

FCC RADIO TEST REPORT

according to

47 CFR FCC Part 15 Subpart E § 15.407

Model Name : Wi-Fi 5GHz Access Point
Model No. : TG233
Filing Type : New Application
FCC ID : RSE-TG233
Trade Name : technicolor
Applicant : Technicolor Delivery Technologies Belgium
Prins Boudewijnlaan 47 B-2650 Edegem Belgium

Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a (5150 ~ 5350MHz / 5470 ~ 5725MHz) of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2009, 47 CFR FCC Part 15 Subpart E, KDB 789033 D01 v01r03 and KDB 662911 D01 v02.**

The test equipment used to perform the test is calibrated and traceable to NML/ROC.



SPORTON International Inc.

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

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR3N0114AB	Rev.01	Initial issue of report	Jan. 29, 2014

CERTIFICATE OF COMPLIANCE

according to

47 CFR FCC Part 15 Subpart E § 15.407

Model Name : Wi-Fi 5GHz Access Point

Model No. : TG233

Trade Name : technicolor

**Applicant : Technicolor Delivery Technologies Belgium
Prins Boudewijnlaan 47 B-2650 Edegem Belgium**

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Oct. 30, 2013 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.



Sam Chen

SPORTON International Inc.

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

1 SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart E				
Part	Rule Section	Description of Test	Result	Under Limit
4.1	15.207	AC Power Line Conducted Emissions	Complies	11.59 dB
4.2	15.407(a)	Emission bandwidth Measurement	Complies	-
4.3	15.407(a)	Maximum Conducted Output Power	Complies	0.11 dB
4.4	15.407(a)	Power Spectral Density	Complies	0.1 dB
4.5	15.407(a)	Peak Excursion	Complies	2.73 dB
4.6	15.407(b)	Radiated Emissions	Complies	4.38 dB
4.7	15.407(b)	Band Edge Emissions	Complies	0.22 dB
4.8	15.407(g)	Frequency Stability	Complies	-
4.9	15.203	Antenna Requirements	Complies	-

1.1 Information provided by the manufacturer

Model Name: Wi-Fi 5GHz Access Point

Model No.: TG233

Trade Name: technicolor

Power Supply: Switching-Type, 12Vdc, 1A, Manufacturer: Huntkey, Model: HKA01212010-2G
DSL37094480

AC Power Cord: Wall-mount, 2pin

Hardware Version: PEM2

Interface Availability

Interface Model Name	DC 12Vdc 1A	Ethernet 10/100/ 1000 Mbps	WLAN IEEE 802.11n 5G (20MHz / 40MHz)
TG233	•	•	•

• : Equipped

○ : Not Equipped

1.2 Application of harmonized standard

US Standard: 47 CFR FCC Part 15 Subpart E § 15.407

ANSI C63.10-2009

KDB662911 D01 Multiple Transmitter Output v02, 05/28/2013

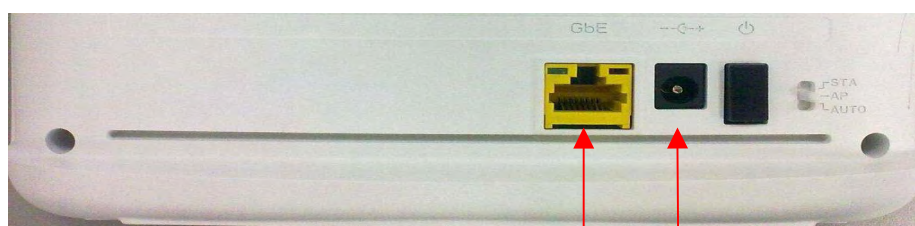
KDB789033 D01 General UNII Test Procedures v01r03, 04/08/2013

1.3 Cabling Attached to the Equipment

Table 1- Cable and Interconnection

Interface	Cable type	Cable length delivered with the modem	"Real life" Cable length that can be attached to this type of interface	Cable length to be used for testing	Internal / external connection
Eth1	UTP Cat 5	2 meter	> 10 meter	Two 10 meter cables	Internal
AC power	-	-	-	-	External

1.4 Panel Drawing



Eth1 Power

2 GENERAL INFORMATION

2.1 Product Details

Items	Description			
Product	Stand alone			
Model No.	TG233			
FCC ID	RSE- TG233			
Power Type	From power adapter			
EUT Stage	☒	Product Unit	☐	Pre-Sample
Antenna Type	Please see Section 2.3			
Product Type	IEEE 802.11a: WLAN (4TX, 4RX) IEEE 802.11n (20MHz): WLAN(4TX, 4RX) IEEE 802.11n (40MHz): WLAN(4TX, 4RX)			
Nominal Chennel Bandwidth	20MHz / 40MHz			
Modulation	802.11a: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11n: See the below table.			
Data Rate (Mbps)	11a mode:OFDM (6/9/12/18/24/36/48/54) 11n(20MHz) mode:(MCS0~MCS31); 11n(40MHz)mode:(MCS0~MCS31)			
Operating Band, Maximum Conducted Output Power	5150~5250MHz	☒	IEEE 802.11a: 16.73 dBm	
		☒	IEEE 802.11n (20MHz): 16.89 dBm	
		☒	IEEE 802.11n (40MHz): 16.88 dBm	
	5250~5350MHz	☒	IEEE 802.11a: 23.17 dBm	
		☒	IEEE 802.11n (20MHz): 23.69 dBm	
		☒	IEEE 802.11n (40MHz): 23.44 dBm	
	5470~ 5725 MHz	☒	IEEE 802.11a: 23.23 dBm	
		☒	IEEE 802.11n (20MHz): 23.28 dBm	
		☒	IEEE 802.11n (40MHz): 23.16 dBm	
TPC Function	☒	With TPC	☐	Without TPC
Beam forming Function	☐	With Beam forming	☒	Without Beam forming, but it has Total Max Composition Gain
DFS Operating Mode(s)	☒	Master	☒	Slave without radar detection
DFS Function	☒	5250~5350MHz		
	☒	5470~5725MHz		
	☐	5600~5650MHz		
User Access Restrictions	☒	DFS controls (hardware or software) related to radar detection are NOT accessible to the user.		
Software Version	v35.1.0.30			
Associated Devices	Power supply x 1			

2.2 Accessories

Power	Brand	Model	Rating
Switching-Type Power Adapter	Huntkey	HKA01212010-2G	Input:100-240V~0.5A 50/60Hz Output: 12.0V, 1.0A

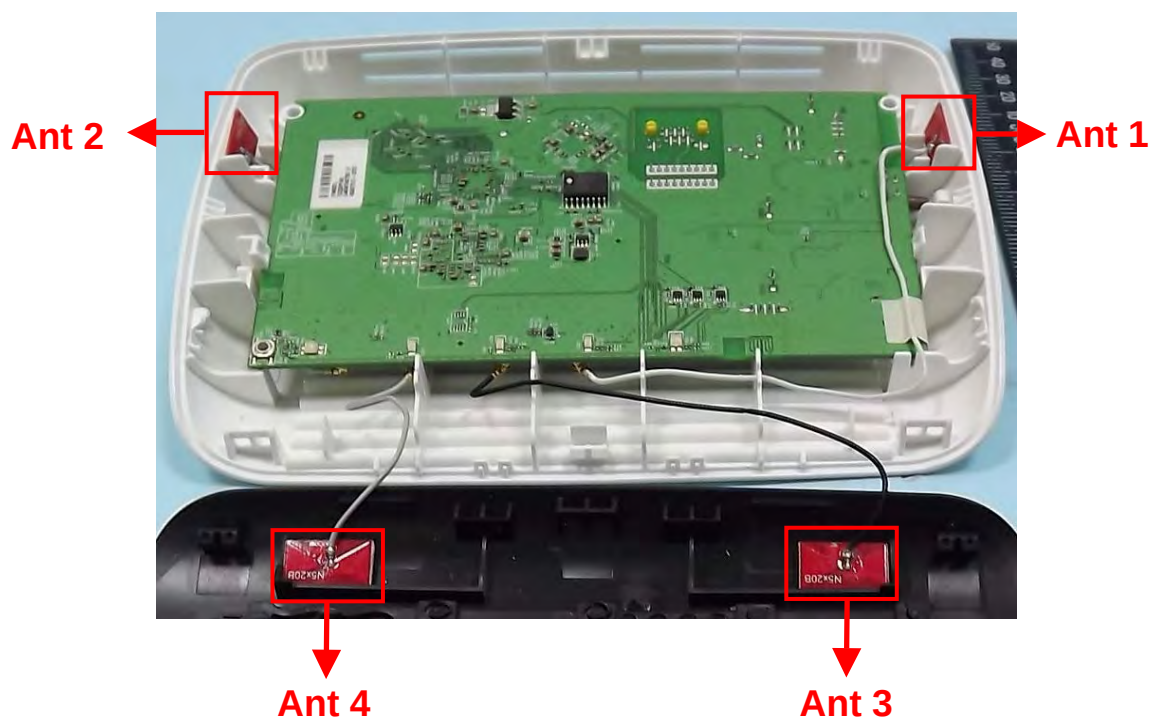
2.3 Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector
1	Airgain	N5X20B-T-PK1-W170UR2	PCB Antenna	I-PEX
2	Airgain	N5X20B-T-PK1-G85UR2	PCB Antenna	I-PEX
3	Airgain	N5X20B-T-PK1-G85UR2	PCB Antenna	I-PEX
4	Airgain	N5X20B-T-PK1-B130UR2	PCB Antenna	I-PEX

Antenna & Bandwidth

Antenna	4 steam (TX)	
Bandwidth Mode	20 MHz	40 MHz
802.11a	V	X
802.11n	V	V

Bandwidth	Total Max Composition Gain (dBi) for Band1 (5150MHz~5250MHz)						
	Ant. 1 + 2 + 3 + 4						
	5180MHz	5190MHz	5200MHz	5230MHz	5240MHz		
20MHz	-0.60	-	-0.83	-	-0.44		
40MHz	-	-0.80	-	-0.83	-		
Bandwidth	Total Max Composition Gain (dBi) for Band2 (5250MHz~5350MHz)						
	Ant. 1 + 2 + 3 + 4						
	5260MHz	5270MHz	5300MHz	5310MHz	5320MHz		
20MHz	-0.62	-	-0.37	-	-0.35		
40MHz	-	-0.63	-	-0.37	-		
Bandwidth	Total Max Composition Gain (dBi) for Band3 (5470MHz~5725MHz)						
	Ant. 1 + 2 + 3 + 4						
	5500MHz	5510MHz	5550MHz	5580MHz	5670MHz	5680MHz	5700MHz
20MHz	0.03	-	-	0.29	-	0.85	0.58
40MHz	-	-0.30	-0.02	-	0.79	-	-



IEEE 802.11n Data Rate spec

Standard	INDEX	Data Rate (Mbps)		Standard	INDEX	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11n 20MHz 1 stream on 4 antennas	MCS0	6.5	7.2	11n 40MHz 1 stream on 4 antennas	MCS0	13.5	15
	MCS1	13	14.4		MCS1	27	30
	MCS2	19.5	21.7		MCS2	40.5	45
	MCS3	26	28.9		MCS3	54	60
	MCS4	39	43.3		MCS4	81	90
	MCS5	52	57.8		MCS5	108	120
	MCS6	58.5	65		MCS6	121.5	135
11n 20MHz 2 stream on 4 antennas	MCS7	65	72.2	11n 40MHz 2 stream on 4 antennas	MCS7	135	150
	MCS8	13	14.4		MCS8	27	30
	MCS9	26	28.9		MCS9	54	60
	MCS10	39	43.3		MCS10	81	90
	MCS11	52	57.8		MCS11	108	120
	MCS12	78	86.7		MCS12	162	180
	MCS13	104	115.6		MCS13	216	240
11n 20MHz 3 stream on 4 antennas	MCS14	117	130	11n 40MHz 3 stream on 4 antennas	MCS14	243	270
	MCS15	130	144.4		MCS15	270	300
	MCS16	19.5	21.7		MCS16	40.5	45
	MCS17	39	43.3		MCS17	81	90
	MCS18	58.5	65		MCS18	121.5	135
	MCS19	78	86.7		MCS19	162	180
	MCS20	117	130		MCS20	243	270
11n 20MHz 4 stream on 4 antennas	MCS21	156	173.3	11n 40MHz 4 stream on 4 antennas	MCS21	324	360
	MCS22	175.5	195		MCS22	364.5	405
	MCS23	195	216.7		MCS23	405	450
	MCS24	26	28.9		MCS24	54	60
	MCS25	52	57.8		MCS25	108	120
	MCS26	78	86.7		MCS26	162	180
	MCS27	104	115.6		MCS27	216	240
11n 20MHz 4 stream on 4 antennas	MCS28	156	173.3	11n 40MHz 4 stream on 4 antennas	MCS28	324	360
	MCS29	208	231.1		MCS29	432	480
	MCS30	234	260		MCS30	486	540
	MCS31	260	288.9		MCS31	540	600

2.4 Transmit Operating Modes

Transmit Operating Mode			Transmit Multiple Antennas	
■	802.11a	Operating mode (multiple antenna, without beam forming, with Total Max Composition Gain, with TPC for Band2 & Band 3)	■	4TX only
	802.11n 20MHz			
	802.11n 40MHz			

Note1: For IEEE802.11n, MCS0~MCS31: 4TX only

2.5 Table for Carrier Frequencies

11a and 11n(Nominal Channel Bandwidth 20MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	36	5180 MHz	44	5220 MHz
	40	5200 MHz	48	5240 MHz
5250~5350 MHz Band 2	52	5260 MHz	60	5300 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz Band 3	100	5500 MHz	116	5580 MHz
	104	5520 MHz	132	5660 MHz
	108	5540 MHz	136	5680 MHz
	112	5560 MHz	140	5700 MHz

Note: Master mode doesn't support 5700MHz, slave without radar detection mode supports 5700MHz.

11n(Nominal Channel Bandwidth 40MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	38	5190 MHz	46	5230 MHz
5250~5350 MHz Band 2	54	5270 MHz	62	5310 MHz
5470~5725 MHz Band 3	102	5510 MHz	134	5670 MHz
	110	5550 MHz	-	-

2.6 Table for Test Modes

Investigation has been done on all the possible configurations for searching the worst cases.

The following table is a list of the test modes shown in this test report.

Test Items	Mode	Note	Channel	Data Rate	Antenna
AC Power Line Conducted Emissions	CTX	-	-	-	-
Emission bandwidth	11a	OFDM/BPSK	36/40/48 52/60/64 100/116/136/140	6Mbps	1+2+3+4
	11n(20MHz)		36/40/48 52/60/64 100/116/136/140	MCS0	1+2+3+4
	11n(40MHz)		38/46 54/62 102/110/134	MCS0	1+2+3+4
Maximum Conducted Output Power (Average)	11a	OFDM/BPSK	36/40/48 52/60/64 100/116/136/140	6Mbps	1+2+3+4
	11n(20MHz)		36/40/48 52/60/64 100/116/136/140	MCS0	1+2+3+4
	11n(40MHz)		38/46 54/62 102/110/134	MCS0	1+2+3+4
Power Spectral Density	11a	OFDM/BPSK	36/40/48 52/60/64 100/116/136/140	6Mbps	1+2+3+4
	11n(20MHz)		36/40/48 52/60/64 100/116/136/140	MCS0	1+2+3+4
	11n(40MHz)		38/46 54/62 102/110/134	MCS0	1+2+3+4
Peak Power Excursion	11a	OFDM/BPSK	36/40/48 52/60/64 100/116/136/140	6Mbps	1+2+3+4
	11n(20MHz)		36/40/48 52/60/64 100/116/136/140	MCS0	1+2+3+4
	11n(40MHz)		38/46 54/62 102/110/134	MCS0	1+2+3+4

Unwanted emissions in the restricted bands Above 1GHz (Radiated)	11a	OFDM/BPSK	36/40/48 52/60/64 100/116/136/140	6Mbps	1+2+3+4
	11n(20MHz)		36/40/48 52/60/64 100/116/136/140	MCS0	1+2+3+4
	11n(40MHz)		38/46 54/62 102/110/134	MCS0	1+2+3+4
Unwanted Emission out of the restricted bands Above 1GHz (Radiated)	11a	OFDM/BPSK	36/40/48 52/60/64 100/116/136/140	6Mbps	1+2+3+4
	11n(20MHz)		36/40/48 52/60/64 100/116/136/140	MCS0	1+2+3+4
	11n(40MHz)		38/46 54/62 102/110/134	MCS0	1+2+3+4
Radiated Emissions Below 1GHz(Radiated)	CTX	-	-	-	-
Frequency Stability	-	un-modulation	40/60/100	-	-

2.7 Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH01-CB	SAC	Hsin Chu	262045	IC 4086D	-
CO01-CB	Conduction	Hsin Chu	262045	IC 4086D	-
TH01-CB	OVEN Room	Hsin Chu	-	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC).

2.8 Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E6430	DoC

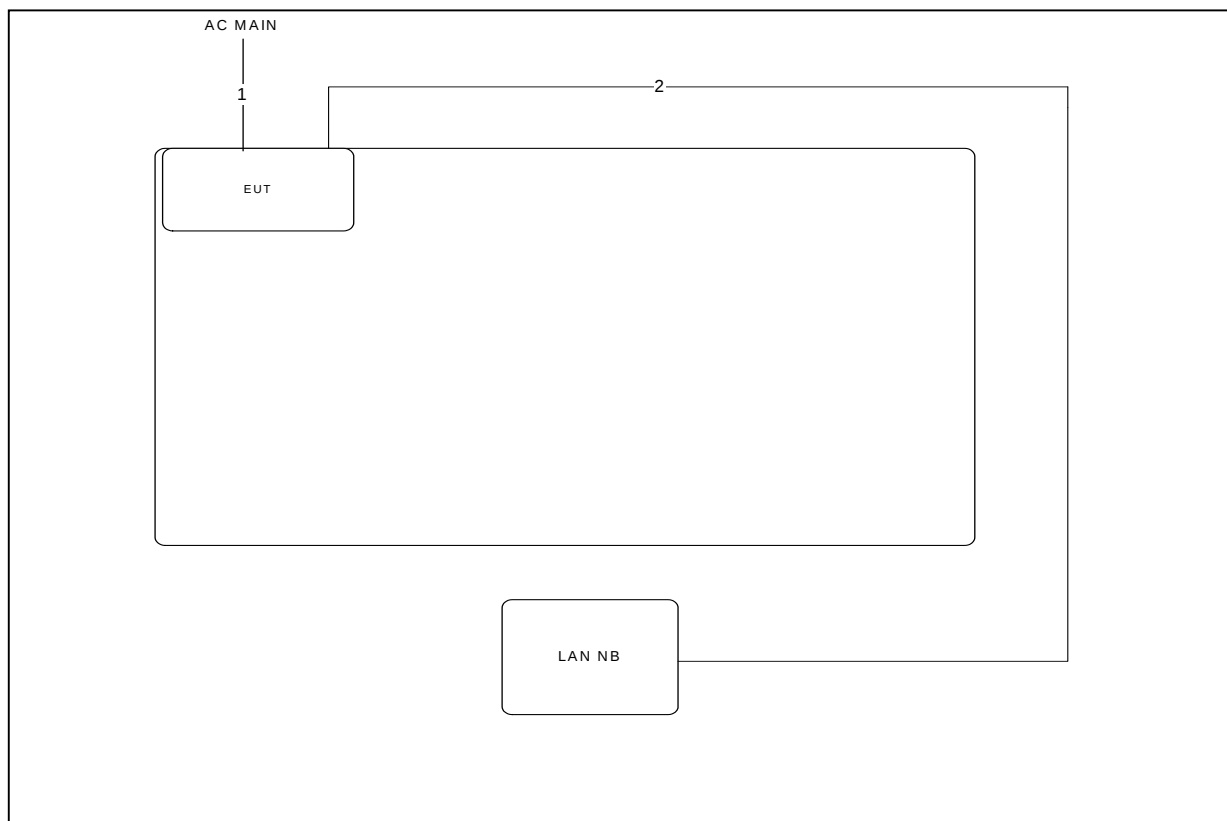
2.9 Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. 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.

The Power Setting Parameter					
Power Level		1			
Test Software Version		DOS			
Worst Modulation Mode		Number of Transmit Chains (NTX)	Frequency (MHz)	Power Setting	Data Rate / MCS
Ant. 1+2+3+4	802.11a	4	5180	10	6Mbps
Ant. 1+2+3+4	802.11a	4	5200	10	6Mbps
Ant. 1+2+3+4	802.11a	4	5240	10	6Mbps
Ant. 1+2+3+4	802.11a	4	5260	17	6Mbps
Ant. 1+2+3+4	802.11a	4	5300	16	6Mbps
Ant. 1+2+3+4	802.11a	4	5320	16	6Mbps
Ant. 1+2+3+4	802.11a	4	5500	13	6Mbps
Ant. 1+2+3+4	802.11a	4	5580	17	6Mbps
Ant. 1+2+3+4	802.11a	4	5680	17	6Mbps
Ant. 1+2+3+4	802.11a	4	5700	17	6Mbps
Ant. 1+2+3+4	802.11n 20MHz	4	5180	10	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5200	10	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5240	10	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5260	17	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5300	16	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5320	16	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5500	13	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5580	17	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5680	17	MCS0
Ant. 1+2+3+4	802.11n 20MHz	4	5700	17	MCS0
Ant. 1+2+3+4	802.11n 40MHz	4	5190	10	MCS0
Ant. 1+2+3+4	802.11n 40MHz	4	5230	10	MCS0
Ant. 1+2+3+4	802.11n 40MHz	4	5270	17	MCS0
Ant. 1+2+3+4	802.11n 40MHz	4	5310	16	MCS0
Ant. 1+2+3+4	802.11n 40MHz	4	5510	13	MCS0
Ant. 1+2+3+4	802.11n 40MHz	4	5550	17	MCS0
Ant. 1+2+3+4	802.11n 40MHz	4	5670	17	MCS0

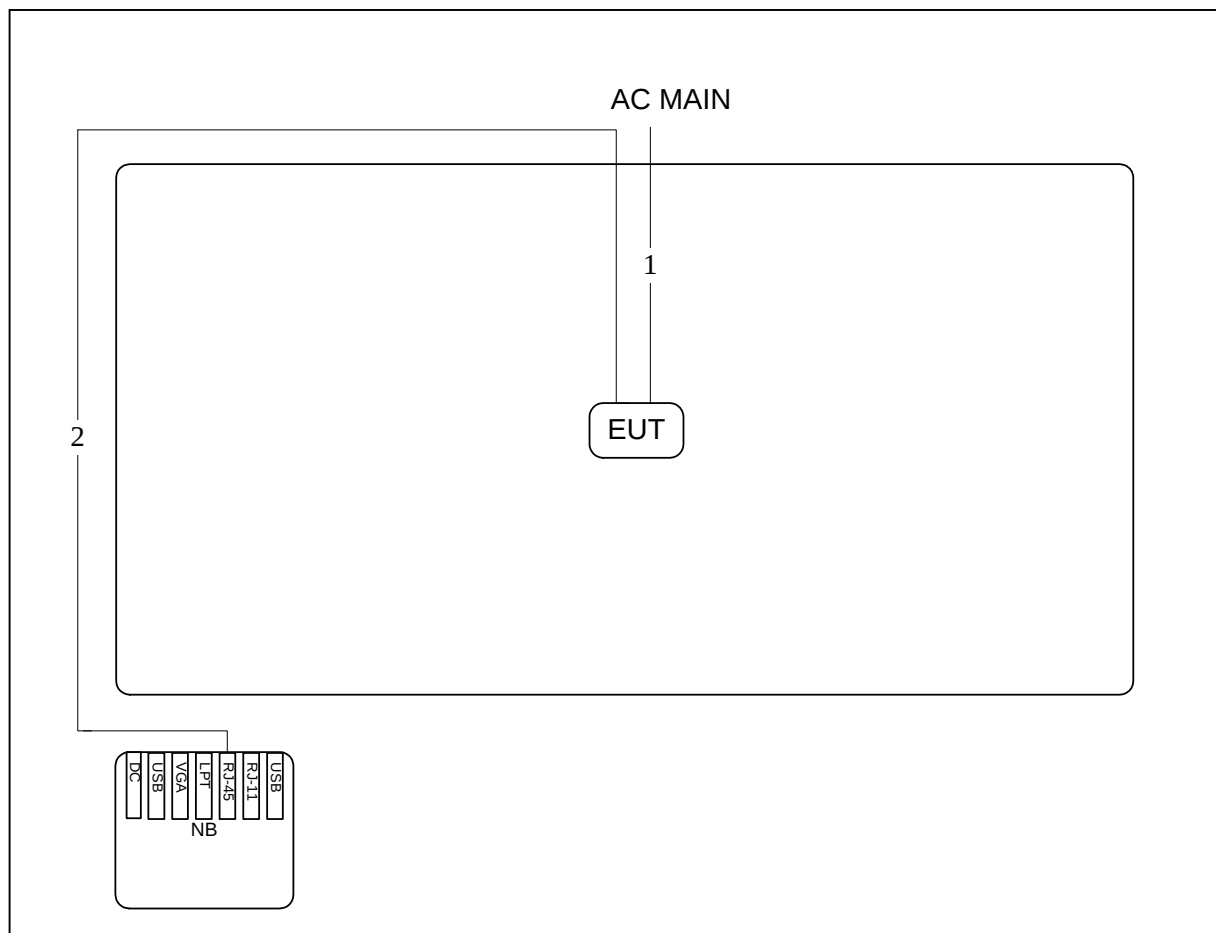
2.10 Test Configuration

2.10.1 AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	1.5M
2	RJ-45 cable	No	10M

2.10.2 Radiation Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	1.5M
2	RJ-45 cable	No	10M

3 TEST RESULT

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit

For this product which is designed to be connected to the 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 below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

3.1.2 Measuring Instruments and Setting

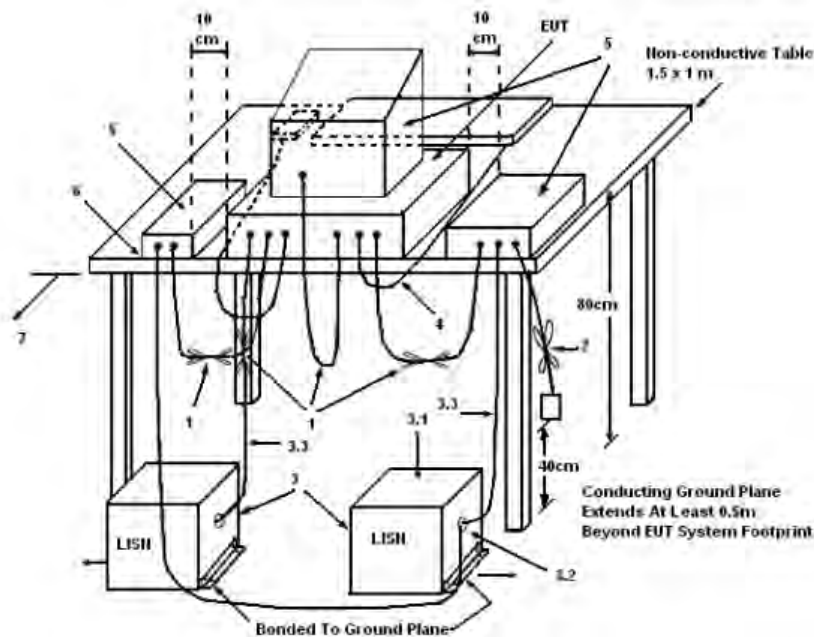
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.3 Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

3.1.4 Test Setup Layout



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.
4. All other equipment powered from additional LISN(s).
5. Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
6. LISN at least 80 cm from nearest part of EUT chassis.
7. Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
8. Non-EUT components of EUT system being tested.
9. Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
10. Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

3.1.5 Test Deviation

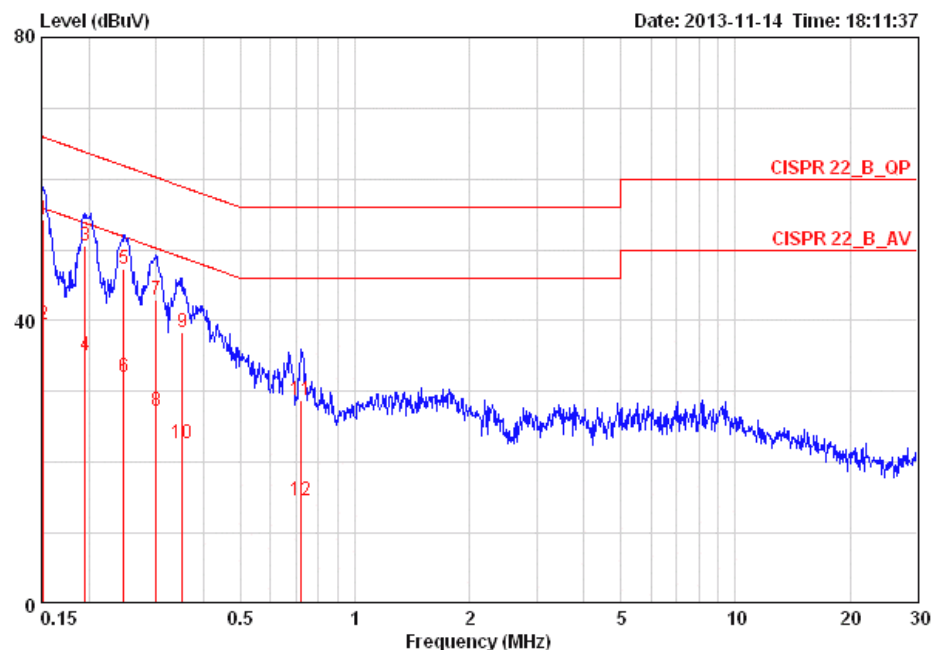
There is no deviation with the original standard.

3.1.6 EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

3.1.7 Results of AC Power Line Conducted Emissions Measurement

Temperature	25°C	Humidity	58%
Test Engineer	Da Deng	Phase	Line
Configuration	CTX		



	Freq	Level	Over	Limit	Read	LISN	Cable		
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Pol/Phase	Remark
			dB	dBuV	dBuV	dB	dB		
1	0.15160	54.32	-11.59	65.91	53.98	0.16	0.18	LINE	QP
2	0.15160	39.54	-16.37	55.91	39.20	0.16	0.18	LINE	AVERAGE
3	0.19550	50.64	-13.16	63.80	50.29	0.15	0.20	LINE	QP
4	0.19550	35.00	-18.80	53.80	34.65	0.15	0.20	LINE	AVERAGE
5	0.24682	47.24	-14.62	61.86	46.89	0.15	0.20	LINE	QP
6	0.24682	32.12	-19.74	51.86	31.77	0.15	0.20	LINE	AVERAGE
7	0.30028	42.87	-17.37	60.24	42.52	0.15	0.20	LINE	QP
8	0.30028	27.14	-23.10	50.24	26.79	0.15	0.20	LINE	AVERAGE
9	0.35201	38.35	-20.56	58.91	38.00	0.15	0.20	LINE	QP
10	0.35201	22.70	-26.21	48.91	22.35	0.15	0.20	LINE	AVERAGE
11	0.72360	28.78	-27.22	56.00	28.42	0.16	0.20	LINE	QP
12	0.72360	14.55	-31.45	46.00	14.19	0.16	0.20	LINE	AVERAGE

Note 1: The test was passed at the minimum margin that marked by the frame in the following data

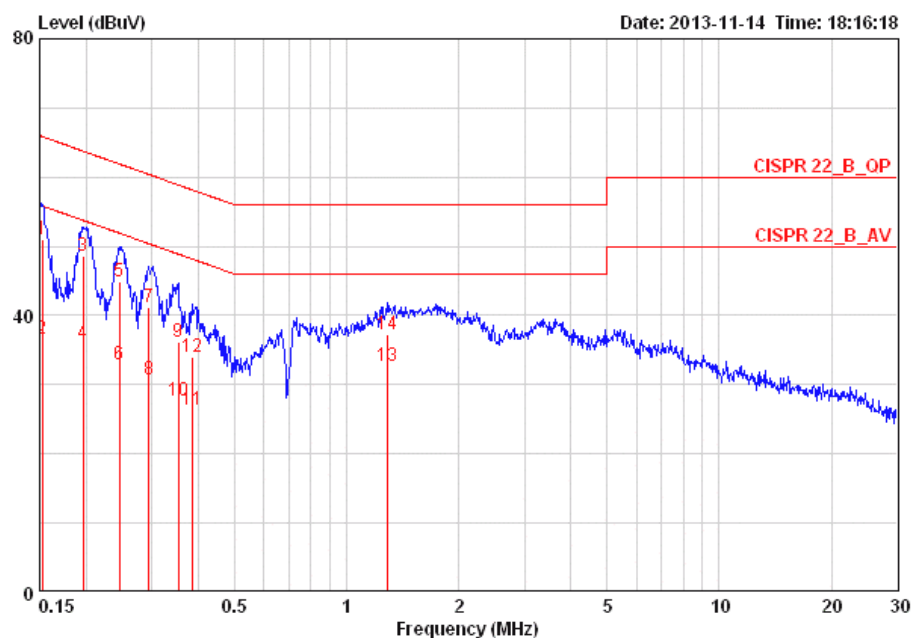
Note 2: The emission levels of other frequencies were very low against the limit.

Note 3: Q.P. and AV. are abbreviations of quasi-peak and average individually.

Note 4: Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level

Note 5: Over Limit value = level - Limit value

Temperature	25°C	Humidity	58%
Test Engineer	Da Deng	Phase	Neutral
Configuration	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.15240	50.97	-14.90	65.87	50.71	0.08	0.18	NEUTRAL	QP
2	0.15240	36.52	-19.35	55.87	36.26	0.08	0.18	NEUTRAL	AVERAGE
3	0.19654	48.71	-15.05	63.76	48.43	0.08	0.20	NEUTRAL	QP
4	0.19654	35.91	-17.85	53.76	35.63	0.08	0.20	NEUTRAL	AVERAGE
5	0.24552	44.90	-17.01	61.91	44.62	0.08	0.20	NEUTRAL	QP
6	0.24552	32.95	-18.96	51.91	32.67	0.08	0.20	NEUTRAL	AVERAGE
7	0.29398	41.19	-19.22	60.41	40.91	0.08	0.20	NEUTRAL	QP
8	0.29398	30.69	-19.72	50.41	30.41	0.08	0.20	NEUTRAL	AVERAGE
9	0.35388	36.29	-22.58	58.87	36.01	0.08	0.20	NEUTRAL	QP
10	0.35388	27.65	-21.22	48.87	27.37	0.08	0.20	NEUTRAL	AVERAGE
11	0.38724	26.45	-21.67	48.12	26.17	0.08	0.20	NEUTRAL	AVERAGE
12	0.38724	34.03	-24.09	58.12	33.75	0.08	0.20	NEUTRAL	QP
13	1.282	32.65	-13.35	46.00	32.34	0.10	0.21	NEUTRAL	AVERAGE
14	1.282	37.31	-18.69	56.00	37.00	0.10	0.21	NEUTRAL	QP

Note 1: The test was passed at the minimum margin that marked by the frame in the following data

Note 2: The emission levels of other frequencies were very low against the limit.

Note 3: Q.P. and AV. are abbreviations of quasi-peak and average individually.

Note 4: Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level

Note 5: Over Limit value = level - Limit value

3.2 Emission bandwidth Measurement

3.2.1 Limit

No restriction limits

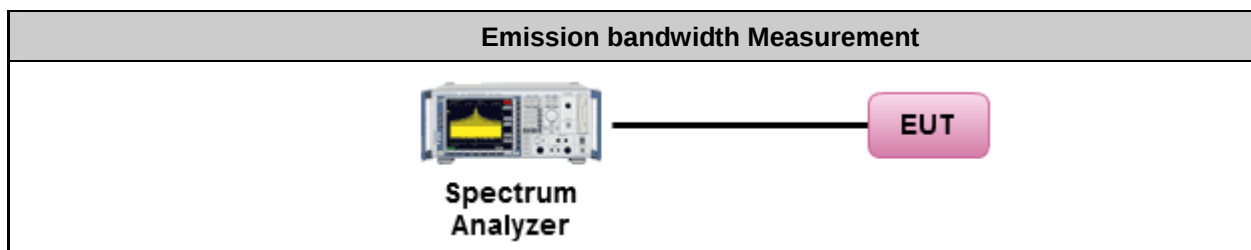
3.2.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

26dB Bandwidth	
Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto
99% Occupied Bandwidth	
Spectrum Parameters	Setting
Span	1.5 times to 5.0 times the OBW
RBW	1 % to 5 % of the OBW
VBW	$\geq 3 \times \text{RBW}$
Detector	Peak
Trace	Max Hold

3.2.3 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with Measurement of Digital Transmission Systems Operating under KDB789033 D01 General UNII Test Procedures v01r03, in section "Emission bandwidth" , 04/08/2013
3. When measuring Emission bandwidth with multiple antenna systems, add every result of the values by mathematic formula.

3.2.4 Test Setup Layout**3.2.5 Test Deviation**

There are no deviation with the original standard.

3.2.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.2.7 Test Result for Emission bandwidth

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11a
Duty Cycle	99.26%	Duty Factor	0.032

Configuration IEEE 802.11a

<6Mbps, Ant 1>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	25.12	17.12	6Mbps
40	5200 MHz	25.44	17.12	6Mbps
48	5240 MHz	25.44	17.12	6Mbps
52	5260 MHz	24.96	17.28	6Mbps
60	5300 MHz	25.28	17.28	6Mbps
64	5320 MHz	24.96	17.12	6Mbps
100	5500 MHz	25.60	17.28	6Mbps
116	5580 MHz	25.44	17.28	6Mbps
136	5680 MHz	25.60	17.28	6Mbps
140	5700 MHz	25.60	17.28	6Mbps

<6Mbps, Ant 2>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	26.24	17.44	6Mbps
40	5200 MHz	27.36	17.44	6Mbps
48	5240 MHz	26.40	17.44	6Mbps
52	5260 MHz	26.08	17.44	6Mbps
60	5300 MHz	26.24	17.44	6Mbps
64	5320 MHz	25.44	17.44	6Mbps
100	5500 MHz	27.20	17.28	6Mbps
116	5580 MHz	26.08	17.28	6Mbps
136	5680 MHz	25.92	17.44	6Mbps
140	5700 MHz	25.76	17.44	6Mbps

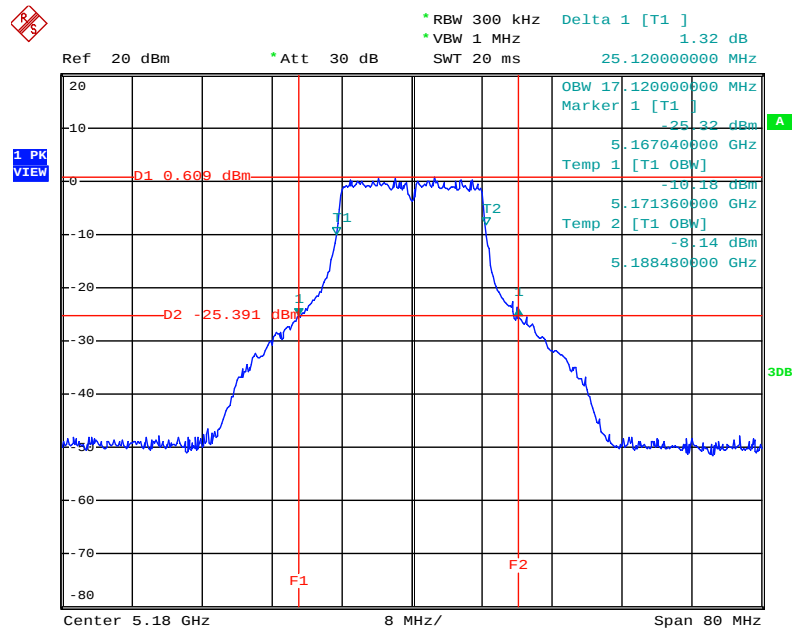
<6Mbps, Ant 3>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	24.96	17.12	6Mbps
40	5200 MHz	24.96	17.28	6Mbps
48	5240 MHz	24.96	17.28	6Mbps
52	5260 MHz	25.28	17.28	6Mbps
60	5300 MHz	24.96	17.28	6Mbps
64	5320 MHz	25.12	17.28	6Mbps
100	5500 MHz	24.96	17.44	6Mbps
116	5580 MHz	25.12	17.28	6Mbps
136	5680 MHz	25.44	17.28	6Mbps
140	5700 MHz	25.60	17.28	6Mbps

<6Mbps, Ant 4>

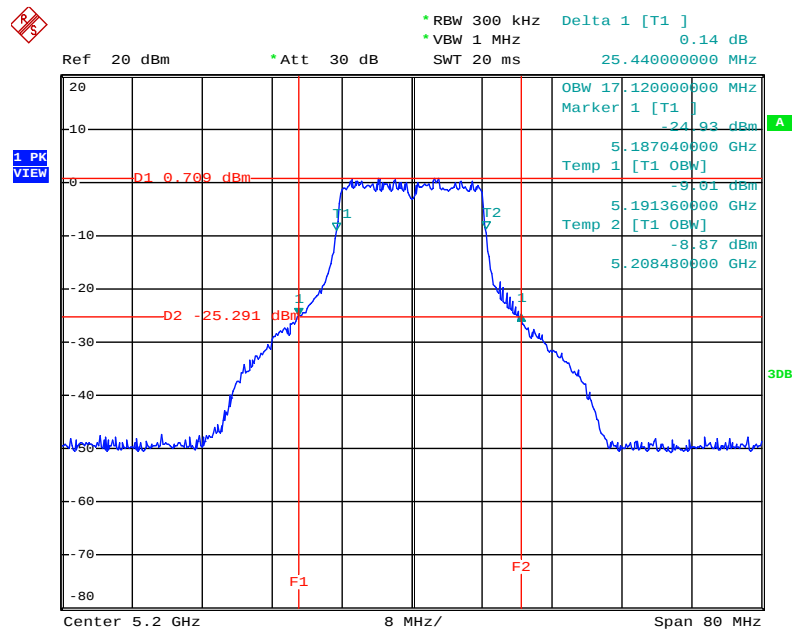
Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	26.72	17.44	6Mbps
40	5200 MHz	26.24	17.44	6Mbps
48	5240 MHz	26.08	17.44	6Mbps
52	5260 MHz	25.60	17.44	6Mbps
60	5300 MHz	25.44	17.44	6Mbps
64	5320 MHz	26.40	17.44	6Mbps
100	5500 MHz	27.20	17.60	6Mbps
116	5580 MHz	25.60	17.60	6Mbps
136	5680 MHz	25.60	17.44	6Mbps
140	5700 MHz	25.76	17.60	6Mbps

26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5180 MHz



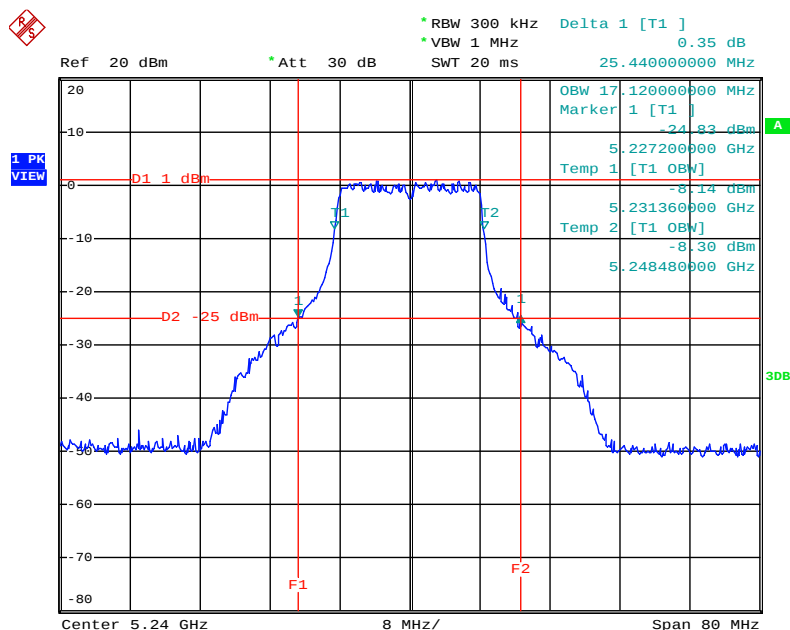
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5200 MHz



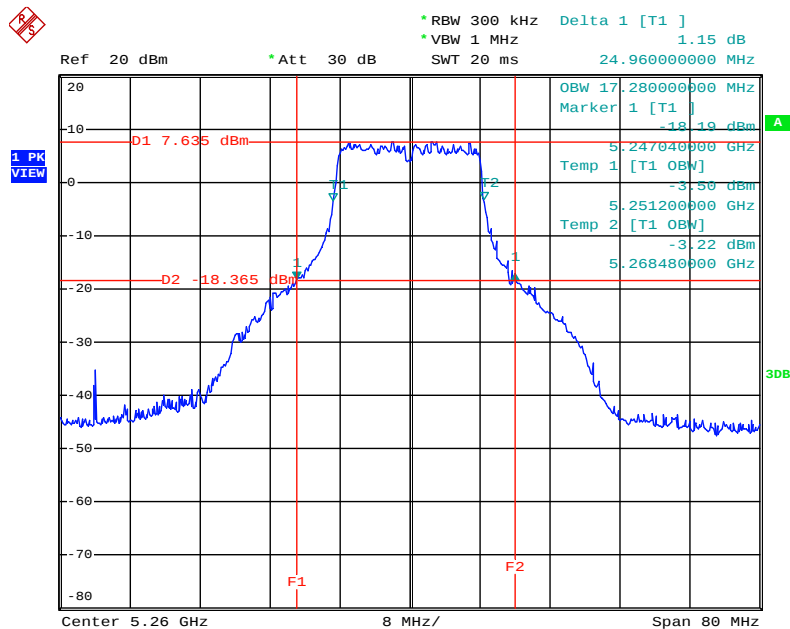
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5240 MHz



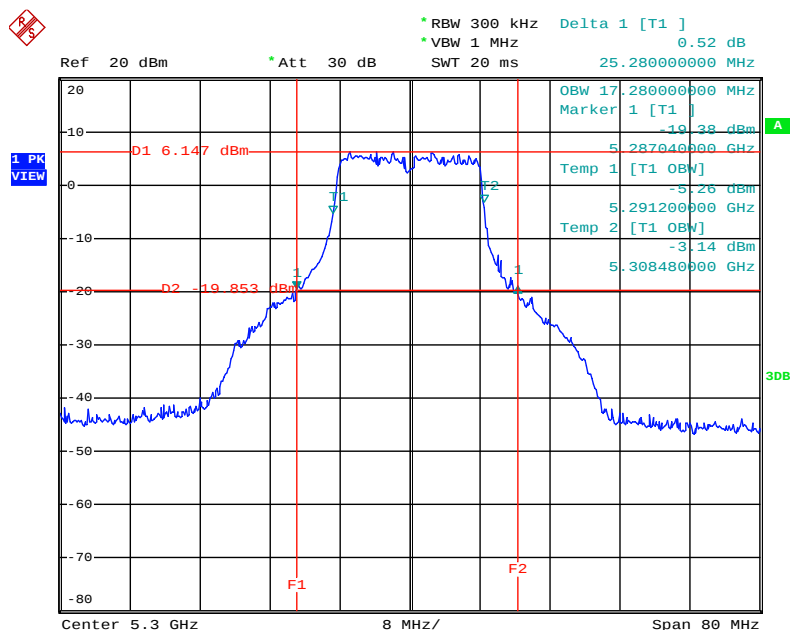
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5260 MHz



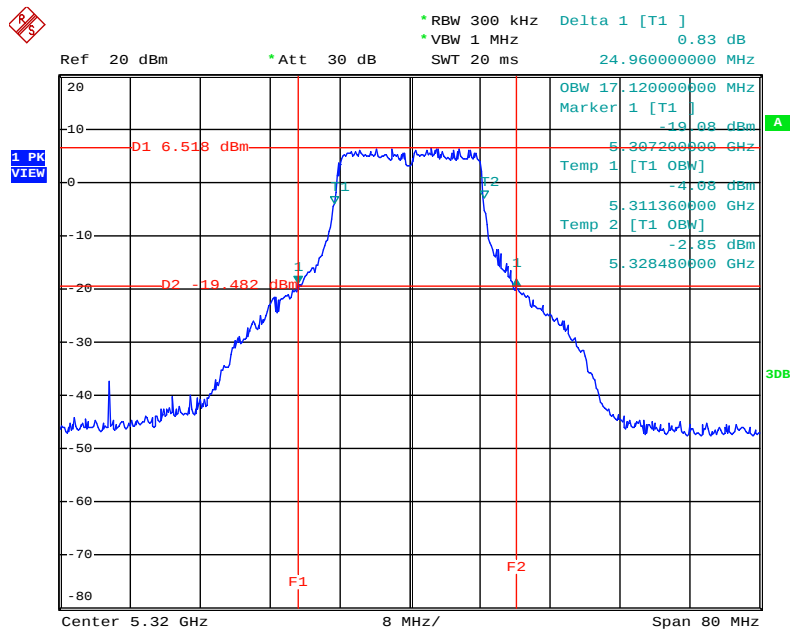
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5300 MHz



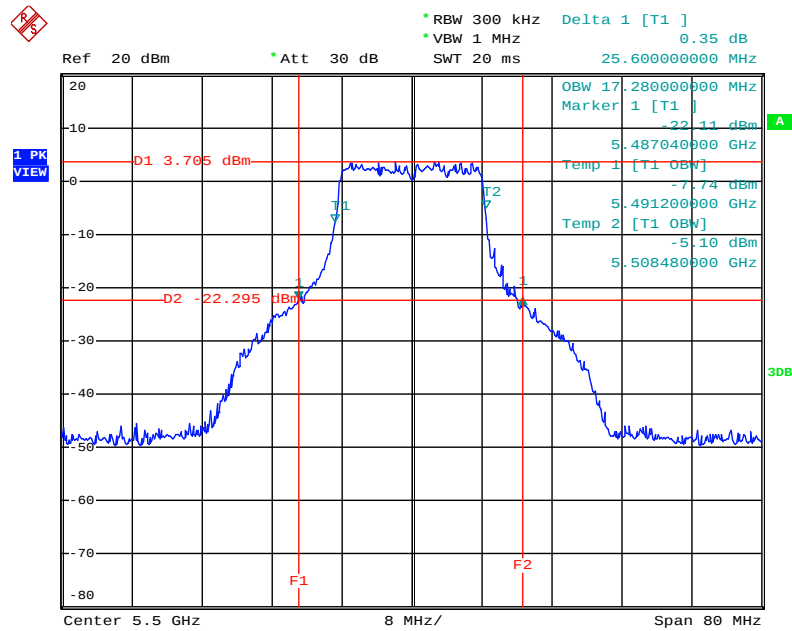
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5320 MHz



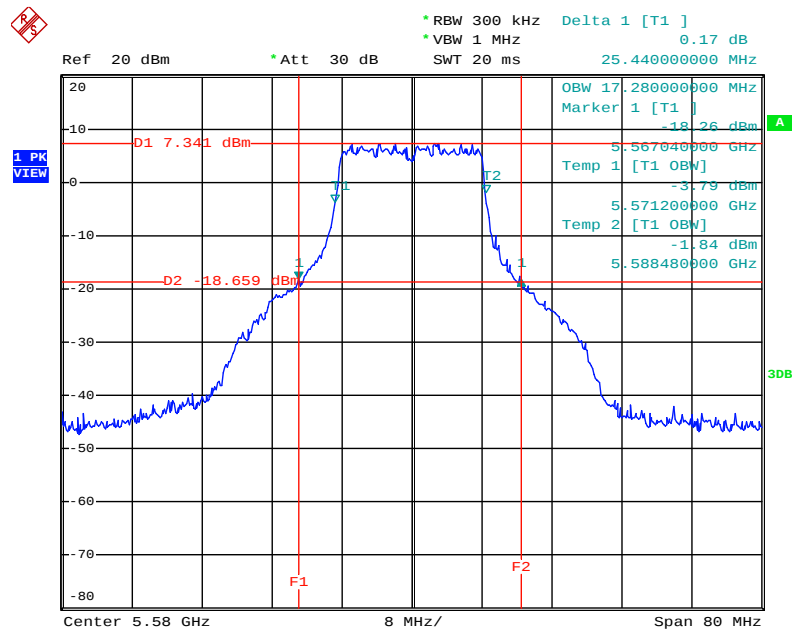
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5500 MHz



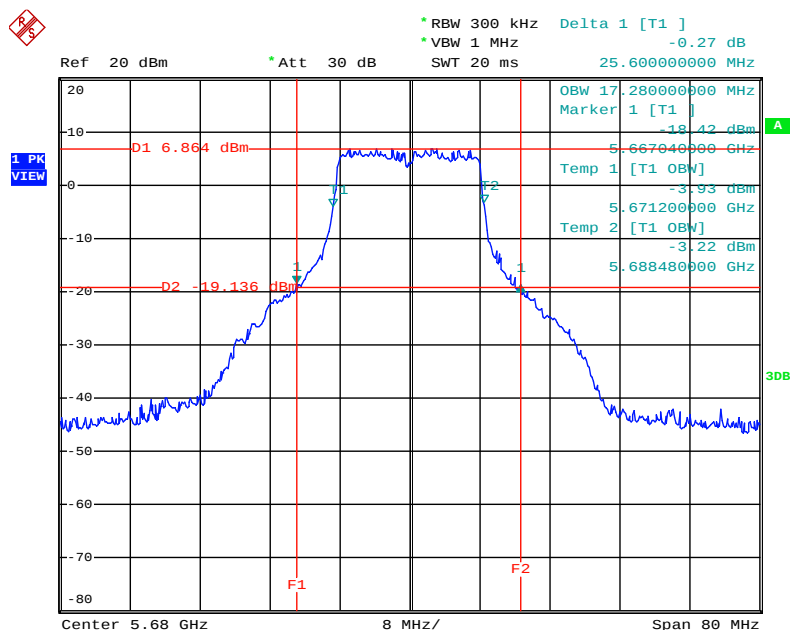
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5580 MHz



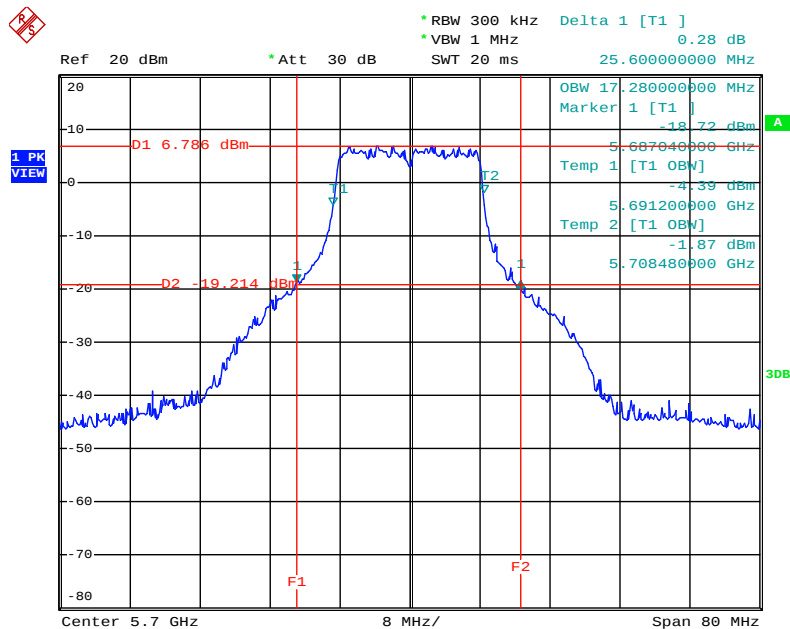
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5680 MHz



