60	8.47	32.56	Peak