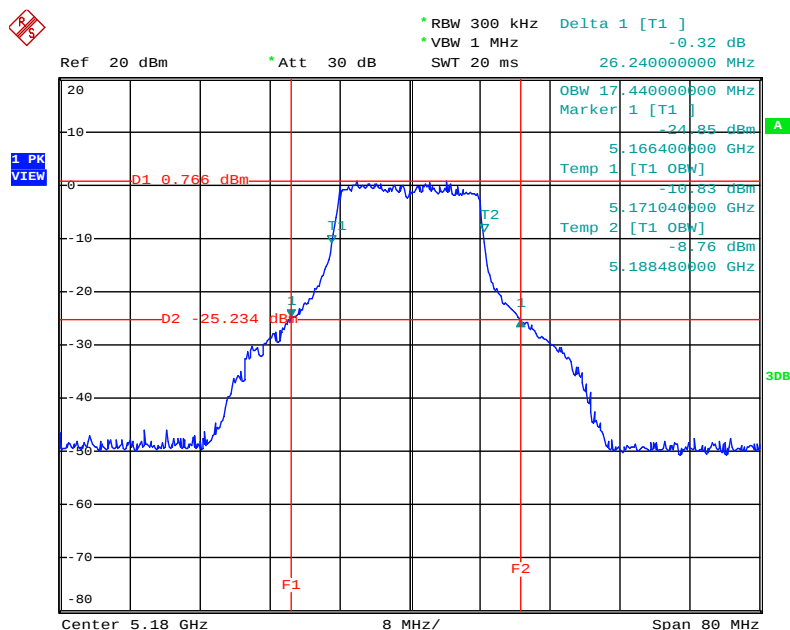
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5700 MHz



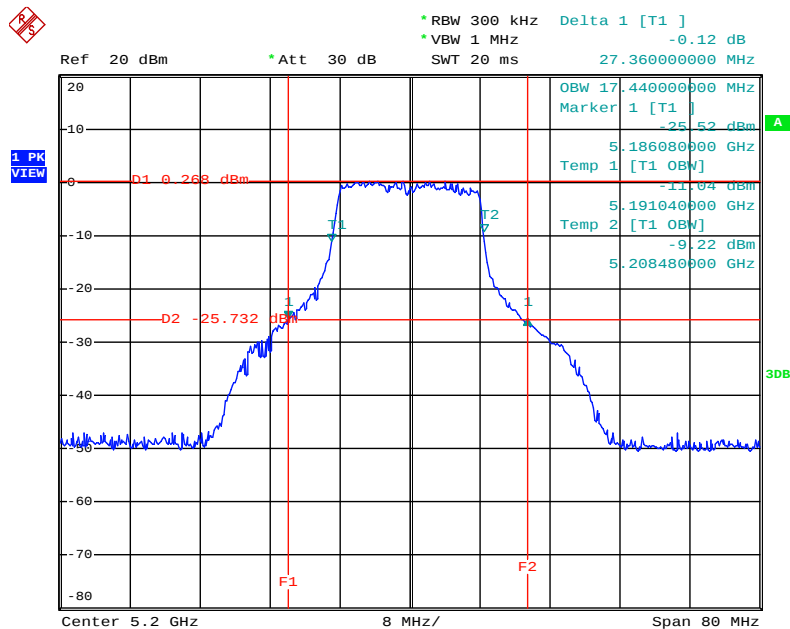
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5180 MHz



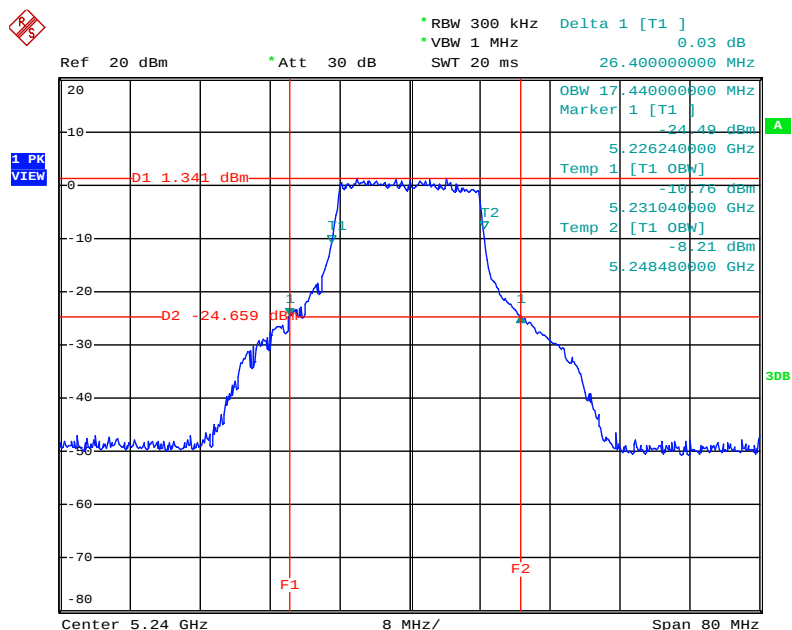
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5200 MHz



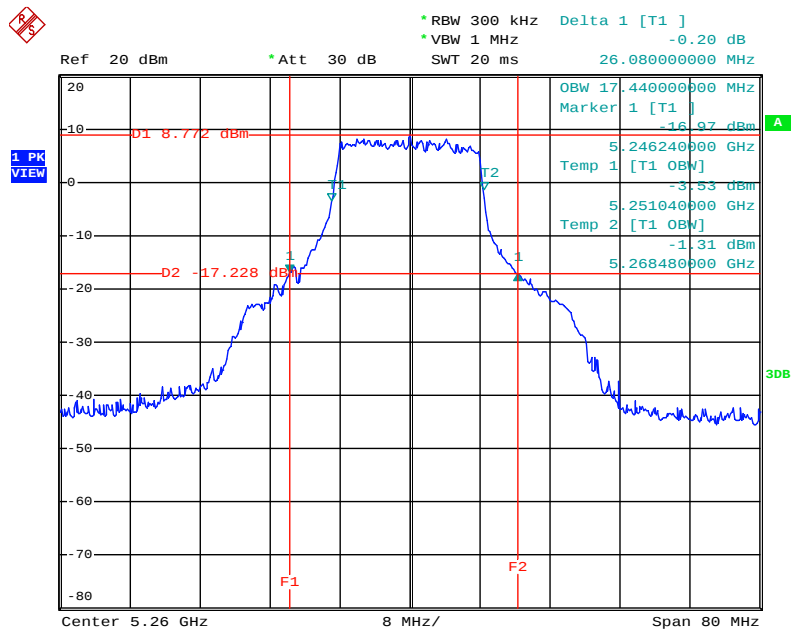
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5240 MHz



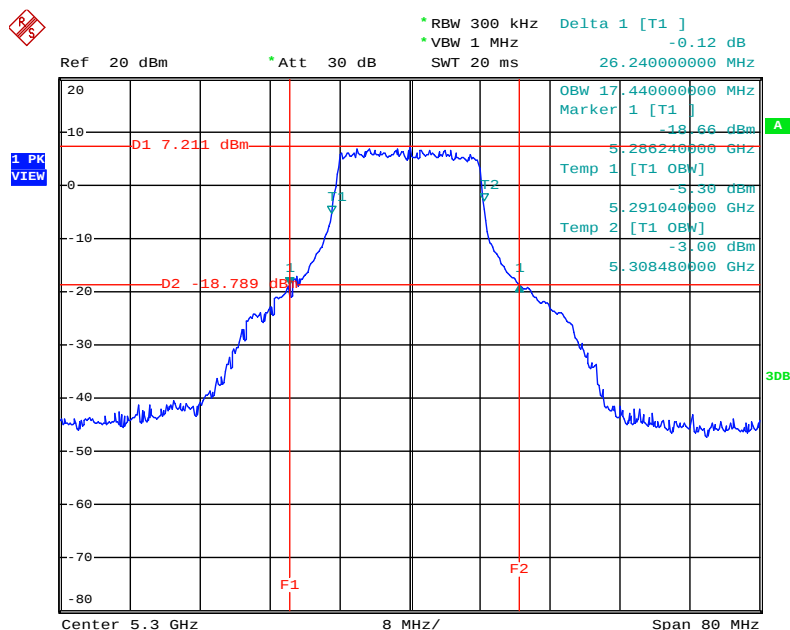
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5260 MHz



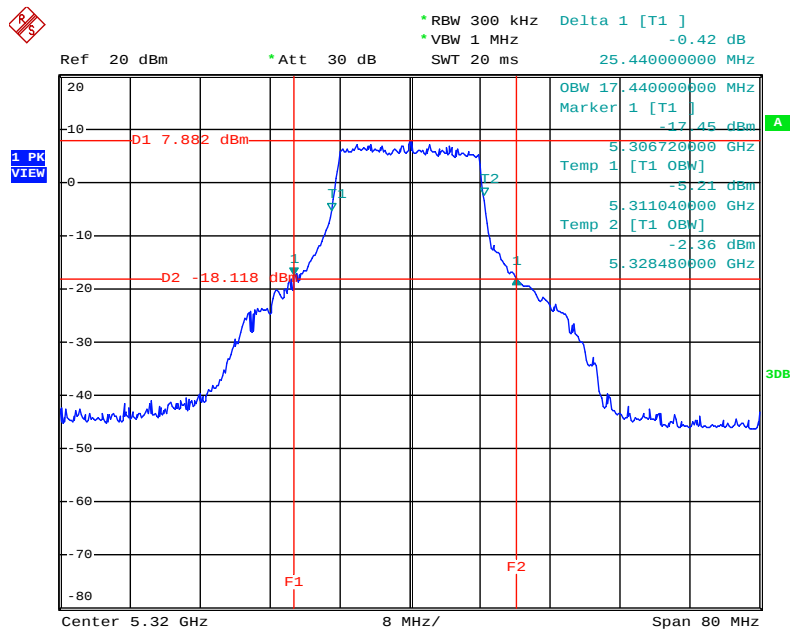
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5300 MHz



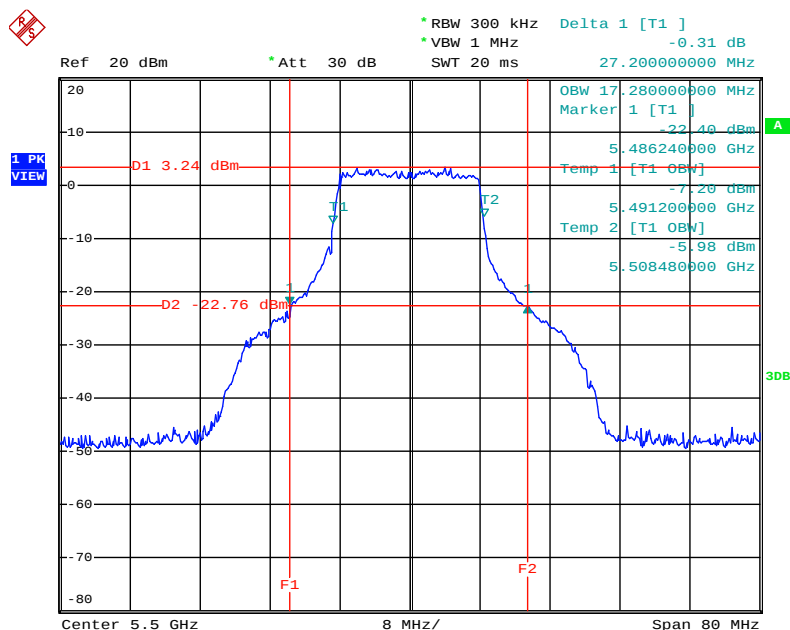
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5320 MHz



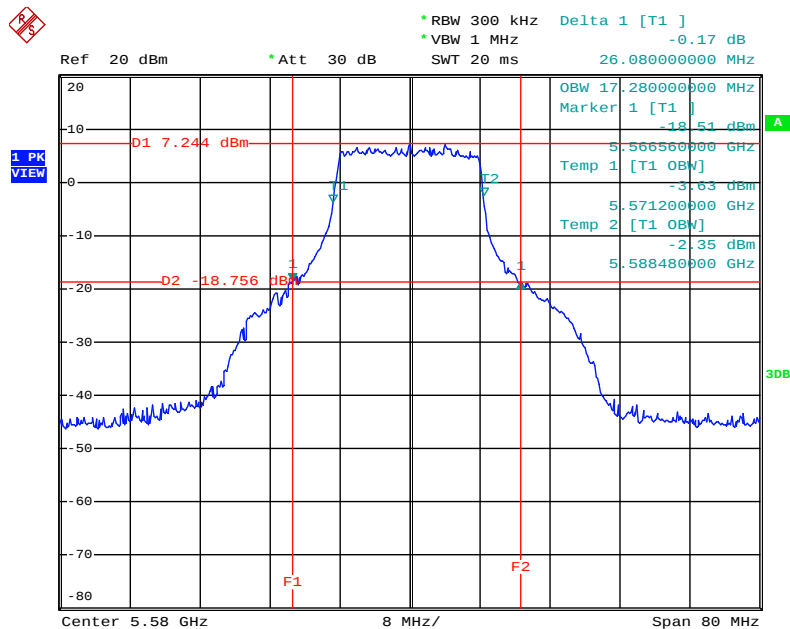
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5500 MHz



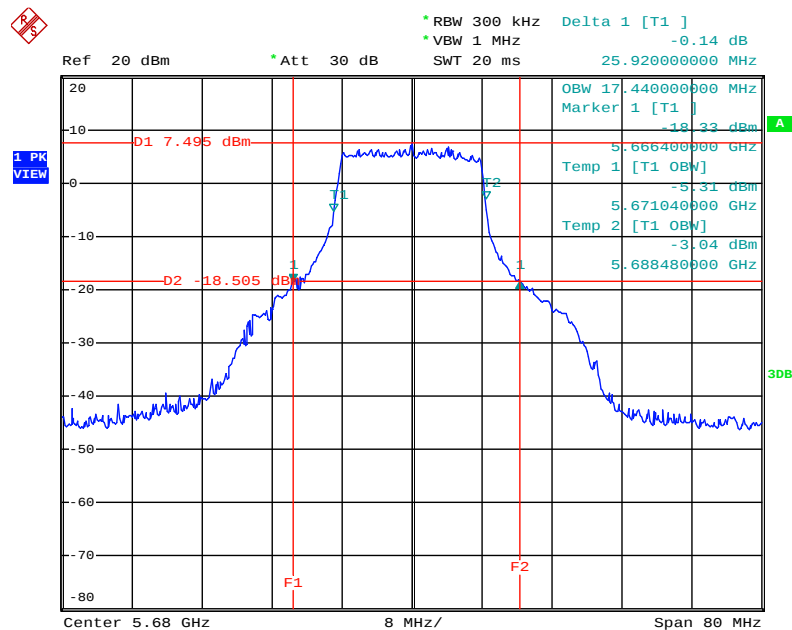
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5580 MHz



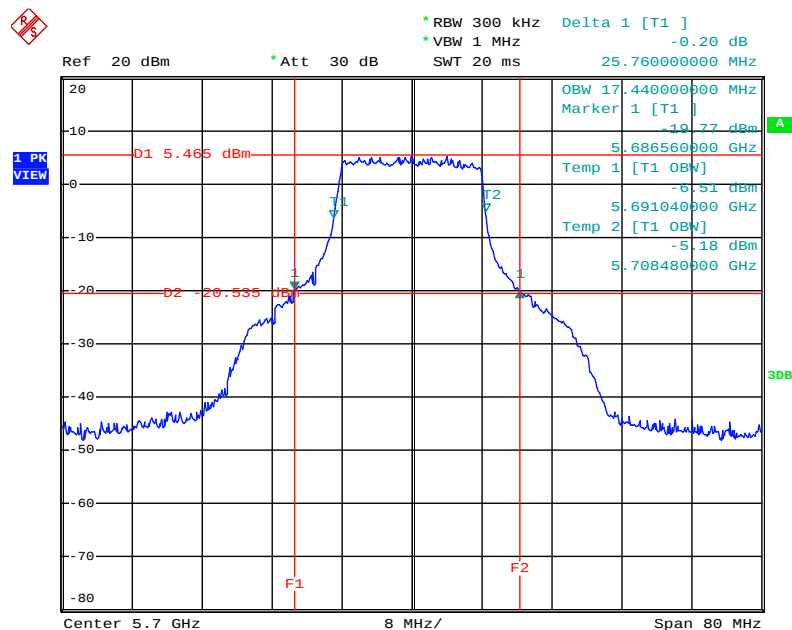
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5680 MHz



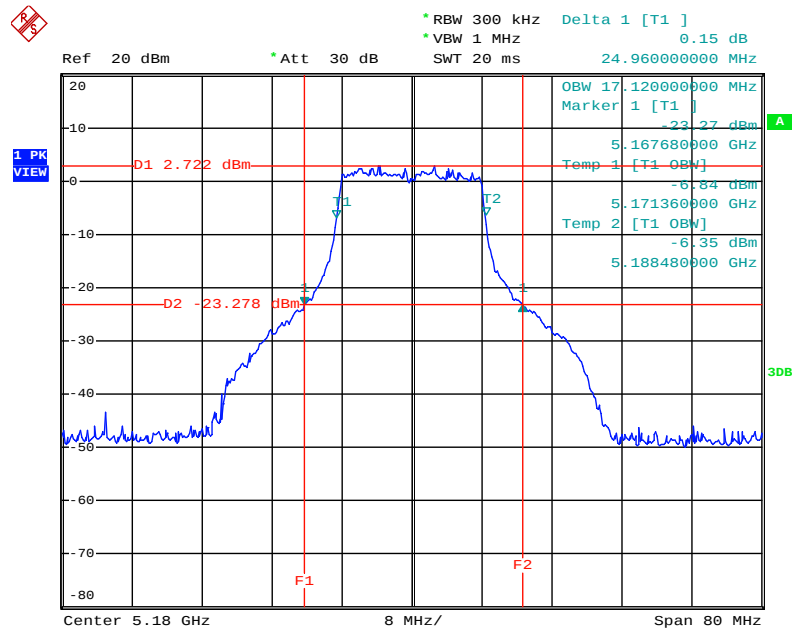
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 2 / 5700 MHz



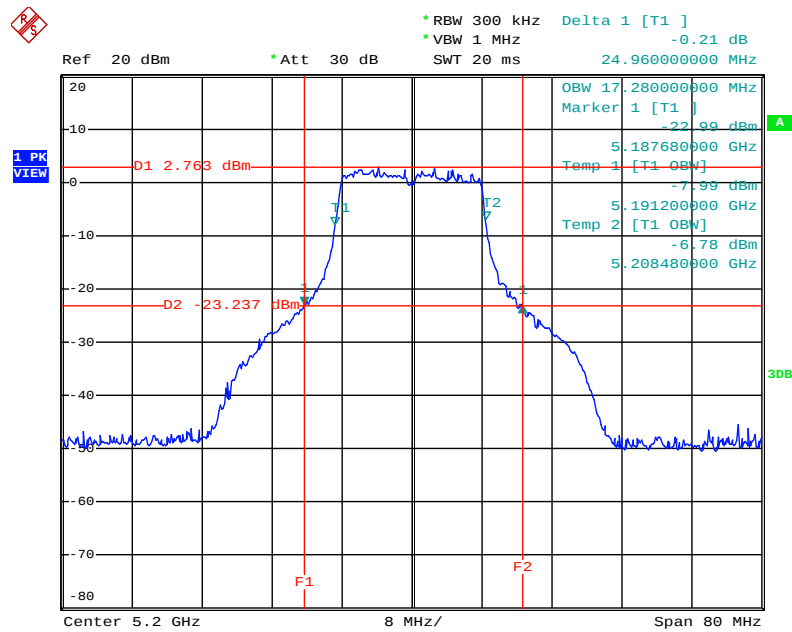
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5180 MHz



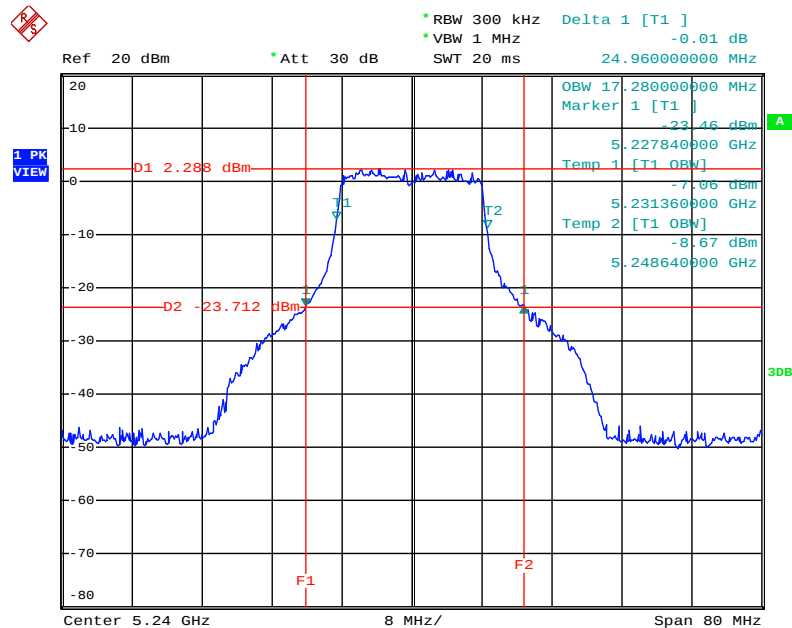
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5200 MHz



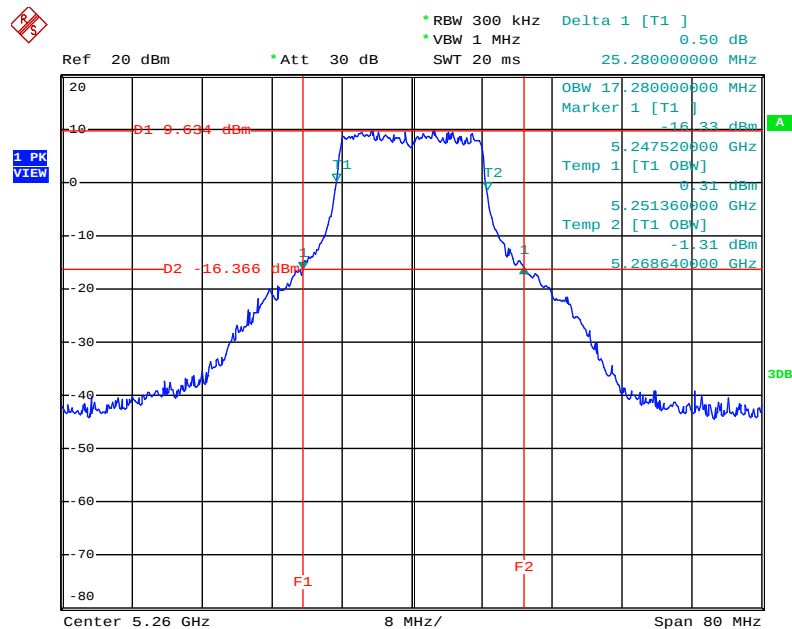
Date: 8.NOV.2013 10:20:37

26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5240 MHz



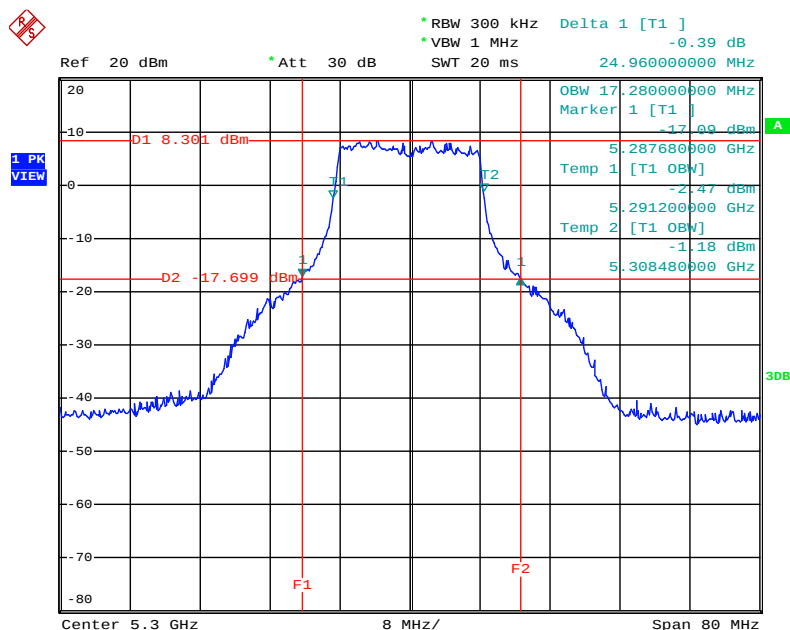
Date: 8.NOV.2013 10:21:20

26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5260 MHz



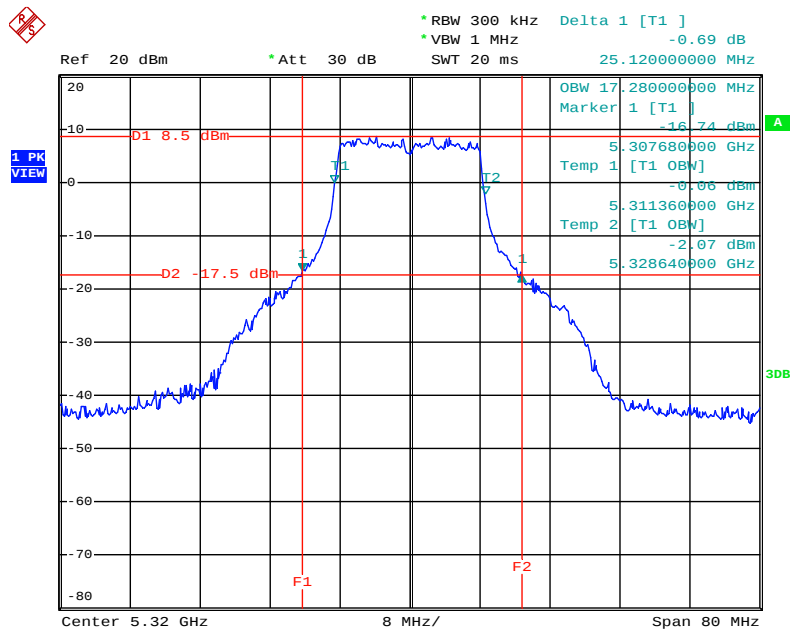
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5300 MHz



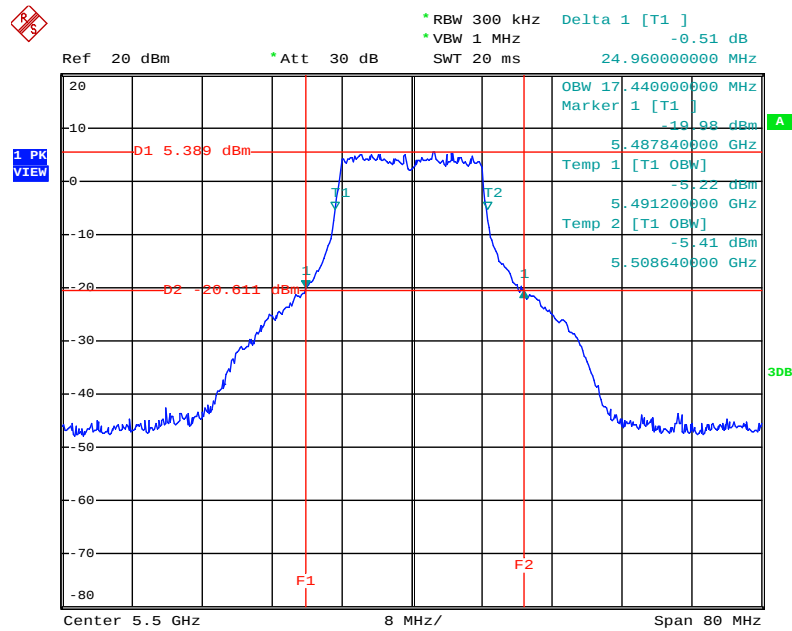
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5320 MHz



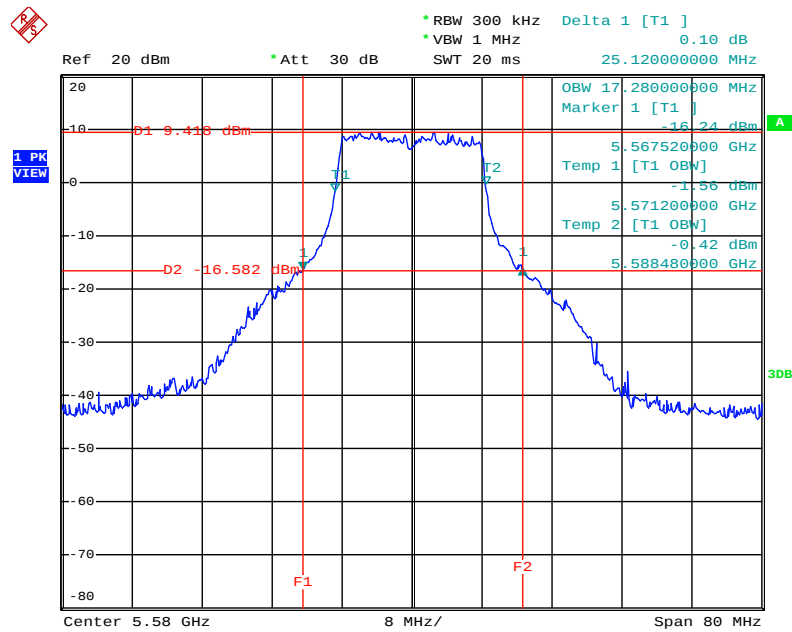
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5500 MHz



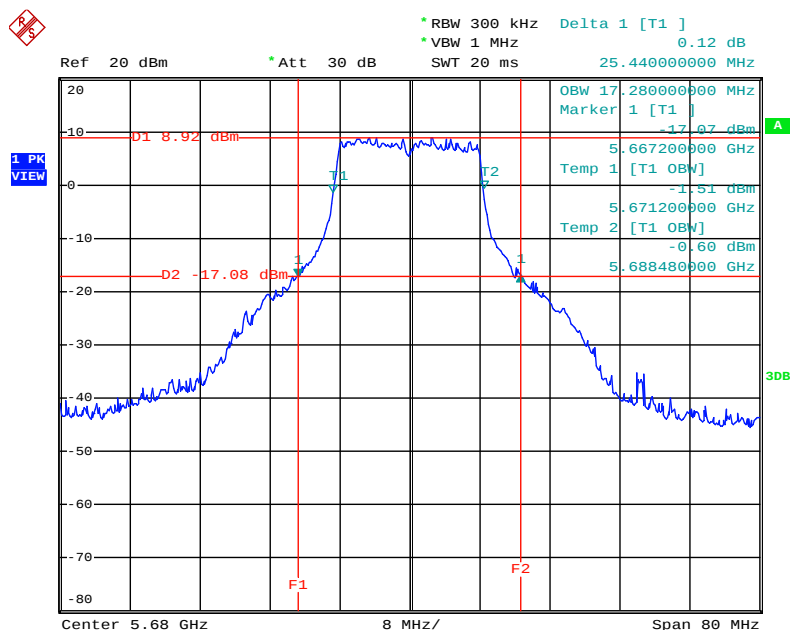
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5580 MHz



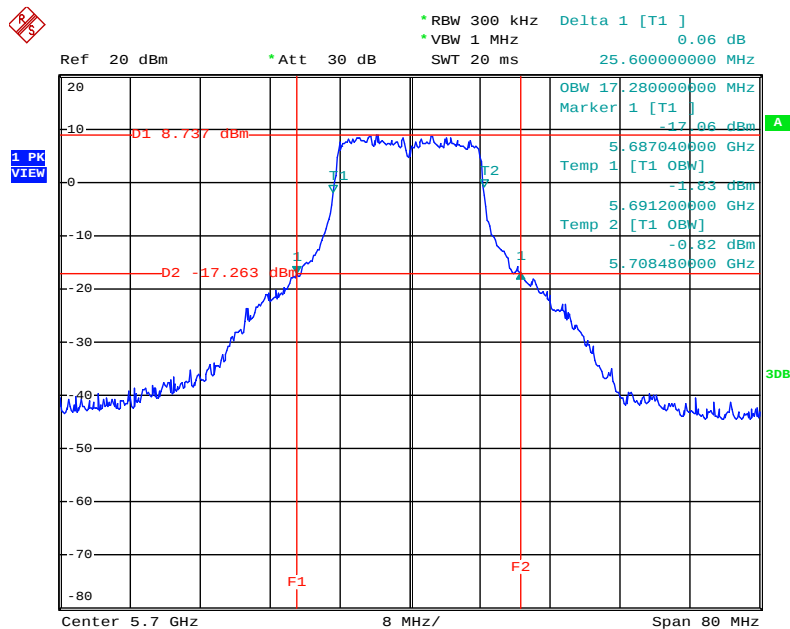
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5680 MHz



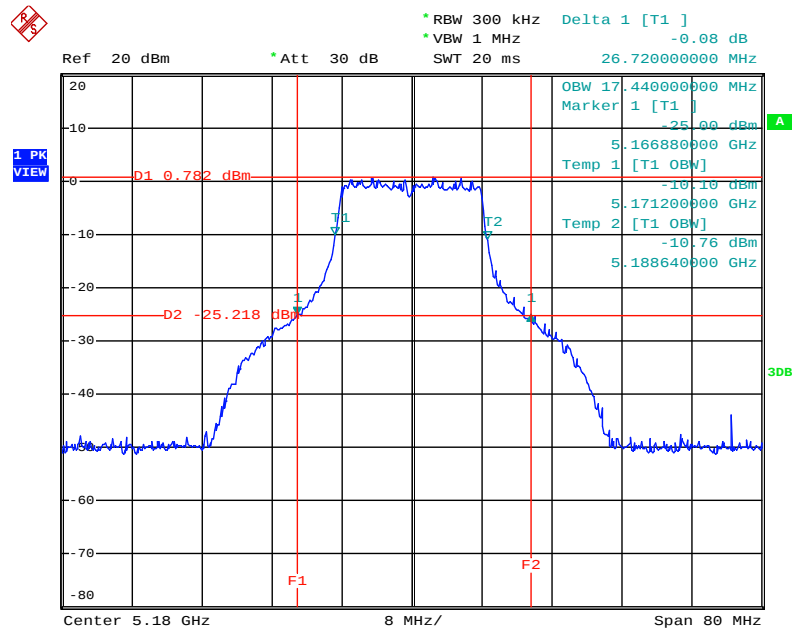
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 3 / 5700 MHz



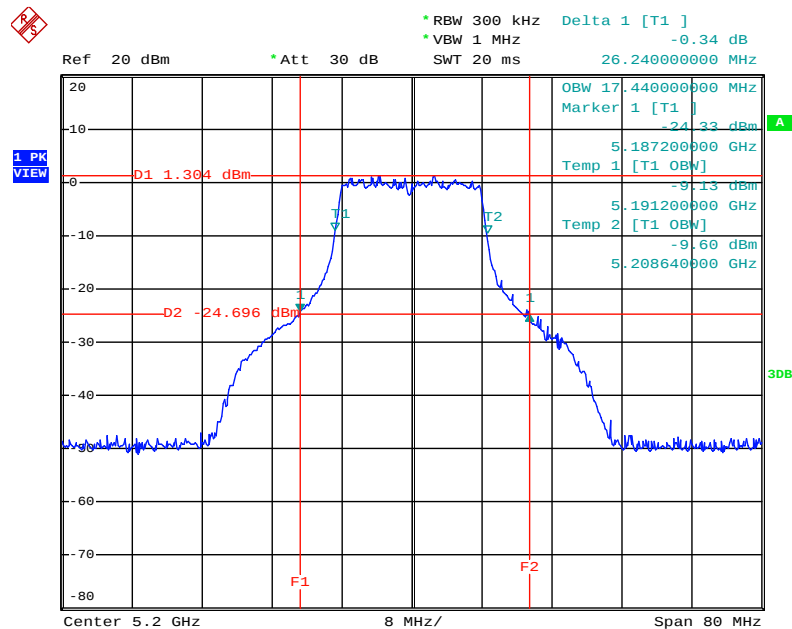
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5180 MHz



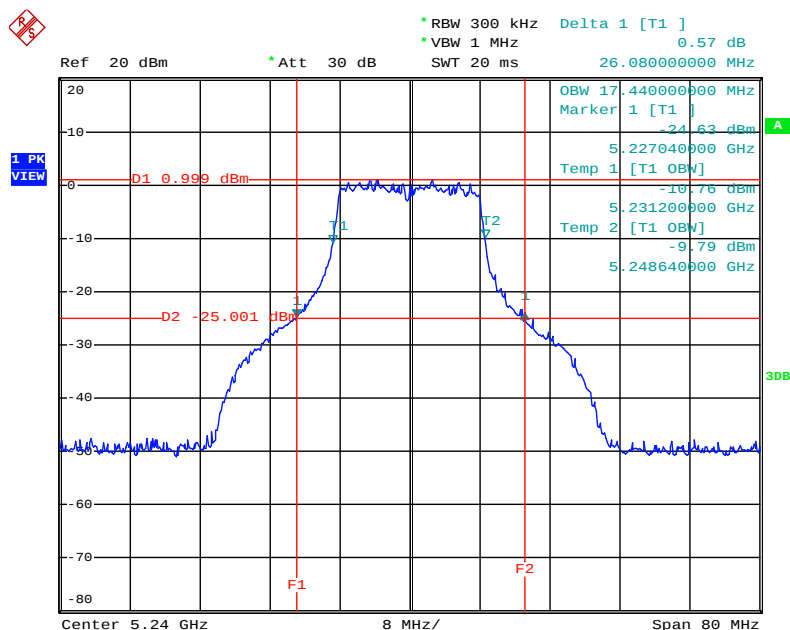
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5200 MHz



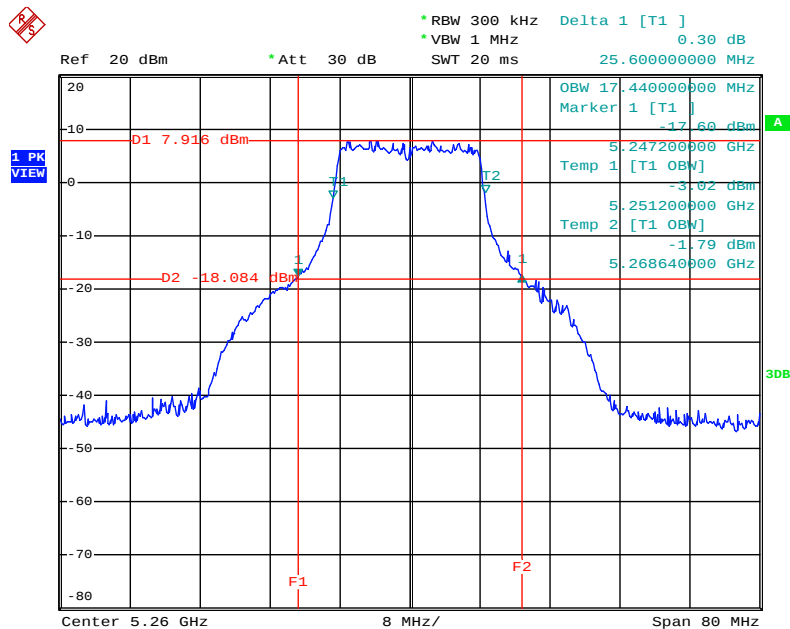
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5240 MHz



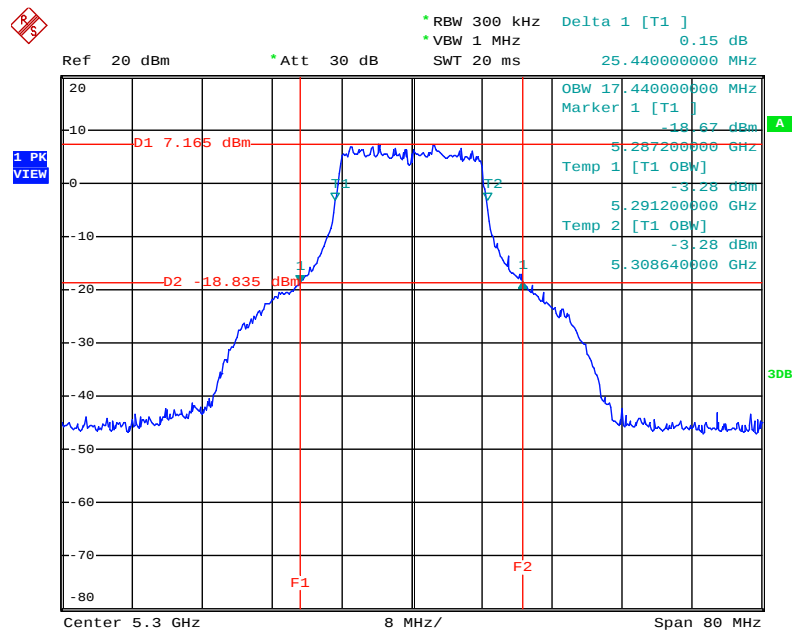
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5260 MHz



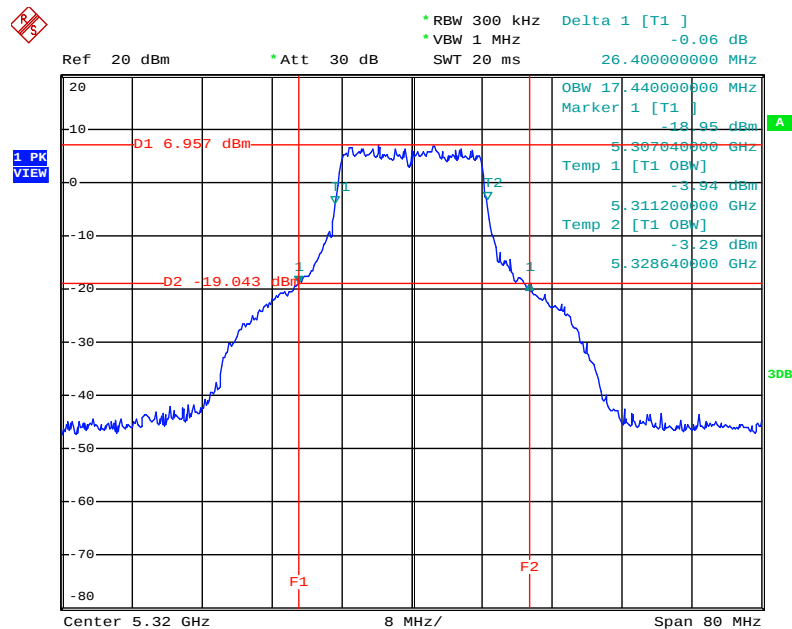
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5300 MHz



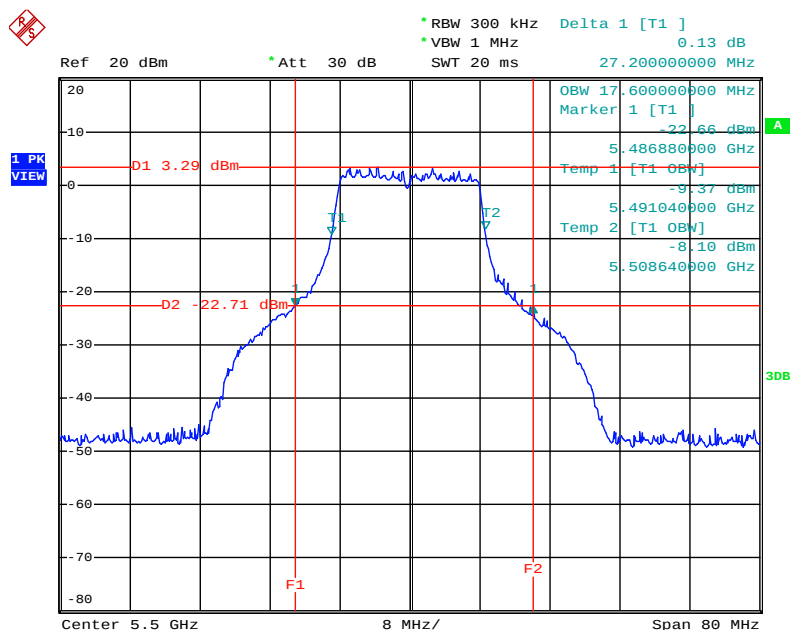
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5320 MHz



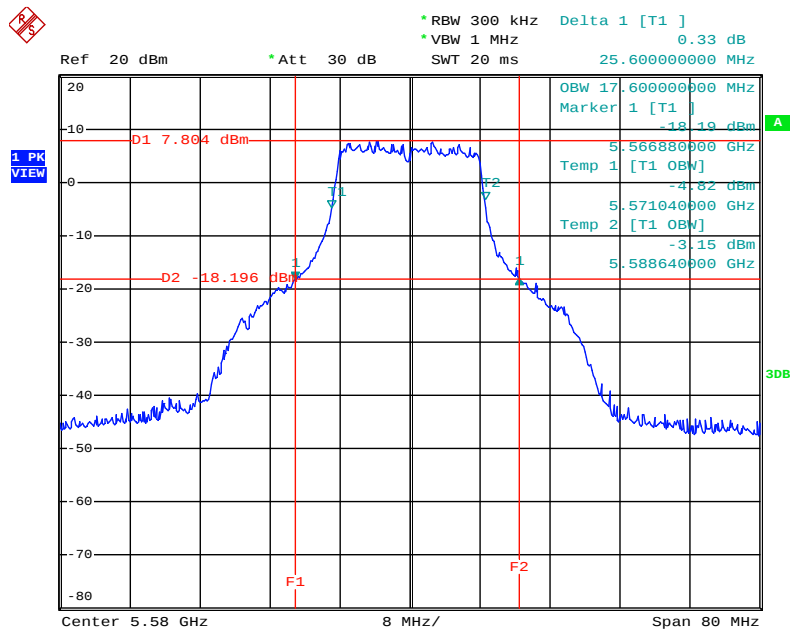
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5500 MHz



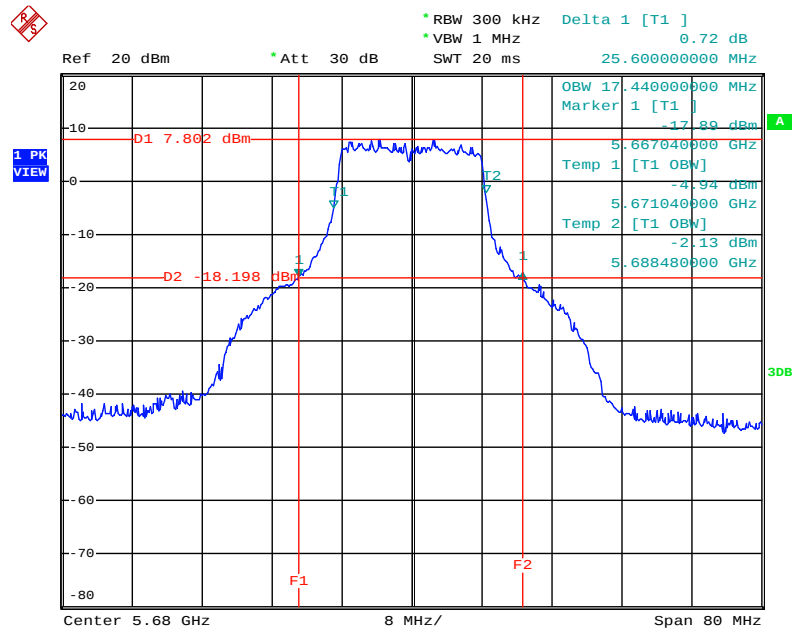
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5580 MHz



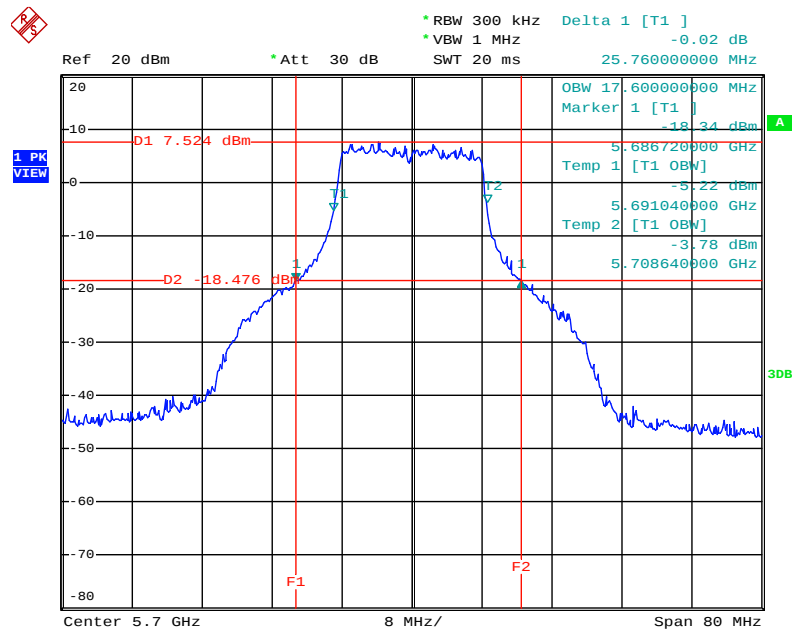
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26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5680 MHz



Date: 8.NOV.2013 10:36:27

26dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 4 / 5700 MHz



Date: 8.NOV.2013 10:37:05

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 20MHz
Duty Cycle	99.20%	Duty Factor	0.035

Configuration IEEE 802.11n 20MHz

<MCS0, Ant 1>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	25.76	18.24	MCS0
40	5200 MHz	26.24	18.24	MCS0
48	5240 MHz	25.92	18.40	MCS0
52	5260 MHz	25.92	18.24	MCS0
60	5300 MHz	25.76	18.24	MCS0
64	5320 MHz	26.24	18.40	MCS0
100	5500 MHz	25.92	18.24	MCS0
116	5580 MHz	26.56	18.24	MCS0
136	5680 MHz	25.92	18.24	MCS0
140	5700 MHz	25.12	18.40	MCS0

<MCS0, Ant 2>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	26.88	18.24	MCS0
40	5200 MHz	26.72	18.40	MCS0
48	5240 MHz	25.60	18.40	MCS0
52	5260 MHz	24.96	18.40	MCS0
60	5300 MHz	25.12	18.40	MCS0
64	5320 MHz	24.64	18.40	MCS0
100	5500 MHz	27.20	18.40	MCS0
116	5580 MHz	25.76	18.40	MCS0
136	5680 MHz	24.96	18.40	MCS0
140	5700 MHz	25.60	18.40	MCS0

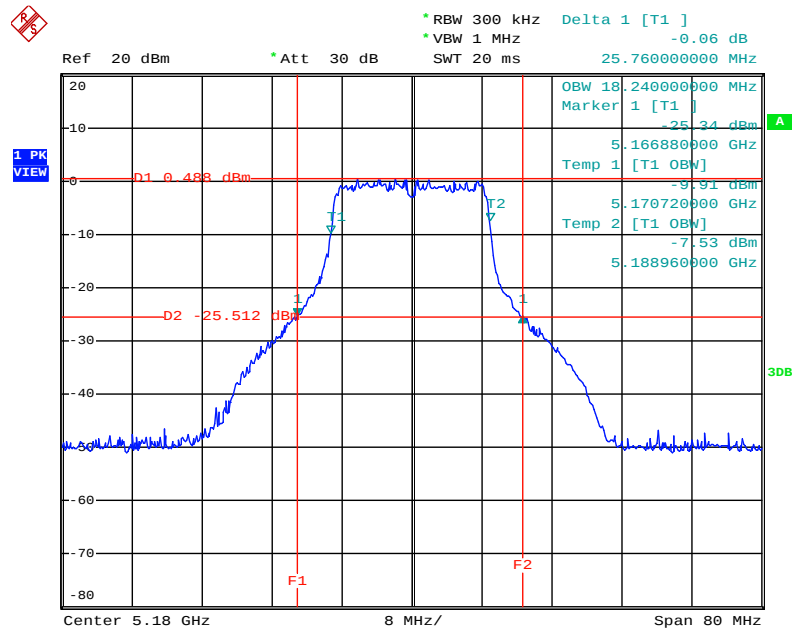
<MCS0, Ant 3>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	27.04	18.56	MCS0
40	5200 MHz	27.20	18.56	MCS0
48	5240 MHz	27.36	18.56	MCS0
52	5260 MHz	29.12	18.56	MCS0
60	5300 MHz	27.68	18.72	MCS0
64	5320 MHz	28.16	18.56	MCS0
100	5500 MHz	28.16	18.72	MCS0
116	5580 MHz	28.80	18.72	MCS0
136	5680 MHz	28.80	18.72	MCS0
140	5700 MHz	29.12	18.72	MCS0

<MCS0, Ant 4>

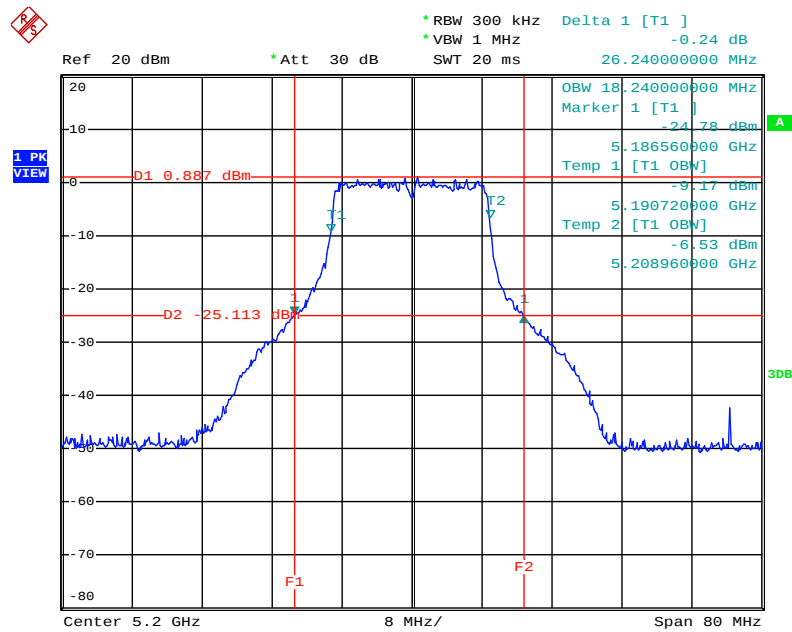
Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	26.08	18.24	MCS0
40	5200 MHz	25.60	18.40	MCS0
48	5240 MHz	26.40	18.40	MCS0
52	5260 MHz	26.56	18.40	MCS0
60	5300 MHz	26.40	18.40	MCS0
64	5320 MHz	26.72	18.40	MCS0
100	5500 MHz	26.24	18.40	MCS0
116	5580 MHz	25.76	18.40	MCS0
136	5680 MHz	26.24	18.24	MCS0
140	5700 MHz	26.08	18.40	MCS0

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5180 MHz



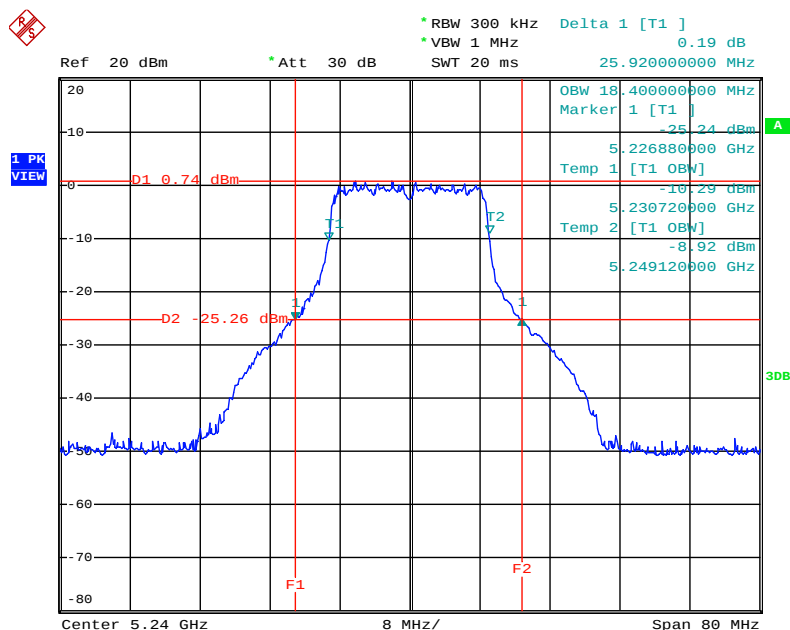
Date: 8.NOV.2013 10:55:05

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS 0 / Ant. 1 / 5200 MHz



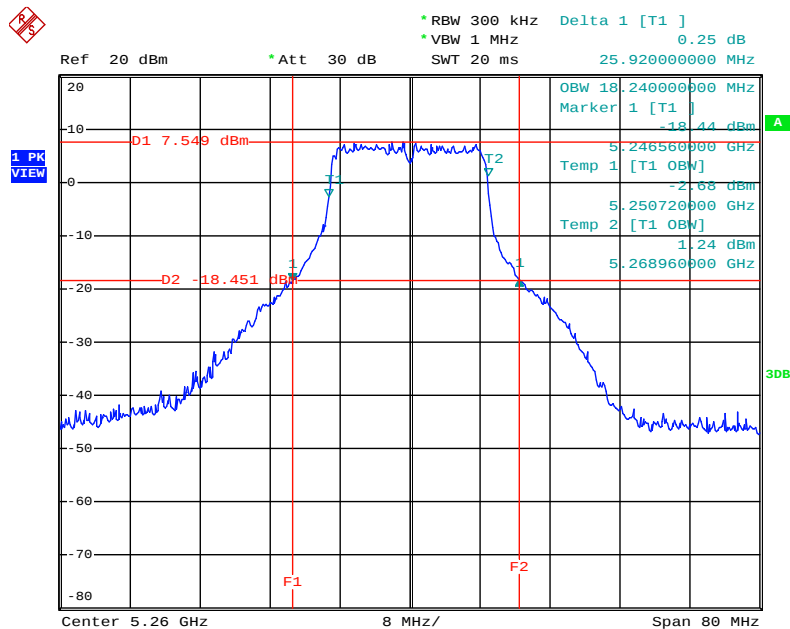
Date: 8.NOV.2013 10:55:49

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5240 MHz



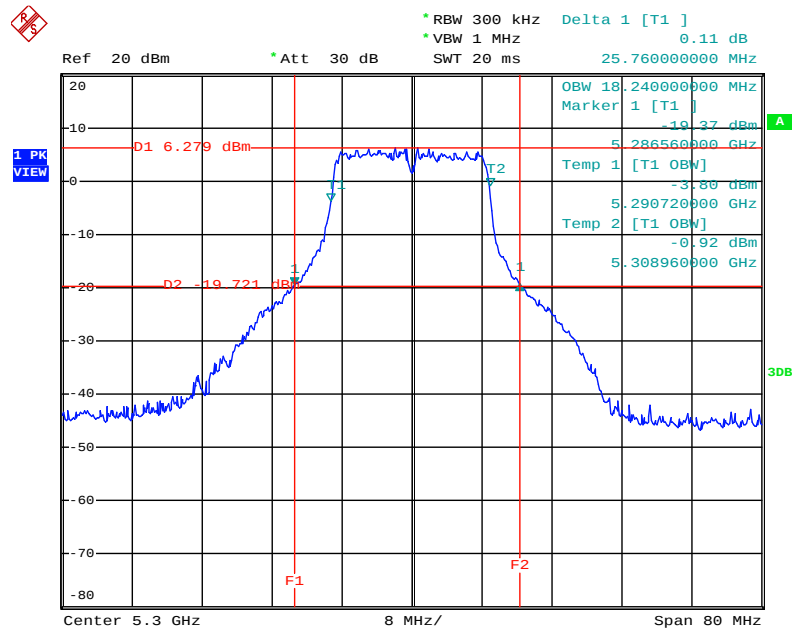
Date: 8.NOV.2013 10:56:26

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5260 MHz



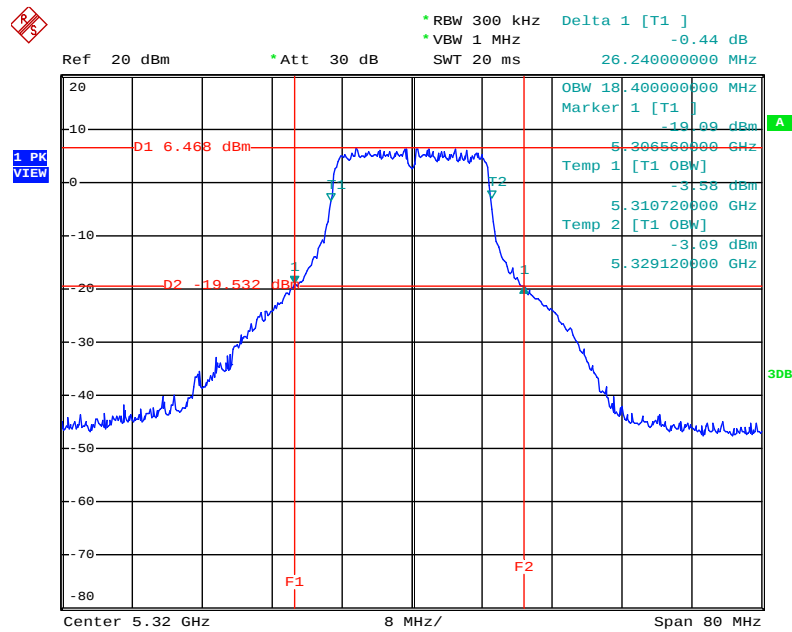
Date: 8.NOV.2013 10:57:05

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5300 MHz



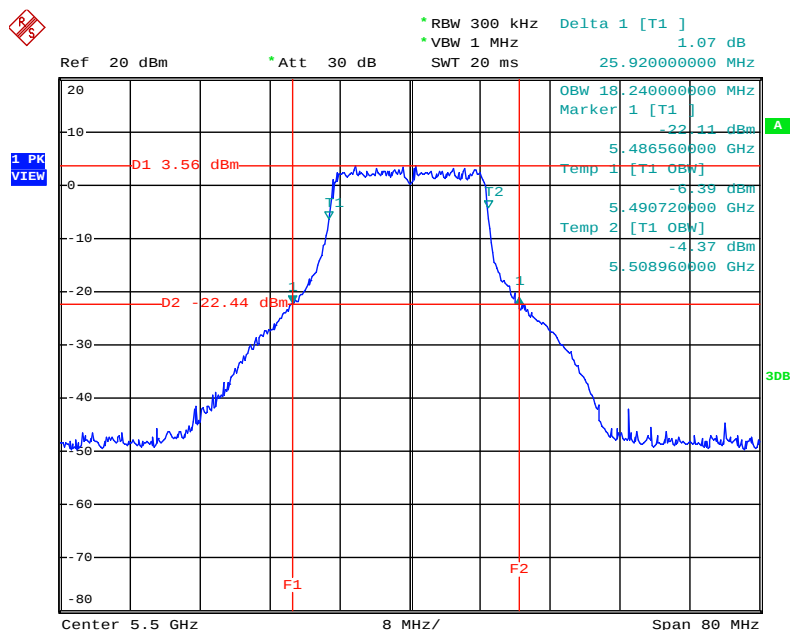
Date: 8.NOV.2013 10:58:04

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5320 MHz



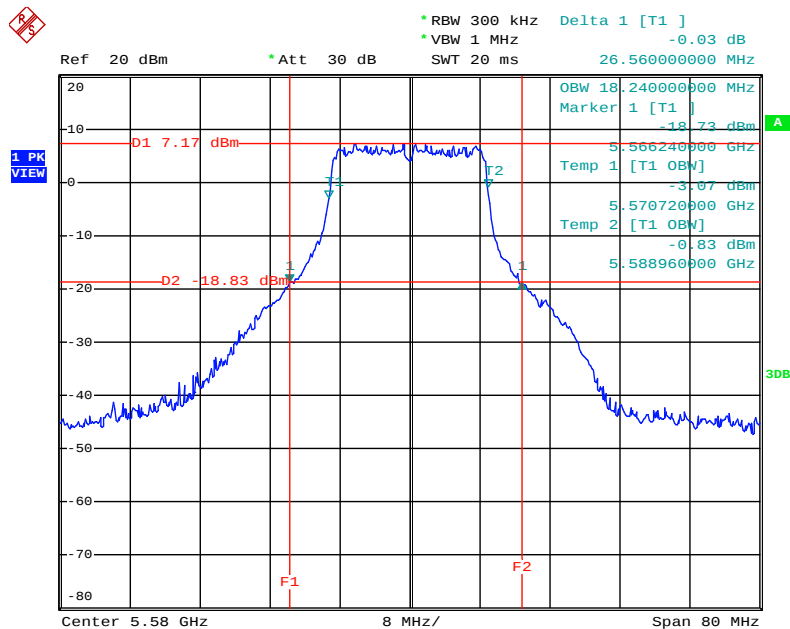
Date: 8.NOV.2013 10:58:51

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5500 MHz



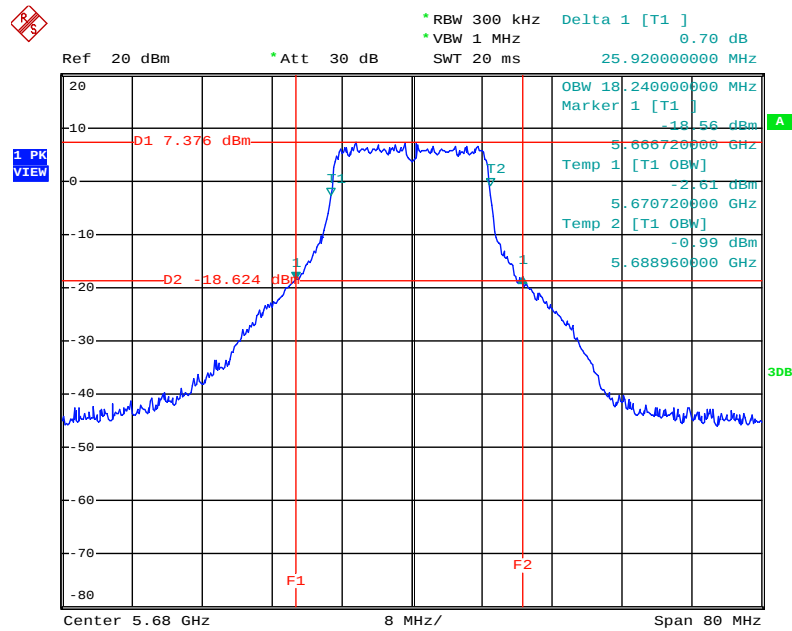
Date: 8.NOV.2013 11:26:48

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5580 MHz



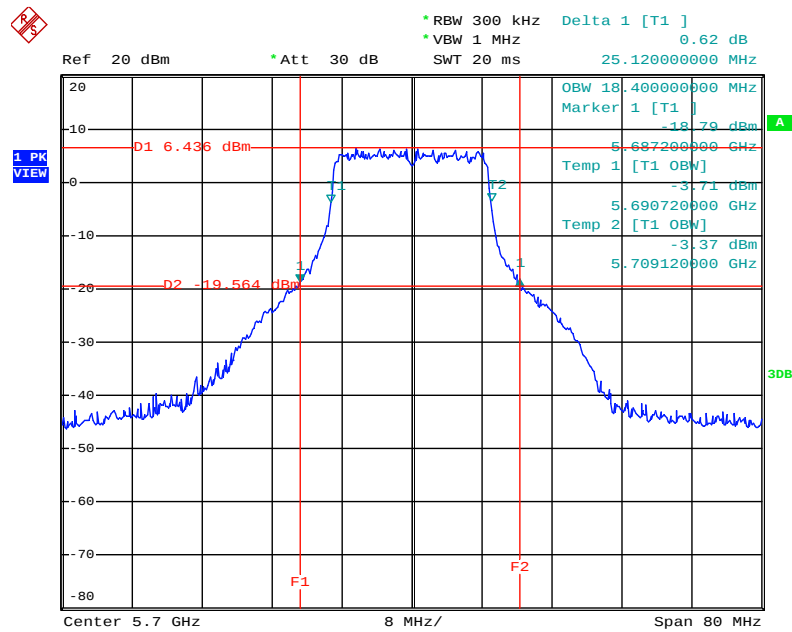
Date: 8.NOV.2013 11:26:14

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5680 MHz



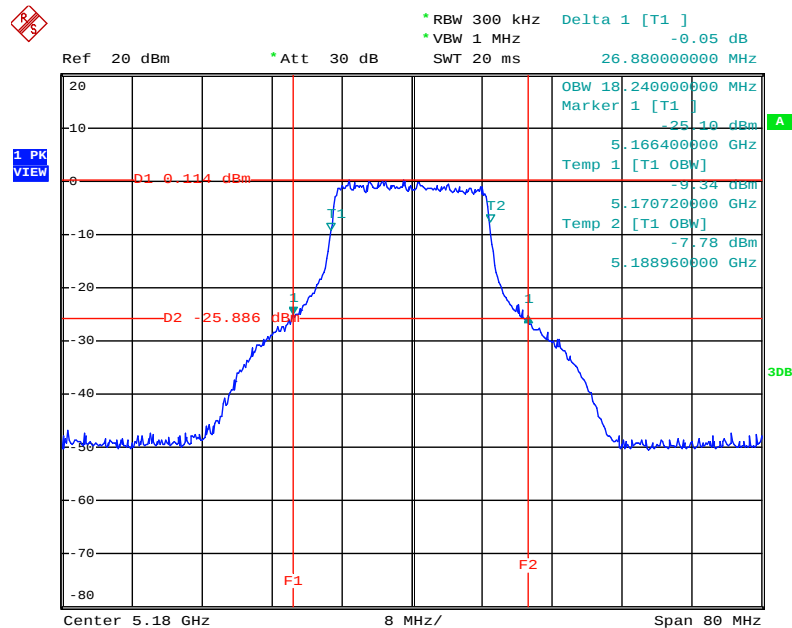
Date: 8.NOV.2013 11:25:36

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1 / 5700 MHz



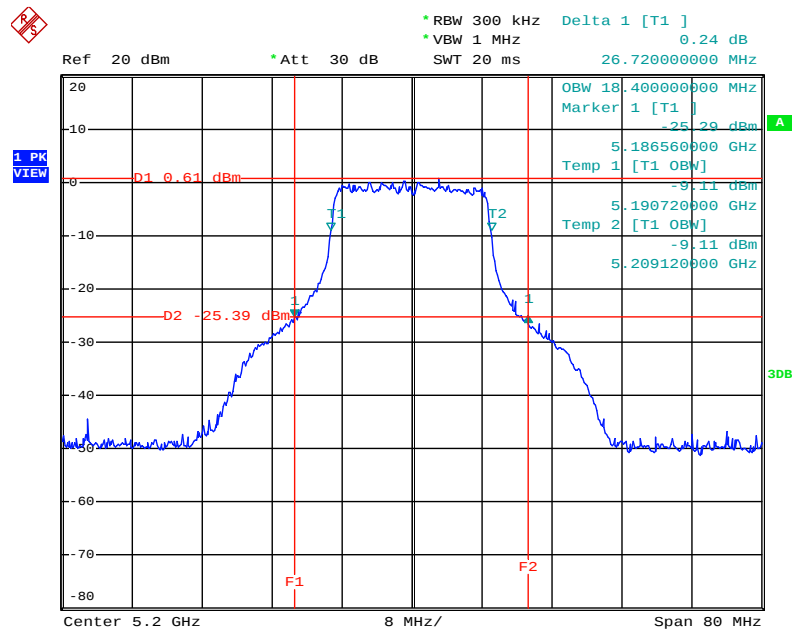
Date: 8.NOV.2013 11:24:58

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5180 MHz



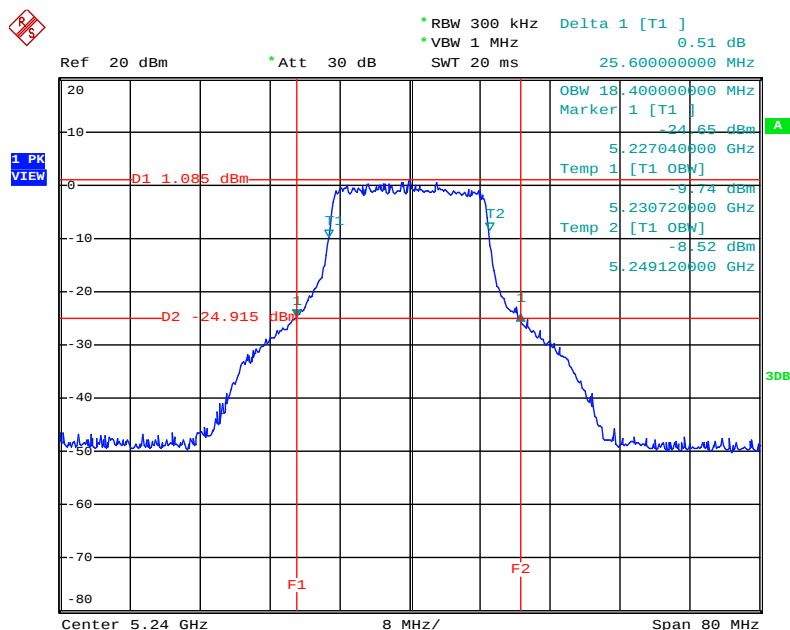
Date: 8.NOV.2013 11:02:55

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5200 MHz



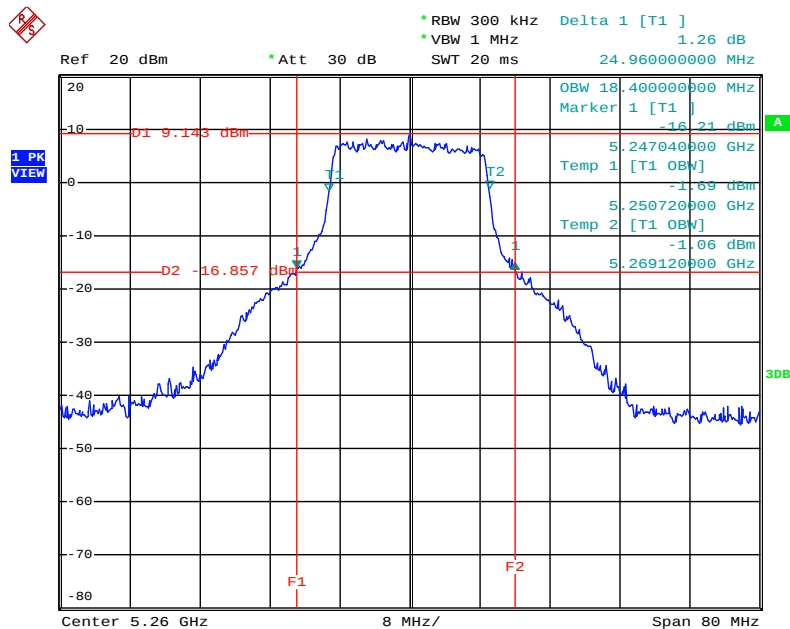
Date: 8.NOV.2013 11:02:18

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5240 MHz



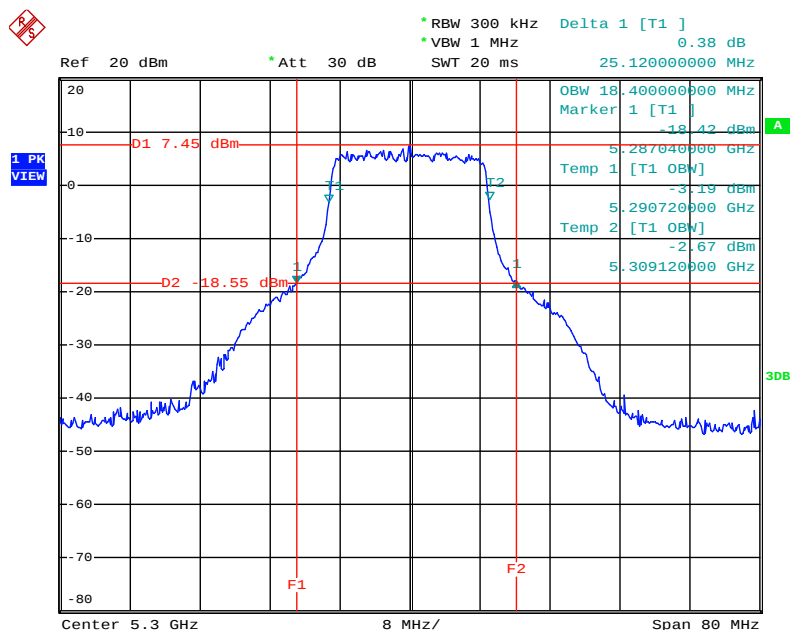
Date: 8.NOV.2013 11:01:41

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5260 MHz



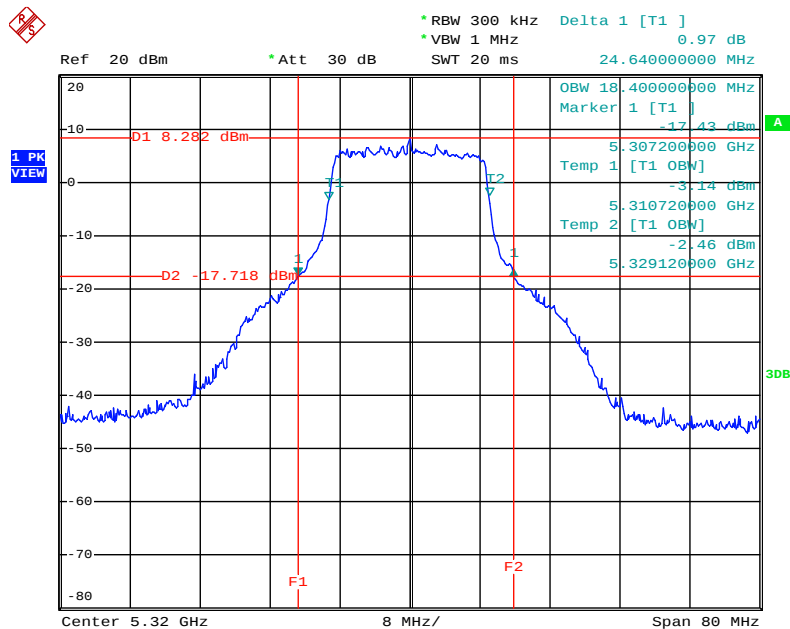
Date: 8.NOV.2013 11:00:51

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5300 MHz



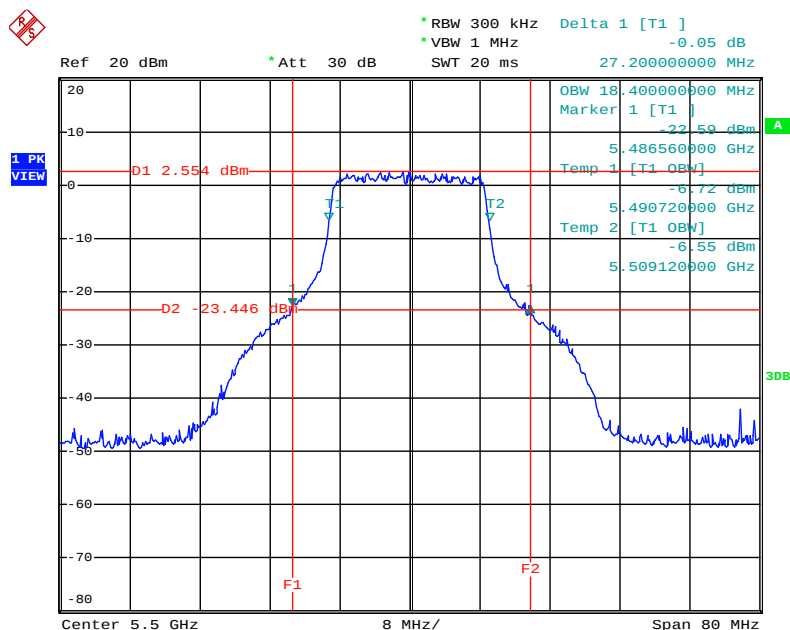
Date: 8.NOV.2013 11:00:08

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5320 MHz



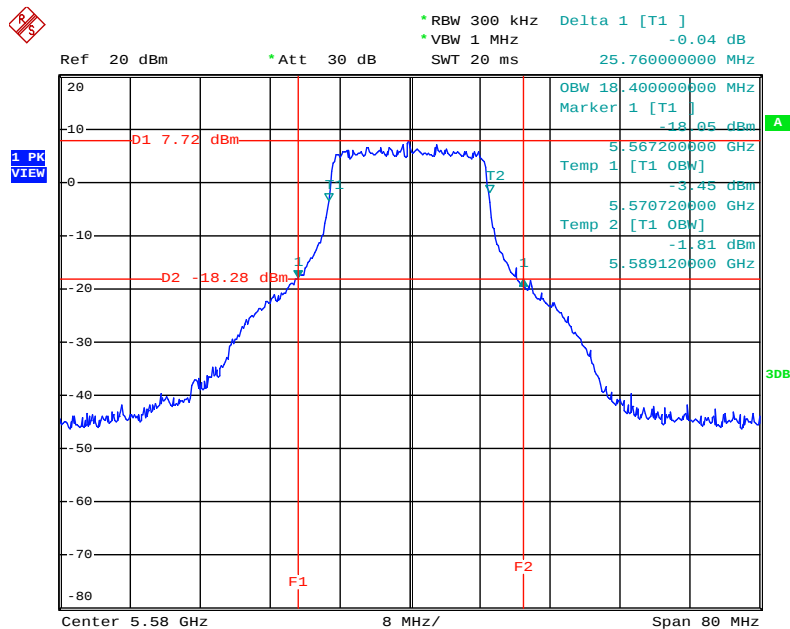
Date: 8.NOV.2013 10:59:35

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5500 MHz



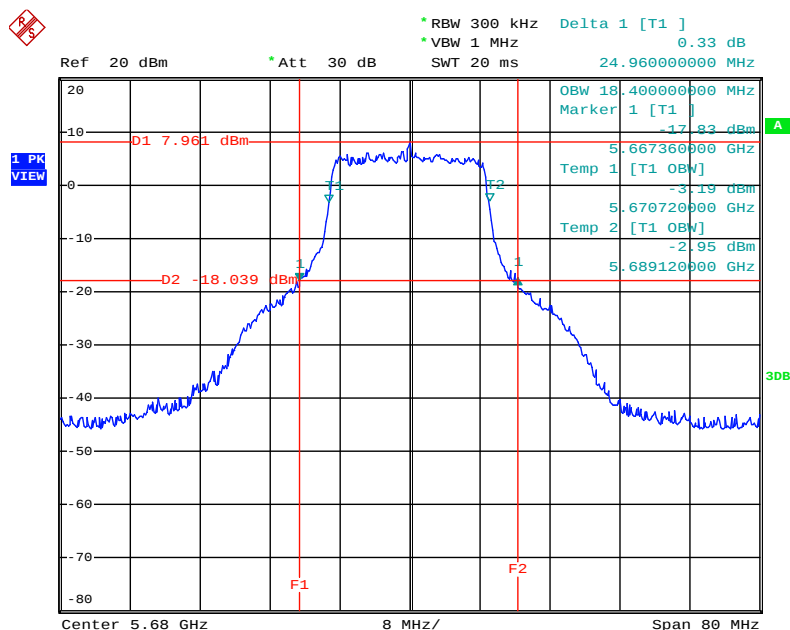
Date: 8.NOV.2013 11:22:23

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5580 MHz



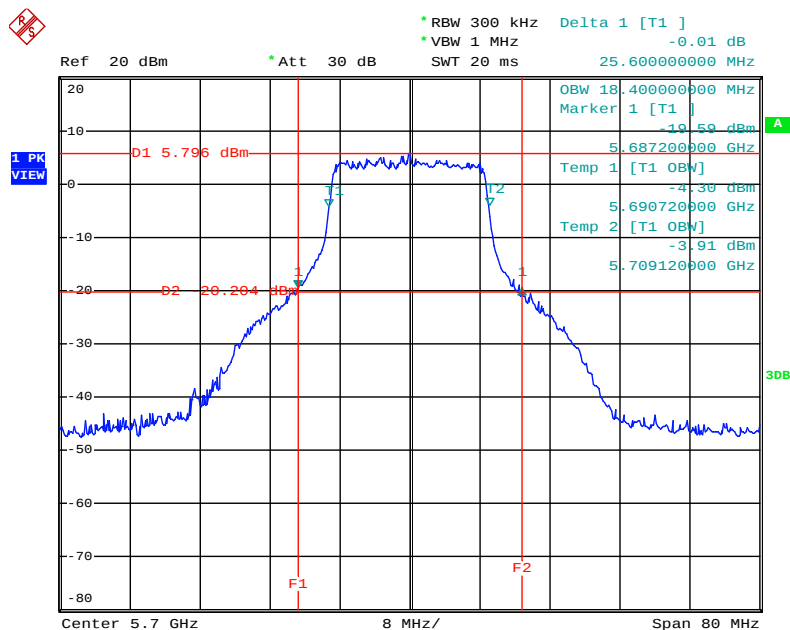
Date: 8.NOV.2013 11:23:01

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5680 MHz



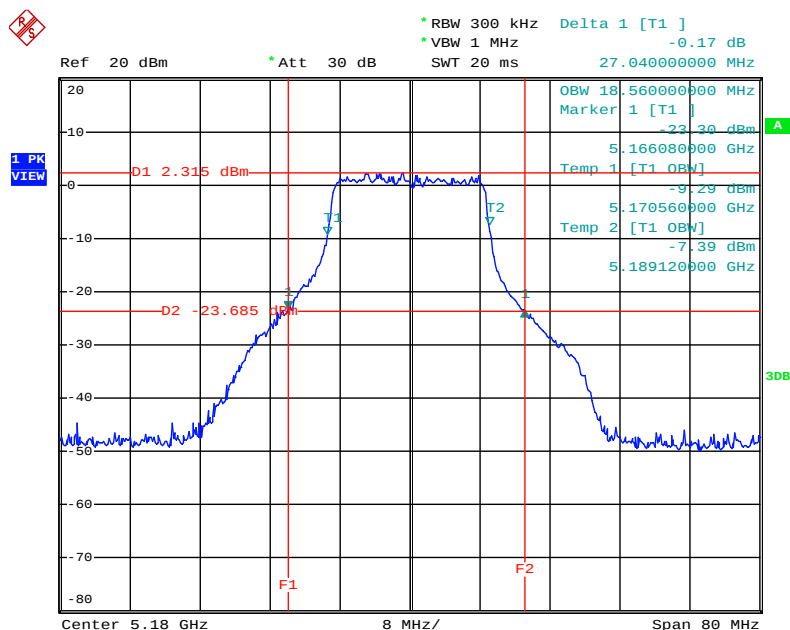
Date: 8.NOV.2013 11:23:45

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 2 / 5700 MHz



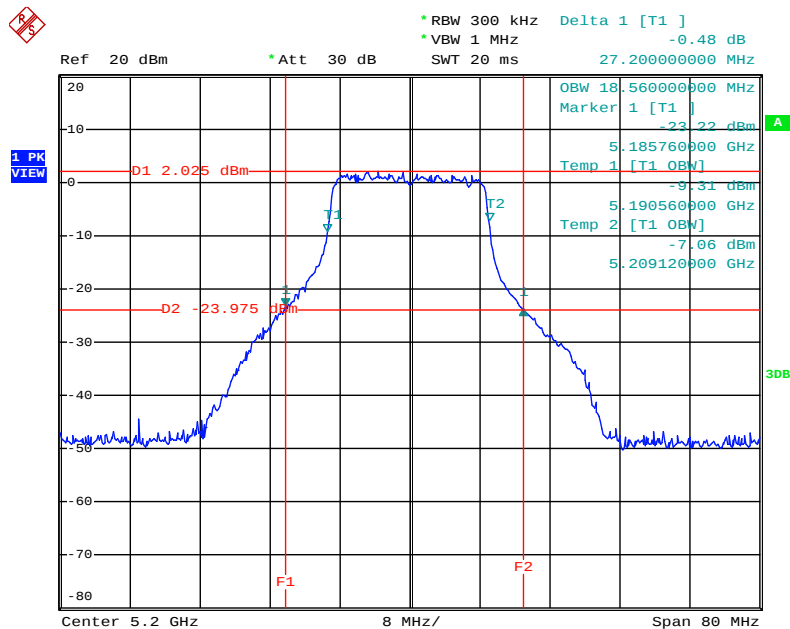
Date: 8.NOV.2013 11:24:20

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5180 MHz



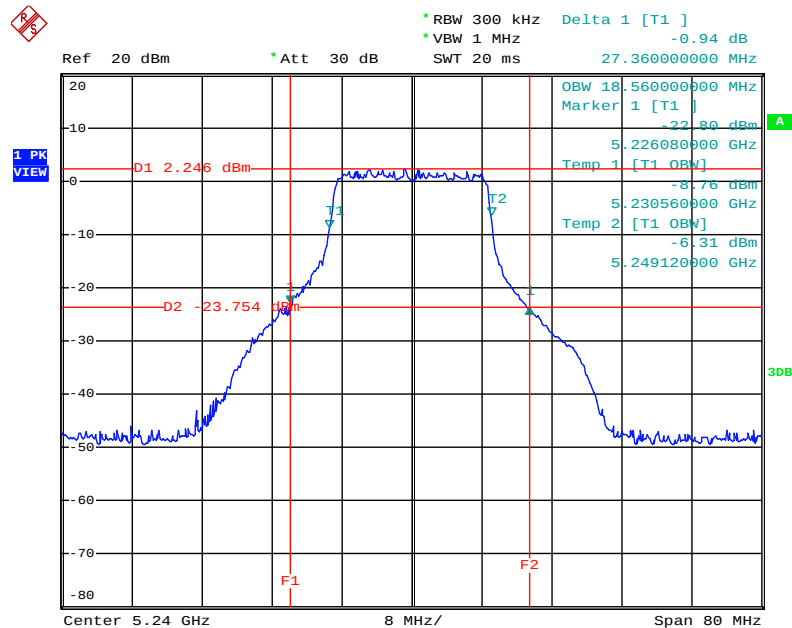
Date: 8.NOV.2013 11:03:35

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5200 MHz



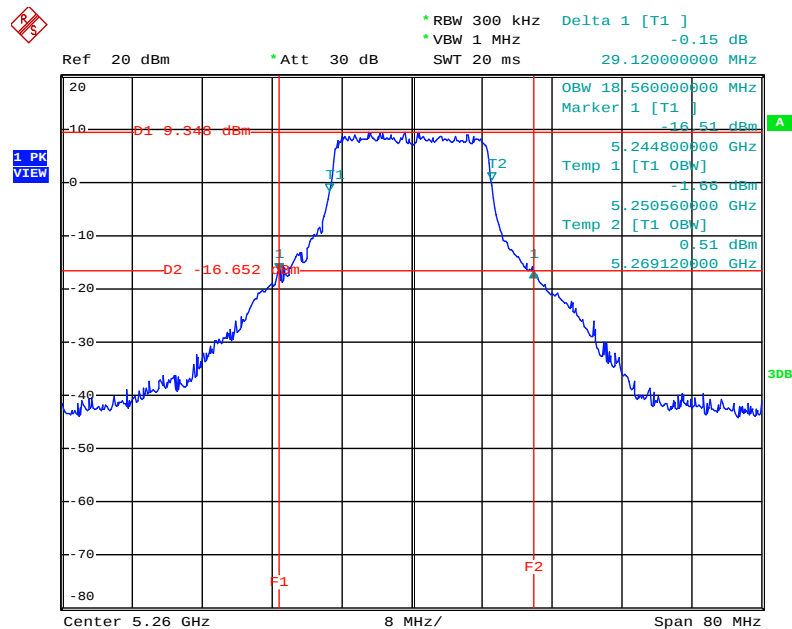
Date: 8.NOV.2013 11:04:10

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5240 MHz



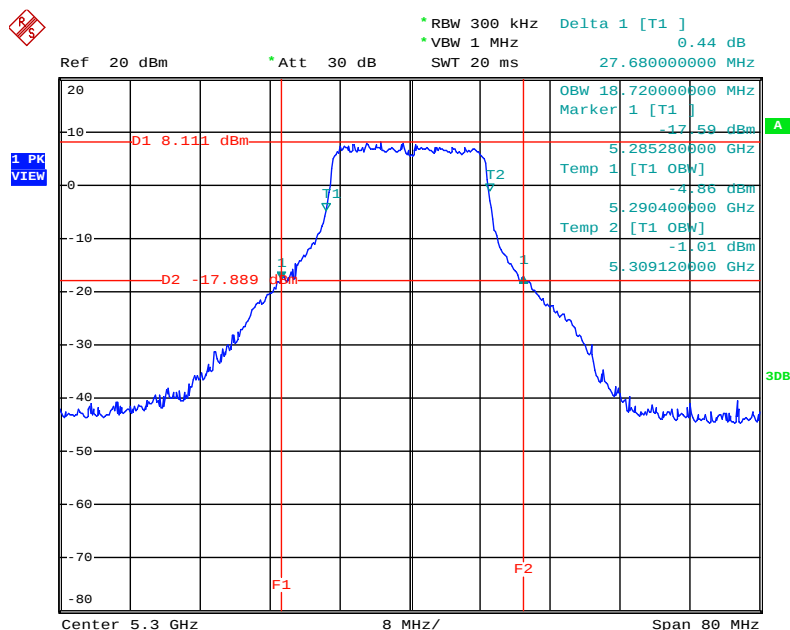
Date: 8.NOV.2013 11:04:44

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5260 MHz



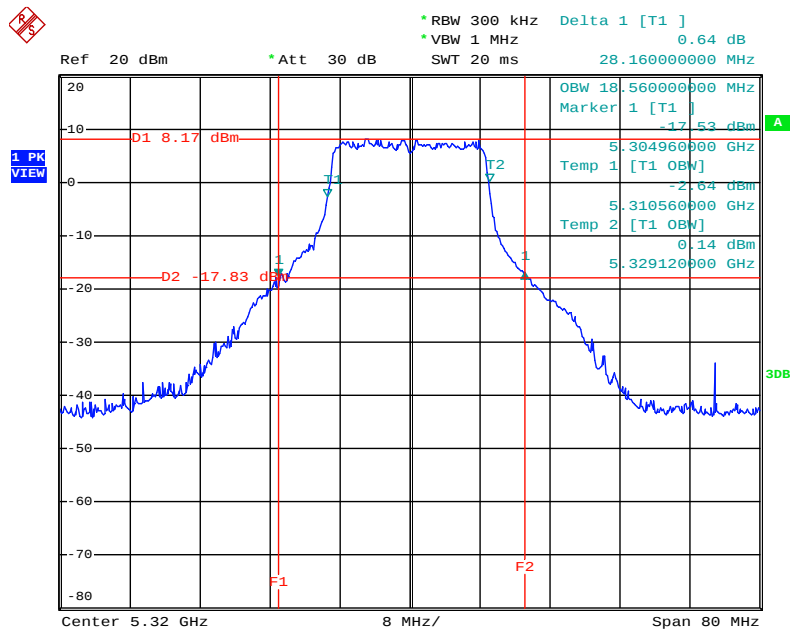
Date: 8.NOV.2013 11:05:22

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5300 MHz



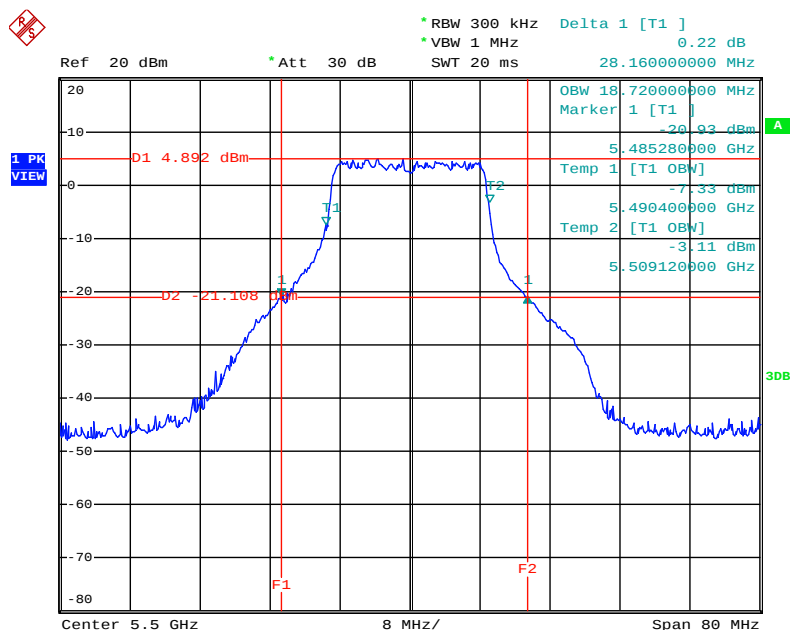
Date: 8.NOV.2013 11:06:03

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5320 MHz



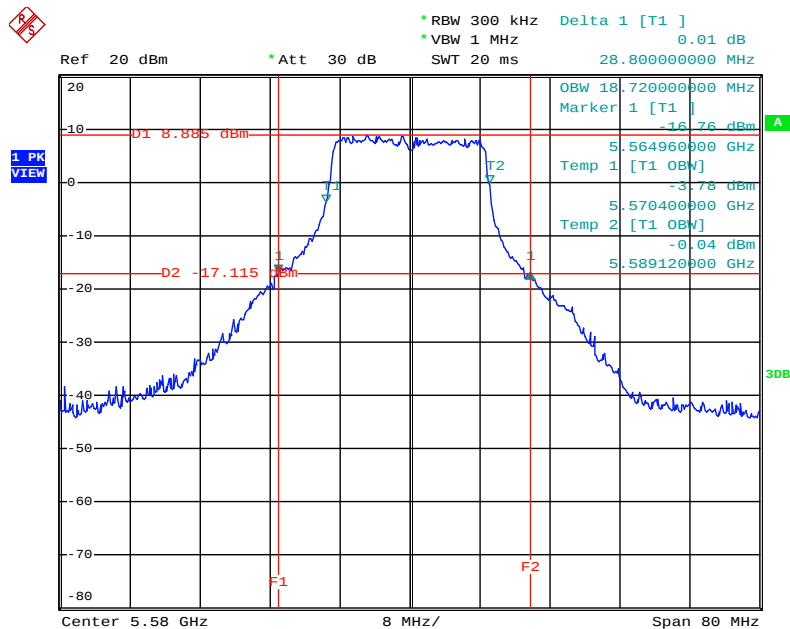
Date: 8.NOV.2013 11:06:42

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5500 MHz



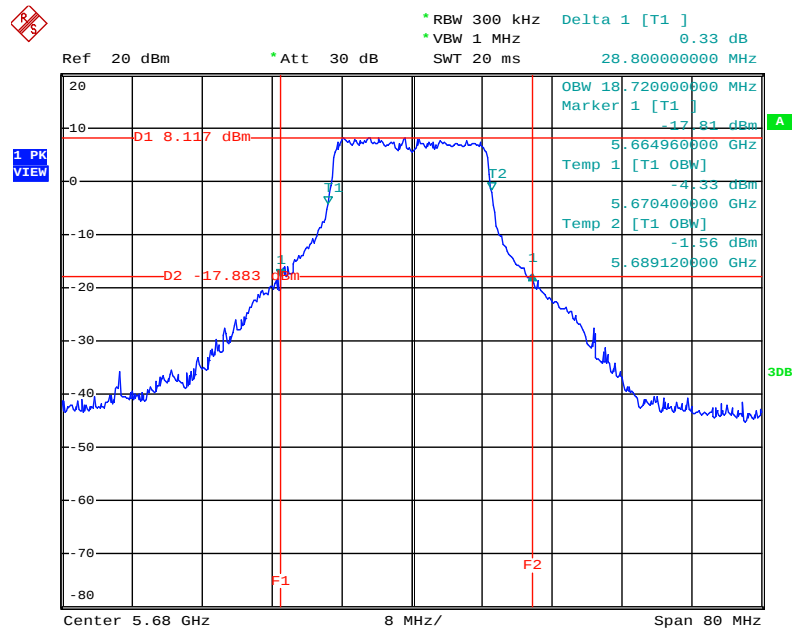
Date: 8.NOV.2013 11:21:31

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5580 MHz



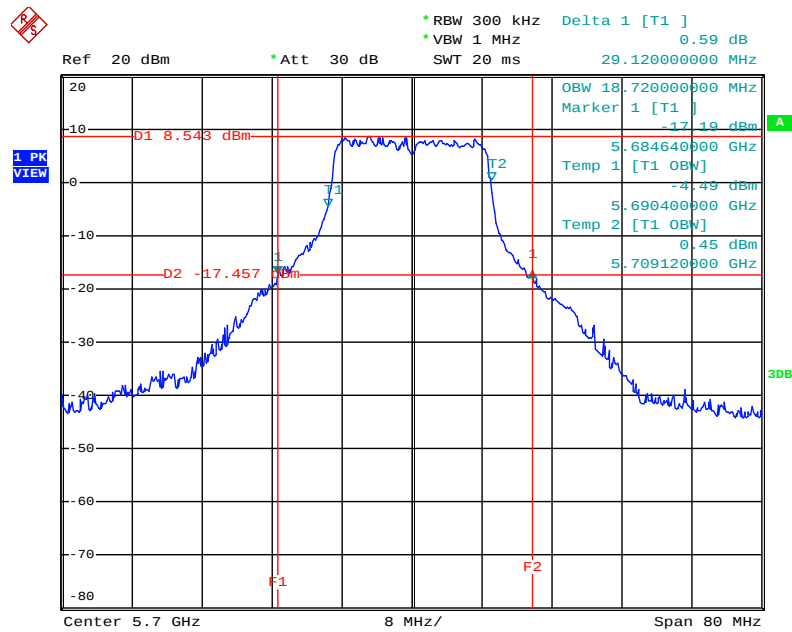
Date: 8.NOV.2013 11:20:57

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5680 MHz



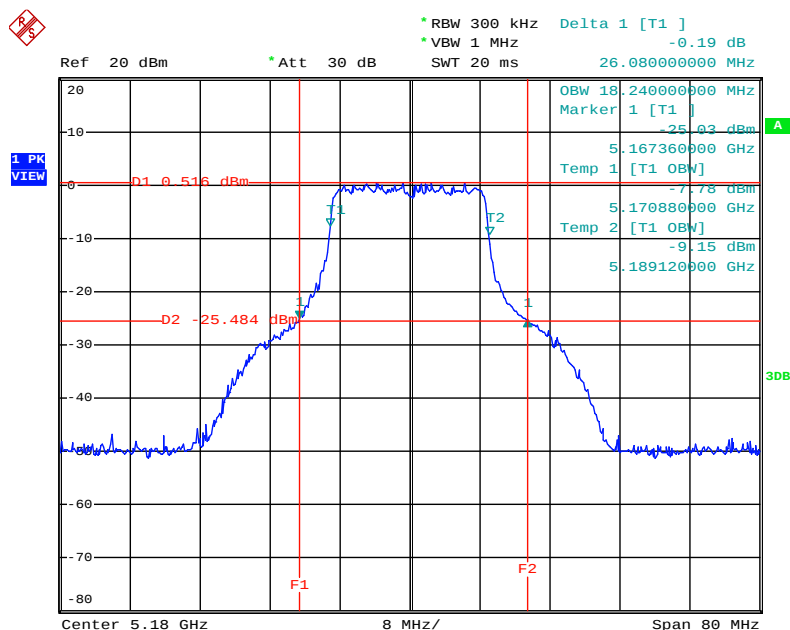
Date: 8.NOV.2013 11:20:22

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 3 / 5700 MHz



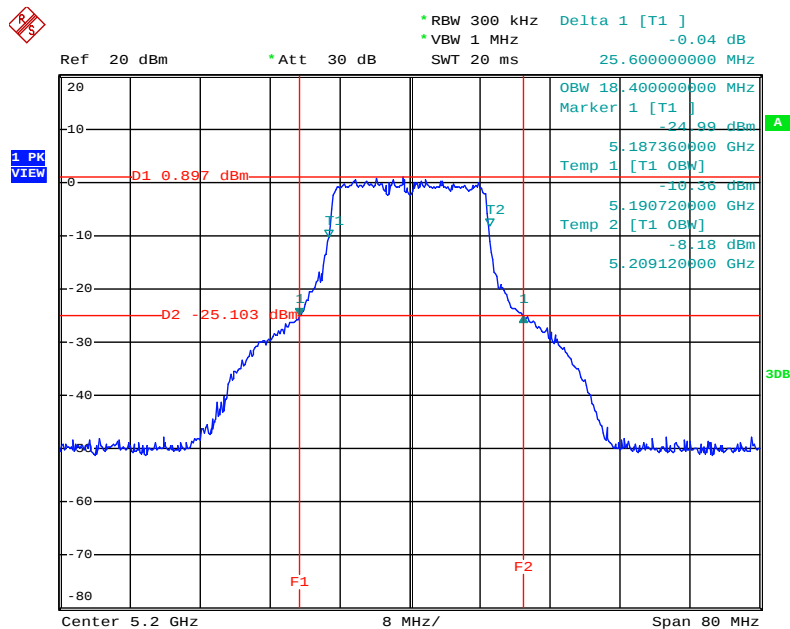
Date: 8.NOV.2013 11:19:46

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5180 MHz



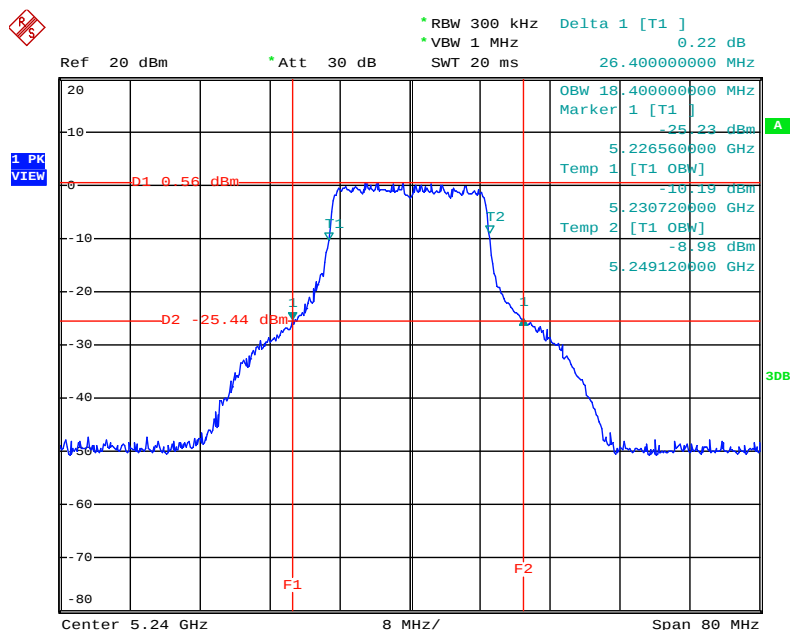
Date: 8.NOV.2013 11:11:14

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5200 MHz



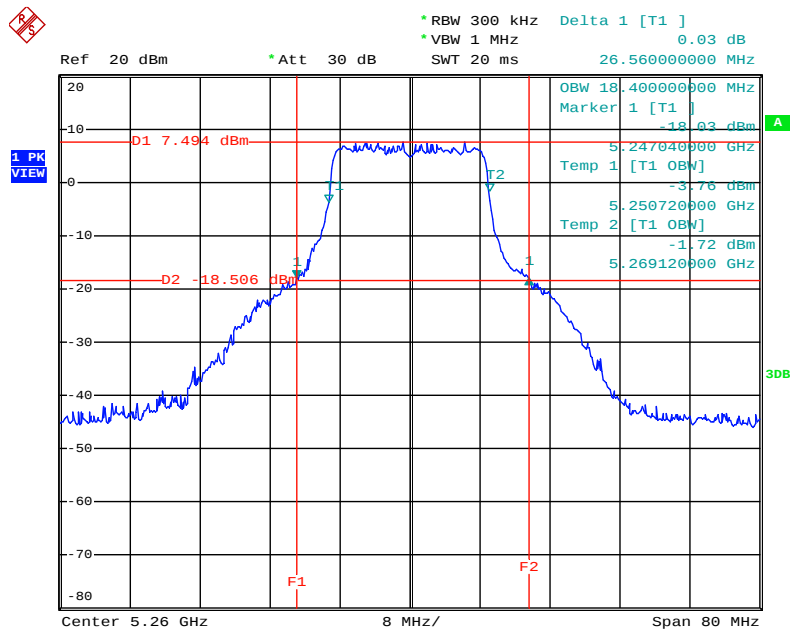
Date: 8.NOV.2013 11:10:34

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5240 MHz



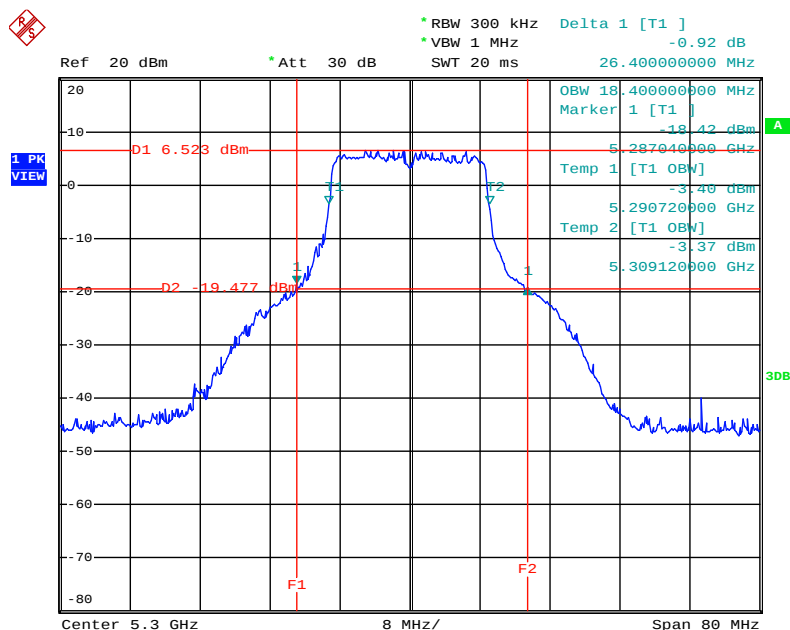
Date: 8.NOV.2013 11:09:30

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5260 MHz



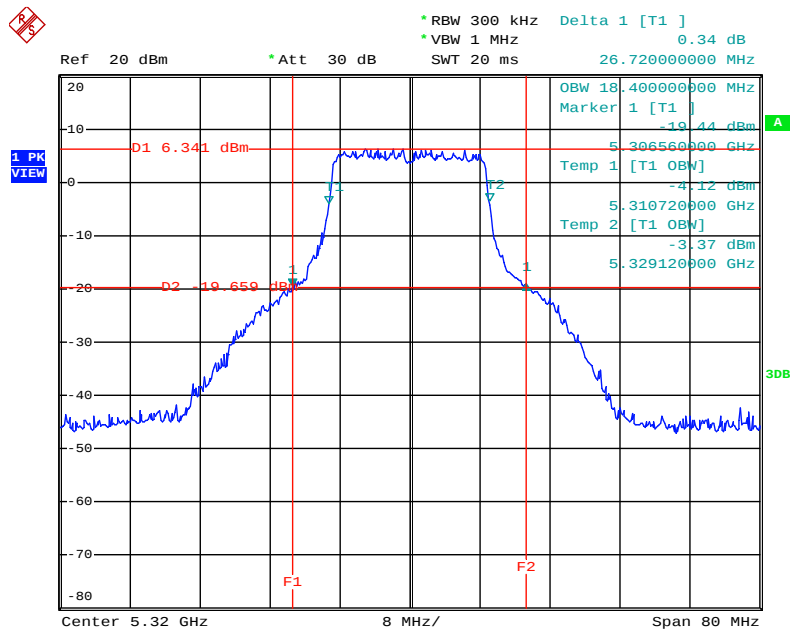
Date: 8.NOV.2013 11:08:47

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5300 MHz



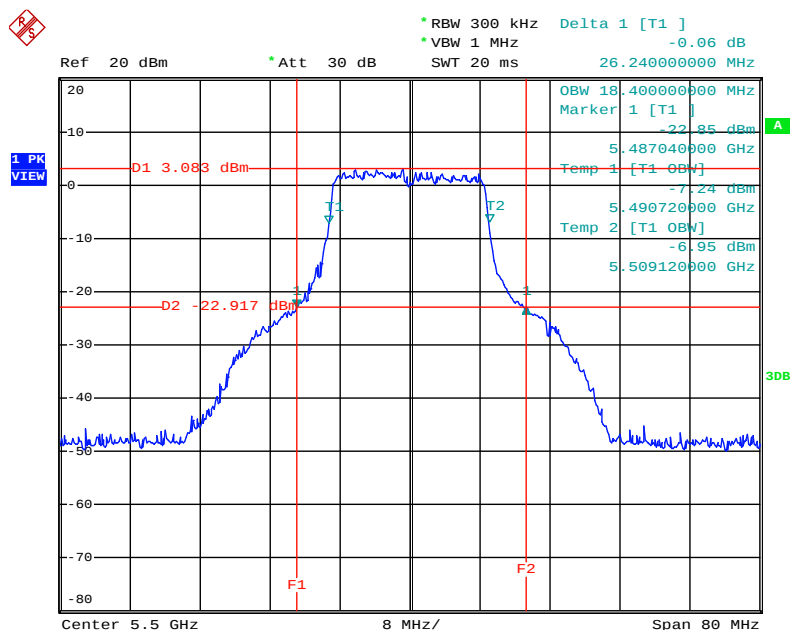
Date: 8.NOV.2013 11:08:10

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5320 MHz



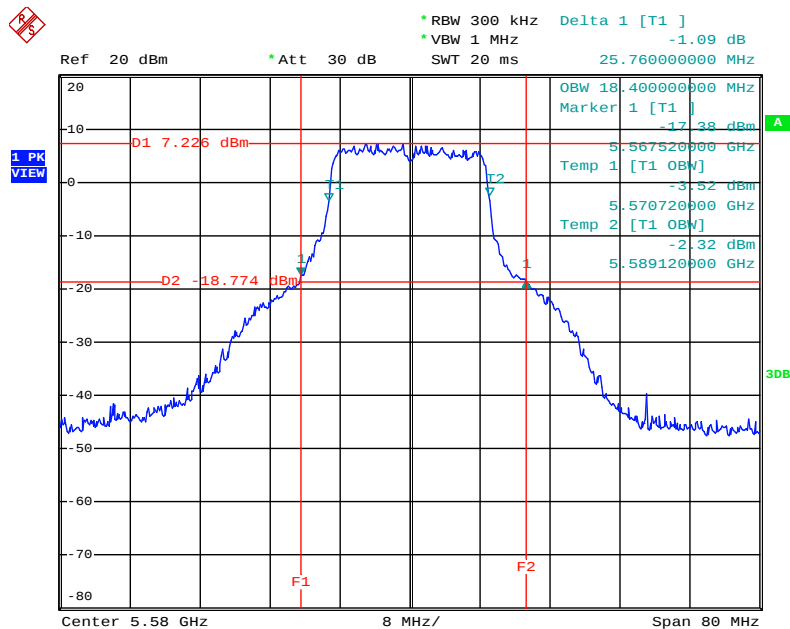
Date: 8.NOV.2013 11:07:31

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5500 MHz



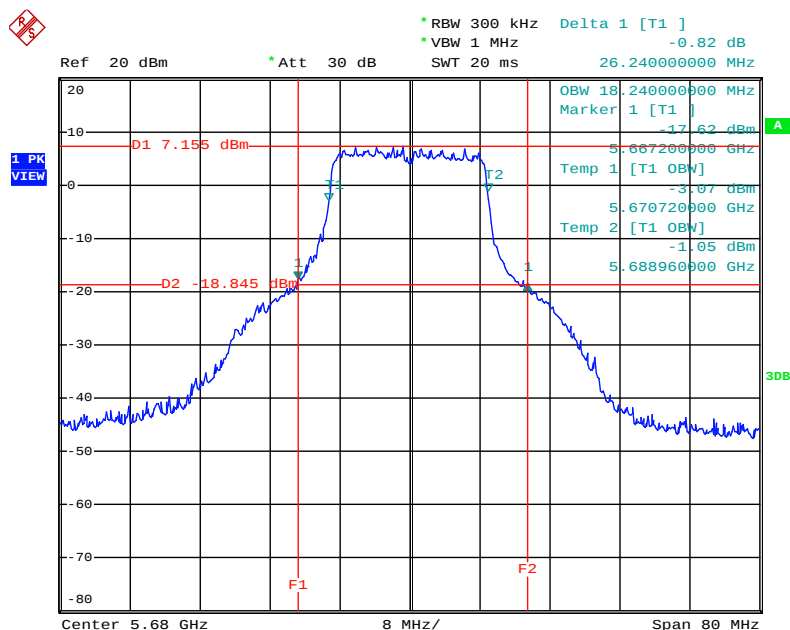
Date: 8.NOV.2013 11:17:01

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5580 MHz



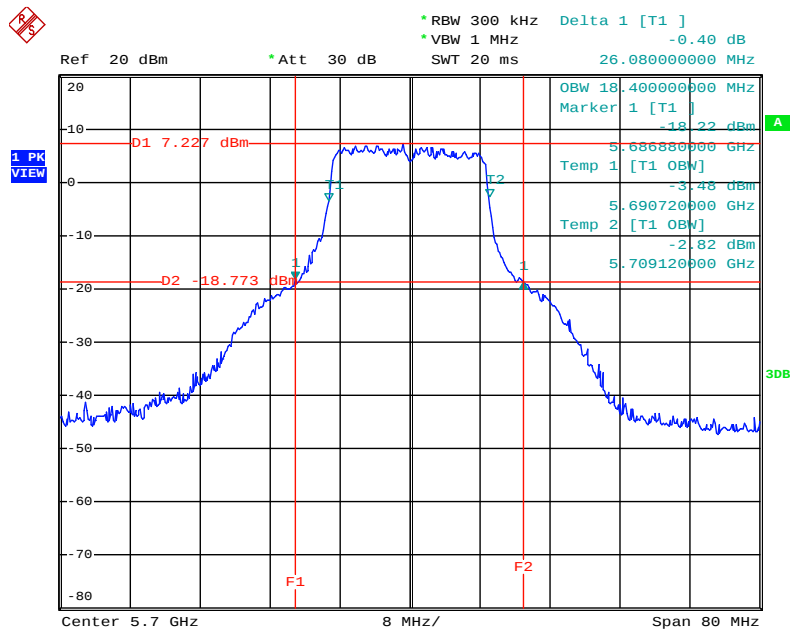
Date: 8.NOV.2013 11:17:44

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5680 MHz



Date: 8.NOV.2013 11:18:29

26dB Bandwidth Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 4 / 5700 MHz



Date: 8.NOV.2013 11:19:06

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 40MHz
Duty Cycle	97.97%	Duty Factor	0.09

Configuration IEEE 802.11n 40MHz

<MCS0, Ant 1>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
38	5190 MHz	42.56	36.48	MCS0
46	5230 MHz	43.20	36.48	MCS0
54	5270 MHz	42.56	36.48	MCS0
62	5310 MHz	42.56	36.48	MCS0
102	5510 MHz	42.88	36.48	MCS0
110	5550 MHz	42.56	36.48	MCS0
134	5670 MHz	40.96	36.48	MCS0

<MCS0, Ant 2>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
38	5190 MHz	43.84	36.48	MCS0
46	5230 MHz	43.84	36.48	MCS0
54	5270 MHz	43.84	36.48	MCS0
62	5310 MHz	42.24	36.48	MCS0
102	5510 MHz	44.16	36.48	MCS0
110	5550 MHz	44.16	36.48	MCS0
134	5670 MHz	42.56	36.48	MCS0

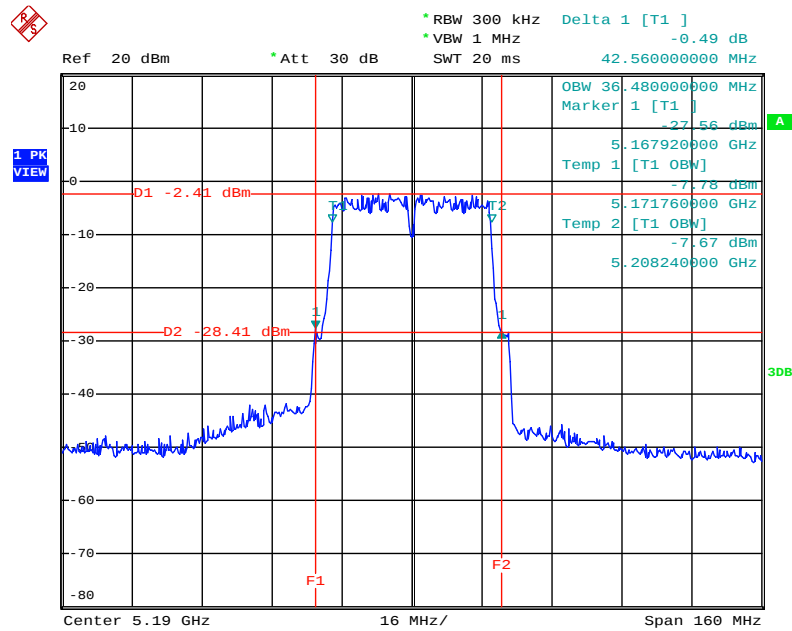
<MCS0, Ant 3>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
38	5190 MHz	43.20	36.48	MCS0
46	5230 MHz	44.16	36.48	MCS0
54	5270 MHz	44.16	36.48	MCS0
62	5310 MHz	44.16	36.48	MCS0
102	5510 MHz	44.16	36.48	MCS0
110	5550 MHz	44.16	36.48	MCS0
134	5670 MHz	44.16	36.48	MCS0

<MCS0, Ant 4>

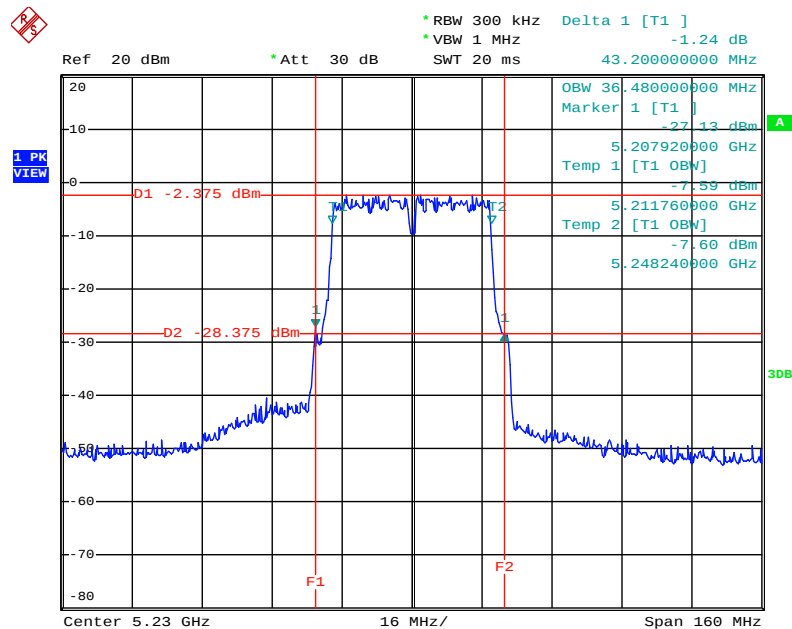
Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
38	5190 MHz	43.84	36.48	MCS0
46	5230 MHz	42.56	36.48	MCS0
54	5270 MHz	44.16	36.48	MCS0
62	5310 MHz	42.88	36.48	MCS0
102	5510 MHz	44.16	36.48	MCS0
110	5550 MHz	42.24	36.48	MCS0
134	5670 MHz	42.88	36.48	MCS0

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1 / 5190 MHz



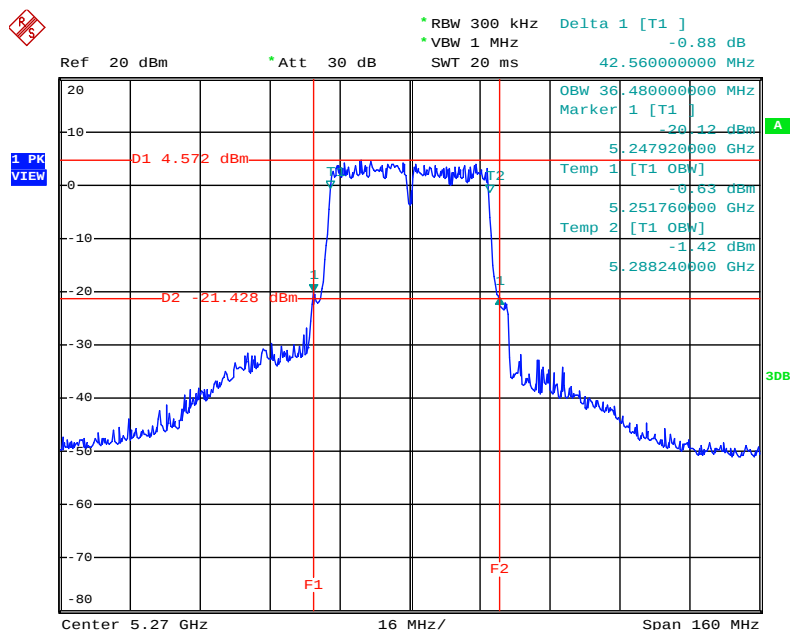
Date: 8.NOV.2013 11:29:06

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1 / 5230 MHz



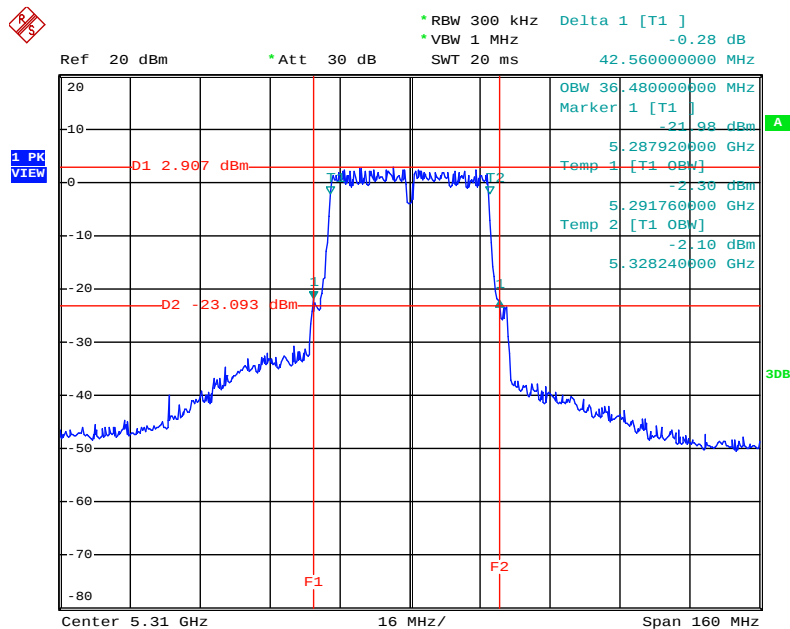
Date: 8.NOV.2013 11:29:41

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1 / 5270 MHz



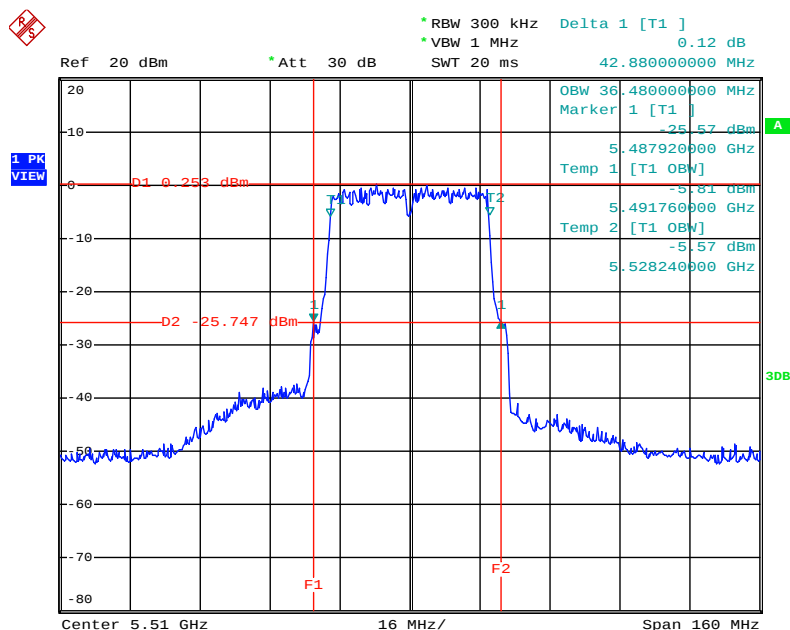
Date: 8.NOV.2013 11:30:29

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1 / 5310 MHz



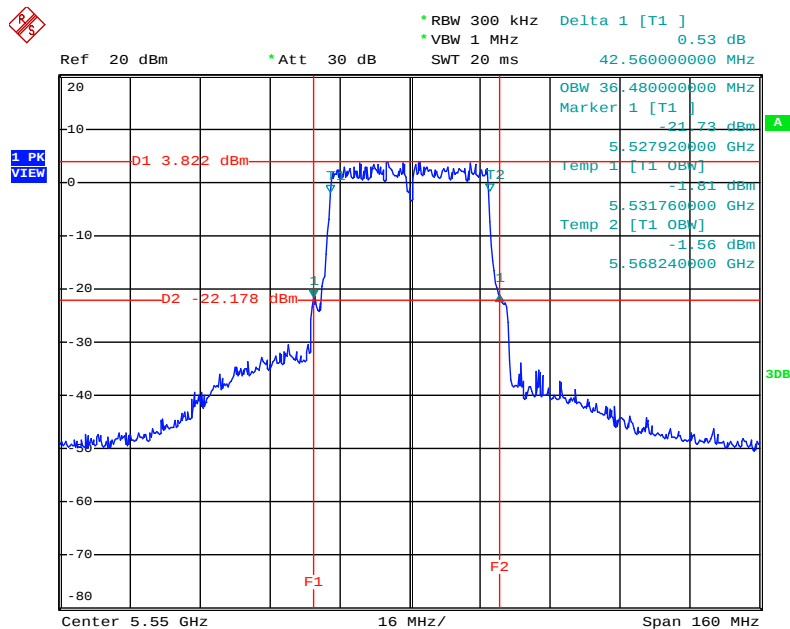
Date: 8.NOV.2013 11:31:10

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1 / 5510 MHz



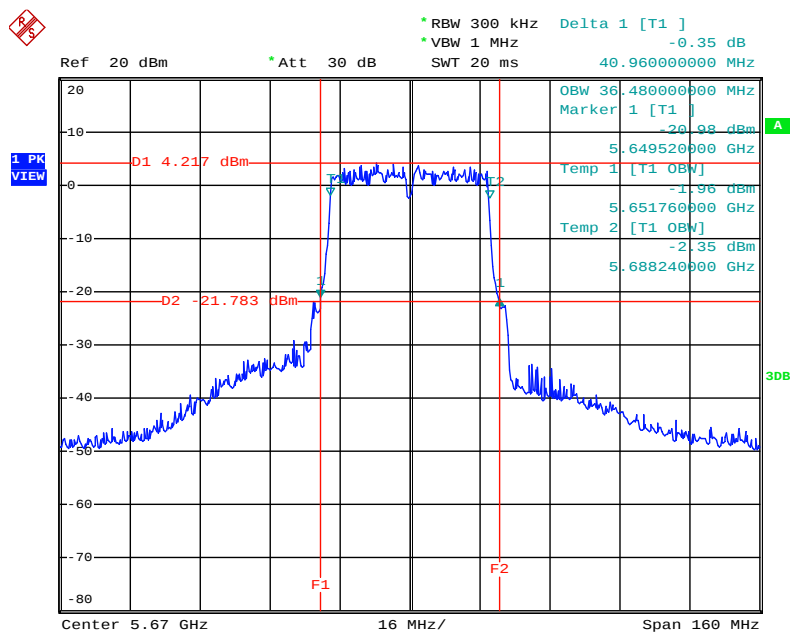
Date: 8.NOV.2013 11:47:51

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1 / 5550 MHz



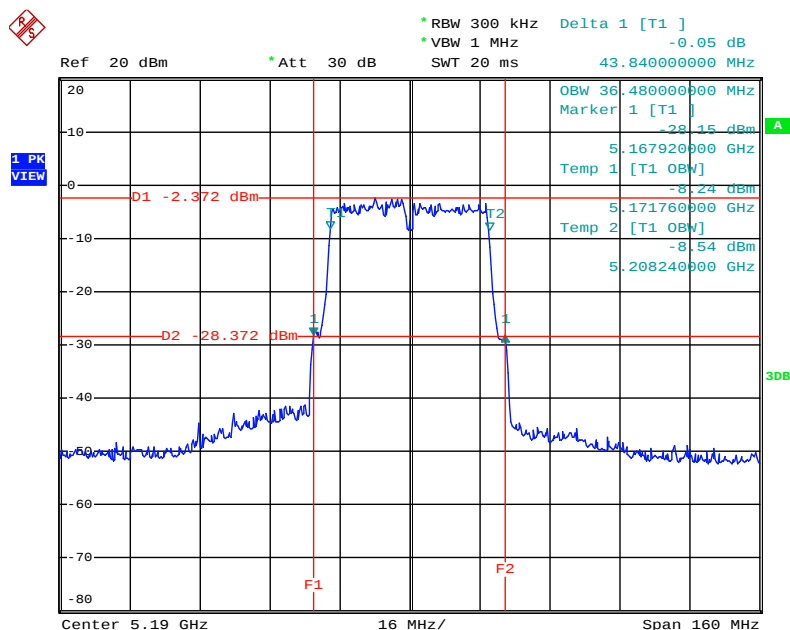
Date: 8.NOV.2013 11:47:16

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1 / 5670 MHz



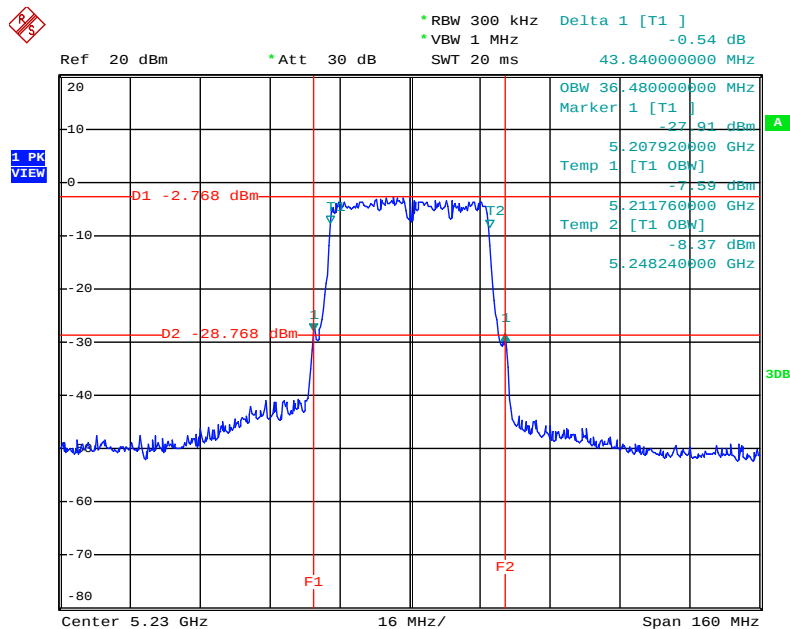
Date: 8.NOV.2013 11:46:37

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 2 / 5190 MHz



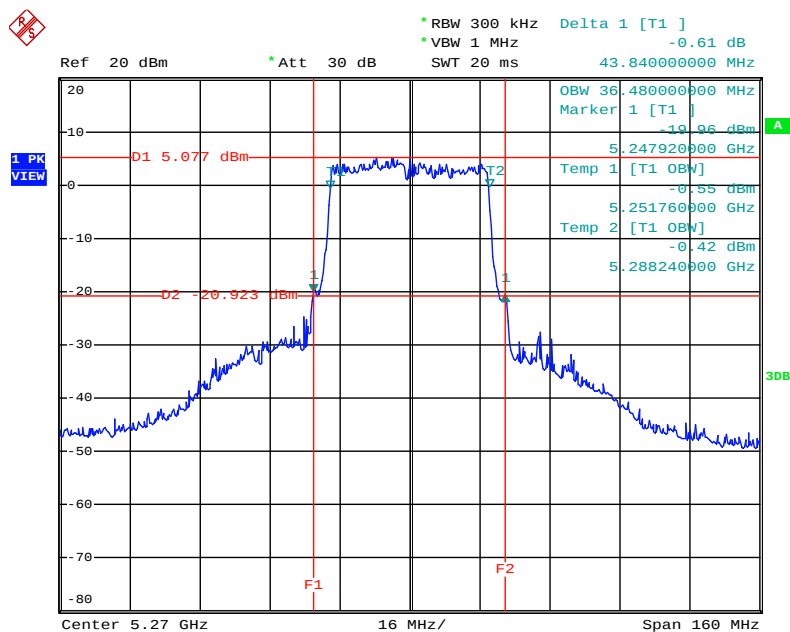
Date: 8.NOV.2013 11:33:47

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 2 / 5230 MHz



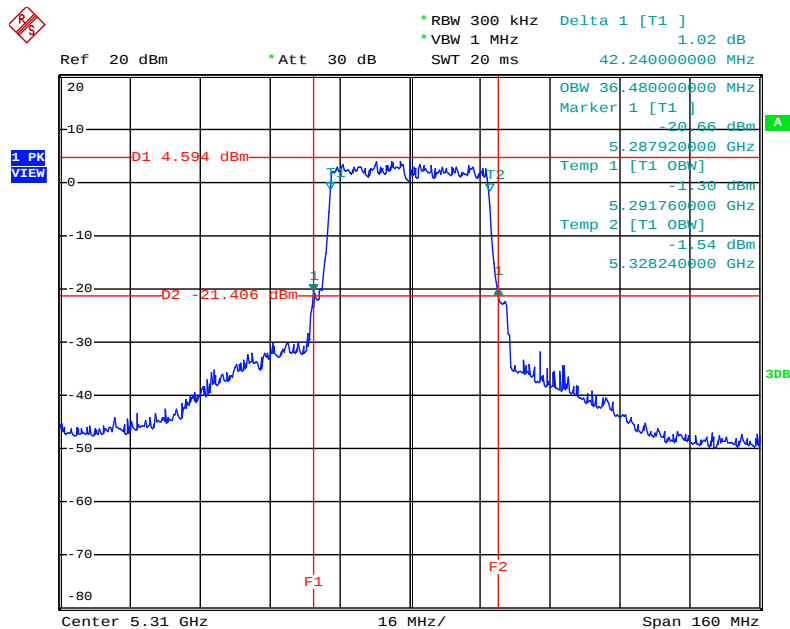
Date: 8.NOV.2013 11:33:10

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 2 / 5270 MHz



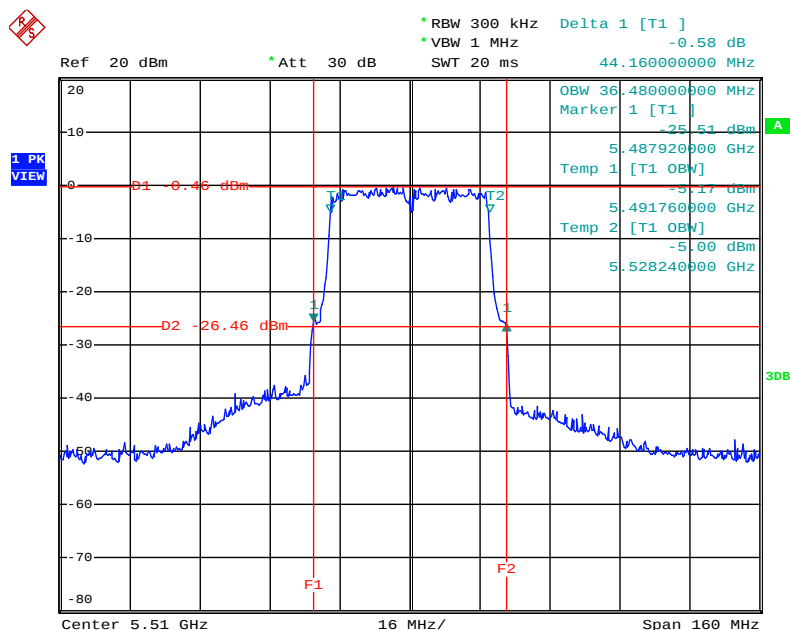
Date: 8.NOV.2013 11:32:31

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 2 / 5310 MHz



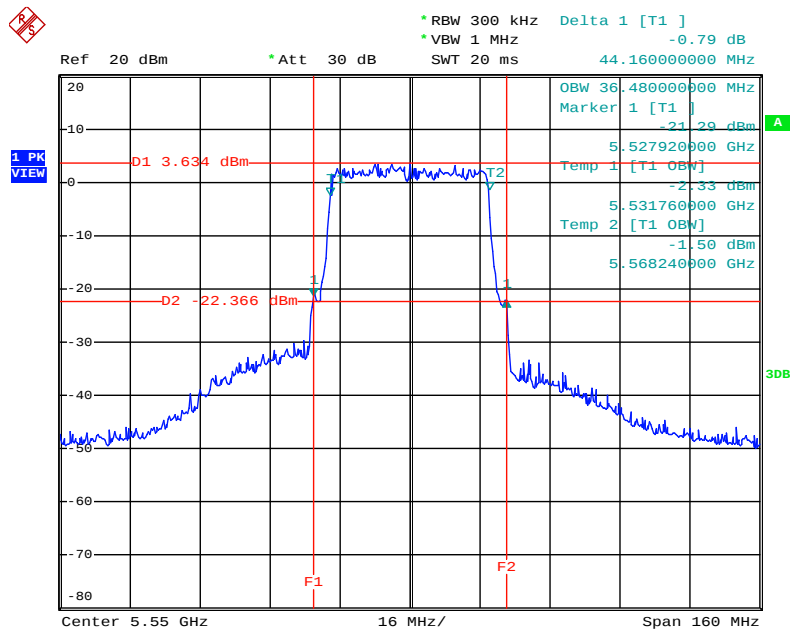
Date: 8.NOV.2013 11:31:53

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 2 / 5510 MHz



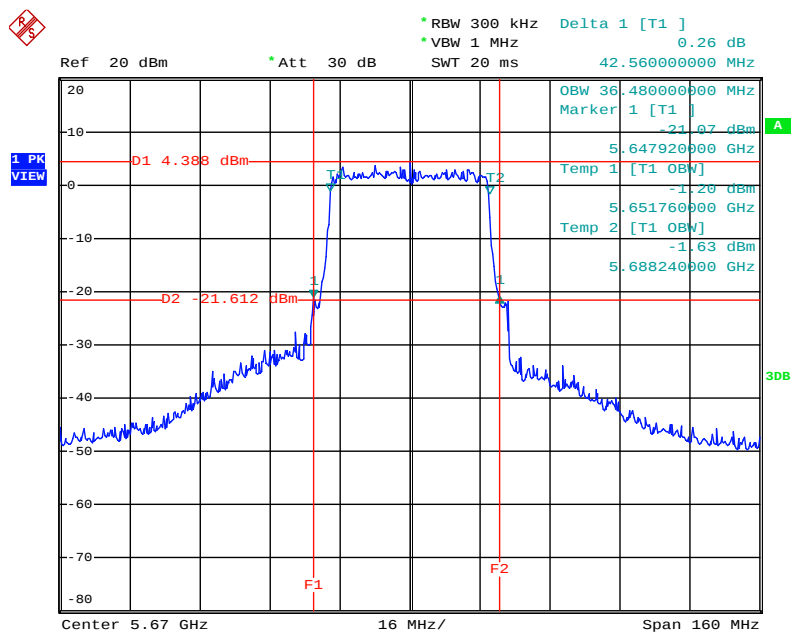
Date: 8.NOV.2013 11:44:38

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 2 / 5550 MHz



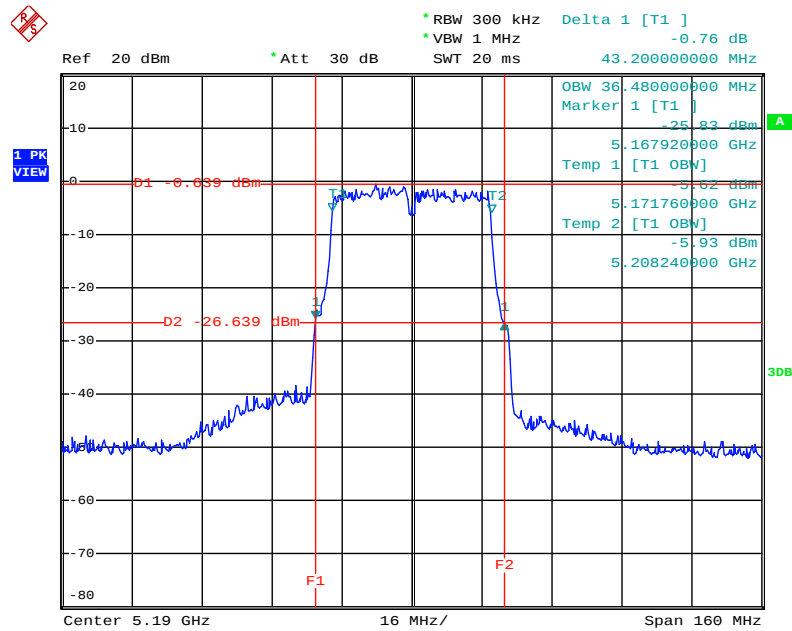
Date: 8.NOV.2013 11:45:17

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 2 / 5670 MHz



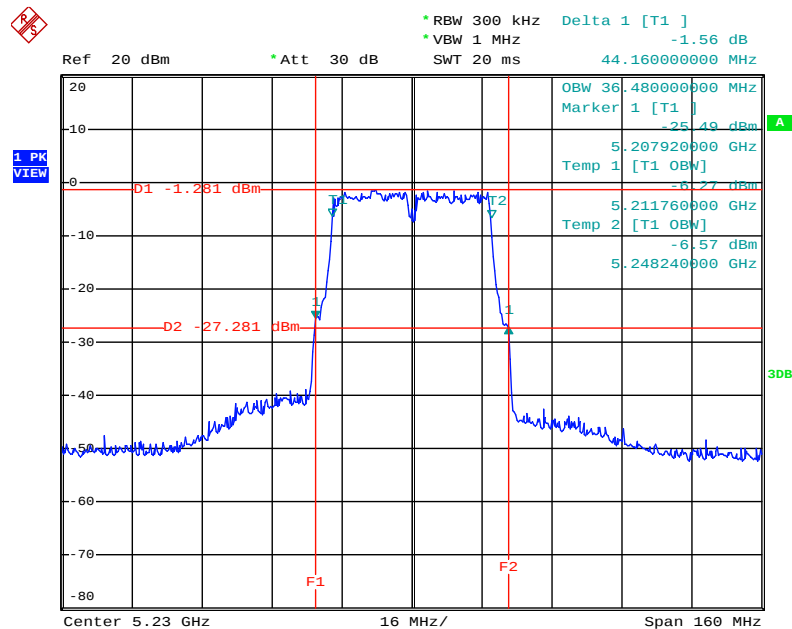
Date: 8.NOV.2013 11:45:57

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 3 / 5190 MHz



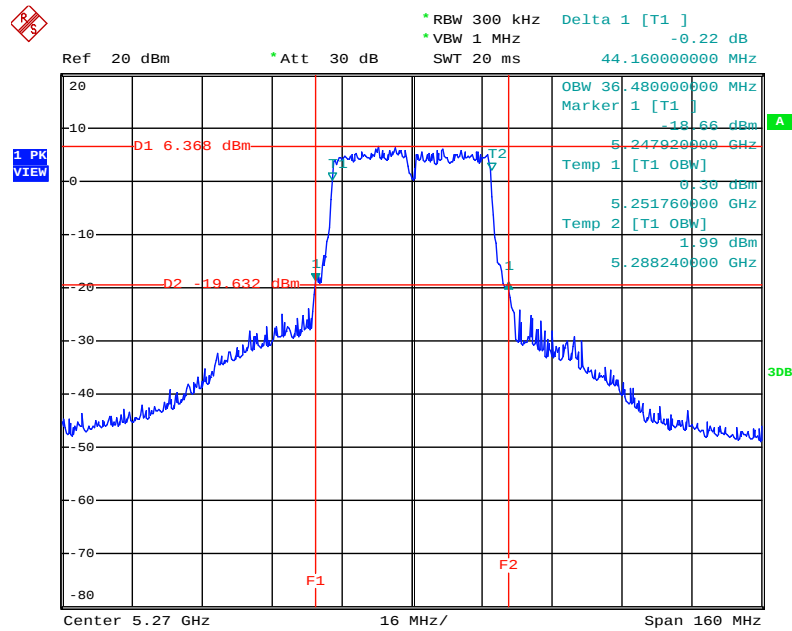
Date: 8.NOV.2013 11:34:25

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 3 / 5230 MHz



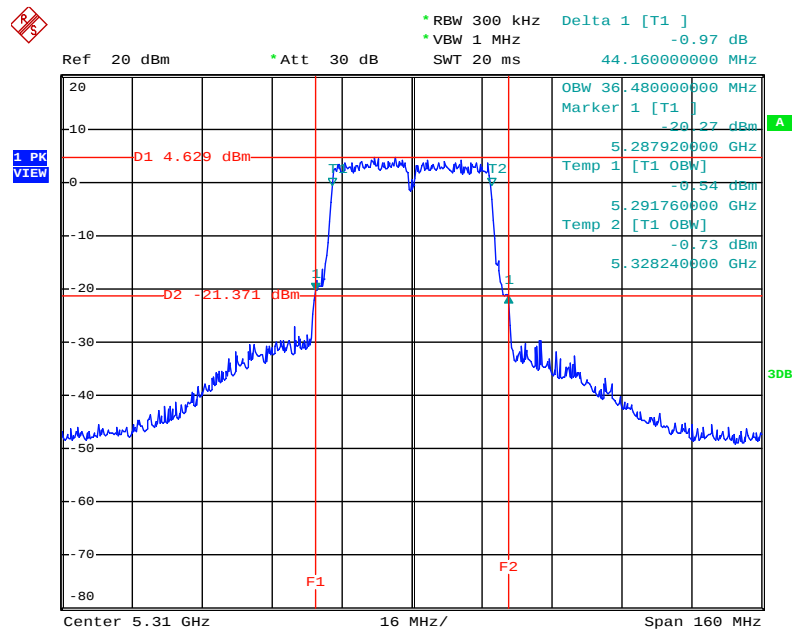
Date: 8.NOV.2013 11:35:05

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 3 / 5270 MHz



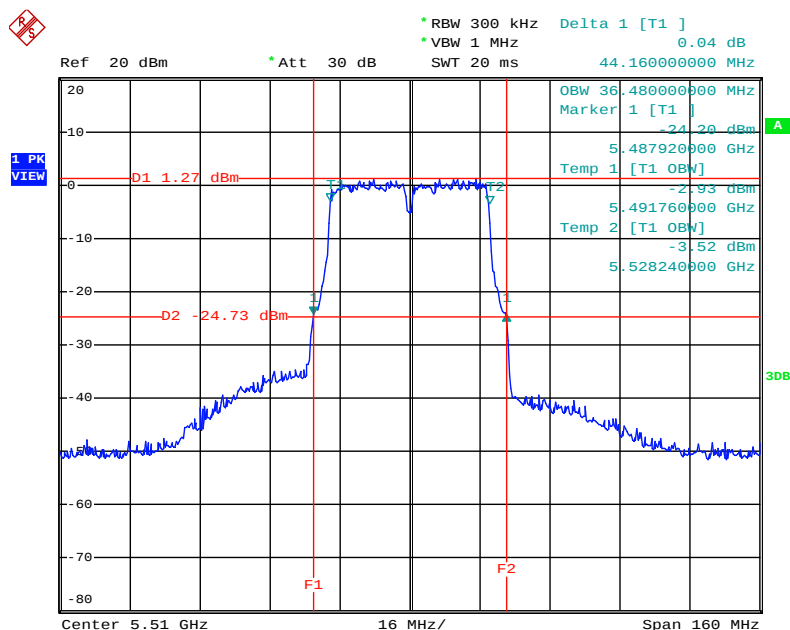
Date: 8.NOV.2013 11:35:42

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 3 / 5310 MHz



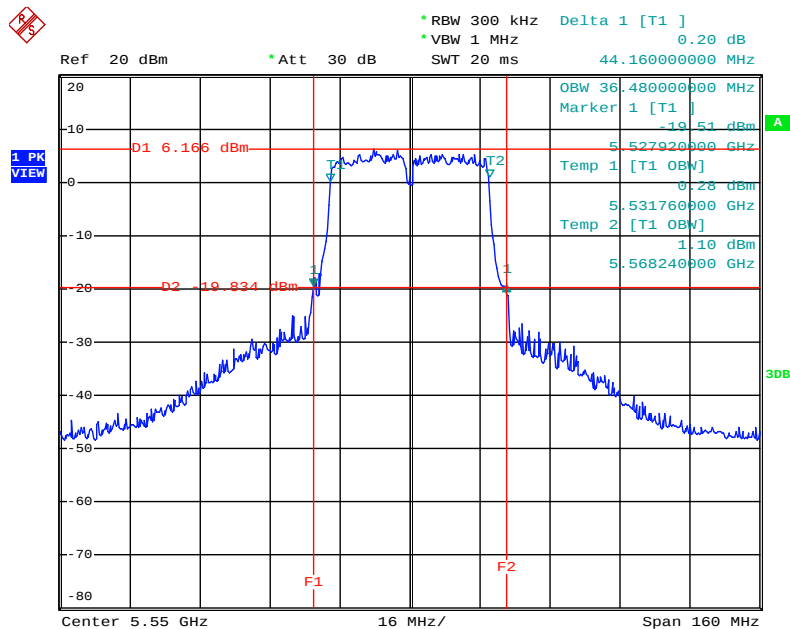
Date: 8.NOV.2013 11:36:19

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 3 / 5510 MHz



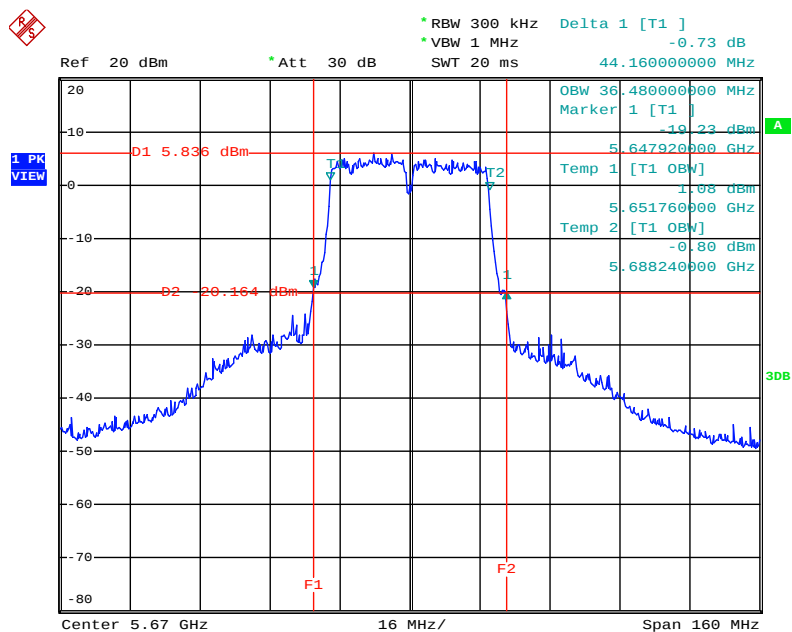
Date: 8.NOV.2013 11:43:42

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 3 / 5550 MHz



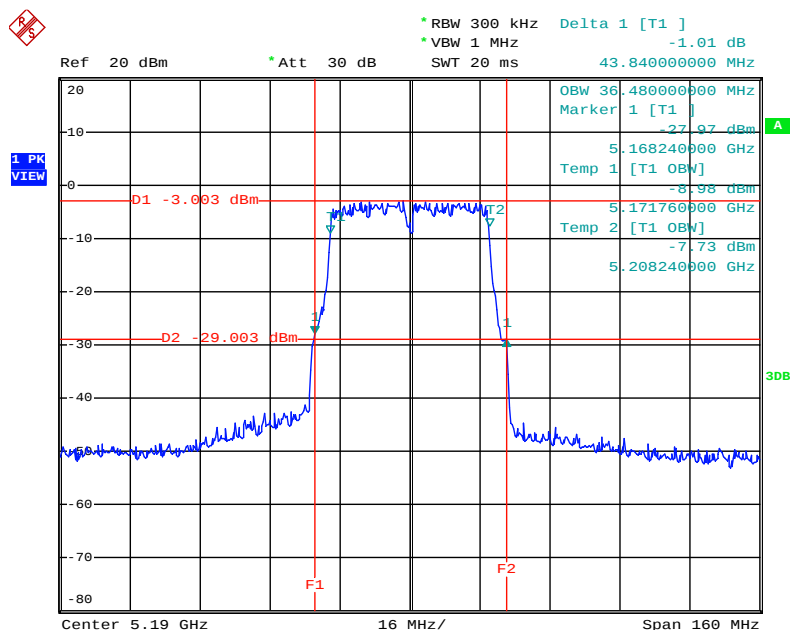
Date: 8.NOV.2013 11:43:05

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 3 / 5670 MHz



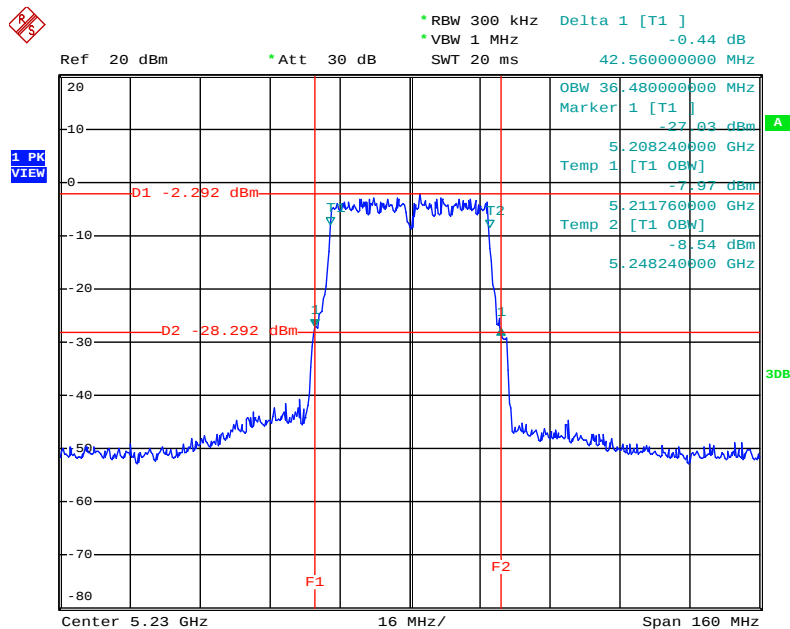
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26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 4 / 5190 MHz



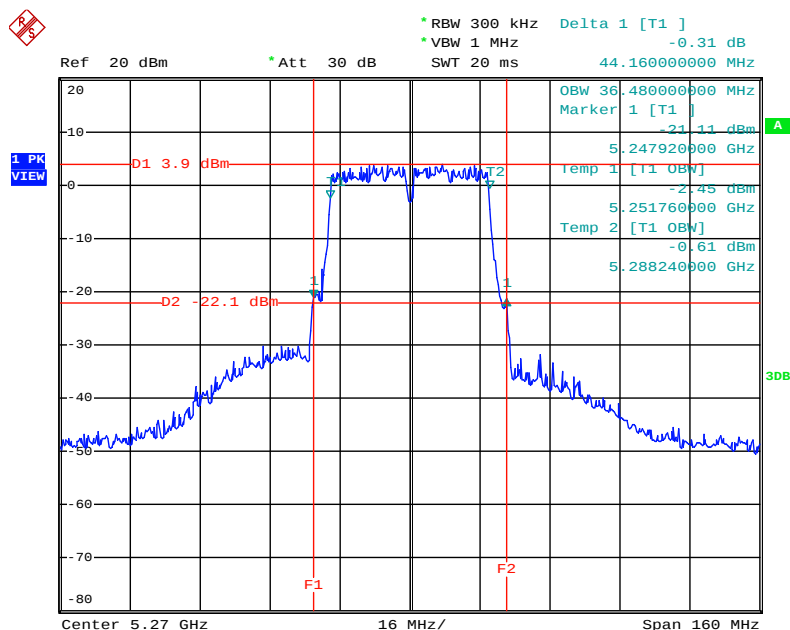
Date: 8.NOV.2013 11:38:44

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 4 / 5230 MHz



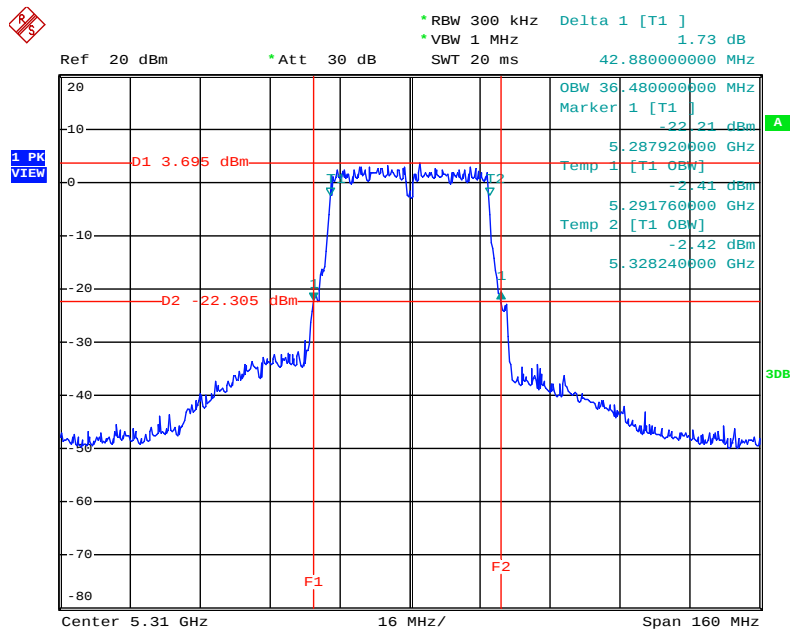
Date: 8.NOV.2013 11:38:09

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 4 / 5270 MHz



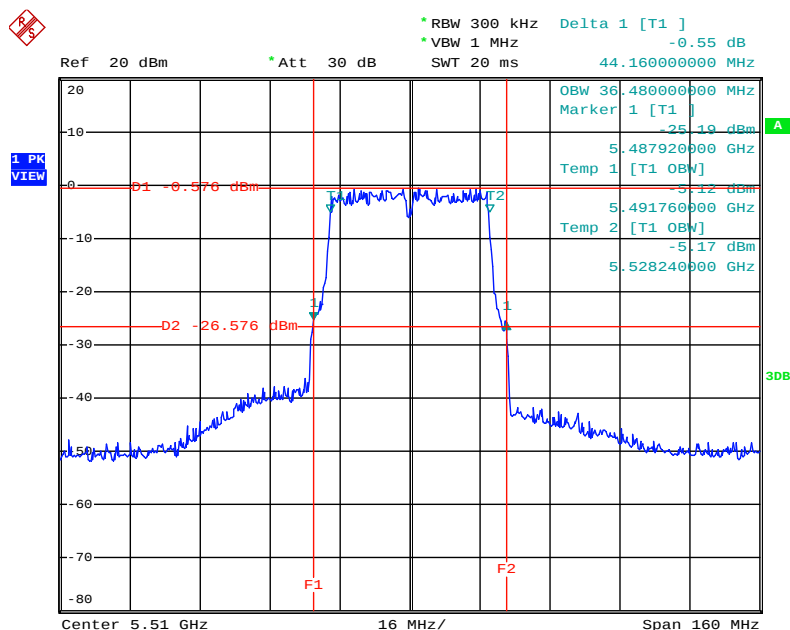
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26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 4 / 5310 MHz



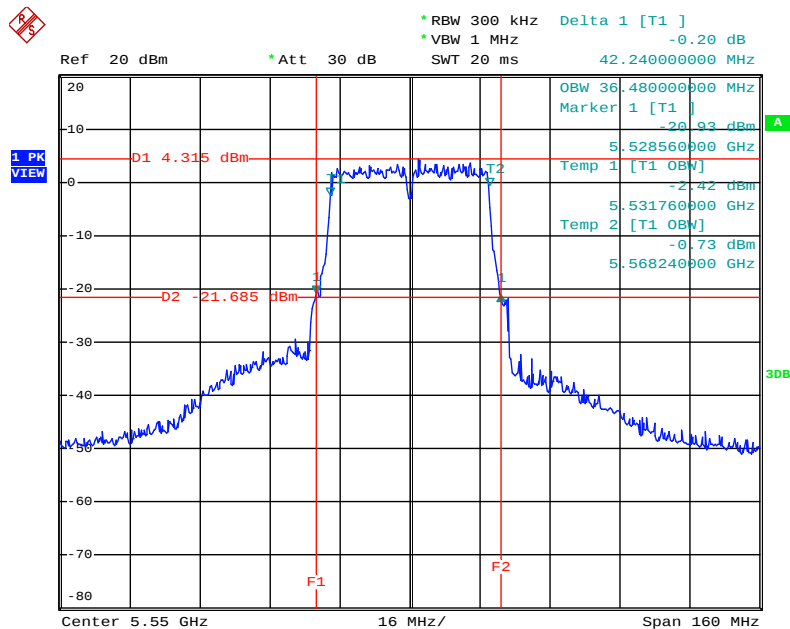
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26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 4 / 5510 MHz



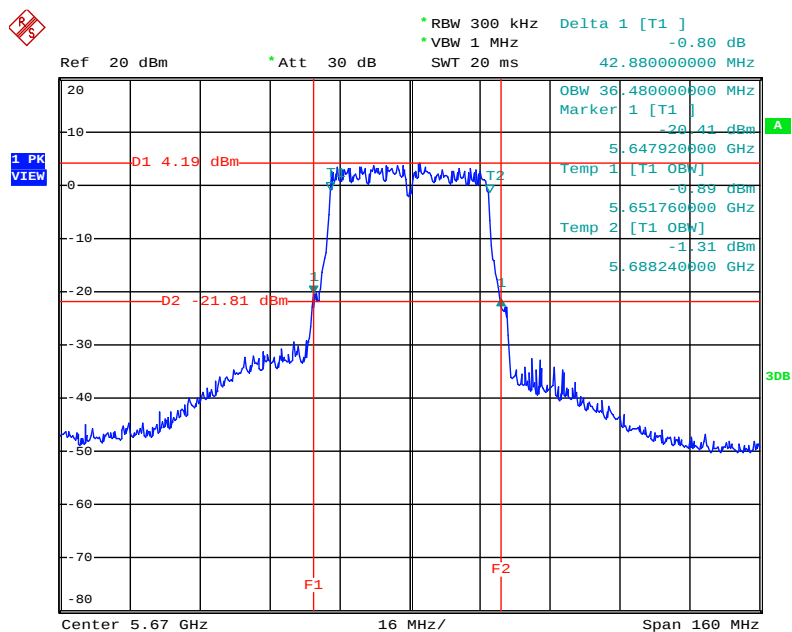
Date: 8.NOV.2013 11:40:08

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 4 / 5550 MHz



Date: 8.NOV.2013 11:41:00

26dB Bandwidth Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 4 / 5670 MHz



Date: 8.NOV.2013 11:41:41

3.3 Maximum Conducted Output Power Measurement

3.3.1 Limit

Frequency Band	Limit
5.15 ~ 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10log B
5.25 ~ 5.35GHz	The lesser of 250 mW (24dBm) or 11 dBm + 10log B
5.47 ~ 5.725GHz	The lesser of 250 mW (24dBm) or 11 dBm + 10log B

NOTE: Where B is the 26-dB emission bandwidth in MHz.

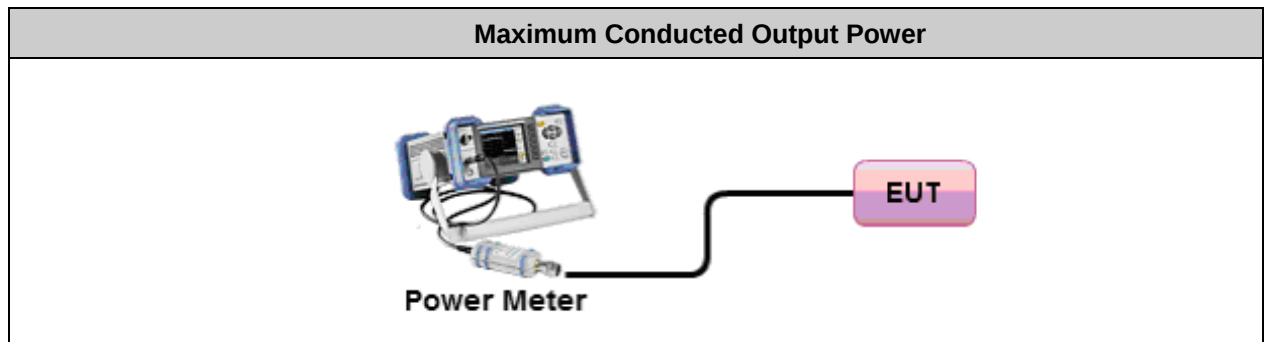
3.3.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer.

Power Meter Parameter	Setting
Filter No.	Auto
Measurement time	0.135 s ~ 26 s
Power Sensor	MA2411B

3.3.3 Test Procedures

1. Test was performed in accordance with Measurement of Digital Transmission Systems Operating under KDB789033 D01 General UNII Test Procedures v01r03, in section "Maximum conducted output power Method (3)", 04/08/2013
2. The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor to get the all on time transmission. Record the average power level.
3. When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.
4. Adjust the measurement in dBm by adding $10 \log(1/x)$ where x is the duty cycle. Record the average power level.

3.3.4 Test Setup Layout**3.3.5 Test Deviation**

There is no deviation with the original standard.

3.3.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.3.7 Test Result for Maximum Conducted Output Power

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11a
Duty Cycle	99.26%	Duty Factor	0.032

Configuration IEEE 802.11a

<6Mbps, Ant. 1+2+3+4>

Channel	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Total Conducted Power (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Ant. 4			
36	5180 MHz	10.21	10.87	11.54	9.91	17.00	16.73	Complies
40	5200 MHz	9.85	10.36	11.87	9.98	17.00	16.65	Complies
48	5240 MHz	9.64	10.76	11.41	10.01	17.00	16.56	Complies
52	5260 MHz	16.05	17.82	18.01	16.24	24.00	23.17	Complies
60	5300 MHz	15.66	16.72	17.38	15.55	24.00	22.45	Complies
64	5320 MHz	15.36	16.93	17.44	15.82	24.00	22.52	Complies
100	5500 MHz	12.84	13.11	14.35	12.1	24.00	19.23	Complies
116	5580 MHz	16.28	16.84	18.24	16.12	24.00	23.01	Complies
136	5680 MHz	16.91	17.02	18.23	16.33	24.00	23.23	Complies
140	5700 MHz	16.44	16.52	18.81	16.38	24.00	23.22	Complies

Note: 5180MHz Total conducted power

$$=(10*\text{LOG}((10^{(\text{Ant 1}/10)}+(10^{(\text{Ant 2}/10)}+(10^{(\text{Ant 3}/10)}+(10^{(\text{Ant 4}/10)}))))+ \text{duty factor}$$

$$=(10*\text{LOG}((10^{(10.21\text{dBm}/10)}+(10^{(10.87\text{dBm}/10)}+(10^{(11.54\text{dBm}/10)}+(10^{(9.91\text{dBm}/10)}))))+0.032\text{dB}$$

$$=(10*\text{LOG}((10.50\text{mW})+(12.22\text{mW})+(14.26\text{mW})+(9.80\text{mW}))+0.032\text{dB}$$

$$=(10*\text{LOG}(46.78\text{mW}))+0.032\text{dB}$$

$$=16.70\text{dBm}+0.032\text{dB}$$

$$=16.73\text{dBm}$$

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 20MHz
Duty Cycle	99.20%	Duty Factor	0.035

Configuration IEEE 802.11n 20MHz

<MCS0, Ant. 1+2+3+4>

Channel	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Total Conducted Power (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Ant. 4			
36	5180 MHz	9.54	11.33	11.78	9.91	17.00	16.80	Complies
40	5200 MHz	9.33	11.46	11.98	10.06	17.00	16.89	Complies
48	5240 MHz	9.51	11.54	11.74	10.11	17.00	16.88	Complies
52	5260 MHz	16.21	18.31	18.67	16.89	24.00	23.69	Complies
60	5300 MHz	15.54	17.03	17.79	15.93	24.00	22.72	Complies
64	5320 MHz	15.11	16.92	17.71	16.34	24.00	22.68	Complies
100	5500 MHz	12.39	13.21	14.76	12.56	24.00	19.39	Complies
116	5580 MHz	16.08	17.01	18.31	16.51	24.00	23.12	Complies
136	5680 MHz	16.01	17.35	18.44	16.74	24.00	23.28	Complies
140	5700 MHz	16.12	16.35	18.59	16.74	24.00	23.12	Complies

Note: 5180MHz Total conducted power

$$=(10*\text{LOG}((10^{(\text{Ant 1}/10)})+(10^{(\text{Ant 2}/10)})+(10^{(\text{Ant 3}/10)})+(10^{(\text{Ant 4}/10)})))+\text{duty factor}$$

$$=(10*\text{LOG}((10^{(9.54\text{dBm}/10)})+(10^{(11.33\text{dBm}/10)})+(10^{(11.78\text{dBm}/10)})+(10^{(9.91\text{dBm}/10)})))+0.035\text{dB}$$

$$=(10*\text{LOG}((8.99\text{mW})+(13.58\text{mW})+(15.07\text{mW})+(9.79\text{mW}))+0.035\text{dB}$$

$$=(10*\text{LOG}(47.43\text{mW}))+0.035\text{dB}$$

$$=16.77\text{dBm}+0.035\text{dB}$$

$$=16.80\text{dBm}$$

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 40MHz
Duty Cycle	97.97%	Duty Factor	0.09

Configuration IEEE 802.11n 40MHz

<MCS0, Ant. 1+2+3+4>

Channel	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Total Conducted Power (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Ant. 4			
38	5190 MHz	9.38	11.36	11.82	10.1	17.00	16.88	Complies
46	5230 MHz	9.54	11.36	11.68	10.13	17.00	16.87	Complies
54	5270 MHz	16.13	17.84	18.47	16.43	24.00	23.44	Complies
62	5310 MHz	15.13	17.21	17.56	15.96	24.00	22.68	Complies
102	5510 MHz	11.94	13.24	14.56	12.71	24.00	19.33	Complies
110	5550 MHz	15.56	17.34	17.82	16.06	24.00	22.90	Complies
134	5670 MHz	15.94	16.84	18.52	16.46	24.00	23.16	Complies

Note: 5190MHz Total conducted power

$$=(10*\text{LOG}((10^{(Ant\ 1/10)})+(10^{(Ant\ 2/10)})+(10^{(Ant\ 3/10)})+(10^{(Ant\ 4/10)})))+\text{duty factor}$$

$$=(10*\text{LOG}((10^{(9.38\text{dBm}/10)})+(10^{(11.36\text{dBm}/10)})+(10^{(11.82\text{dBm}/10)})+(10^{(10.1\text{dBm}/10)})))+0.09\text{dB}$$

$$=(10*\text{LOG}((8.67\text{mW})+(13.68\text{mW})+(15.20\text{mW})+(10.23\text{mW}))+0.09\text{dB}$$

$$=(10*\text{LOG}(47.78\text{mW}))+0.09\text{dB}$$

$$=16.79\text{dBm}+0.09\text{dB}$$

$$=16.88\text{dBm}$$

3.4 Power Spectral Density Measurement

3.4.1 Limit

Frequency Band	Limit
5.15 ~ 5.25GHz	4 dBm/MHz
5.25 ~ 5.35GHz	11 dBm/MHz
5.47 ~ 5.725GHz	11 dBm/MHz

3.4.2 Measuring Instruments and Setting

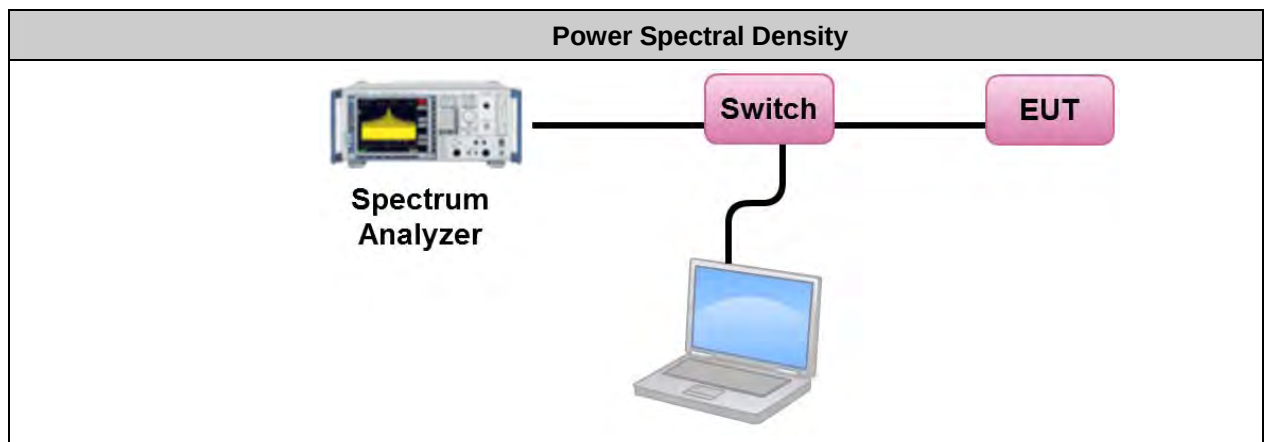
Please refer to section 5 of equipments list in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1000 kHz
VBW	3000 kHz
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times

3.4.3 Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB 789033 D01 v01r03 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E, section (C) Maximum conducted output power => (d) Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).
3. Multiple antenna systems was performed in accordance KDB 662911 D01 v02 in-Band Power Spectral Density (PSD) Measurements (a) Measure and sum the spectra across the outputs (bin-by-bin summing).
4. When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum. The summed spectrum value for each of the other frequency bins is computed in the same way.

3.4.4 Test Setup Layout



3.4.5 Test Deviation

There is no deviation with the original standard.

3.4.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.4.7 Test Result of Power Spectral Density

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11a
Duty Cycle	99.26%	Duty Factor	0.032

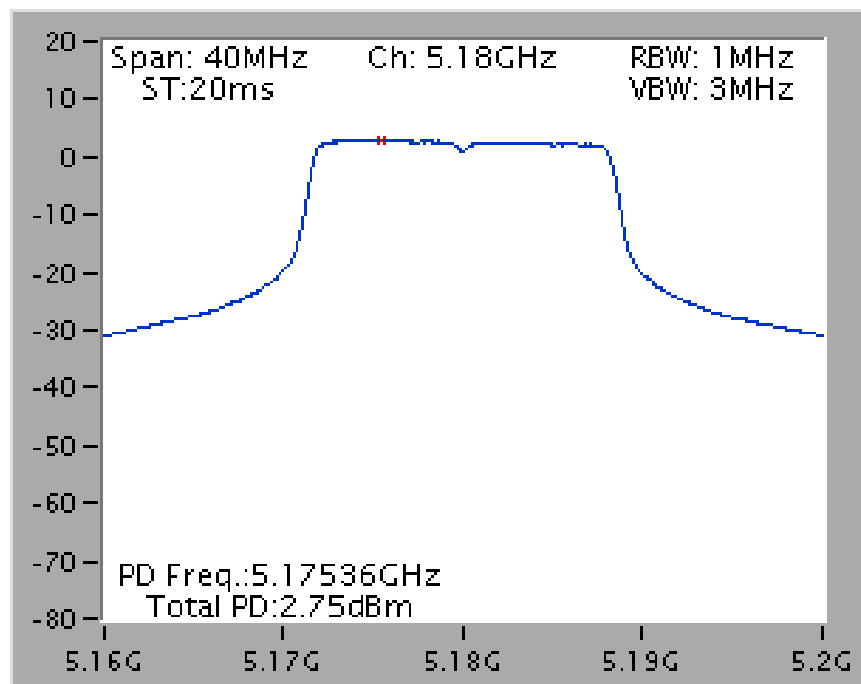
Configuration IEEE 802.11a

<6Mbps, Ant. 1+2+3+4>

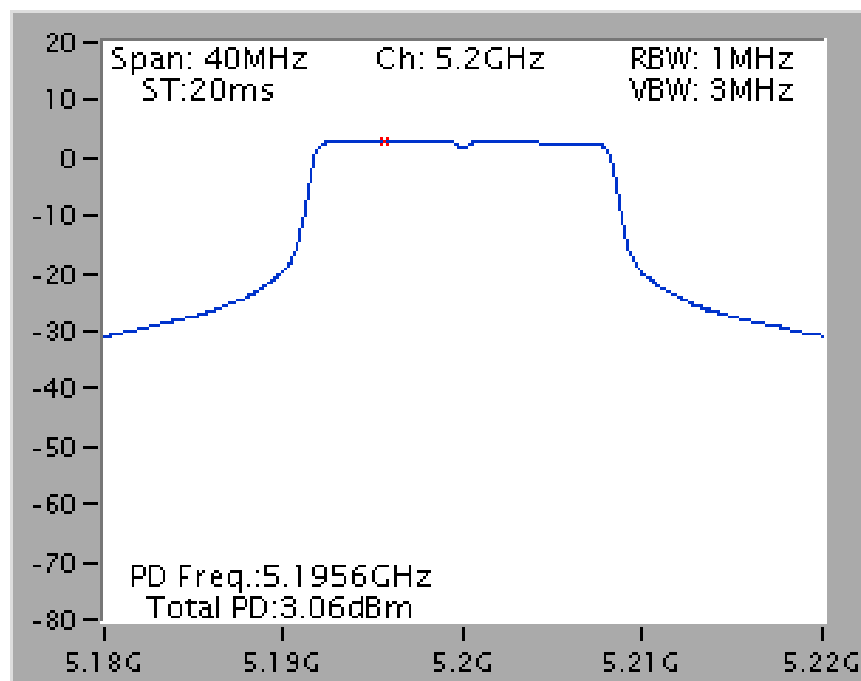
Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	2.75	4.00	Complies
40	5200 MHz	3.06	4.00	Complies
48	5240 MHz	3.38	4.00	Complies
52	5260 MHz	10.25	11.00	Complies
60	5300 MHz	9.58	11.00	Complies
64	5320 MHz	9.78	11.00	Complies
100	5500 MHz	6.77	10.95	Complies
116	5580 MHz	10.49	10.69	Complies
136	5680 MHz	10.03	10.13	Complies
140	5700 MHz	9.95	10.40	Complies

Note: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.42\text{dBi}$ <6dBi, So 5180MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.19\text{dBi}$ <6dBi, So 5200MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.58\text{dBi}$ <6dBi, So 5240MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.40\text{dBi}$ <6dBi, So 5260MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.65\text{dBi}$ <6dBi, So 5300MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.67\text{dBi}$ <6dBi, So 5320MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.05\text{dBi}$ >6dBi, So 5500MHz Limit =11-(6.05-6)=10.95dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.31\text{dBi}$ >6dBi, So 5580MHz Limit =11-(6.31-6)=10.69dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.87\text{dBi}$ >6dBi, So 5680MHz Limit =11-(6.87-6)=10.13dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.60\text{dBi}$ >6dBi, So 5700MHz Limit =11-(6.60-6)=10.40dBm/MHz

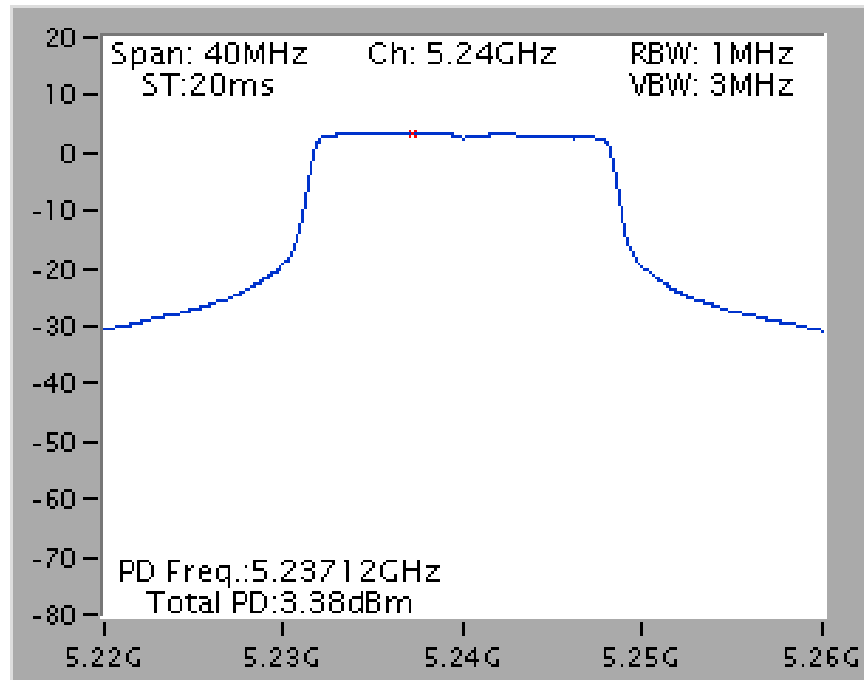
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5180 MHz



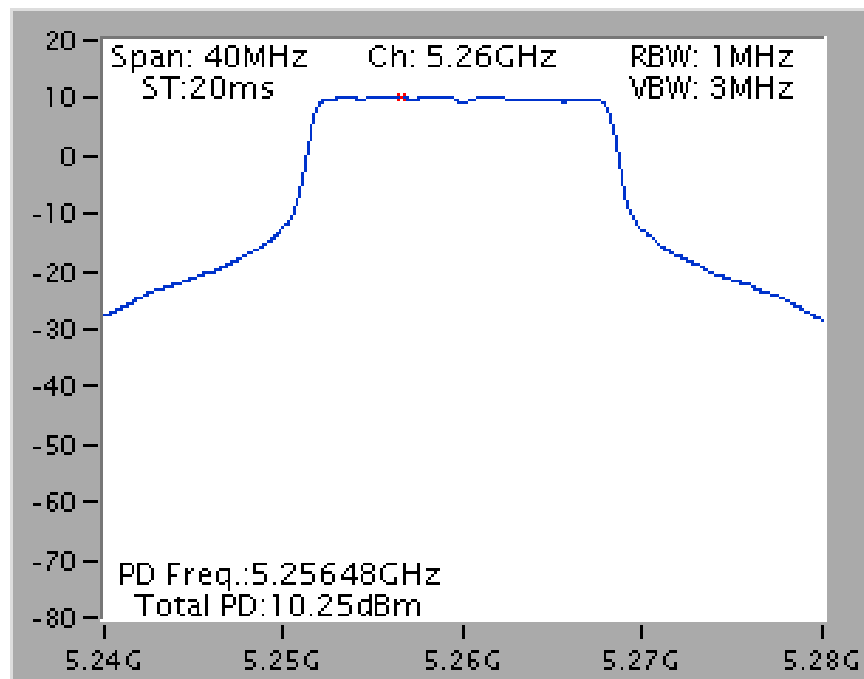
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5200 MHz



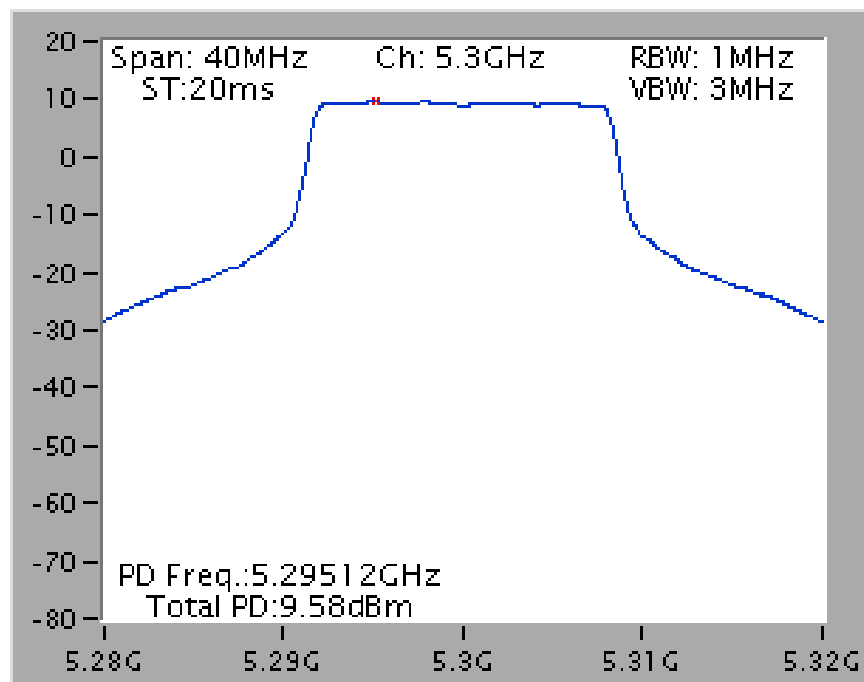
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5240 MHz



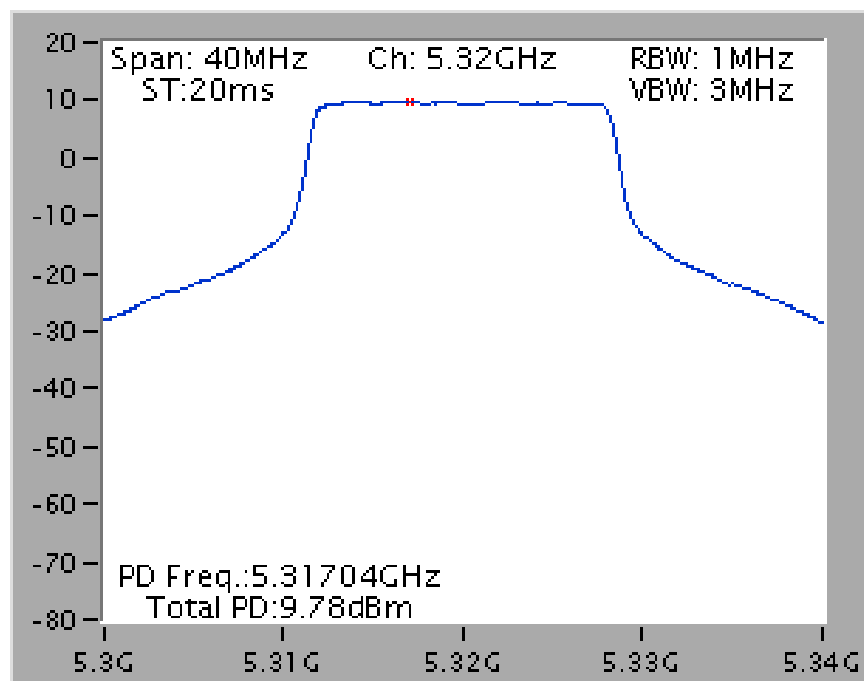
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5260 MHz



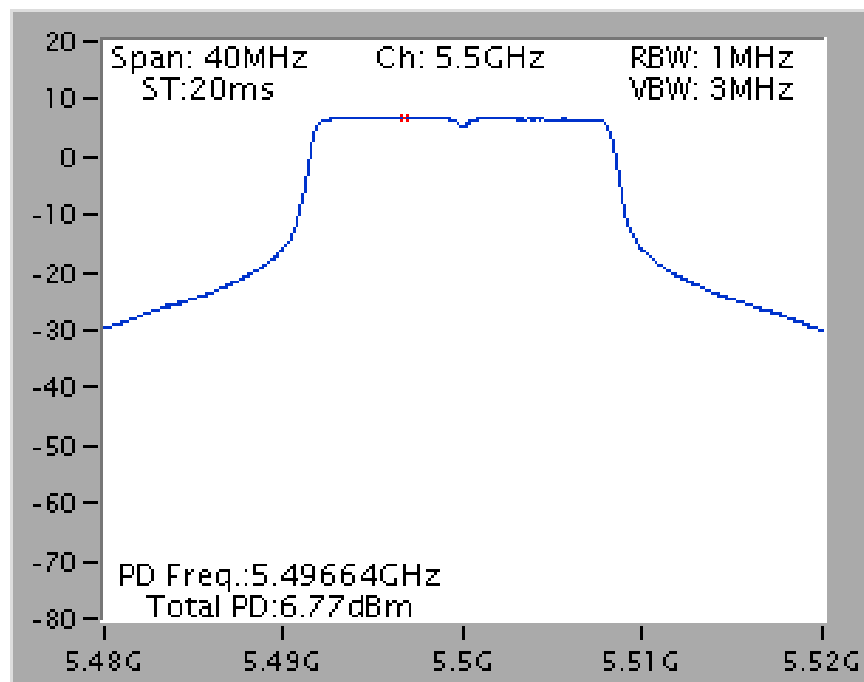
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5300 MHz



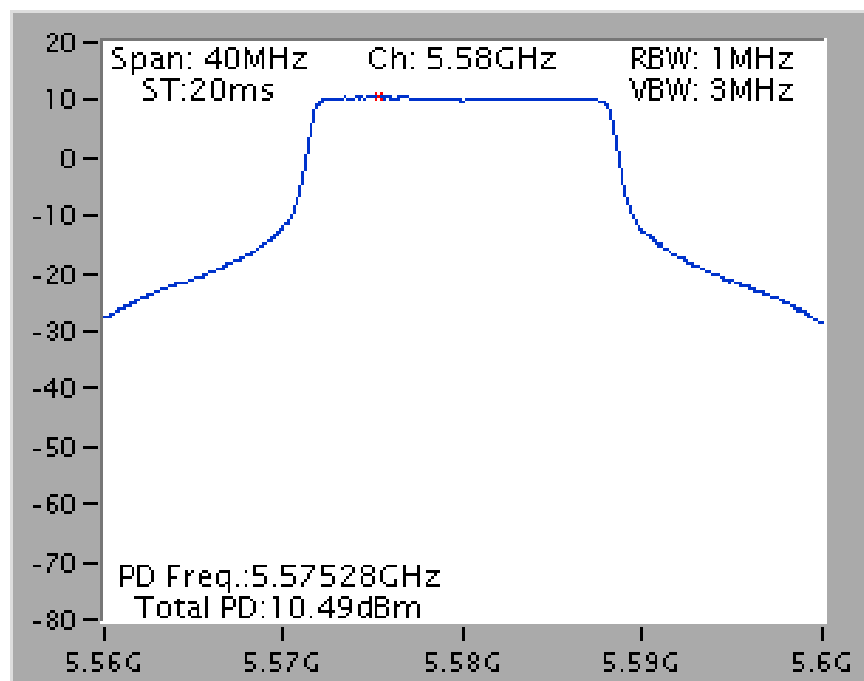
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5320 MHz



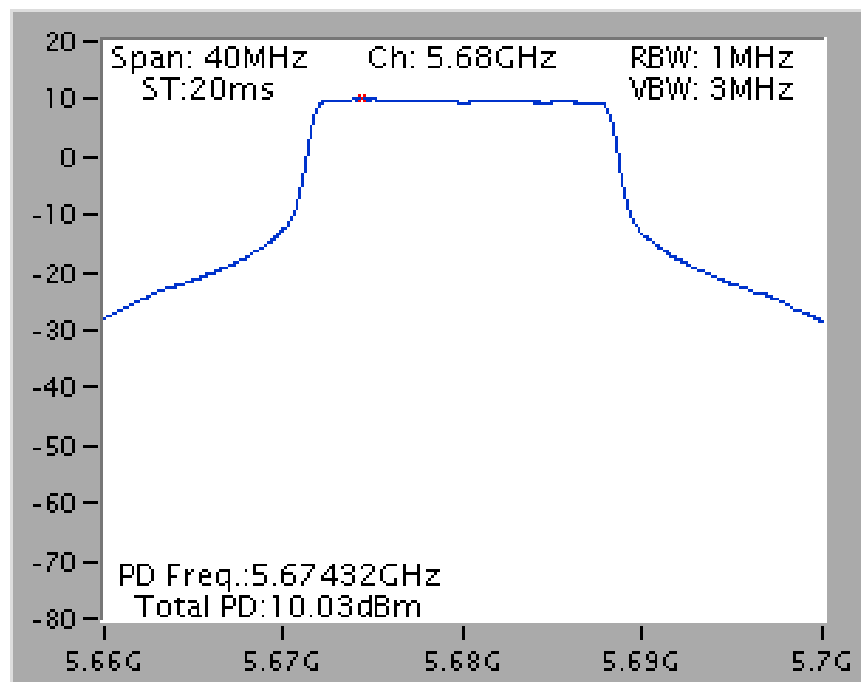
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5500 MHz



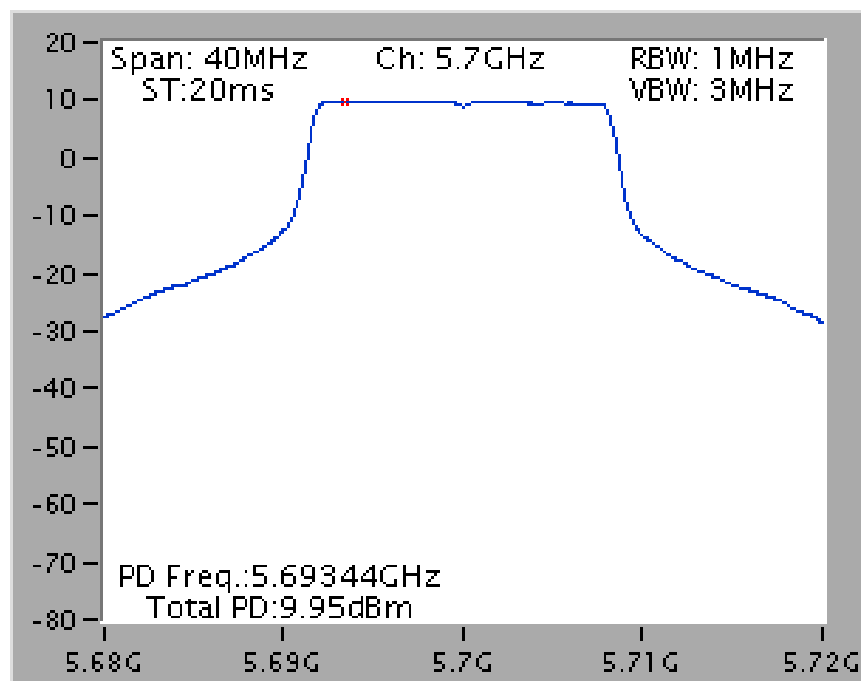
Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5580 MHz



Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5680 MHz



Power Density Plot on Configuration IEEE 802.11a / Ant. 1+2+3+4 / 5700 MHz



Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 20MHz
Duty Cycle	99.20%	Duty Factor	0.035

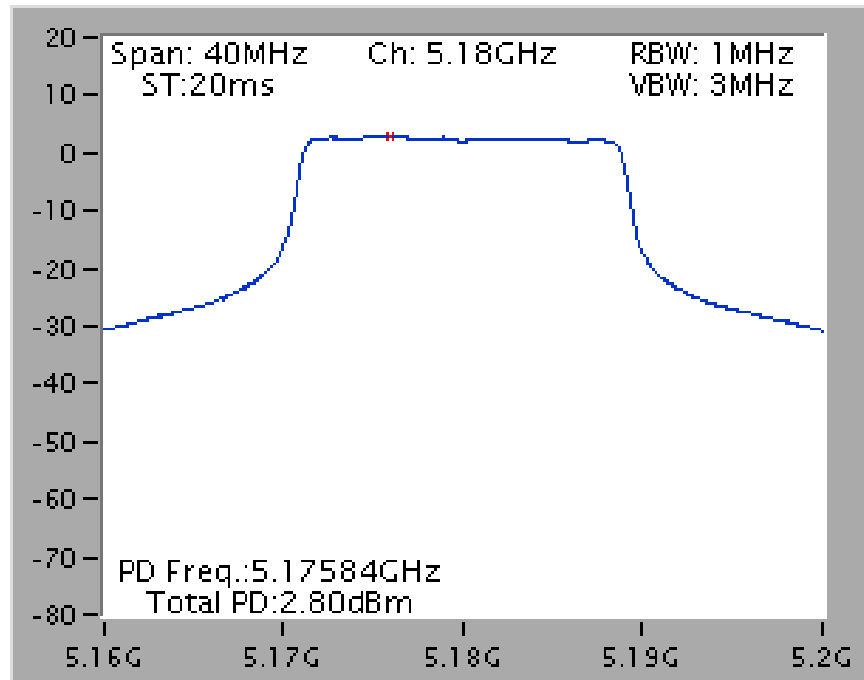
Configuration IEEE 802.11n 20MHz

<MCS0, Ant. 1+2+3+4>

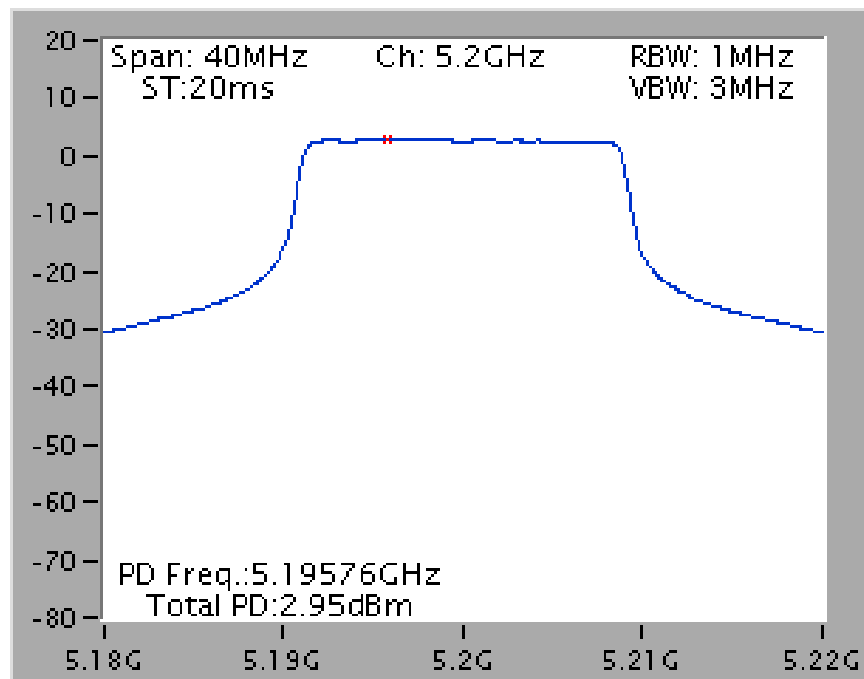
Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	2.80	4.00	Complies
40	5200 MHz	2.95	4.00	Complies
48	5240 MHz	3.10	4.00	Complies
52	5260 MHz	9.97	11.00	Complies
60	5300 MHz	9.12	11.00	Complies
64	5320 MHz	9.52	11.00	Complies
100	5500 MHz	6.64	10.95	Complies
116	5580 MHz	10.23	10.69	Complies
136	5680 MHz	9.78	10.13	Complies
140	5700 MHz	9.53	10.40	Complies

Note: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.42\text{dBi}$ <6dBi, So 5180MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.19\text{dBi}$ <6dBi, So 5200MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.58\text{dBi}$ <6dBi, So 5240MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.40\text{dBi}$ <6dBi, So 5260MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.65\text{dBi}$ <6dBi, So 5300MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.67\text{dBi}$ <6dBi, So 5320MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.05\text{dBi}$ >6dBi, So 5500MHz Limit =11-(6.05-6)=10.95dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.31\text{dBi}$ >6dBi, So 5580MHz Limit =11-(6.31-6)=10.69dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.87\text{dBi}$ >6dBi, So 5680MHz Limit =11-(6.87-6)=10.13dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.60\text{dBi}$ >6dBi, So 5700MHz Limit =11-(6.60-6)=10.40dBm/MHz

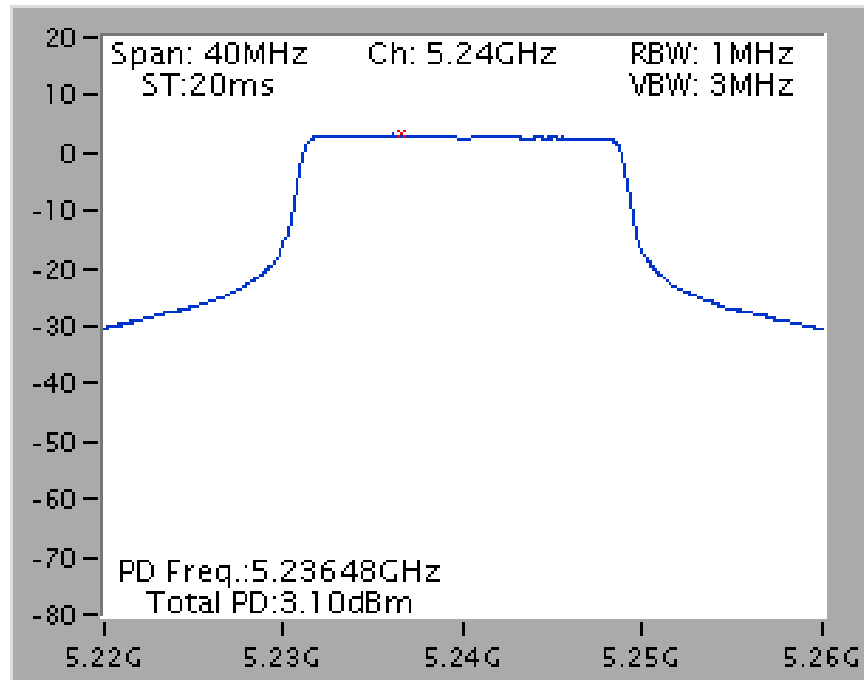
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5180 MHz



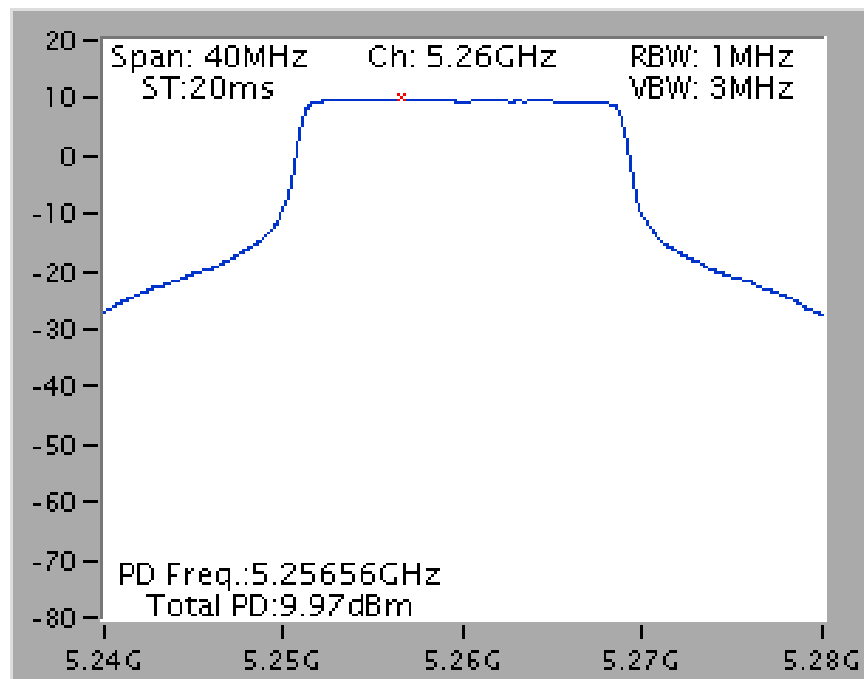
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5200 MHz



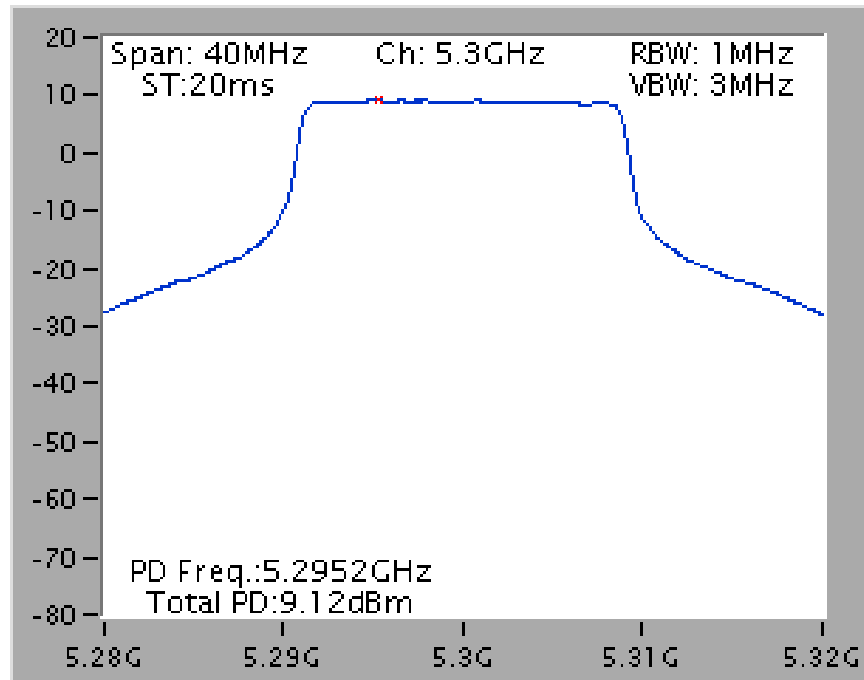
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5240 MHz



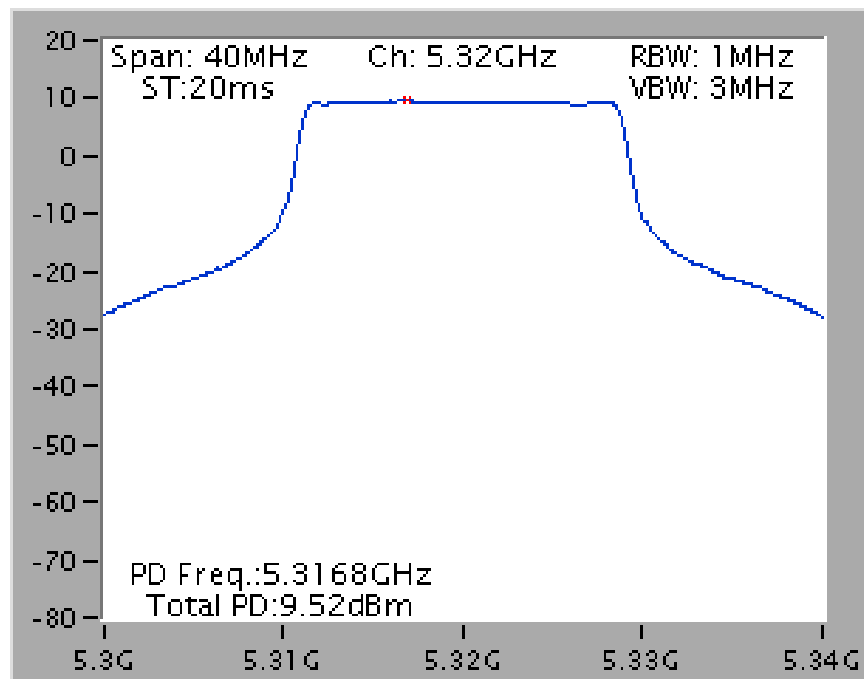
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5260 MHz



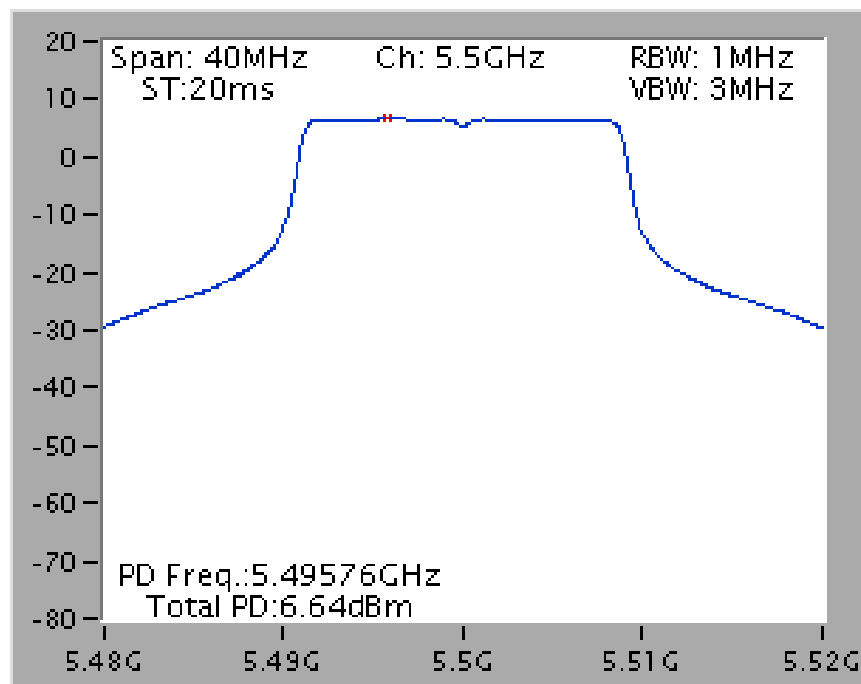
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5300 MHz



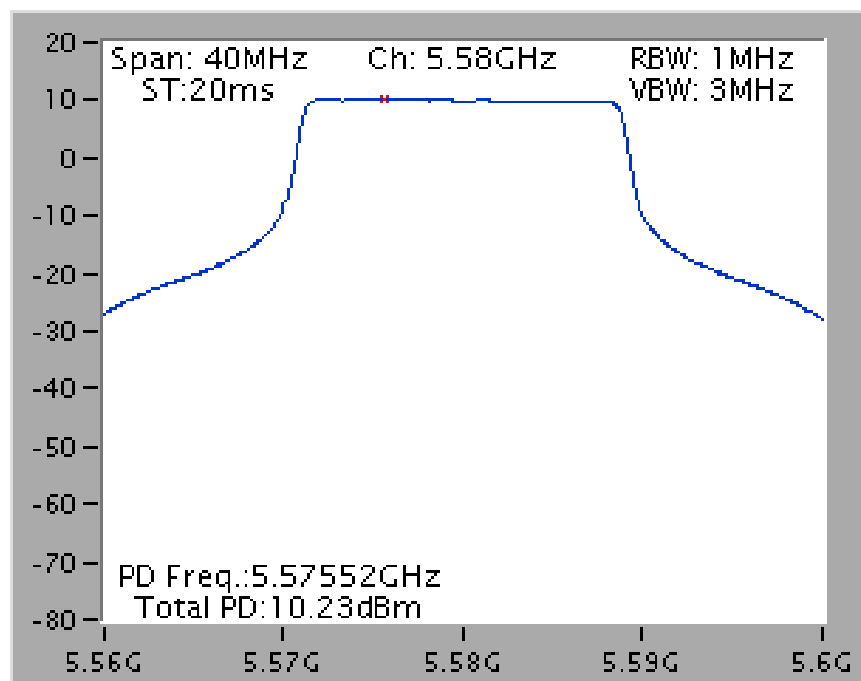
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5320 MHz



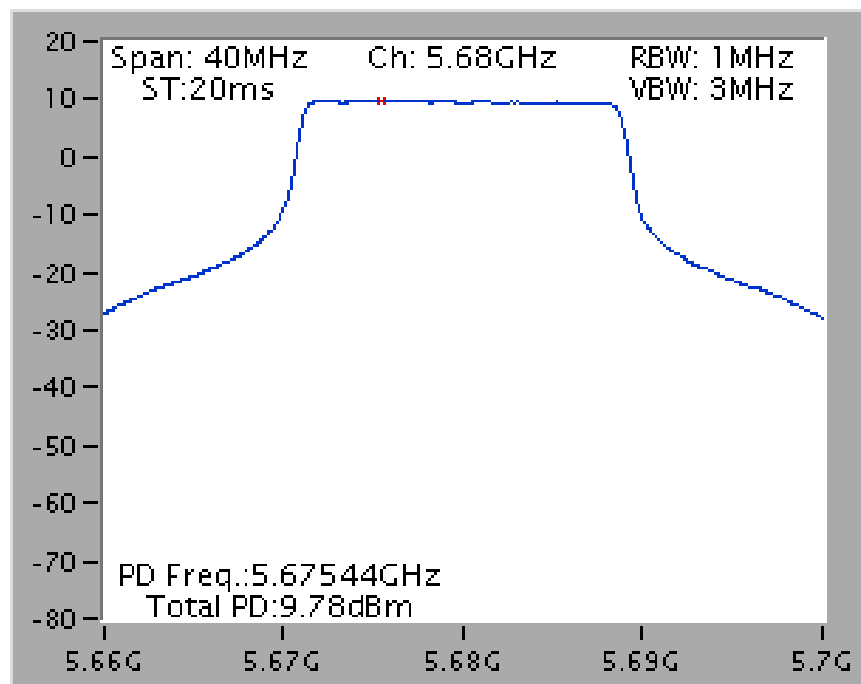
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5500 MHz



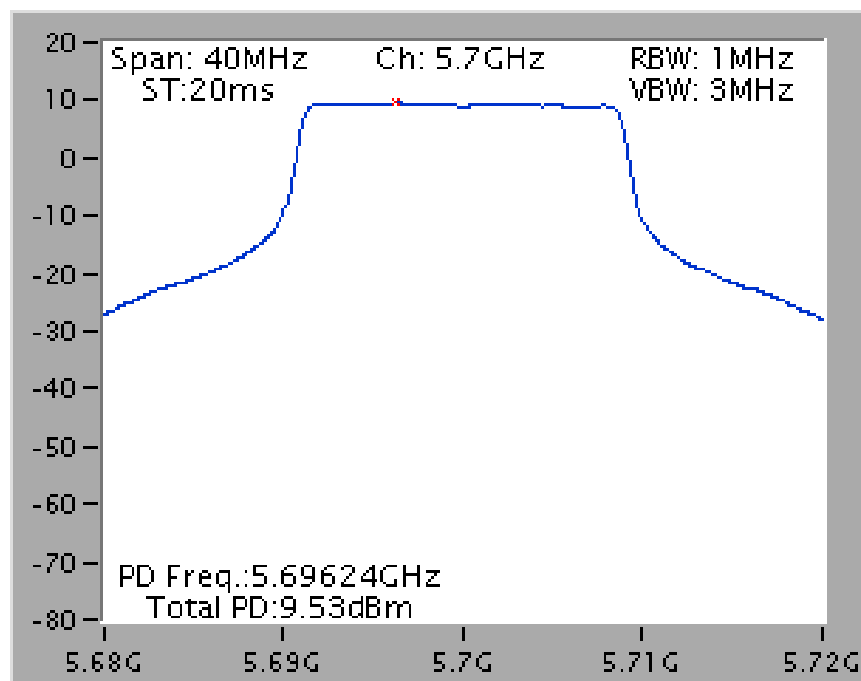
Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5580 MHz



Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5680 MHz



Power Density Plot on Configuration IEEE 802.11n 20MHz MCS0 / Ant. 1+2+3+4 / 5700 MHz



Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 40MHz
Duty Cycle	97.97%	Duty Factor	0.09

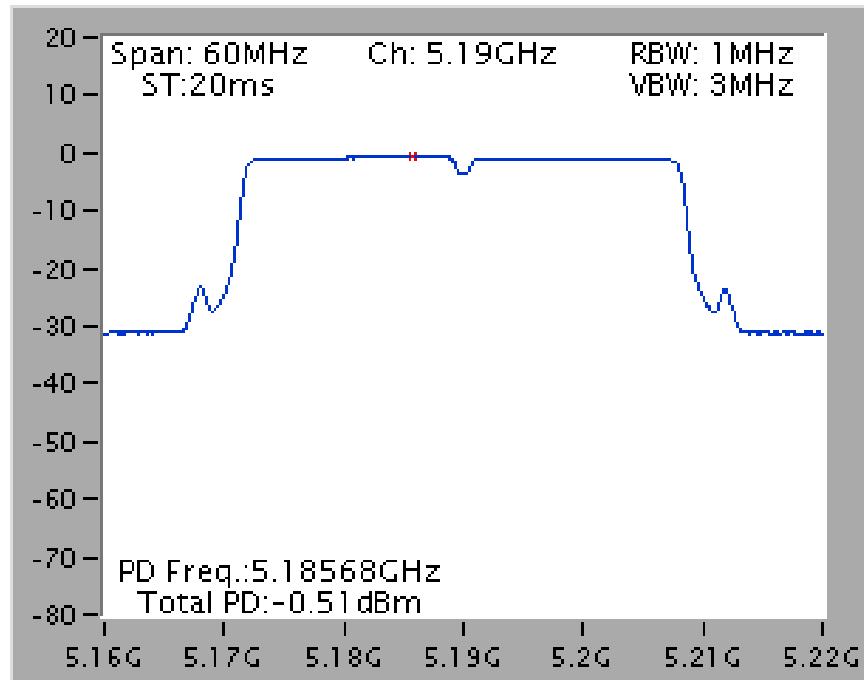
Configuration IEEE 802.11n 40MHz

<MCS0, Ant. 1+2+3+4>

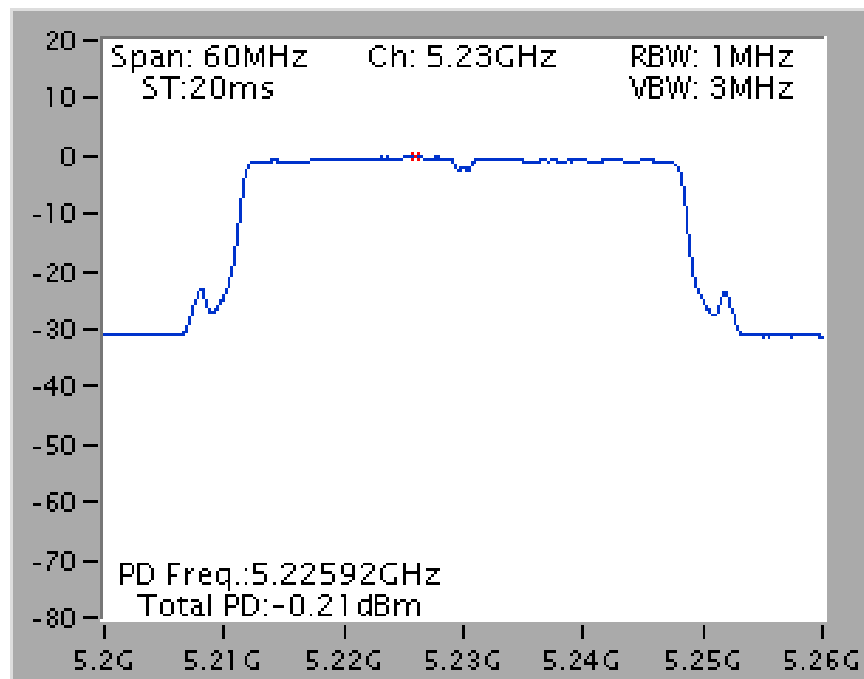
Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-0.51	4.00	Complies
46	5230 MHz	-0.21	4.00	Complies
54	5270 MHz	6.72	11.00	Complies
62	5310 MHz	5.92	11.00	Complies
102	5510 MHz	3.25	11.00	Complies
110	5550 MHz	7.03	11.00	Complies
134	5670 MHz	6.44	10.19	Complies

Note: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.22\text{dBi}$ <6dBi, So 5190MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.19\text{dBi}$ <6dBi, So 5230MHz Limit =4dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.39\text{dBi}$ <6dBi, So 5270MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.65\text{dBi}$ <6dBi, So 5310MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=5.72\text{dBi}$ <6dBi, So 5510MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.00\text{dBi}$ <6dBi, So 5550MHz Limit =11dBm/MHzNote: Directional gain= $G_{ANT}+10\log(N_{ANT}/N_{ss})=6.81\text{dBi}$ >6dBi, So 5670MHz Limit =11-(6.81-6)=10.19dBm/MHz

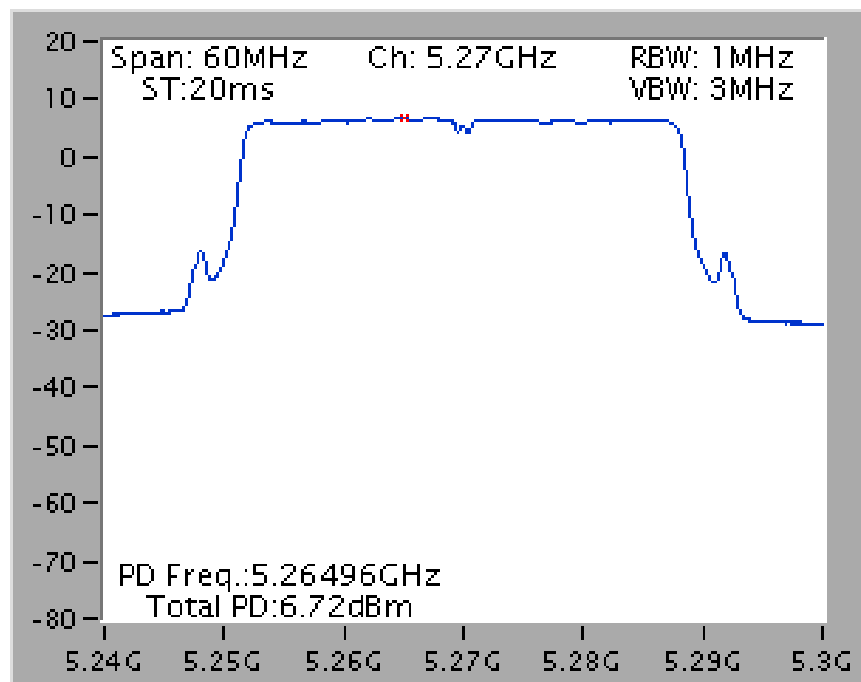
Power Density Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1+2+3+4 / 5190 MHz



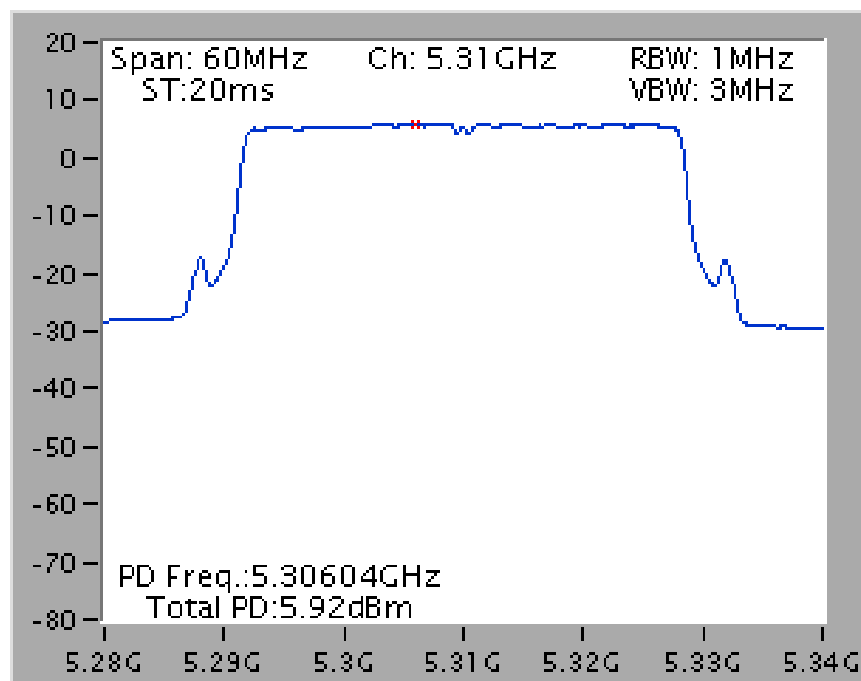
Power Density Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1+2+3+4 / 5230 MHz



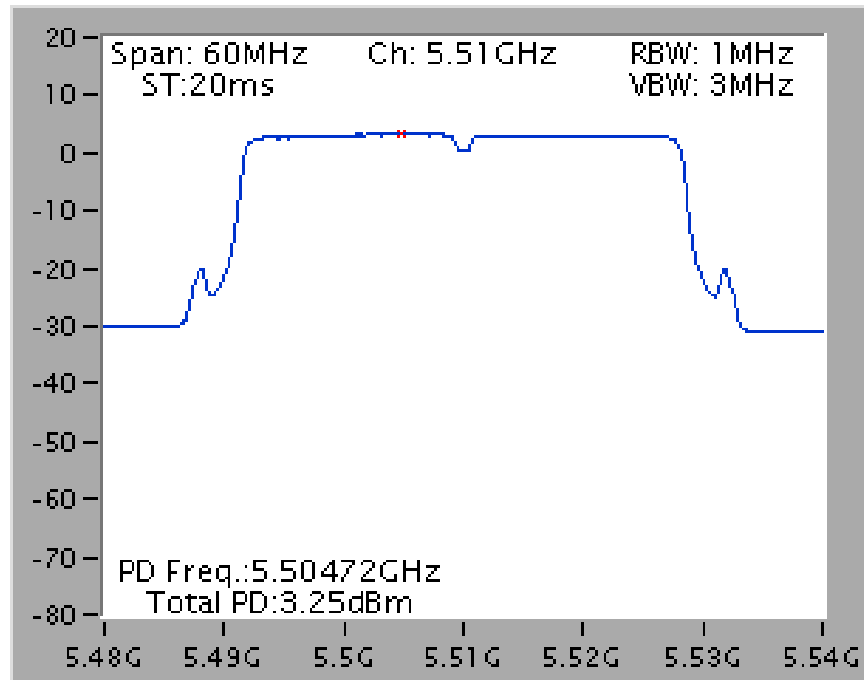
Power Density Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1+2+3+4 / 5270 MHz



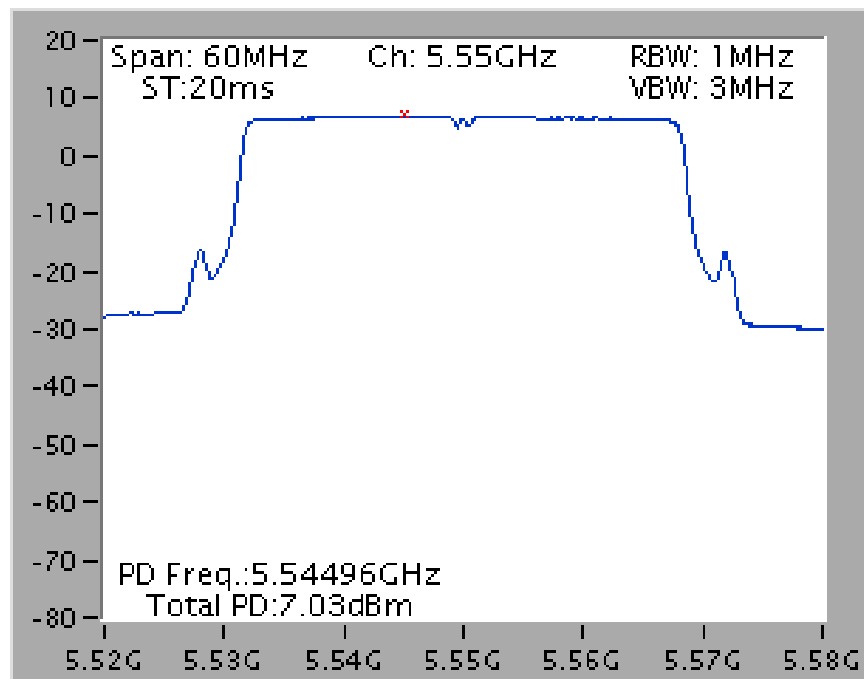
Power Density Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1+2+3+4 / 5310 MHz



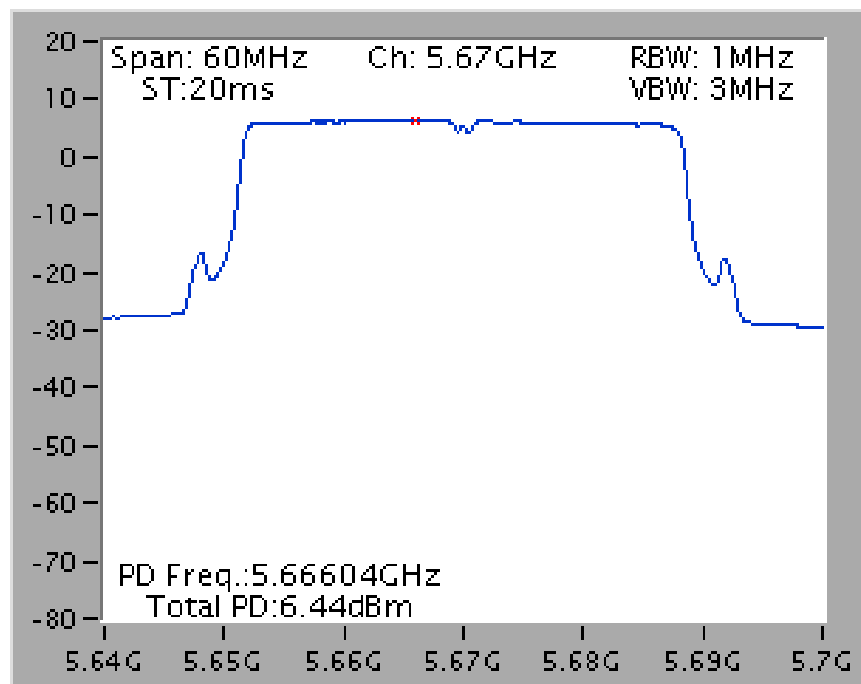
Power Density Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1+2+3+4 / 5510 MHz



Power Density Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1+2+3+4 / 5550 MHz



Power Density Plot on Configuration IEEE 802.11n 40MHz MCS0 / Ant. 1+2+3+4 / 5670 MHz



3.5 Peak Excursion Measurement

3.5.1 Limit

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 emissions bandwidth whichever is less.

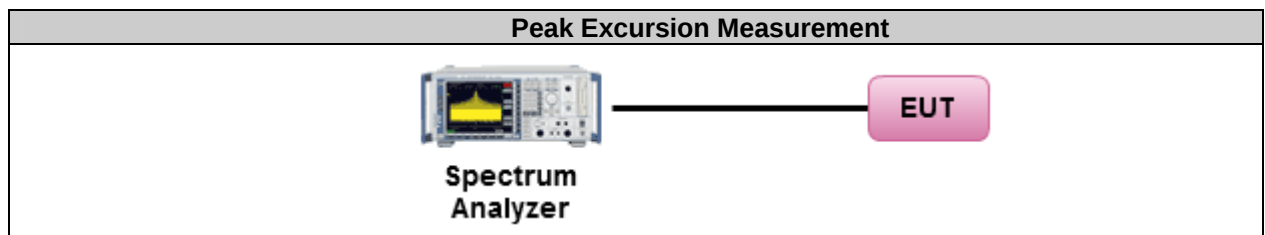
3.5.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1MHz (Peak Trace) / 1MHz (Average Trace)
VBW	≥ 3 MHz (Peak Trace) / ≥ 3 MHz (Average Trace)
Detector	Peak (Peak Trace) / RMS (Average Trace)
Trace	Trace: Max hold (Peak Trace) / Trace Average Sweep Count 100 (Average Trace)
Sweep Time	AUTO

3.5.3 Test Procedures

1. Trace A, Set RBW =1MHz, VBW = 3MHz, Span >26dB bandwidth, Detector : Peak ,Max. hold.
2. Trace B, Set RBW =1MHz, VBW = 3MHz, Span >26dB bandwidth, Detector :RMS ,Trace Average count 100.
3. Delta Mark trace A Maximum frequency and trace B same frequency.
4. Repeat the above procedure until measurements for all frequencies were complete.
5. Testing each modulation mode on a single channel in a single operating band is sufficient to demonstrate compliance with the peak excursion requirement. signal types (e.g., direct sequence spread spectrum (DSSS) and OFDM); All modulation types (e.g., BPSK, QPSK, 16-QAM, 64-QAM, and 256-QAM)

3.5.4 Test Setup Layout**3.5.5 Test Deviation**

There are no deviation with the original standard.

3.5.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.5.7 Test Result of Peak excursion

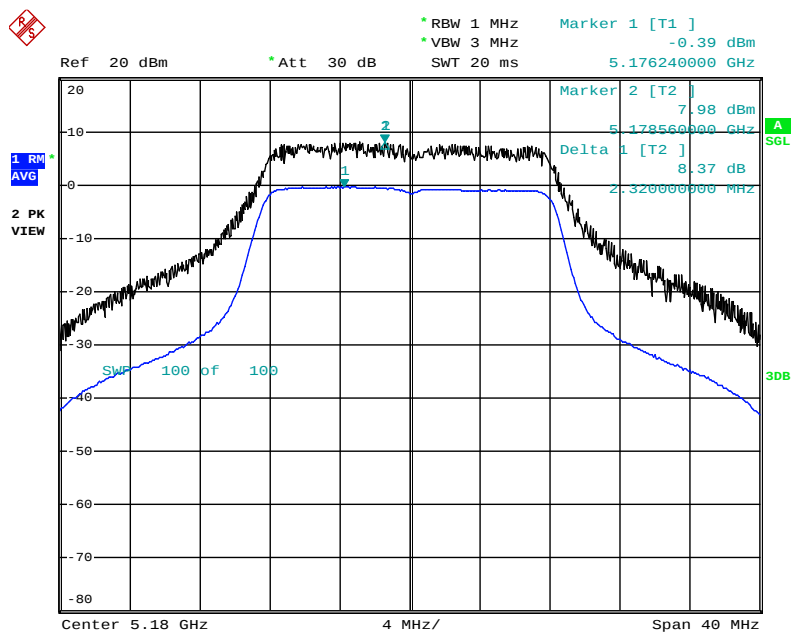
Test date	Nov. 08, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11a
Duty Cycle	96.26%	Duty Factor	0.032

Configuration IEEE 802.11a

<6Mbps, Ant. 1+2+3+4>

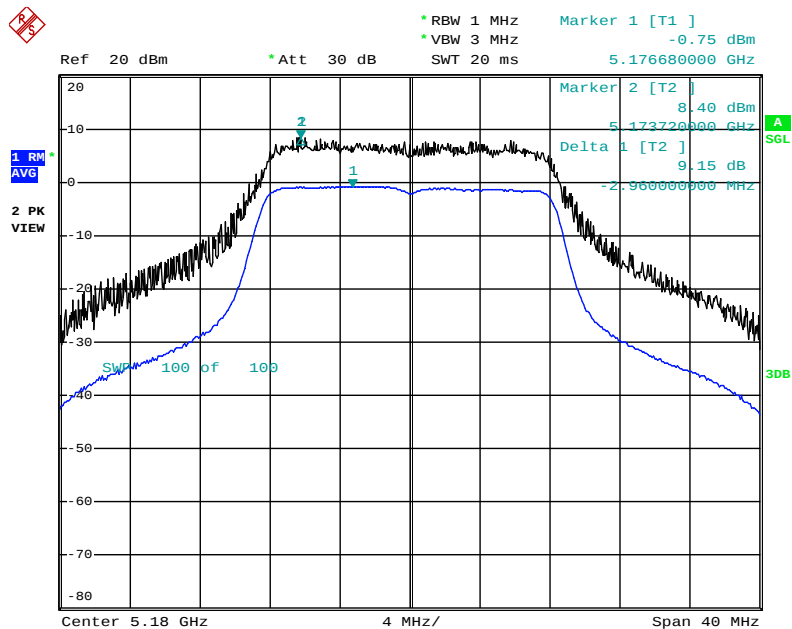
Modulation	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
BSPK(6Mbps)	5180MHz	8.37	13	Complies
QPSK(12Mbps)	5180MHz	9.15	13	Complies
16QAM(24Mbps)	5180MHz	9.54	13	Complies
64QAM(48Mbps)	5180MHz	8.96	13	Complies
BSPK(6Mbps)	5260MHz	8.41	13	Complies
QPSK(12Mbps)	5260MHz	8.82	13	Complies
16QAM(24Mbps)	5260MHz	9.72	13	Complies
64QAM(48Mbps)	5260MHz	8.80	13	Complies
BSPK(6Mbps)	5680MHz	8.29	13	Complies
QPSK(12Mbps)	5680MHz	9.21	13	Complies
16QAM(24Mbps)	5680MHz	9.78	13	Complies
64QAM(48Mbps)	5680MHz	8.66	13	Complies

Peak excursion Plot on Configuration IEEE 802.11a / 5180 MHz / Ant. 1+2+3+4 / BSPK(6Mbps)



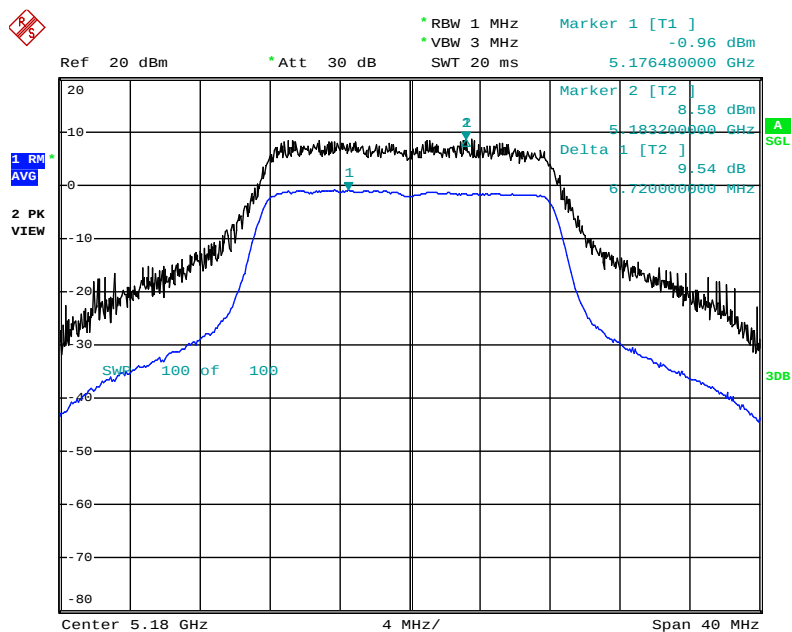
Date: 8.NOV.2013 12:19:16

Peak excursion Plot on Configuration IEEE 802.11a / 5180 MHz / Ant. 1+2+3+4 / QPSK(12Mbps)



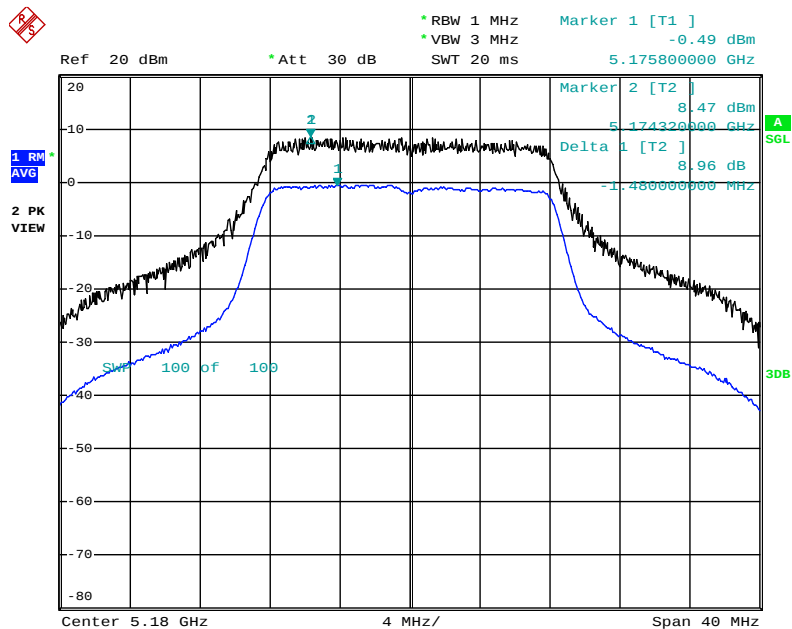
Date: 8.NOV.2013 13:01:39

Peak excursion Plot on Configuration IEEE 802.11a / 5180 MHz / Ant. 1+2+3+4 / 16QAM(24Mbps)



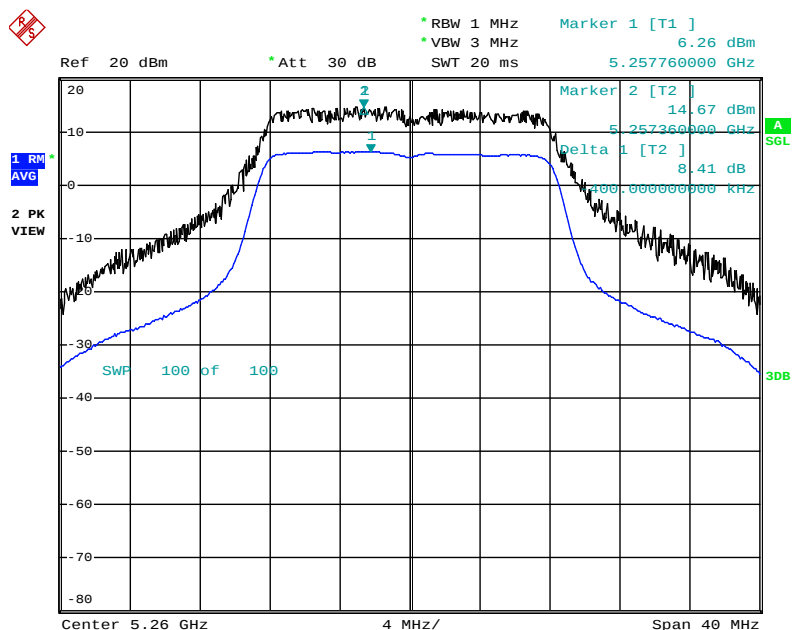
Date: 8.NOV.2013 13:03:39

Peak excursion Plot on Configuration IEEE 802.11a / 5180 MHz / Ant. 1+2+3+4 / 64QAM(48Mbps)



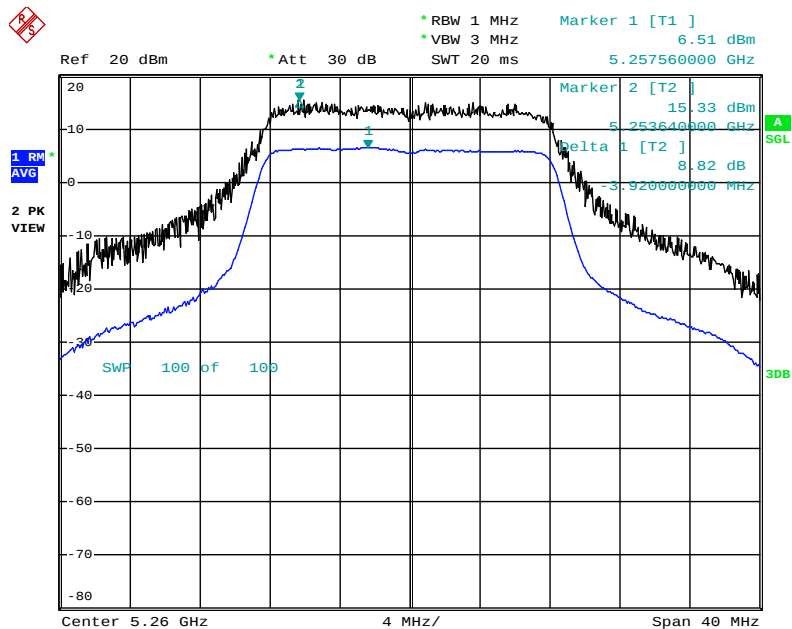
Date: 8.NOV.2013 13:04:39

Peak excursion Plot on Configuration IEEE 802.11a / 5260 MHz / Ant. 1+2+3+4 / BSPK(6Mbps)



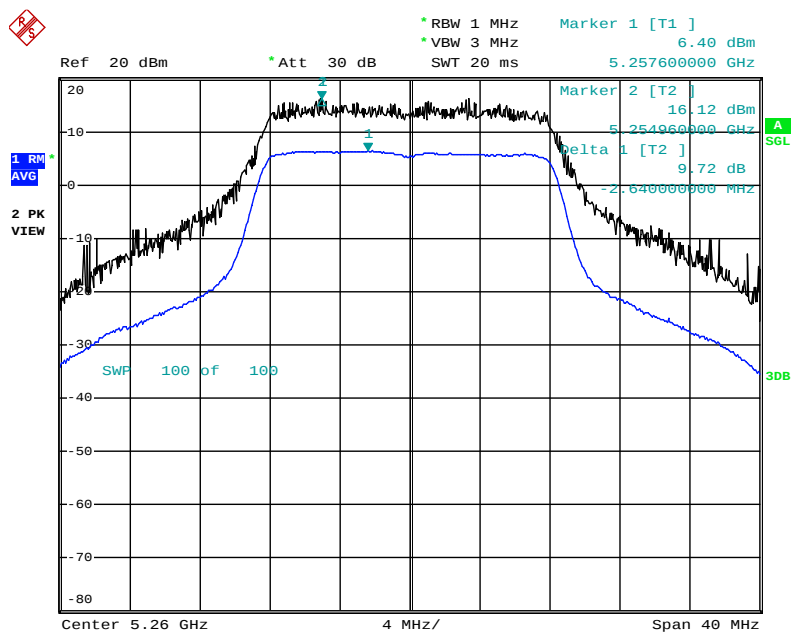
Date: 8.NOV.2013 13:05:55

Peak excursion Plot on Configuration IEEE 802.11a / 5260 MHz / Ant. 1+2+3+4 / QPSK(12Mbps)



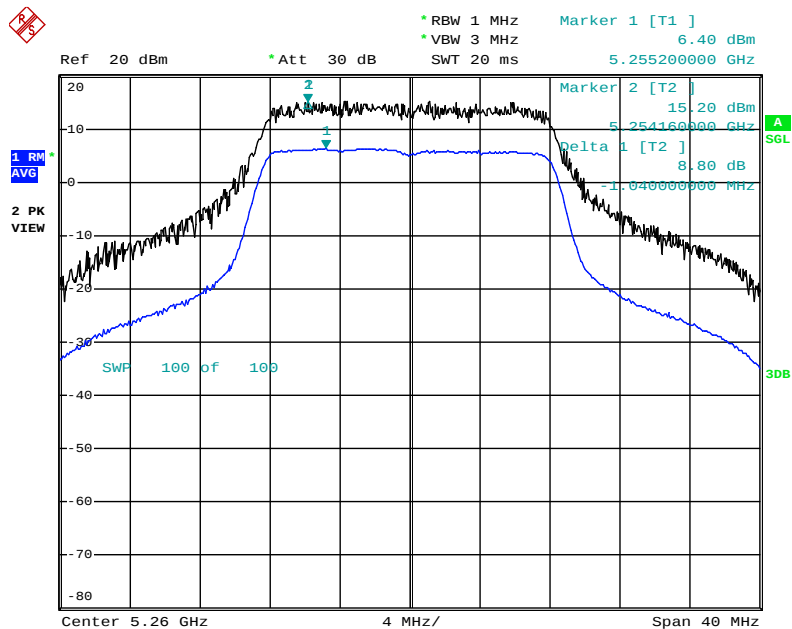
Date: 8.NOV.2013 13:07:08

Peak excursion Plot on Configuration IEEE 802.11a / 5260 MHz / Ant. 1+2+3+4 / 16QAM(24Mbps)



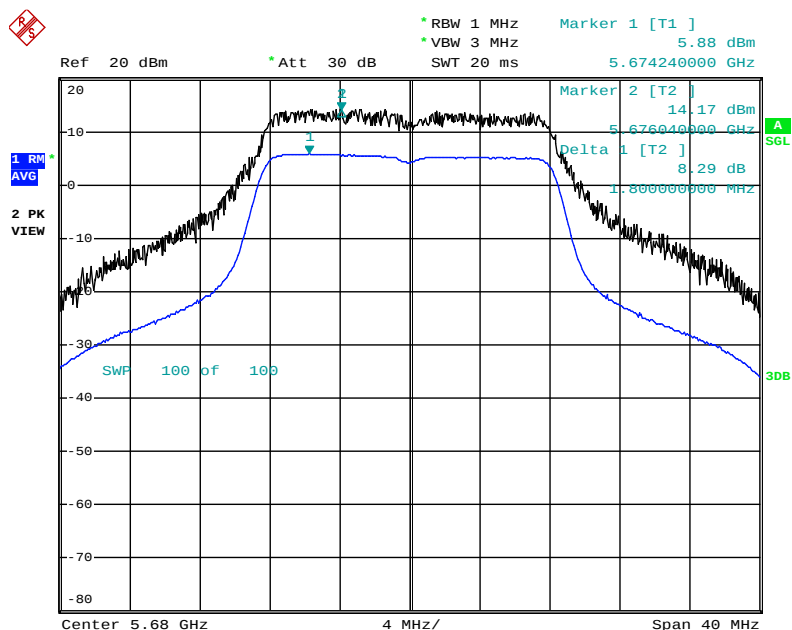
Date: 8.NOV.2013 13:07:41

Peak excursion Plot on Configuration IEEE 802.11a / 5260 MHz / Ant. 1+2+3+4 / 64QAM(48Mbps)



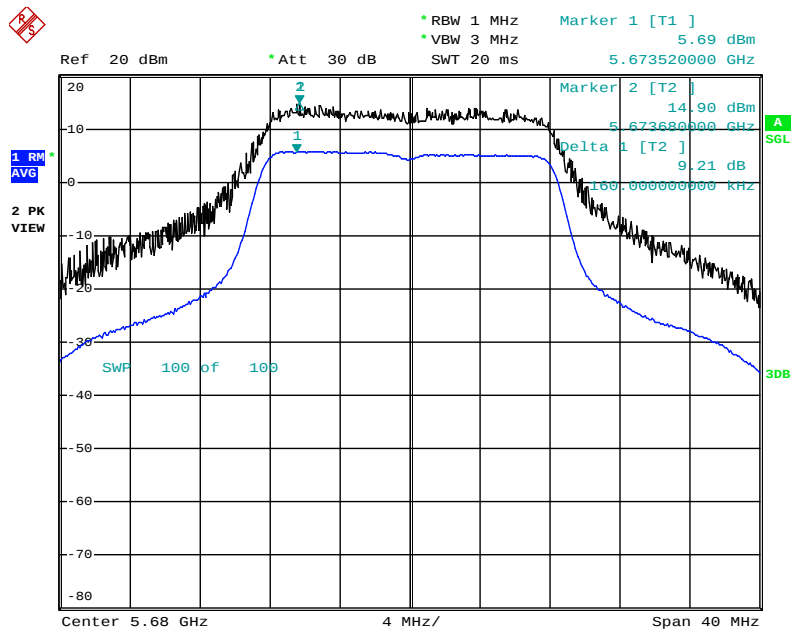
Date: 8.NOV.2013 13:08:44

Peak excursion Plot on Configuration IEEE 802.11a / 5680 MHz / Ant. 1+2+3+4 / BSPK(6Mbps)



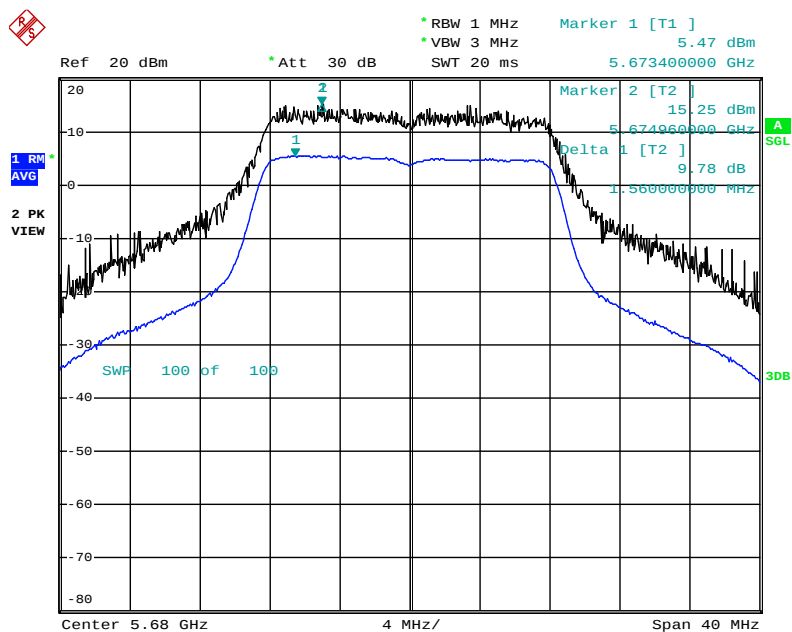
Date: 8.NOV.2013 13:10:44

Peak excursion Plot on Configuration IEEE 802.11a / 5680 MHz / Ant. 1+2+3+4 / QPSK(12Mbps)



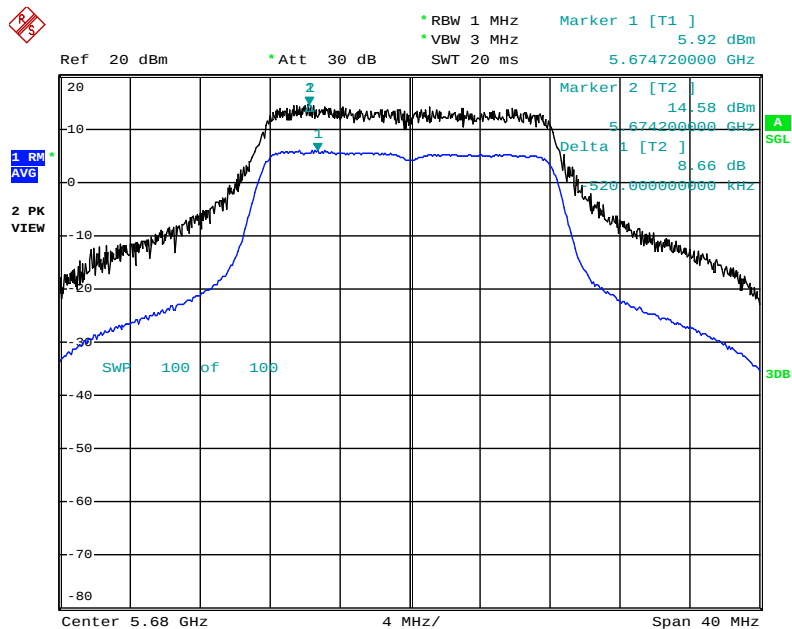
Date: 8.NOV.2013 13:11:25

Peak excursion Plot on Configuration IEEE 802.11a / 5680 MHz / Ant. 1+2+3+4 / 16QAM(24Mbps)



Date: 8.NOV.2013 13:12:03

Peak excursion Plot on Configuration IEEE 802.11a / 5680 MHz / Ant. 1+2+3+4 / 64QAM(48Mbps)



Date: 8.NOV.2013 13:13:18

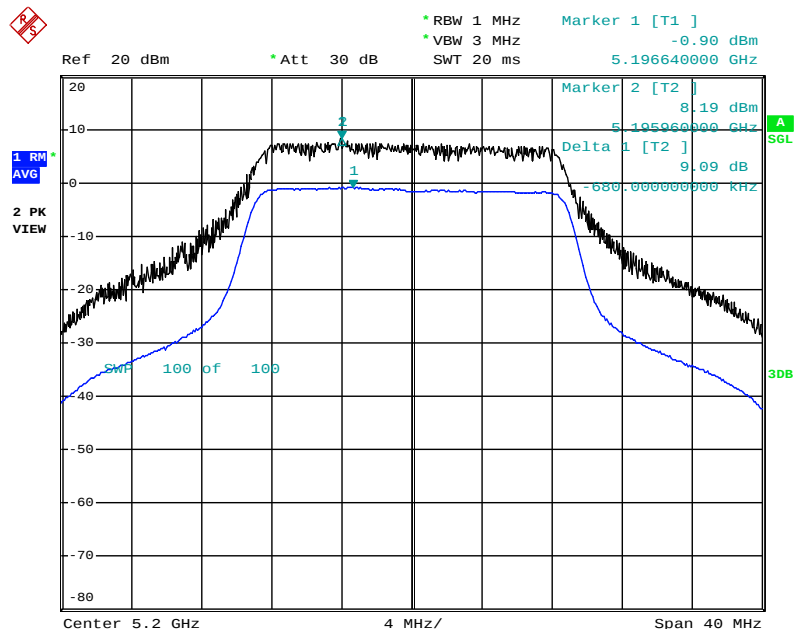
Test date	Nov. 08, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 20MHz
Duty Cycle	96.20%	Duty Factor	0.035

Configuration IEEE 802.11n 20MHz

<MCS0, Ant. 1+2+3+4>

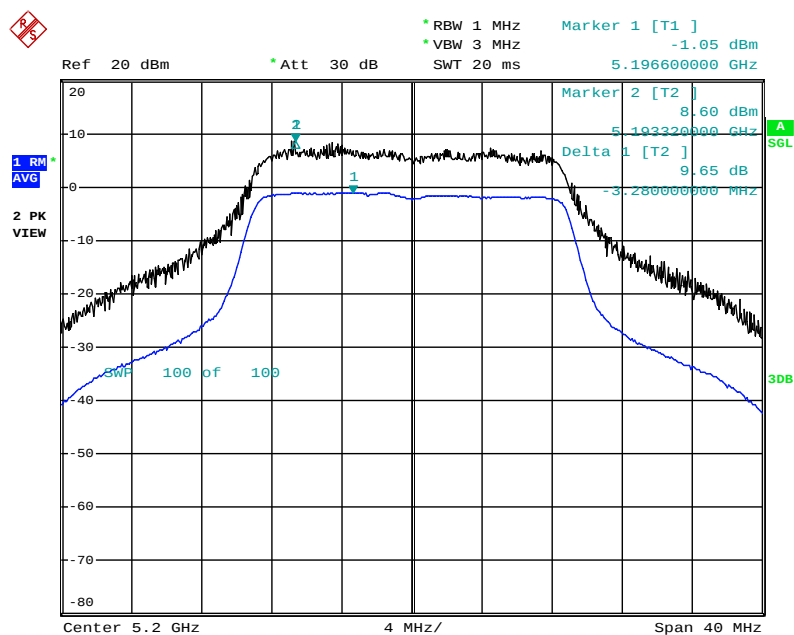
Modulation	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
BSPK(MCS0)	5200MHz	9.09	13	Complies
QPSK(MCS1)	5200MHz	9.65	13	Complies
16QAM(MCS3)	5200MHz	8.82	13	Complies
64QAM(MCS5)	5200MHz	10.23	13	Complies
BSPK(MCS0)	5260MHz	8.30	13	Complies
QPSK(MCS1)	5260MHz	9.40	13	Complies
16QAM(MCS3)	5260MHz	8.67	13	Complies
64QAM(MCS5)	5260MHz	9.67	13	Complies
BSPK(MCS0)	5680MHz	9.12	13	Complies
QPSK(MCS1)	5680MHz	9.64	13	Complies
16QAM(MCS3)	5680MHz	8.78	13	Complies
64QAM(MCS5)	5680MHz	9.73	13	Complies

Peak excursion Plot on Configuration IEEE 802.11n 20 MHz MCS0 / 5200 MHz / Ant. 1+2+3+4 /
BSPK(MCS0)



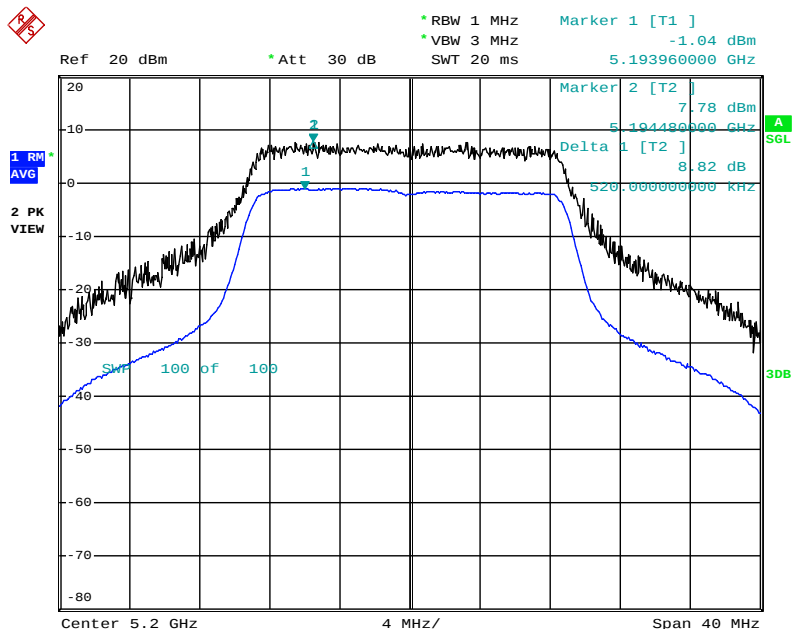
Date: 8.NOV.2013 13:15:12

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5200 MHz / Ant. 1+2+3+4 /
QPSK(MCS1)



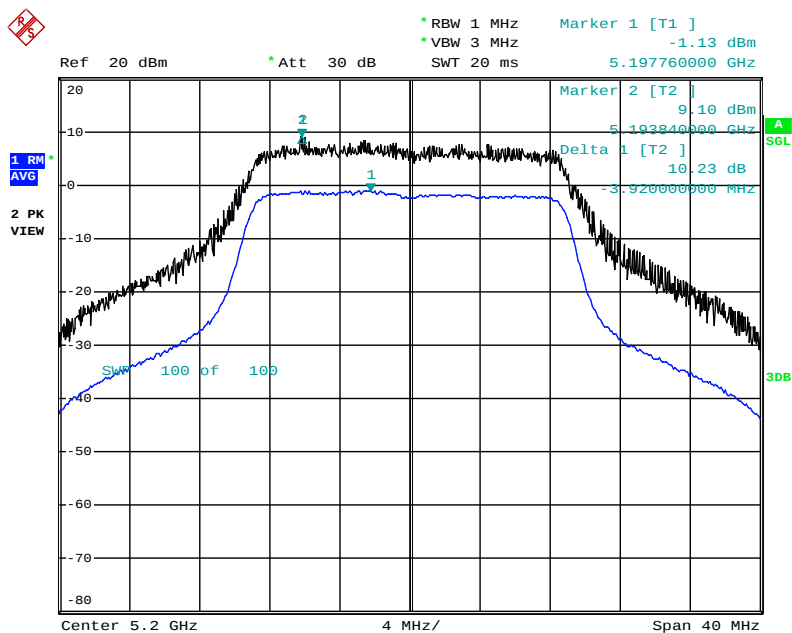
Date: 8.NOV.2013 13:16:01

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5200 MHz / Ant. 1+2+3+4 /
16QAM(MCS3)



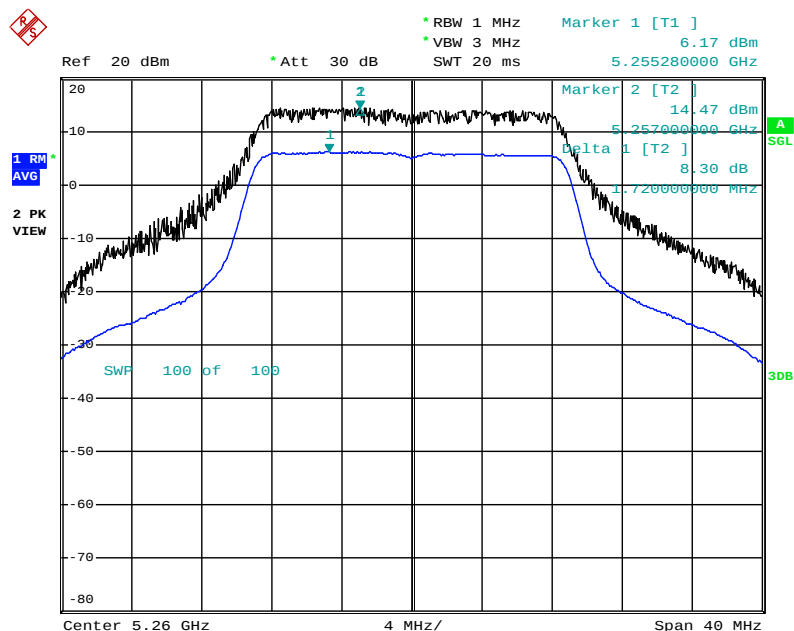
Date: 8.NOV.2013 13:16:39

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5200 MHz / Ant. 1+2+3+4 /
64QAM(MCS5)



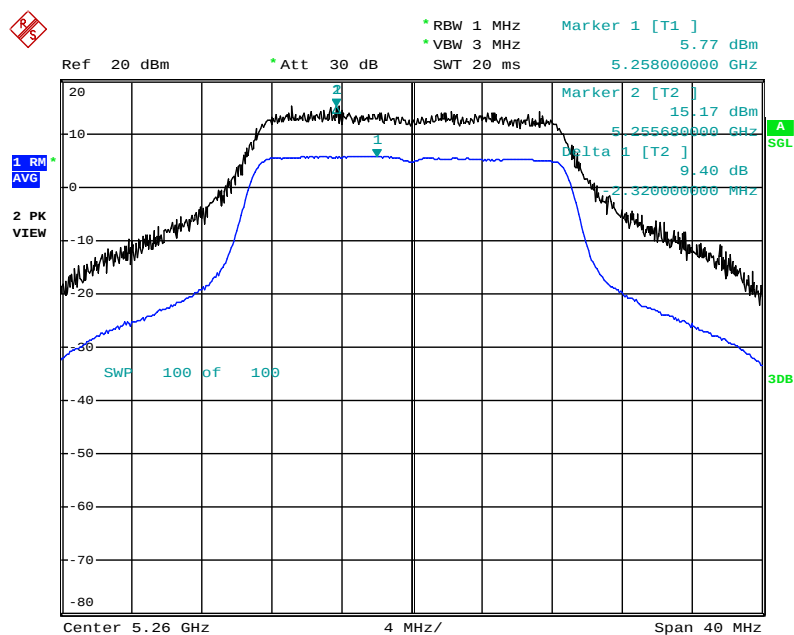
Date: 8.NOV.2013 13:18:12

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5260 MHz / Ant. 1+2+3+4 /
BSPK(MCS0)



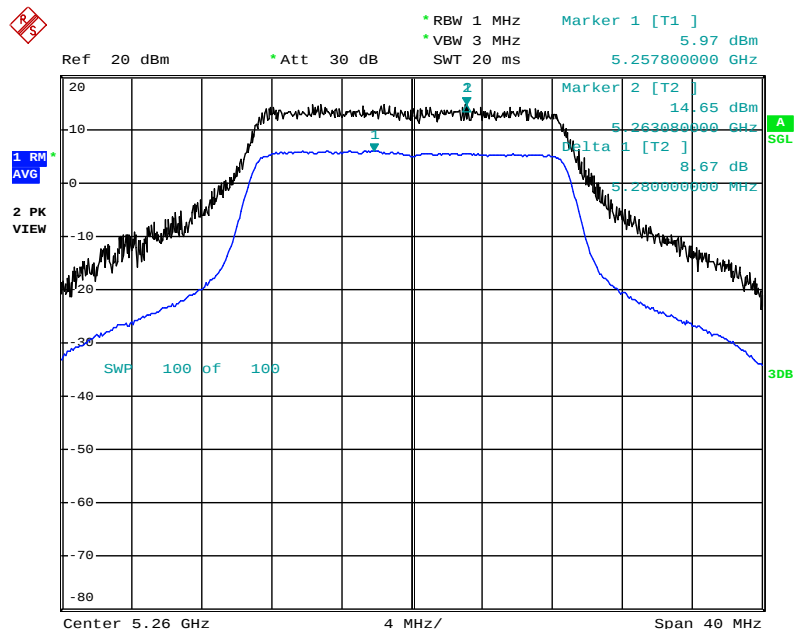
Date: 8.NOV.2013 13:19:31

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5260 MHz / Ant. 1+2+3+4 /
QPSK(MCS1)



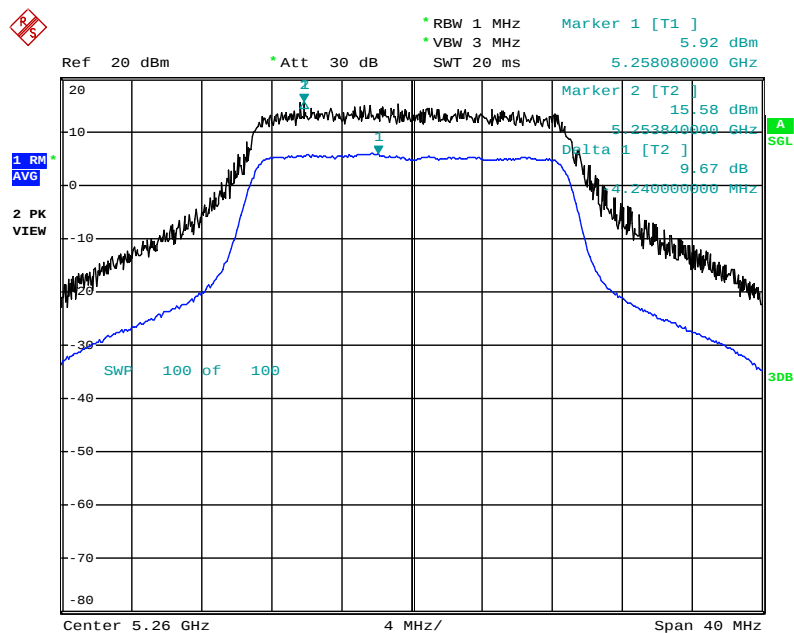
Date: 8.NOV.2013 13:20:21

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5260 MHz / Ant. 1+2+3+4 /
16QAM(MCS3)



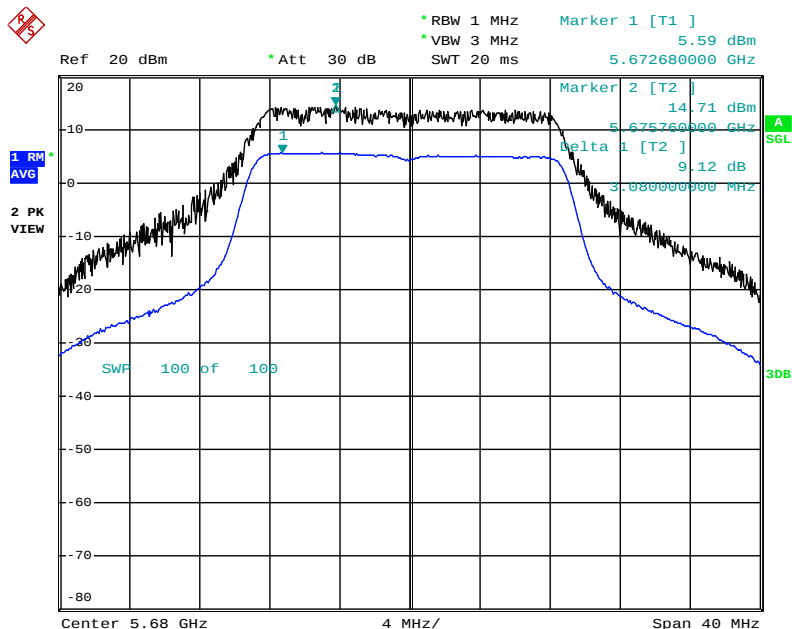
Date: 8.NOV.2013 13:21:51

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5260 MHz / Ant. 1+2+3+4 /
64QAM(MCS5)



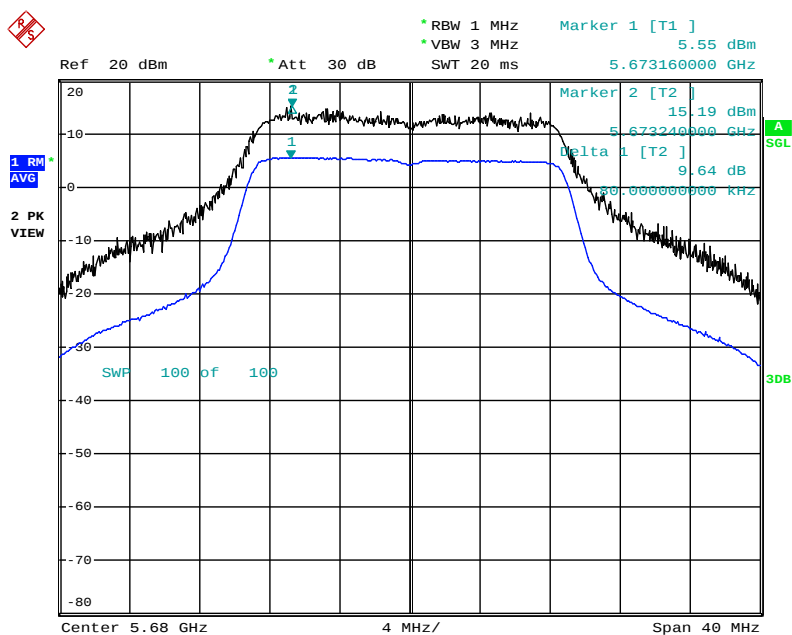
Date: 8.NOV.2013 13:22:29

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5680 MHz / Ant. 1+2+3+4 /
BSPK(MCS0)



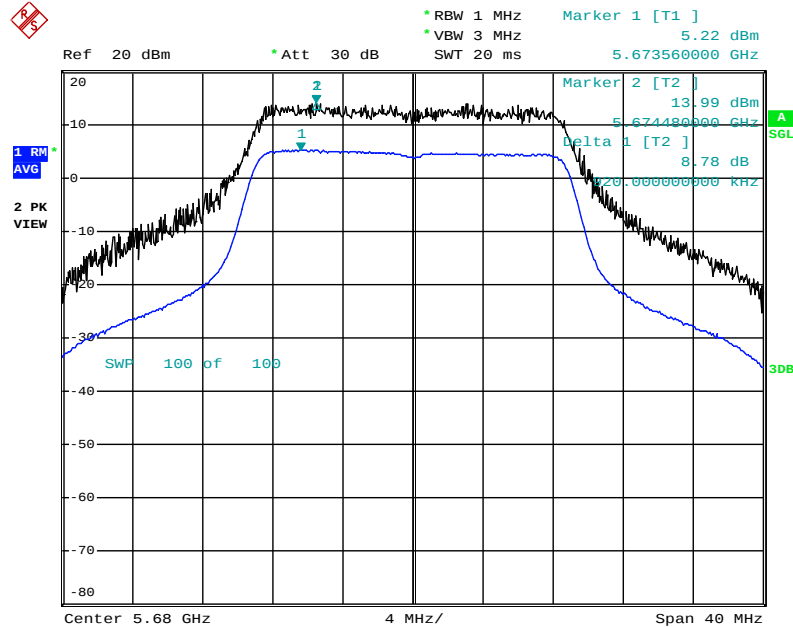
Date: 8.NOV.2013 13:23:41

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5680 MHz / Ant. 1+2+3+4 /
QPSK(MCS1)



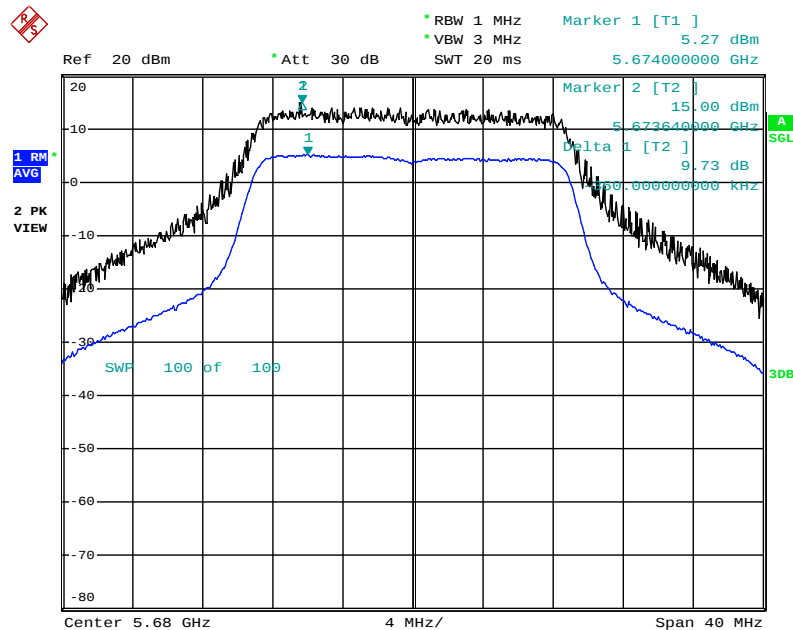
Date: 8.NOV.2013 13:24:27

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5680 MHz / Ant. 1+2+3+4 /
16QAM(MCS3)



Date: 8.NOV.2013 13:25:06

Peak excursion Plot on Configuration IEEE 802.11n 20MHz MCS0 / 5680 MHz / Ant. 1+2+3+4 /
64QAM(MCS5)



Date: 8.NOV.2013 13:25:55

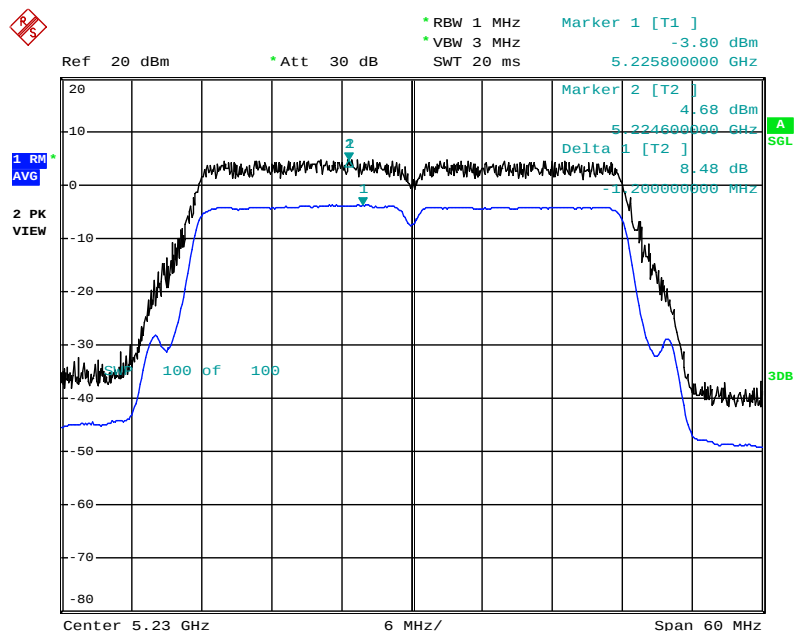
Test date	Nov. 08, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao	Configuration	802.11n 40MHz
Duty Cycle	97.97%	Duty Factor	0.09

Configuration IEEE 802.11n 40MHz

<MCS0, Ant. 1+2+3+4>

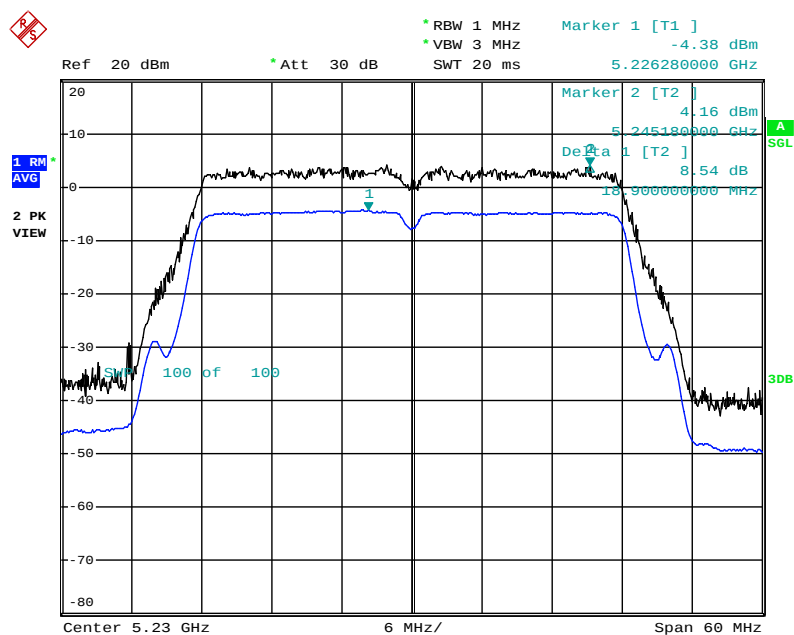
Modulation	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
BSPK(MCS0)	5230MHz	8.48	13	Complies
QPSK(MCS1)	5230MHz	8.54	13	Complies
16QAM(MCS3)	5230MHz	9.38	13	Complies
64QAM(MCS5)	5230MHz	10.26	13	Complies
BSPK(MCS0)	5270MHz	8.07	13	Complies
QPSK(MCS1)	5270MHz	8.08	13	Complies
16QAM(MCS3)	5270MHz	9.45	13	Complies
64QAM(MCS5)	5270MHz	10.27	13	Complies
BSPK(MCS0)	5670MHz	8.00	13	Complies
QPSK(MCS1)	5670MHz	8.01	13	Complies
16QAM(MCS3)	5670MHz	9.31	13	Complies
64QAM(MCS5)	5670MHz	9.54	13	Complies

Peak excursion Plot on Configuration IEEE 802.11n 40 MHz MCS0 / 5230 MHz / Ant. 1+2+3+4 /
BSPK(MCS0)



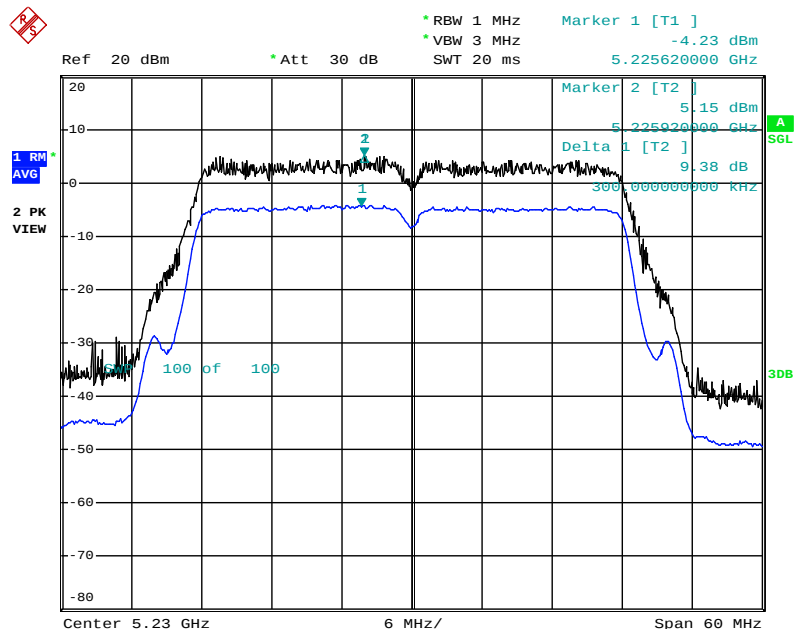
Date: 8.NOV.2013 13:32:10

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5230 MHz / Ant. 1+2+3+4 /
QPSK(MCS1)



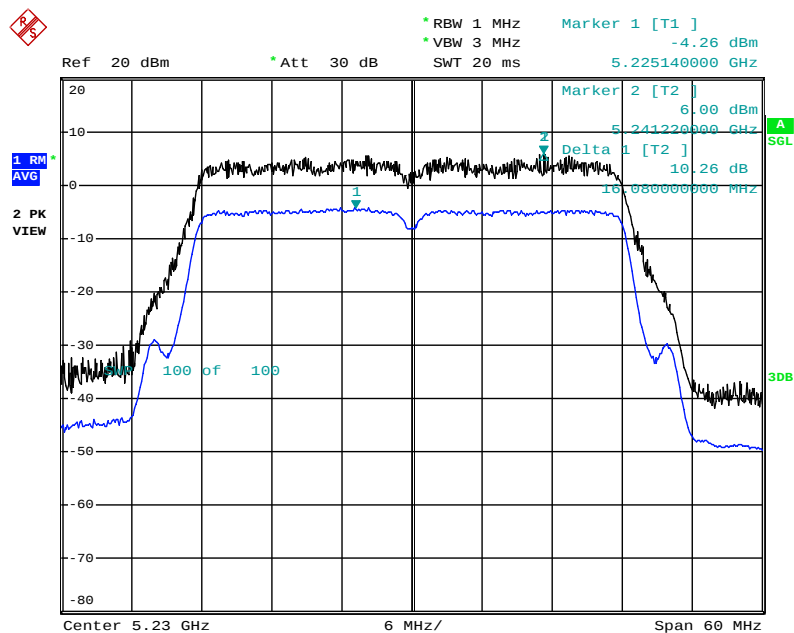
Date: 8.NOV.2013 13:33:18

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5230 MHz / Ant. 1+2+3+4 /
16QAM(MCS3)



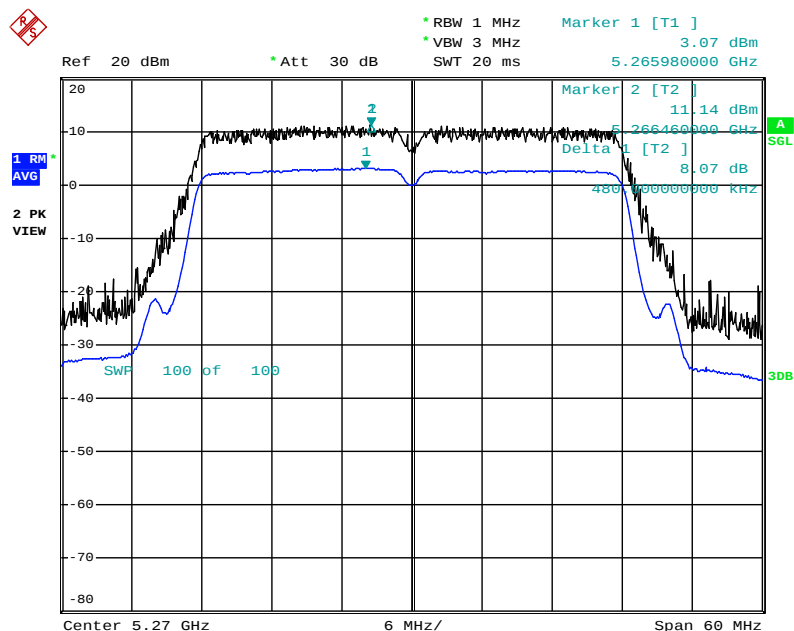
Date: 8.NOV.2013 13:33:57

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5230 MHz / Ant. 1+2+3+4 /
64QAM(MCS5)



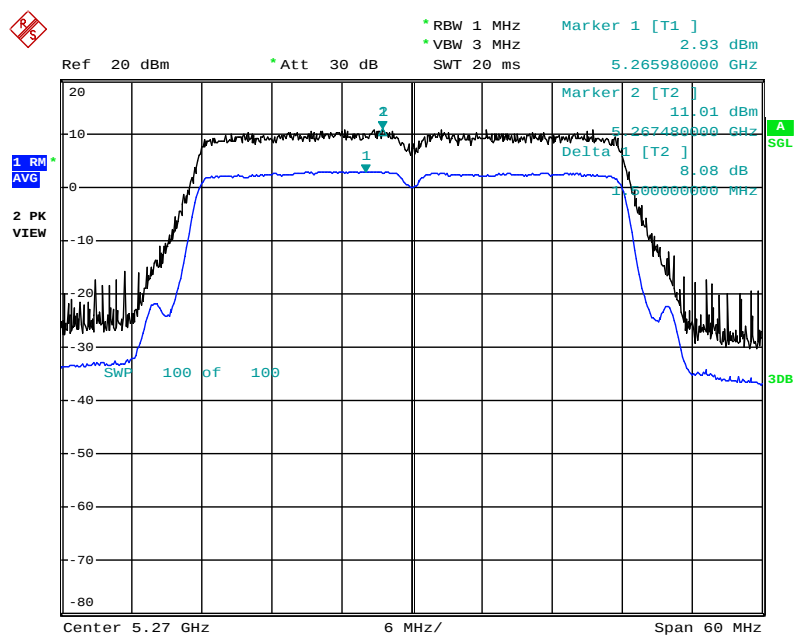
Date: 8.NOV.2013 13:35:32

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5270 MHz / Ant. 1+2+3+4 /
BSPK(MCS0)



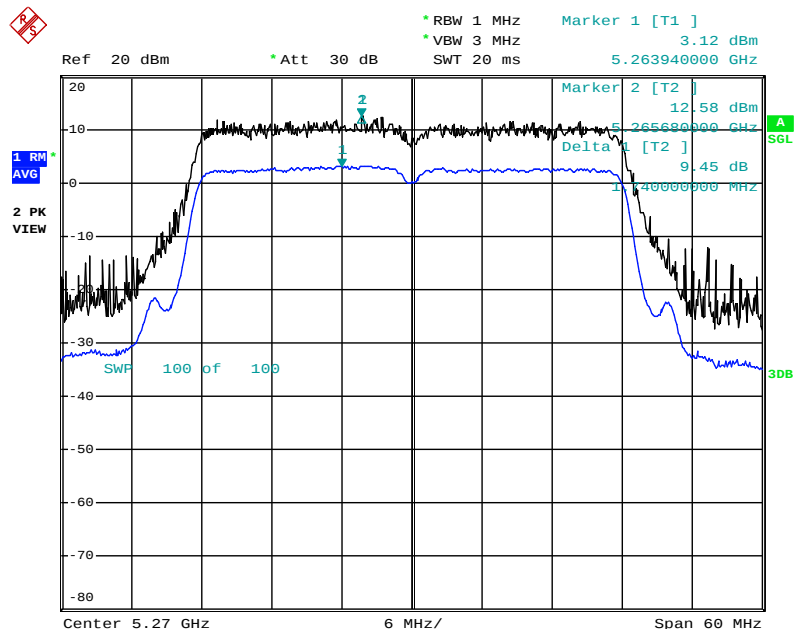
Date: 8.NOV.2013 13:36:22

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5270 MHz / Ant. 1+2+3+4 /
QPSK(MCS1)



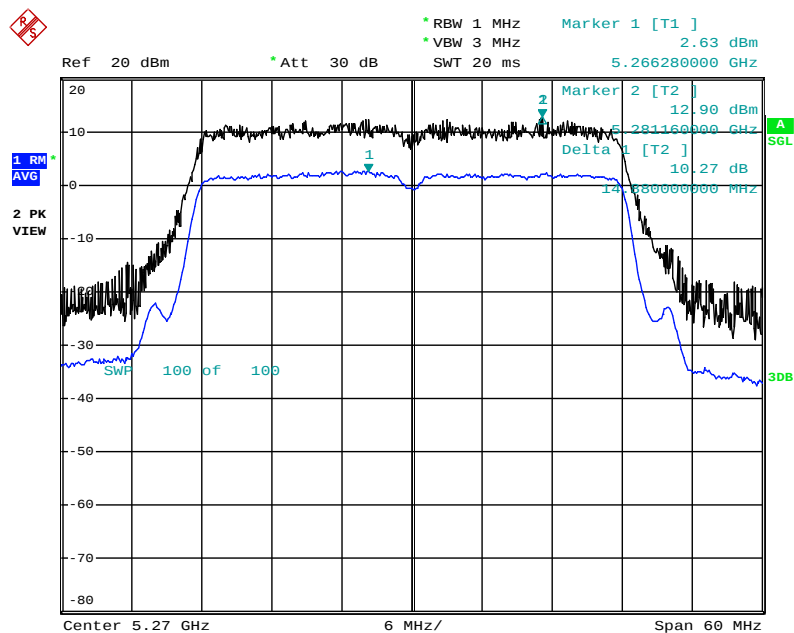
Date: 8.NOV.2013 13:37:03

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5270 MHz / Ant. 1+2+3+4 /
16QAM(MCS3)



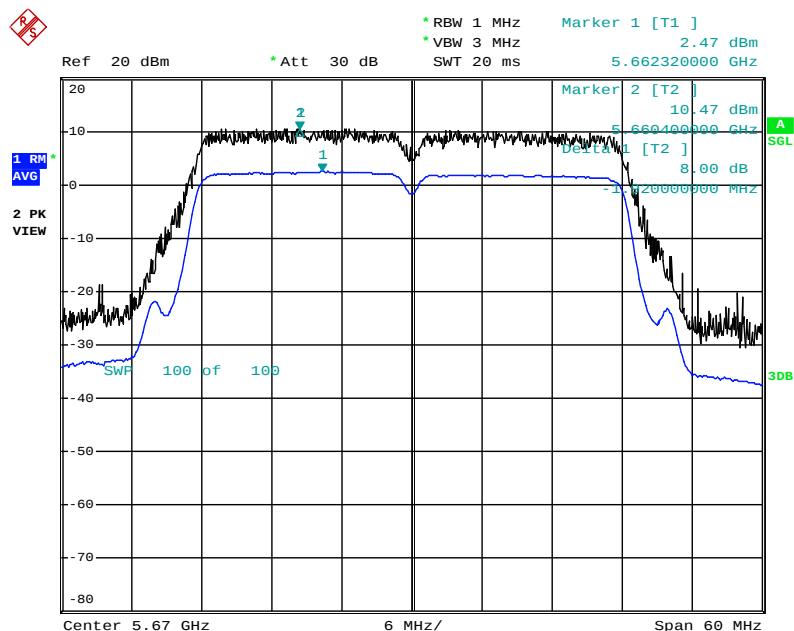
Date: 8.NOV.2013 13:37:41

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5270 MHz / Ant. 1+2+3+4 /
64QAM(MCS5)



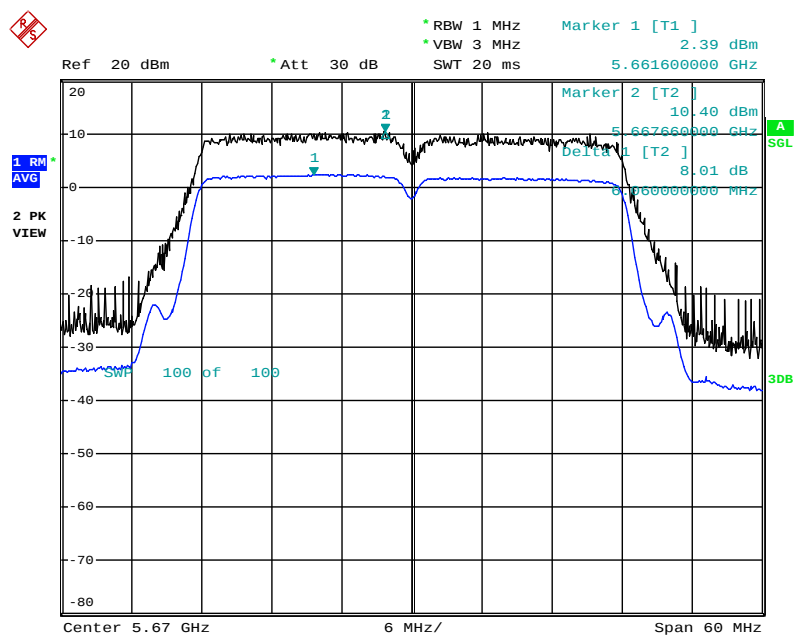
Date: 8.NOV.2013 13:38:19

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5670 MHz / Ant. 1+2+3+4 /
BSPK(MCS0)



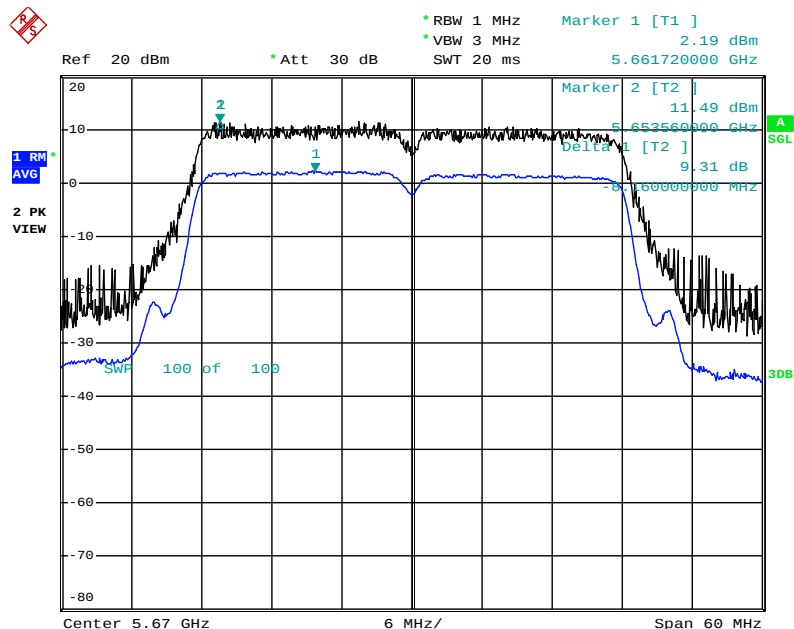
Date: 8.NOV.2013 13:39:31

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5670 MHz / Ant. 1+2+3+4 /
QPSK(MCS1)



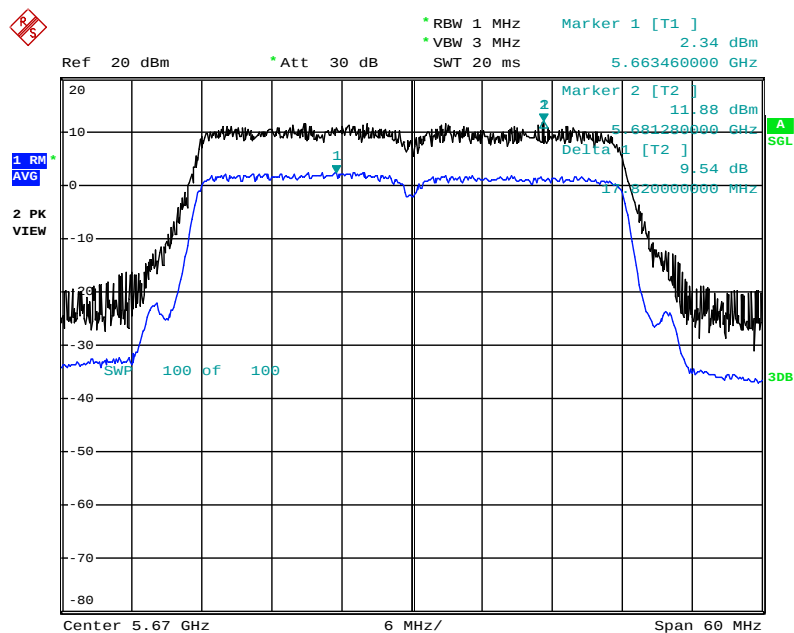
Date: 8.NOV.2013 13:40:36

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5670 MHz / Ant. 1+2+3+4 /
16QAM(MCS3)



Date: 8.NOV.2013 13:41:14

Peak excursion Plot on Configuration IEEE 802.11n 40MHz MCS0 / 5670 MHz / Ant. 1+2+3+4 /
64QAM(MCS5)



Date: 8.NOV.2013 13:42:03

3.6 Radiated Emissions Measurement

3.6.1 Limit of Unwanted emissions in the restricted bands

Radiated emissions which fall within the restricted band specified on 15.205(a) must comply with the radiated emission limits specified as below table:

Frequencies (MHz)	Field Strength (microvolt/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:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

3.6.2 Limits of Unwanted Emission out of the restricted bands

EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m)	
Peak	Peak	Peak / Average
-27	68.3	74 / 54

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{100000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$

3.6.3 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1GHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 10Hz for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for Peak
Detector	Peak
Trace mode	Max hold.

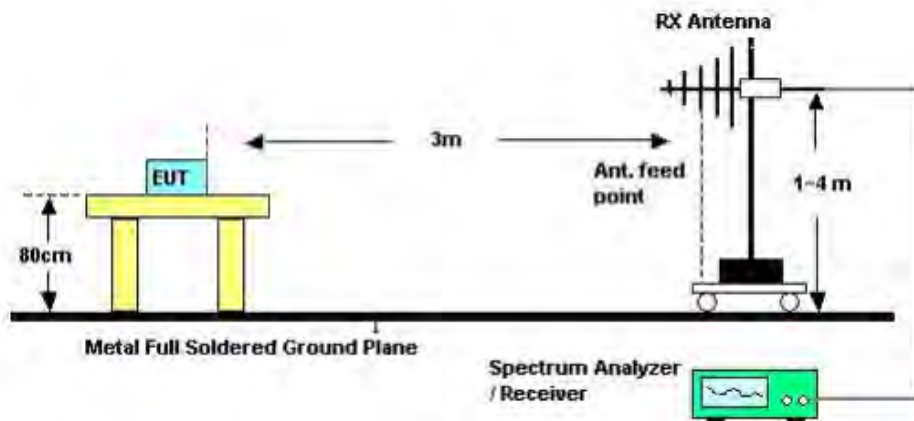
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1GHz / RBW 120kHz for QP

3.6.4 Test Procedures

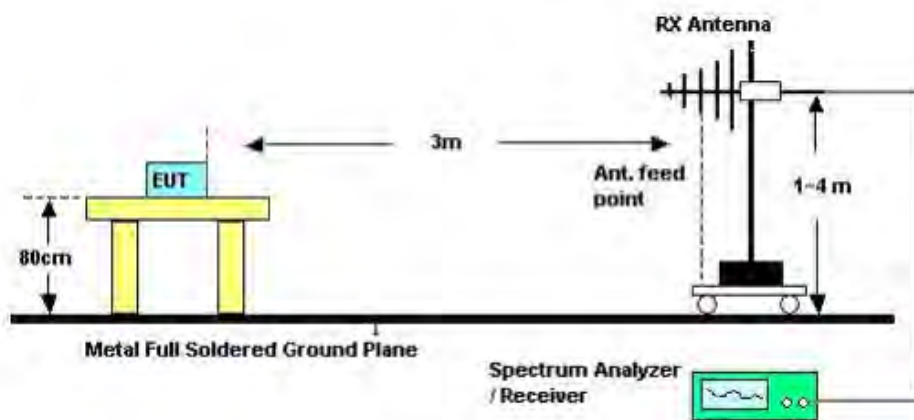
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 m to 4 m) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak 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.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

3.6.5 Test Setup Layout

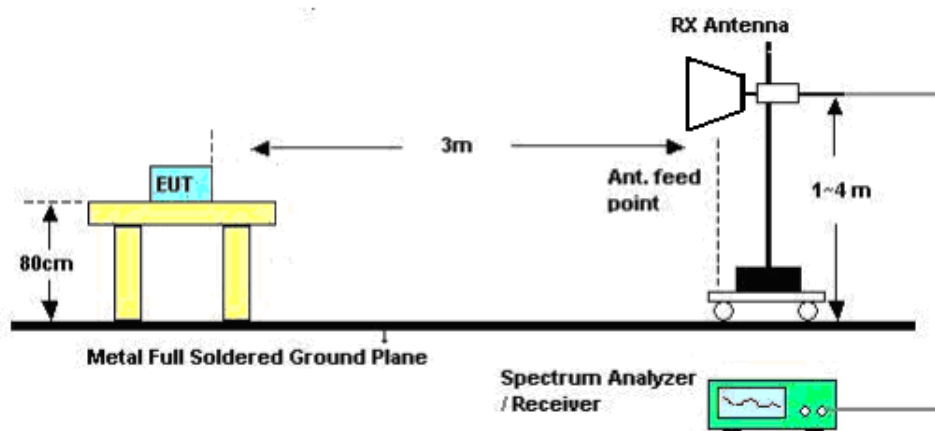
For Radiated Emissions below 1GHz (9kHz~30MHz)



For Radiated Emissions below 1GHz (30MHz~1GHz)



For Radiated Emissions above 1GHz



3.6.6 Test Deviation

There are no deviations with the original standard.

3.6.7 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.6.8 Results of Radiated Emissions (9kHz~30MHz)

Frequency Range	9kHz~30MHz	Test Site No.	03CH01-CB
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Configurations	CTX
Test Date	Nov. 12, 2013		

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 20 dB below the permissible value has no need to be reported.

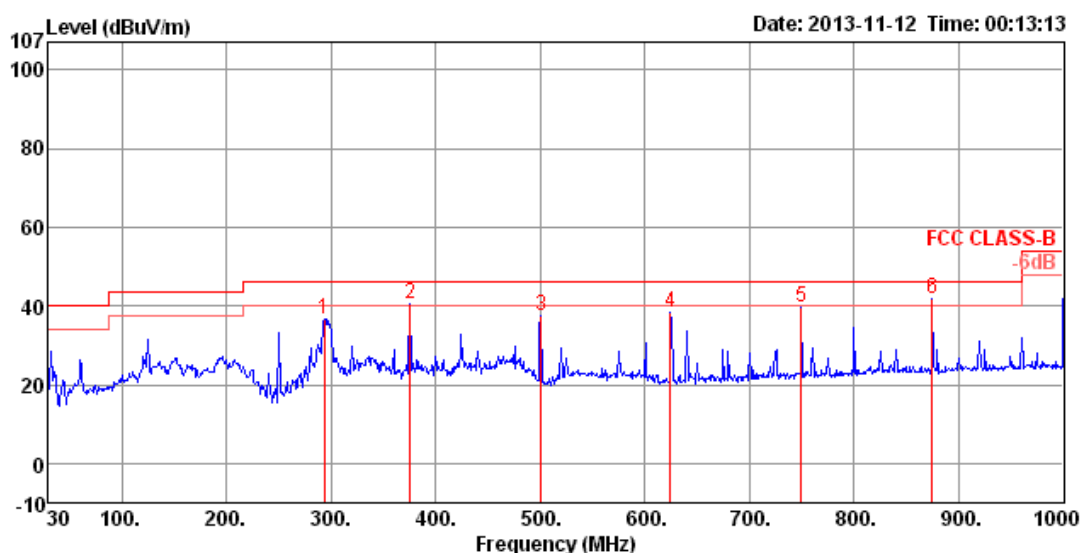
Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

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

3.6.9 Results of Radiated Emissions (30MHz~1GHz)

Frequency Range	30MHz~1GHz	Test Site No.	03CH01-CB
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Configurations	CTX

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	293.84	36.60	46.00	-9.40	53.20	2.10	12.79	31.49	100	127	HORIZONTAL Peak
2	375.32	40.71	46.00	-5.29	54.77	2.44	14.93	31.43	100	151	HORIZONTAL QP
3	500.45	37.37	46.00	-8.63	49.04	2.82	16.92	31.41	200	135	HORIZONTAL Peak
4	624.61	38.51	46.00	-7.49	48.12	3.18	18.61	31.40	150	177	HORIZONTAL Peak
5	749.74	39.50	46.00	-6.50	47.65	3.53	19.69	31.37	125	217	HORIZONTAL Peak
6	874.87	41.62	46.00	-4.38	48.64	3.89	20.24	31.15	100	163	HORIZONTAL QP

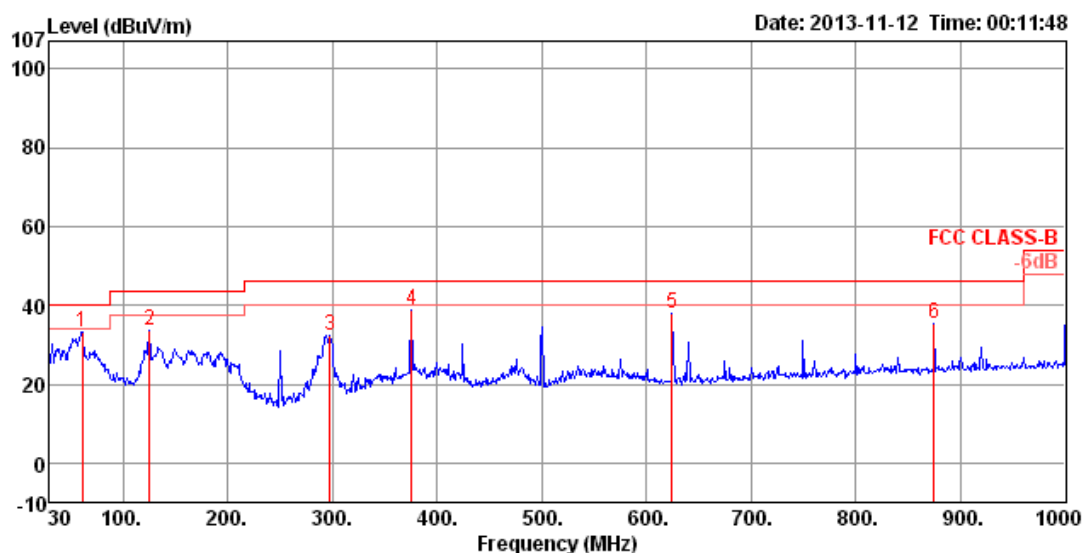
Note:

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

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	61.04	33.24	40.00	-6.76	59.26	0.90	4.87	31.79	100	122 VERTICAL	Peak
2	125.06	33.41	43.50	-10.09	51.92	1.33	11.73	31.57	100	182 VERTICAL	Peak
3	297.72	32.35	46.00	-13.65	48.74	2.12	12.94	31.45	100	284 VERTICAL	Peak
4	375.32	38.86	46.00	-7.14	52.92	2.44	14.93	31.43	100	182 VERTICAL	Peak
5	624.61	37.76	46.00	-8.24	47.37	3.18	18.61	31.40	100	122 VERTICAL	Peak
6	874.87	35.32	46.00	-10.68	42.34	3.89	20.24	31.15	100	89 VERTICAL	Peak

Note:

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

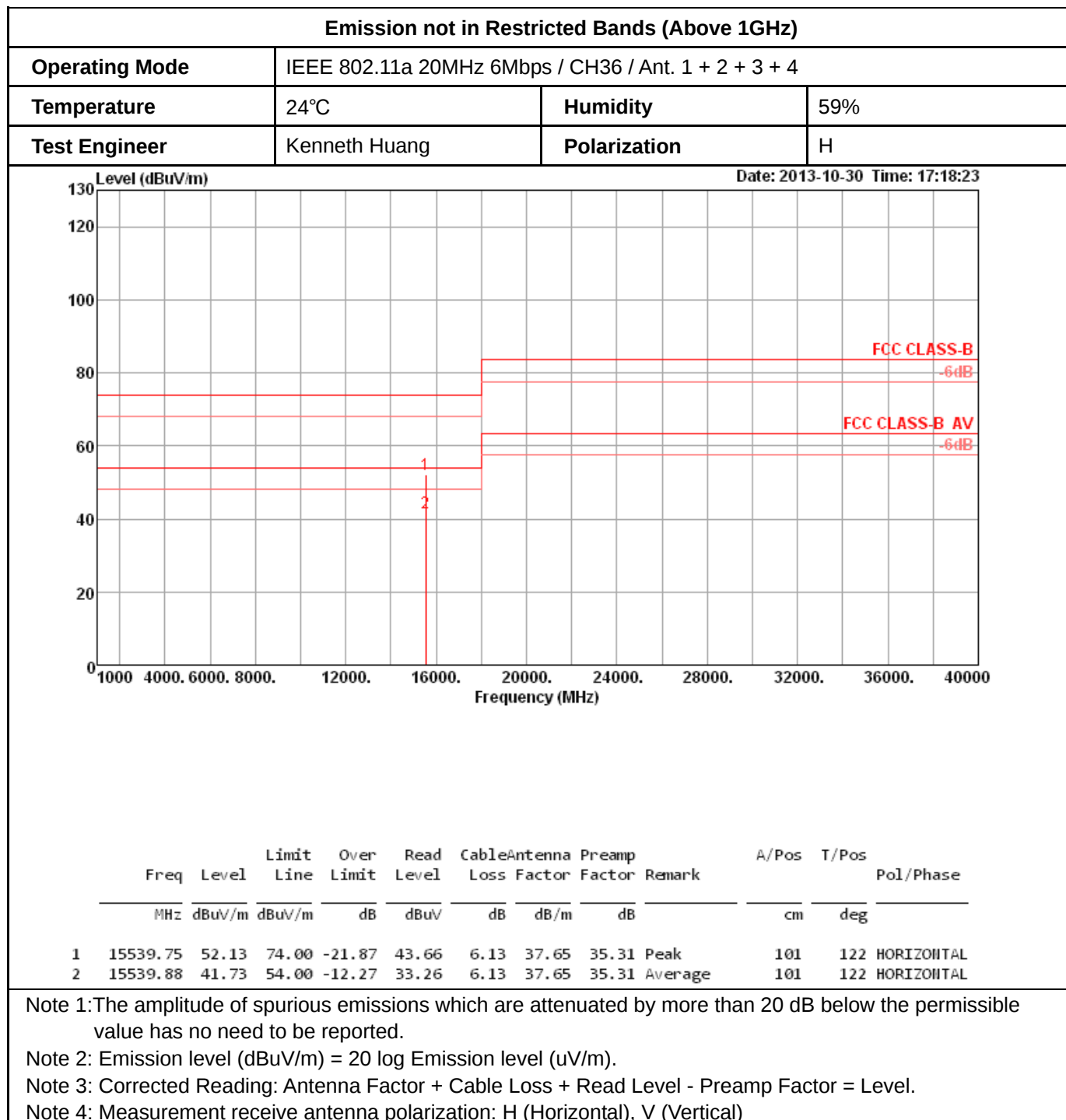
Emission level (dBuV/m) = 20 log Emission level (uV/m).

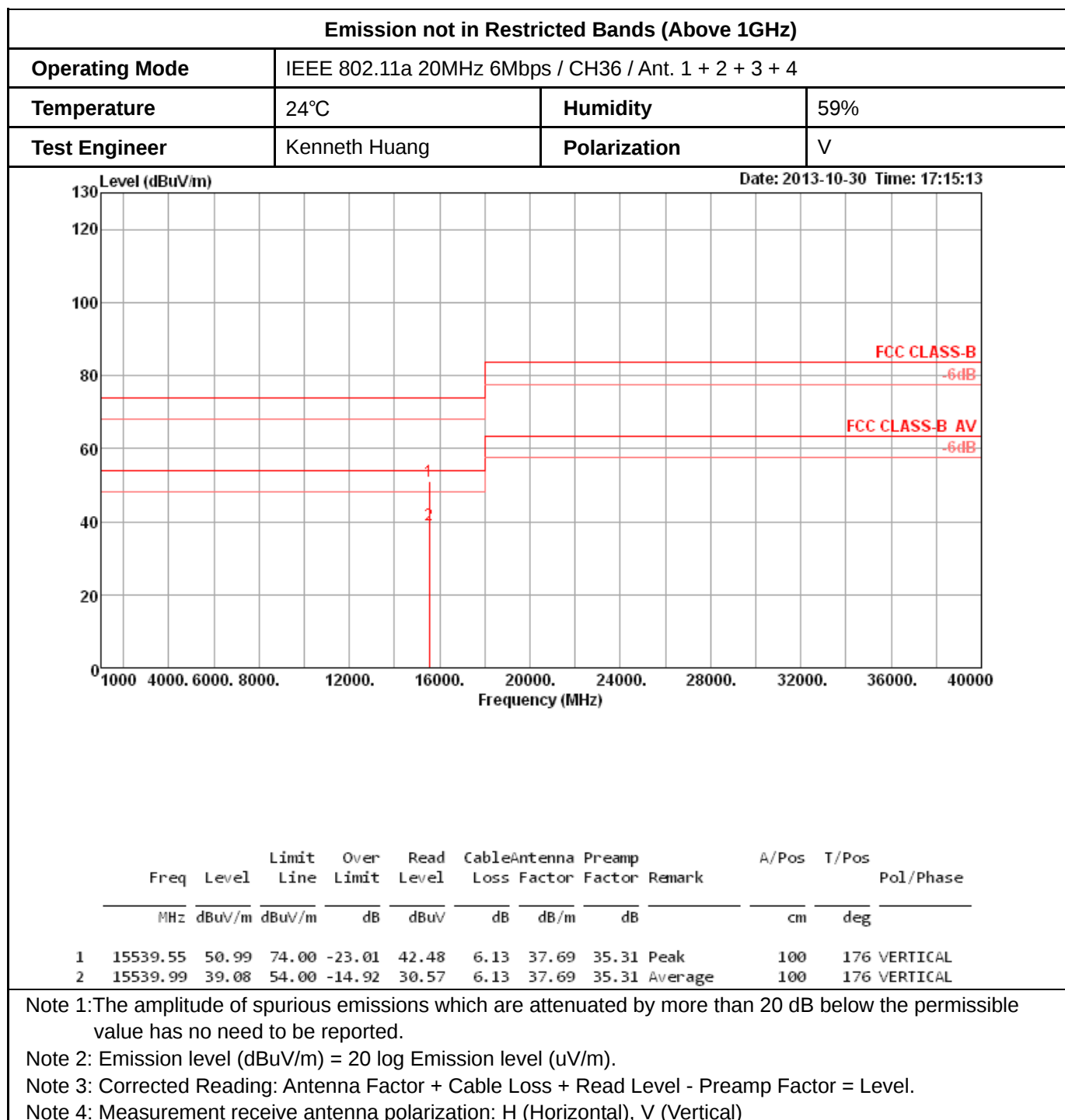
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

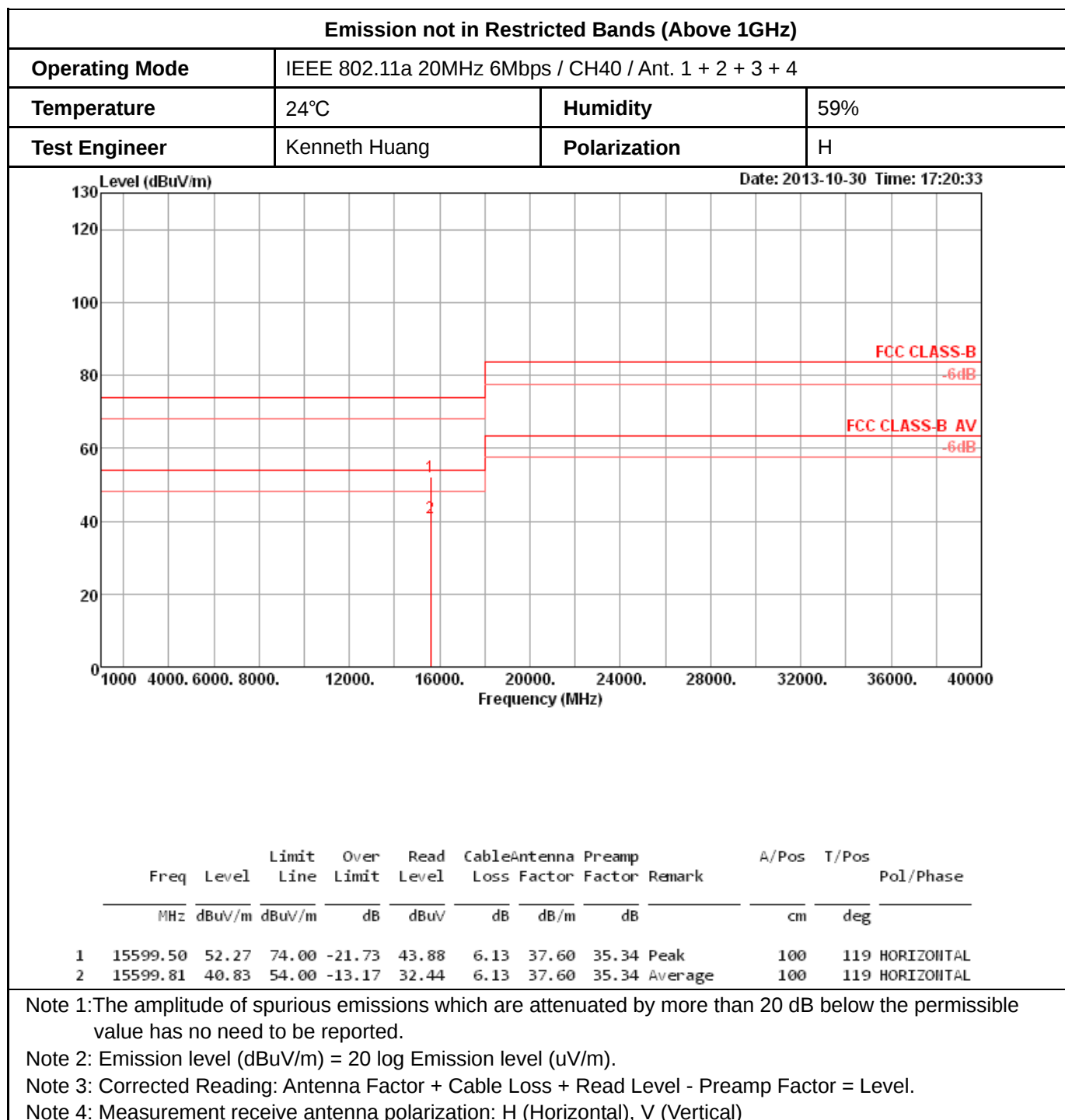
3.6.10 Results of Emission not in Restricted Bands

Following channel(s) was (were) selected for the final test as listed below.

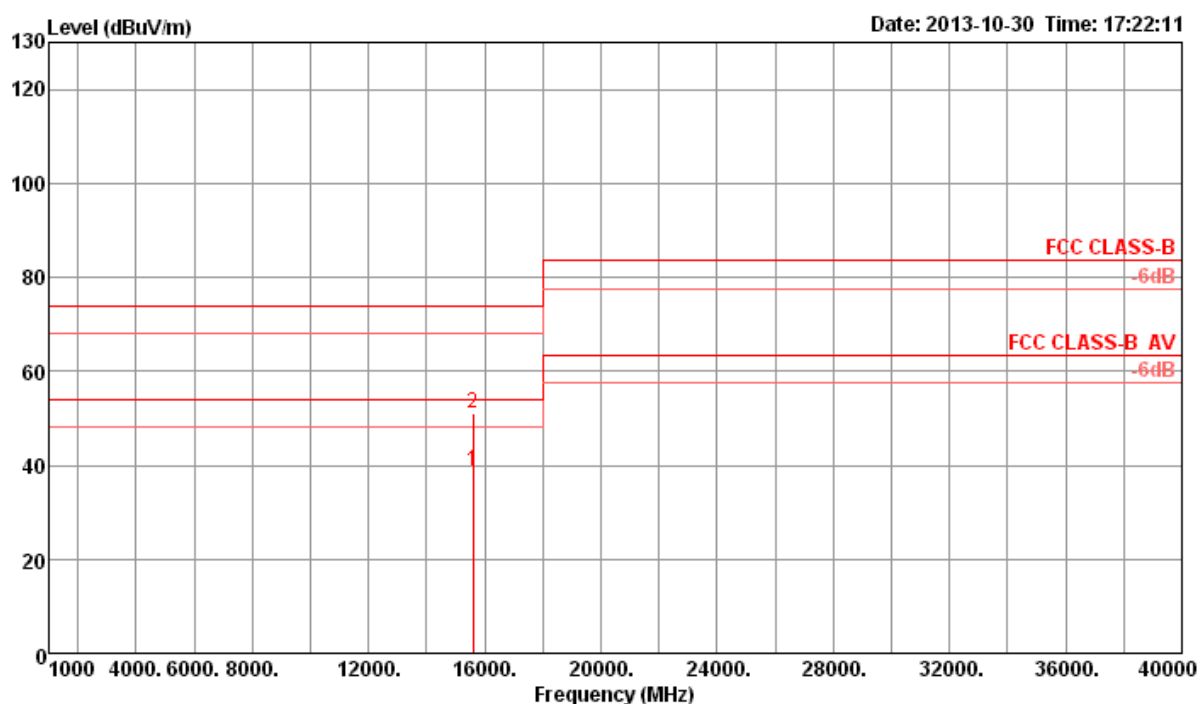
Mode	TX Chain	Test Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	Ant.1+2+3+4	36, 40, 48	OFDM	BPSK	6
802.11a	Ant.1+2+3+4	52, 60, 64	OFDM	BPSK	6
802.11a	Ant.1+2+3+4	100, 116, 136, 140	OFDM	BPSK	6
802.11n 20MHz	Ant.1+2+3+4	36, 40, 48	OFDM	BPSK	MCS0
802.11n 20MHz	Ant.1+2+3+4	52, 60, 64	OFDM	BPSK	MCS0
802.11n 20MHz	Ant.1+2+3+4	100, 116, 136, 140	OFDM	BPSK	MCS0
802.11n 40MHz	Ant.1+2+3+4	38, 46	OFDM	BPSK	MCS0
802.11n 40MHz	Ant.1+2+3+4	54, 62	OFDM	BPSK	MCS0
802.11n 40MHz	Ant.1+2+3+4	102, 110, 134	OFDM	BPSK	MCS0







Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH40 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15599.80	38.64	54.00	-15.36	30.25	6.13	37.60	35.34	Average	112	223	VERTICAL
2	15599.89	51.05	74.00	-22.95	42.66	6.13	37.60	35.34	Peak	112	223	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

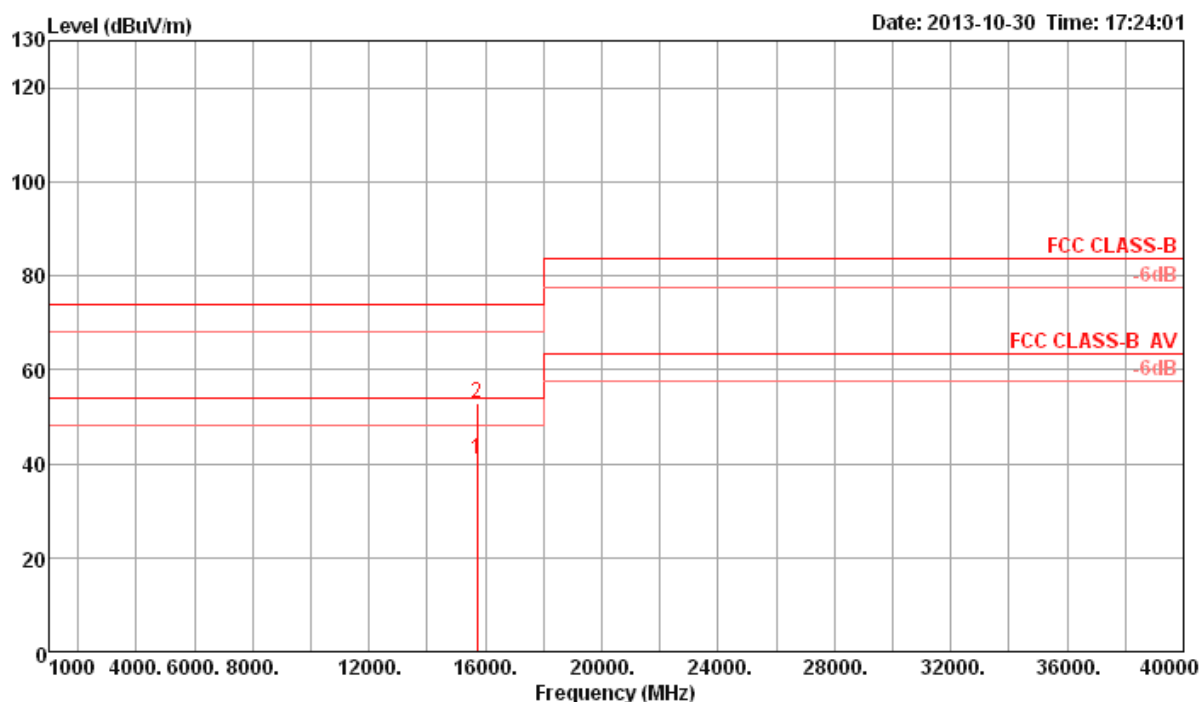
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15719.80	40.92	54.00	-13.08	32.69	6.14	37.48	35.39	Average	100	126	HORIZONTAL
2	15719.86	52.81	74.00	-21.19	44.58	6.14	37.48	35.39	Peak	100	126	HORIZONTAL

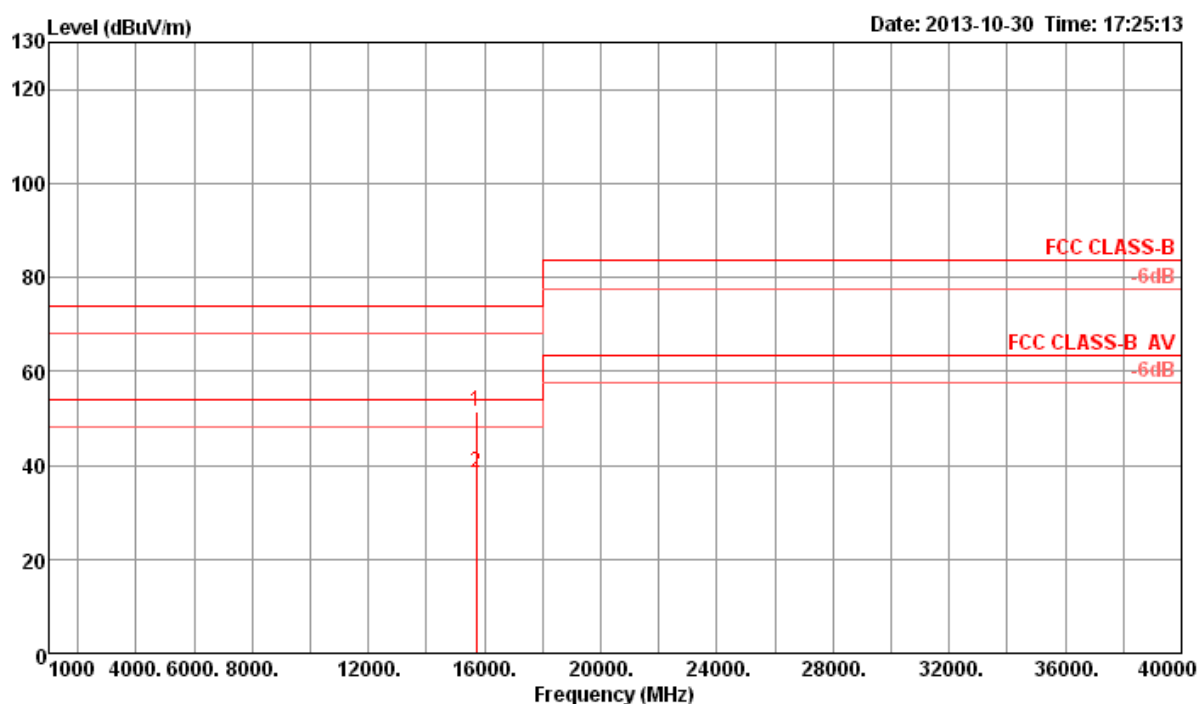
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	15719.33	51.31	74.00	-22.69	43.08	6.14	37.48	35.39	Peak	100	251	VERTICAL
2	15719.80	38.56	54.00	-15.44	30.33	6.14	37.48	35.39	Average	100	251	VERTICAL

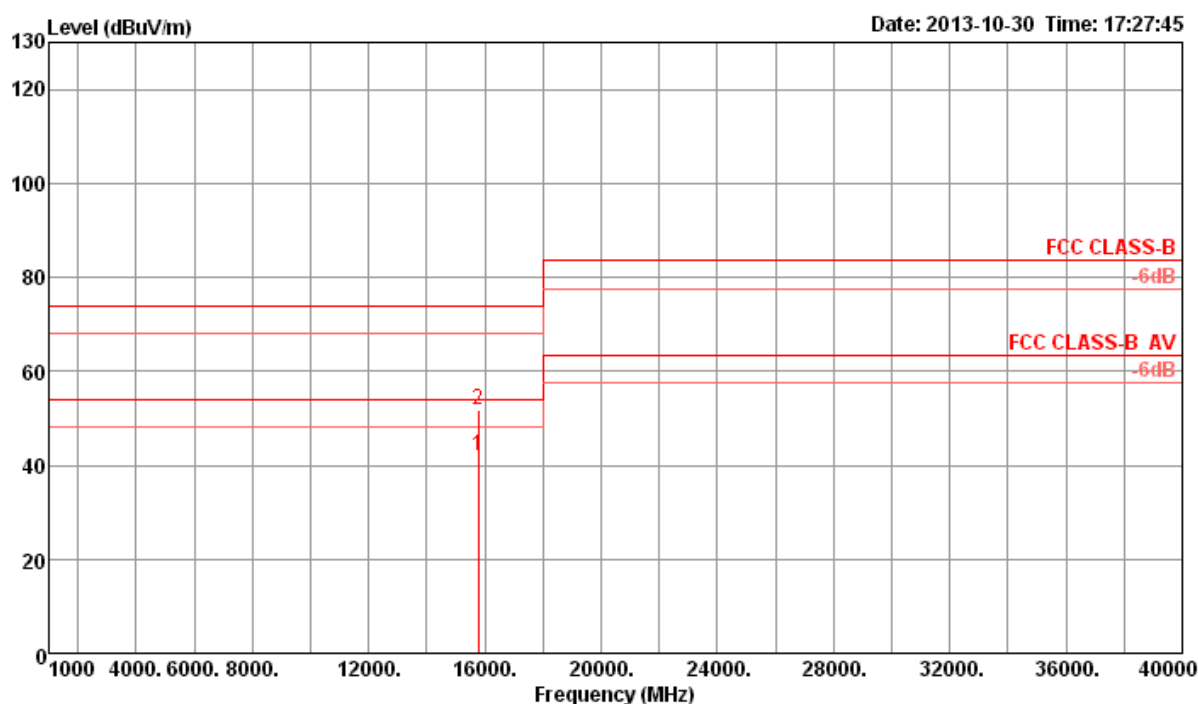
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15779.87	41.88	54.00	-12.12	33.75	6.14	37.41	35.42	Average	103	124	HORIZONTAL
2	15779.99	51.72	74.00	-22.28	43.59	6.14	37.41	35.42	Peak	103	124	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

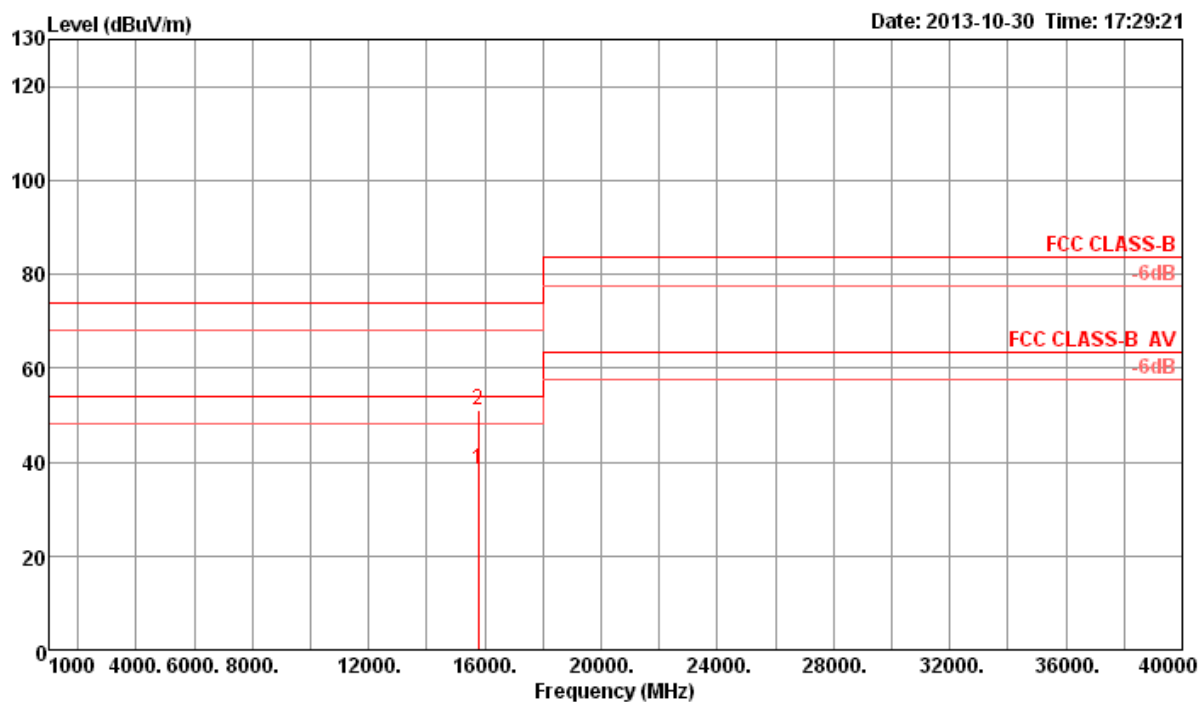
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15779.87	38.24	54.00	-15.76	30.11	6.14	37.41	35.42	Average	117	231 VERTICAL
2	15779.90	50.95	74.00	-23.05	42.82	6.14	37.41	35.42	Peak	117	231 VERTICAL

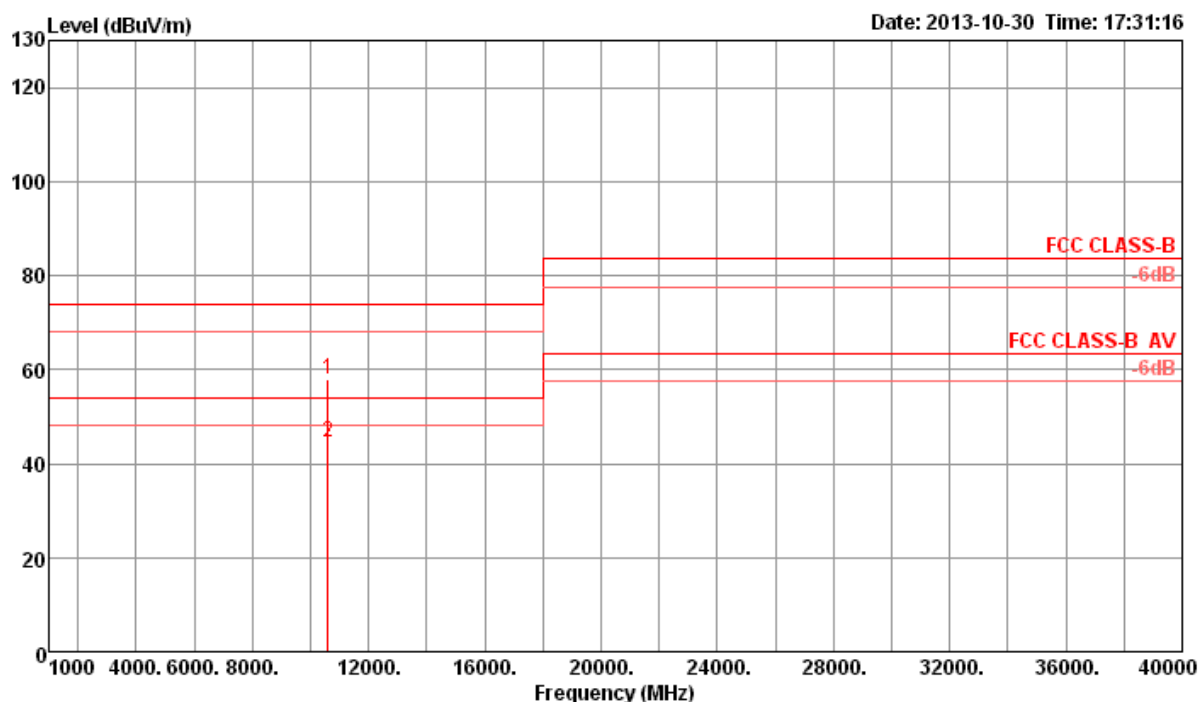
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.23	58.03	74.00	-15.97	50.06	5.01	38.38	35.42	Peak	101	4	HORIZONTAL
2	10600.91	44.60	54.00	-9.40	36.63	5.01	38.38	35.42	Average	101	4	HORIZONTAL

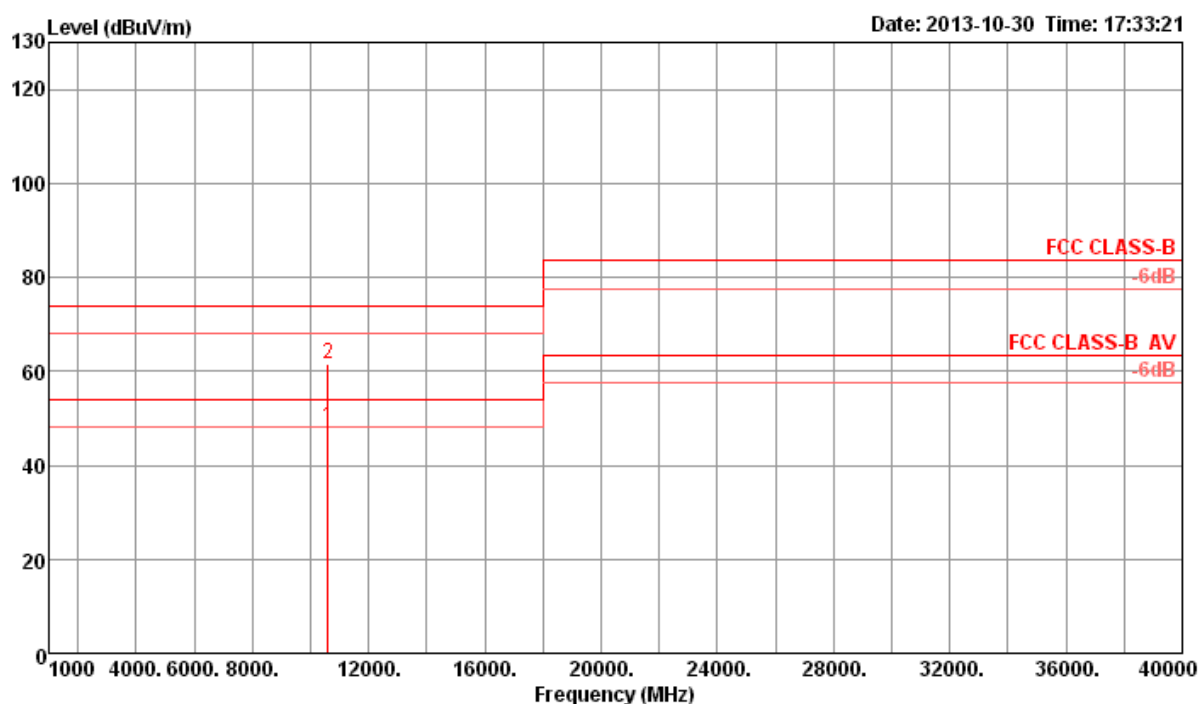
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	10600.07	48.17	54.00	-5.83	40.20	5.01	38.38	35.42 Average	107	163	VERTICAL
2	10600.99	61.62	74.00	-12.38	53.65	5.01	38.38	35.42 Peak	107	163	VERTICAL

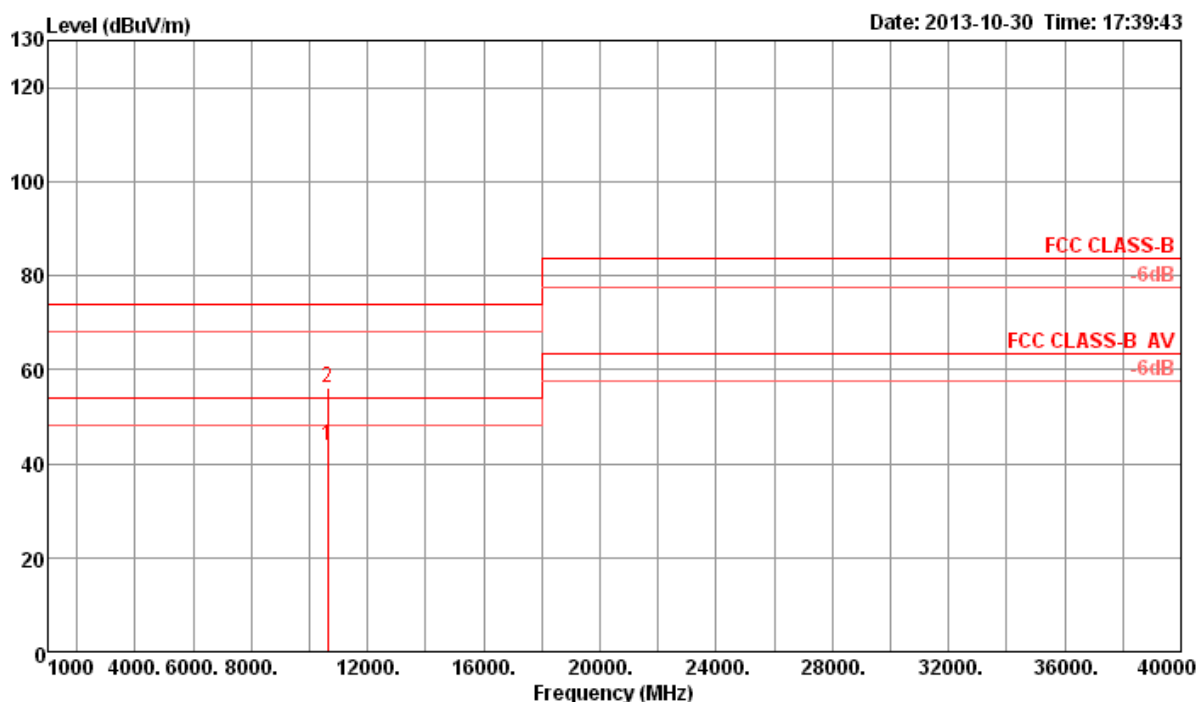
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10642.16	43.71	54.00	-10.29	35.72	5.01	38.37	35.39	Average	100	8	HORIZONTAL
2	10643.37	56.10	74.00	-17.90	48.11	5.01	38.37	35.39	Peak	100	8	HORIZONTAL

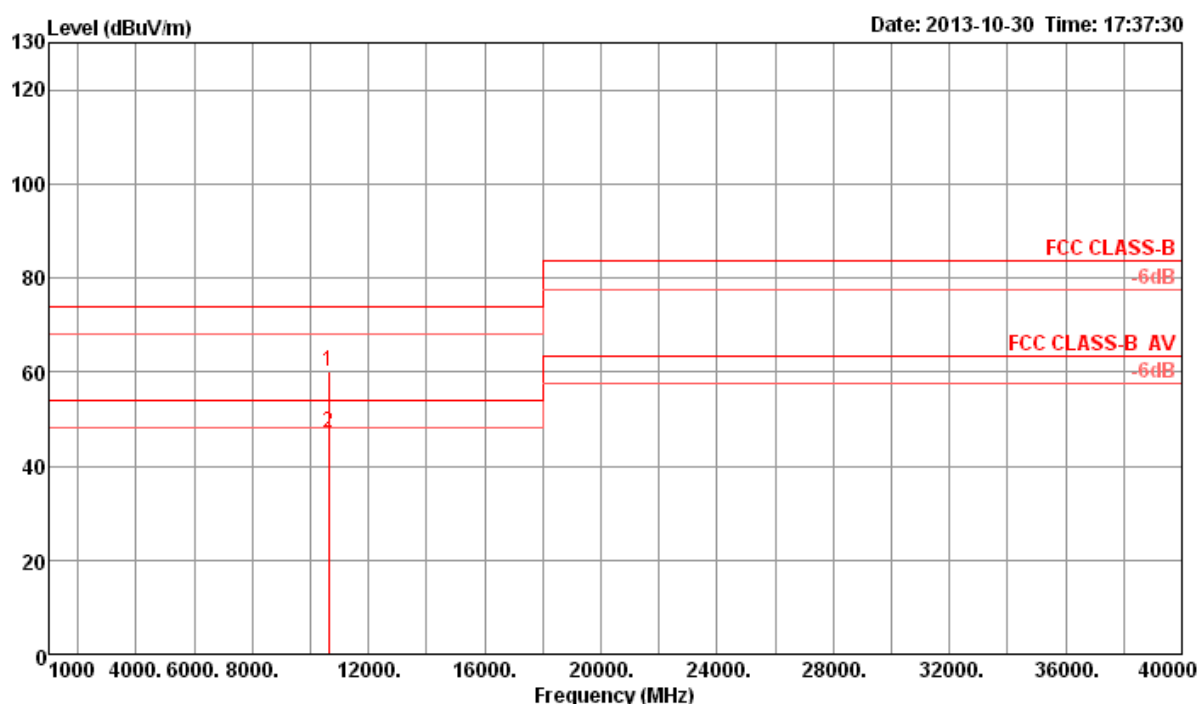
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10636.31	60.14	74.00	-13.86	52.15	5.01	38.37	35.39	Peak	100	162	VERTICAL
2	10637.68	47.15	54.00	-6.85	39.16	5.01	38.37	35.39	Average	100	162	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

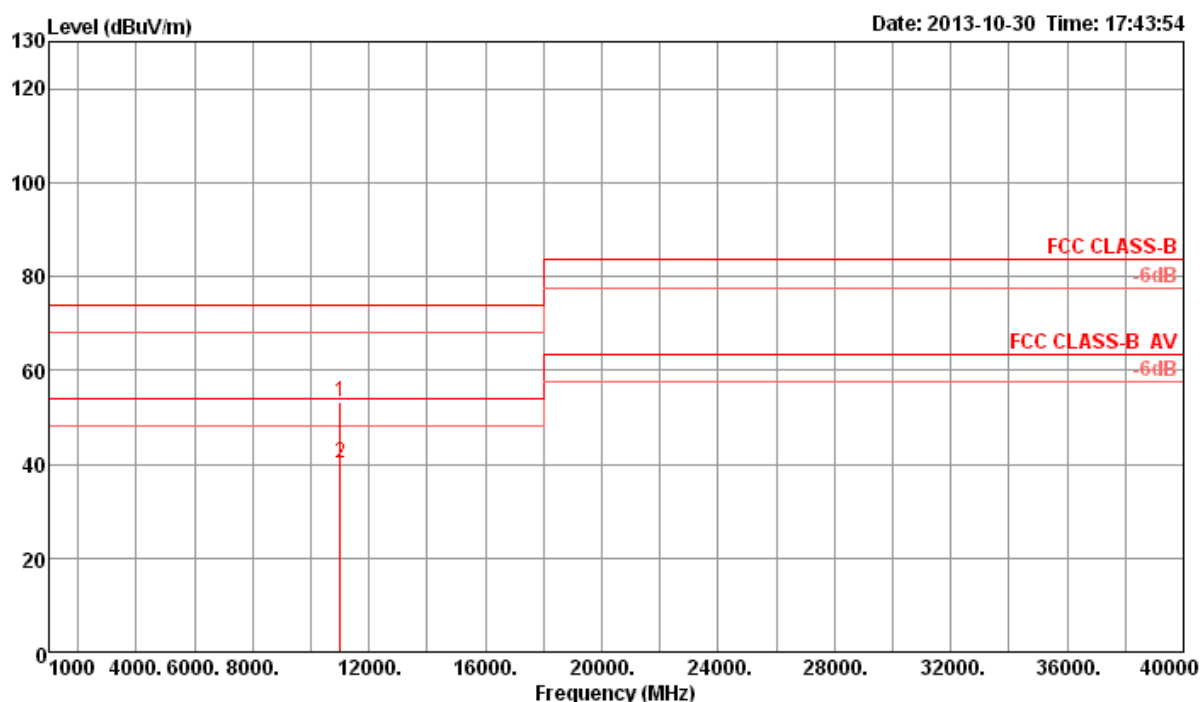
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10999.23	53.41	74.00	-20.59	45.18	5.01	38.32	35.10	Peak	140	346	HORIZONTAL
2	11000.19	40.05	54.00	-13.95	31.82	5.01	38.32	35.10	Average	140	346	HORIZONTAL

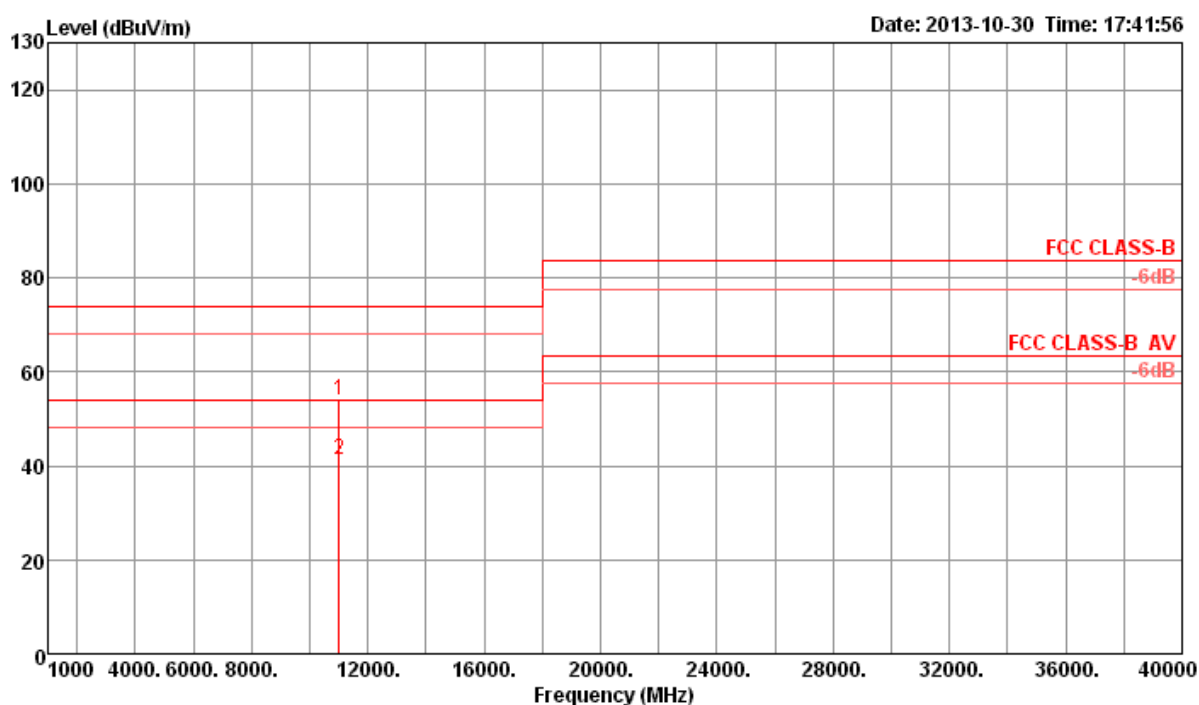
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	10999.90	53.90	74.00	-20.10	45.69	5.01	38.30	35.10	Peak	100	175	VERTICAL
2	11000.05	41.15	54.00	-12.85	32.94	5.01	38.30	35.10	Average	100	175	VERTICAL

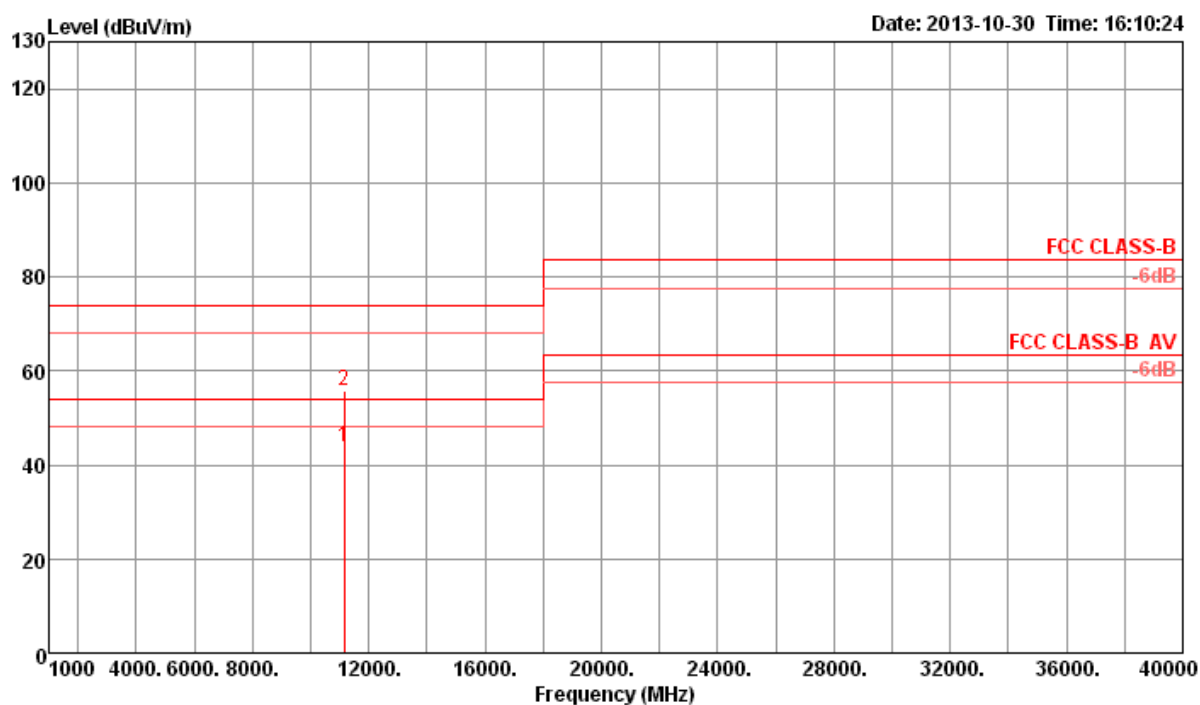
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	11160.08	43.66	54.00	-10.34	35.32	5.04	38.47	35.17	Average	110	235	HORIZONTAL
2	11161.52	55.93	74.00	-18.07	47.59	5.04	38.47	35.17	Peak	110	235	HORIZONTAL

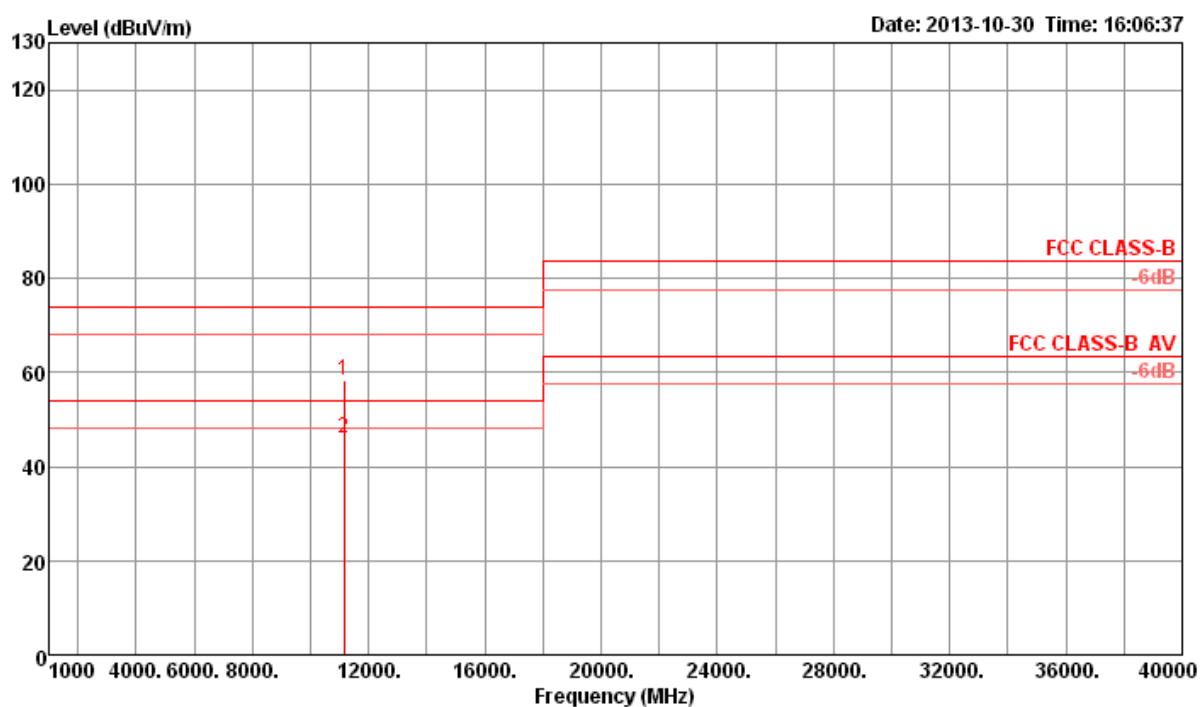
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11158.00	58.43	74.00	-15.57	50.10	5.04	38.45	35.16	Peak	102	181	VERTICAL
2	11158.08	46.12	54.00	-7.88	37.79	5.04	38.45	35.16	Average	102	181	VERTICAL

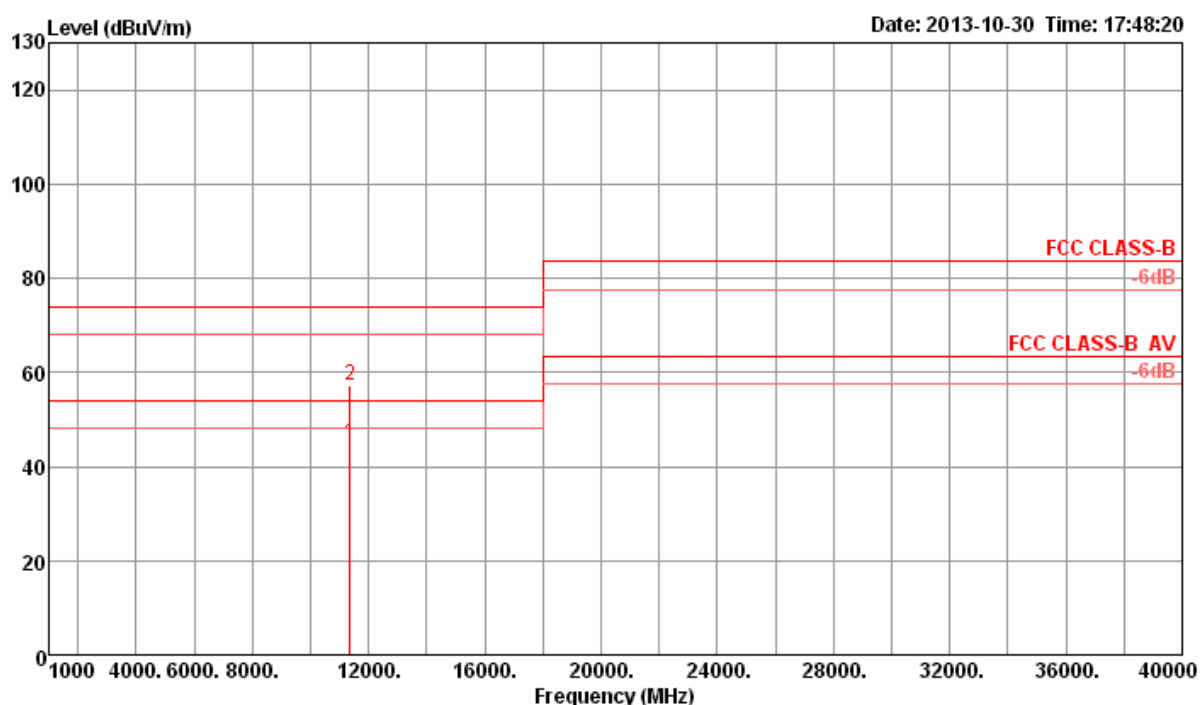
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH136 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



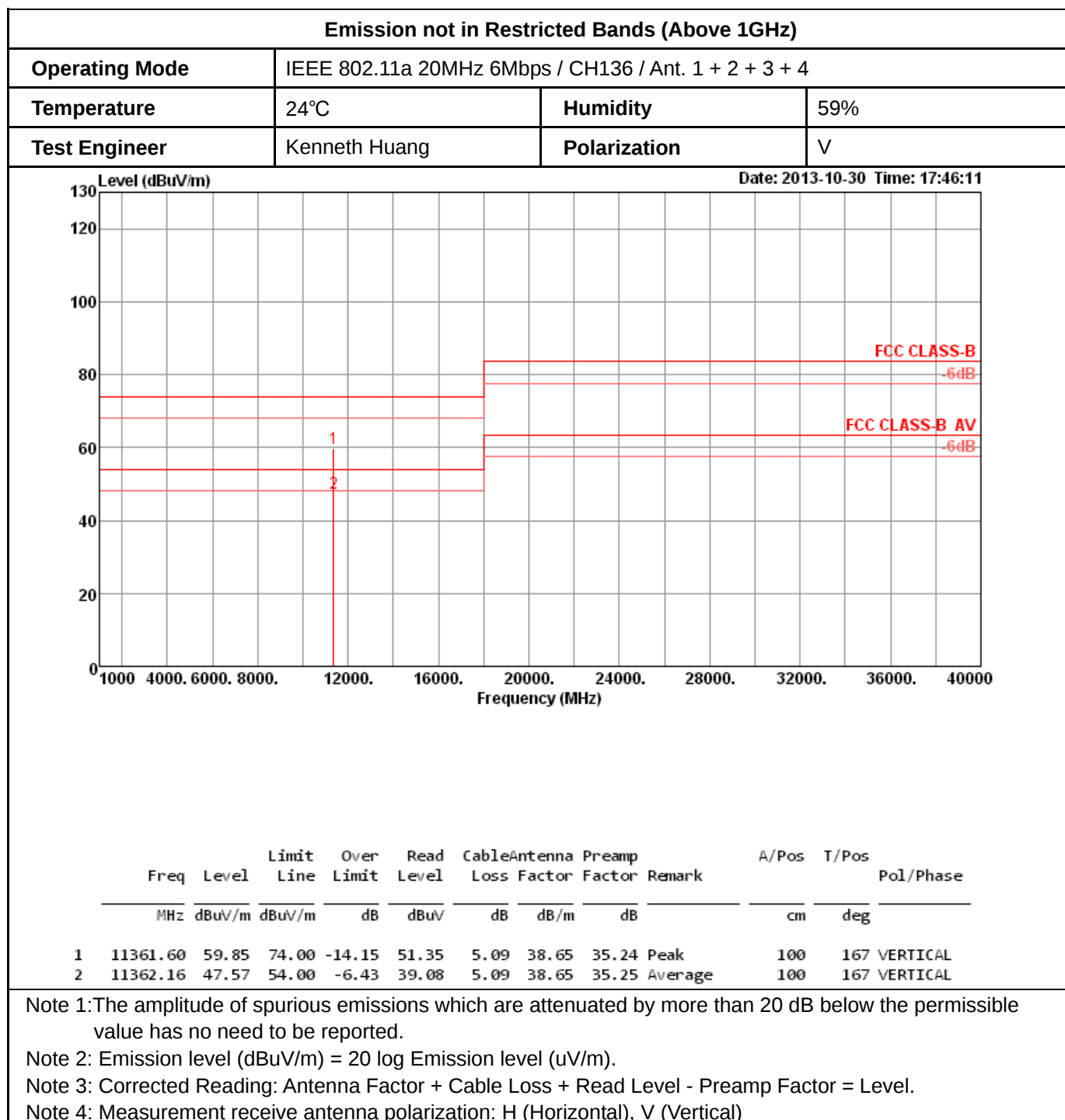
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11360.16	44.78	54.00	-9.22	36.28	5.09	38.65	35.24	Average	102	235	HORIZONTAL
2	11361.60	57.10	74.00	-16.90	48.60	5.09	38.65	35.24	Peak	102	235	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

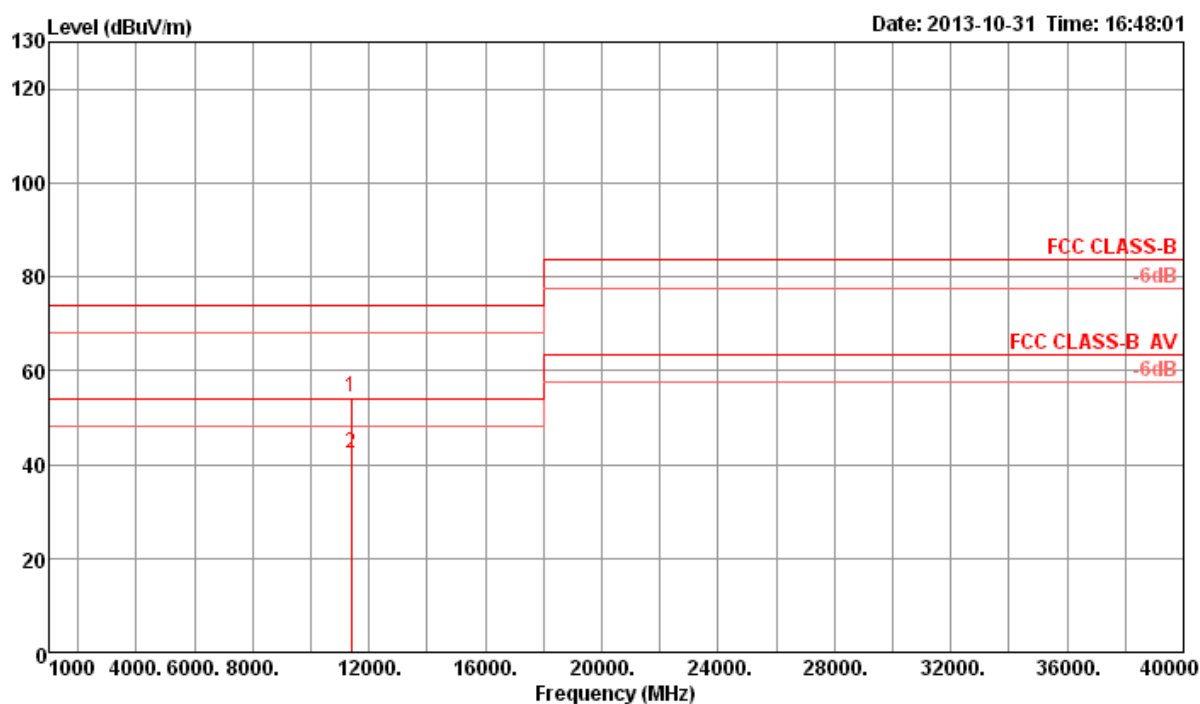
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)



Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg
1	11396.50	54.30	74.00	-19.70	45.77	5.10	38.68	35.25	Peak	109	141
2	11400.10	42.48	54.00	-11.52	33.93	5.10	38.70	35.25	Average	109	141

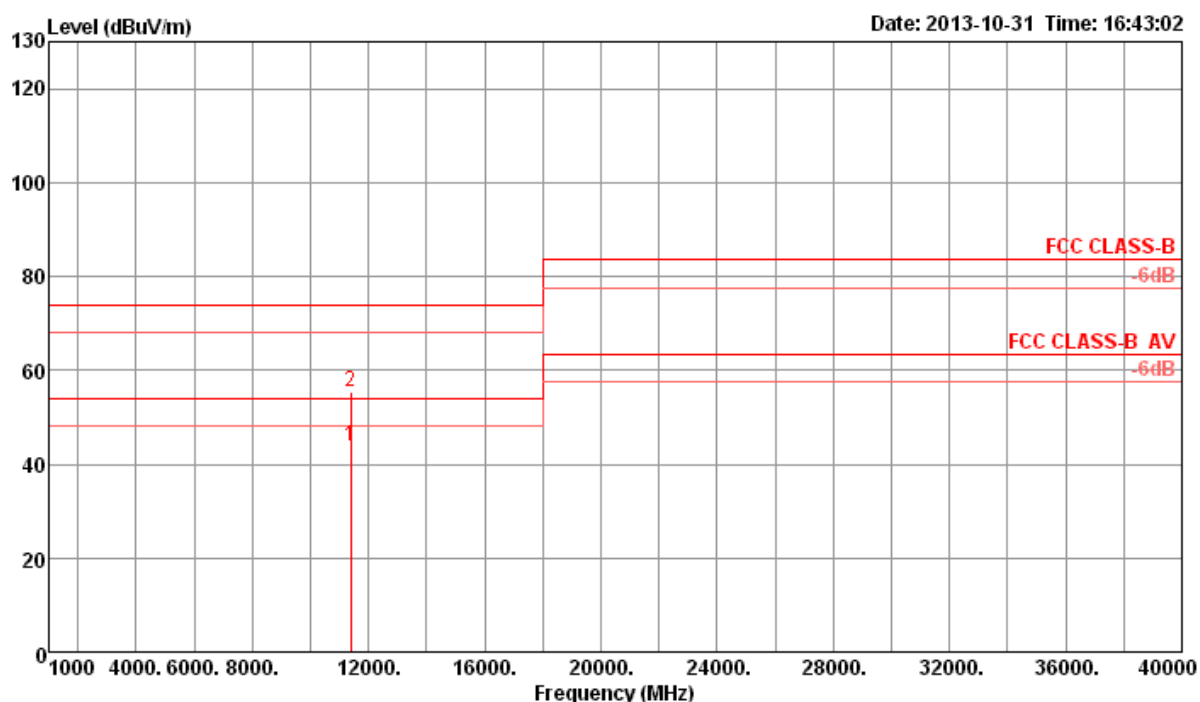
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11400.10	43.82	54.00	-10.18	35.27	5.10	38.70	35.25	Average	100	126	VERTICAL
2	11400.40	55.23	74.00	-18.77	46.68	5.10	38.70	35.25	Peak	100	126	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

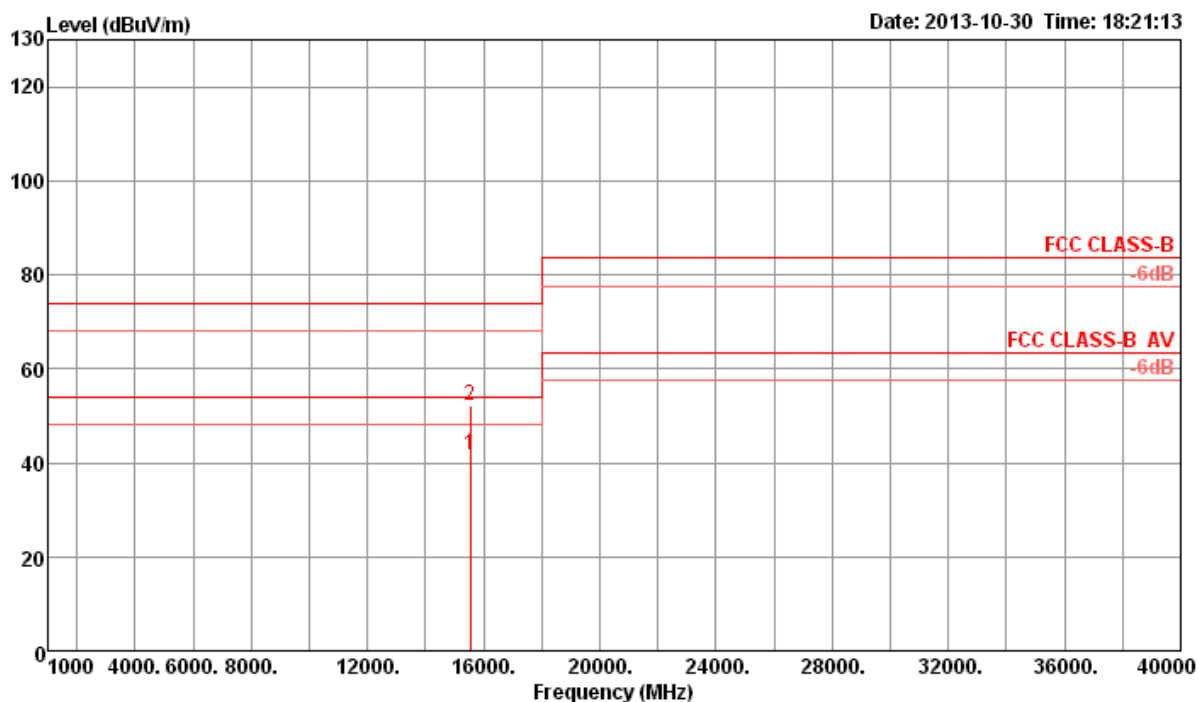
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH36 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	15539.84	41.61	54.00	-12.39	33.14	6.13	37.65	35.31	Average	101	122	HORIZONTAL
2	15540.03	52.19	74.00	-21.81	43.72	6.13	37.65	35.31	Peak	101	122	HORIZONTAL

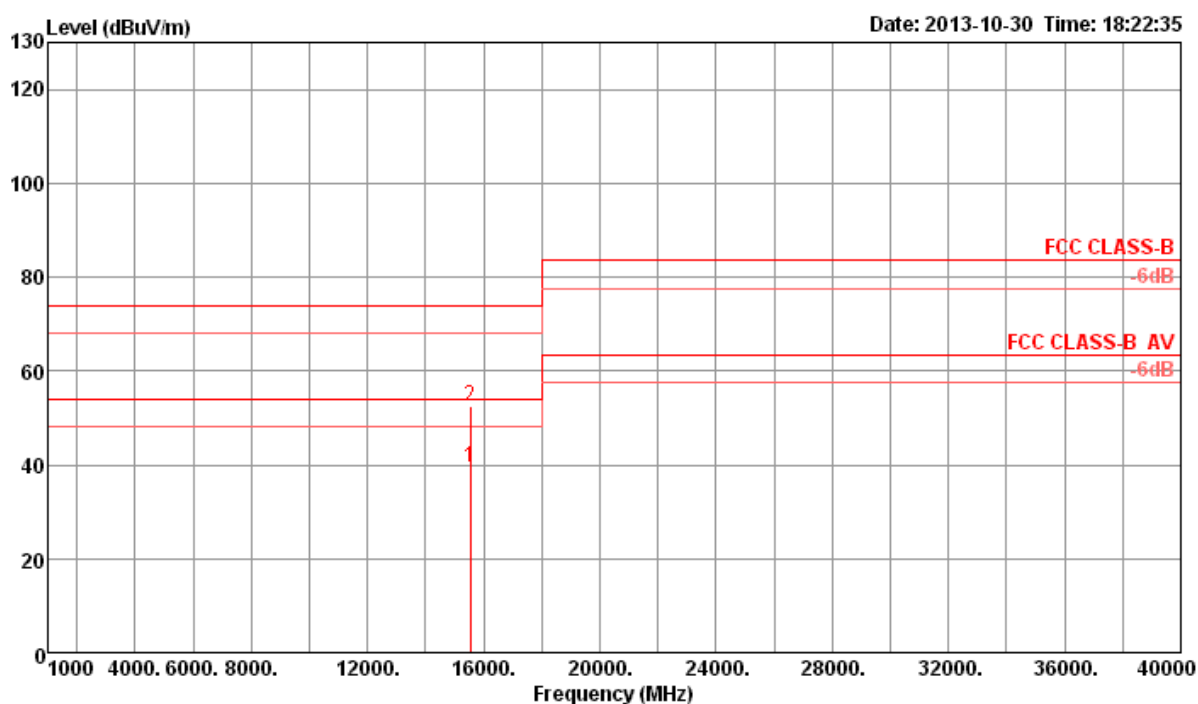
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 36 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	15539.91	39.48	54.00	-14.52	30.97	6.13	37.69	35.31	Average	100	198	VERTICAL
2	15540.00	52.42	74.00	-21.58	43.91	6.13	37.69	35.31	Peak	100	198	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

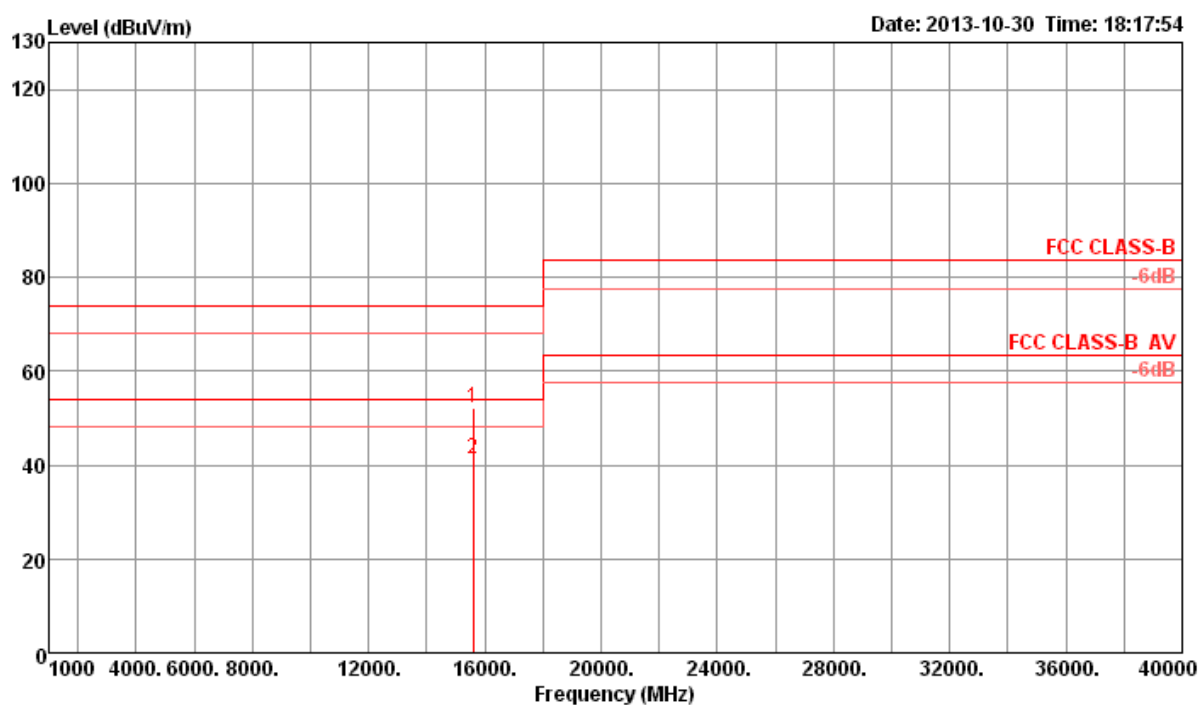
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 40 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15599.61	52.03	74.00	-21.97	43.64	6.13	37.60	35.34	Peak	100	119	HORIZONTAL
2	15599.86	41.16	54.00	-12.84	32.77	6.13	37.60	35.34	Average	100	119	HORIZONTAL

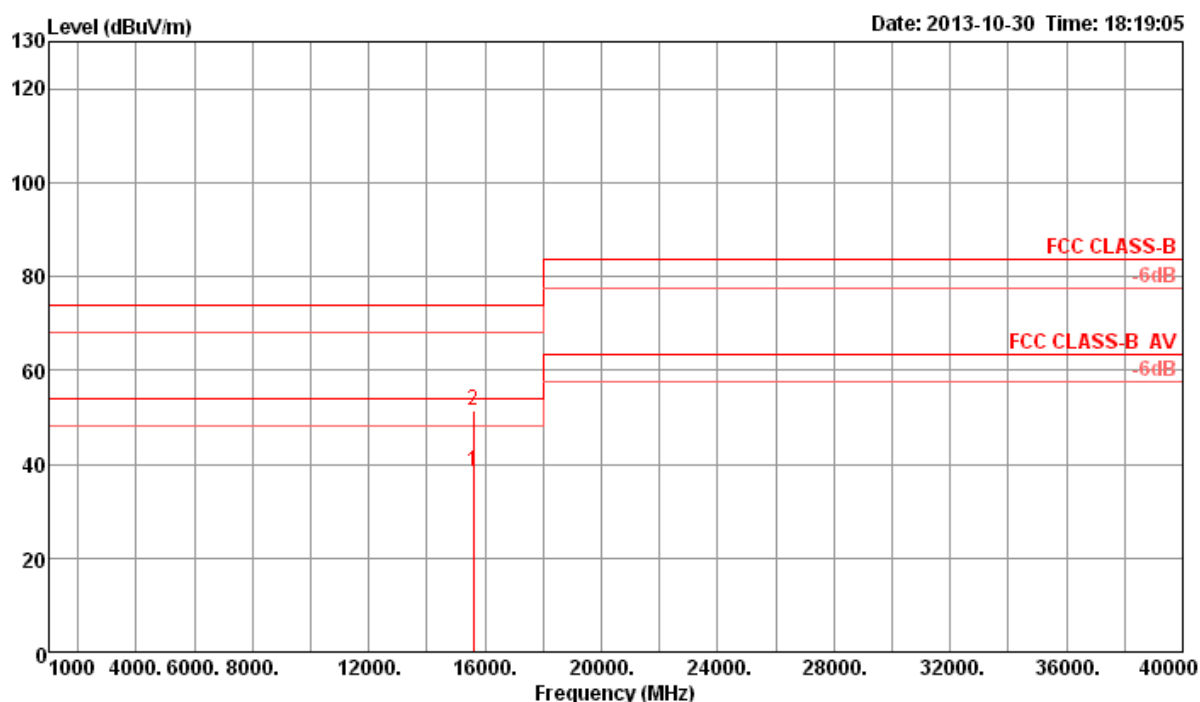
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 40 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	15599.78	38.47	54.00	-15.53	30.08	6.13	37.60	35.34	Average	100	241	VERTICAL
2	15600.07	51.37	74.00	-22.63	42.98	6.13	37.60	35.34	Peak	100	241	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

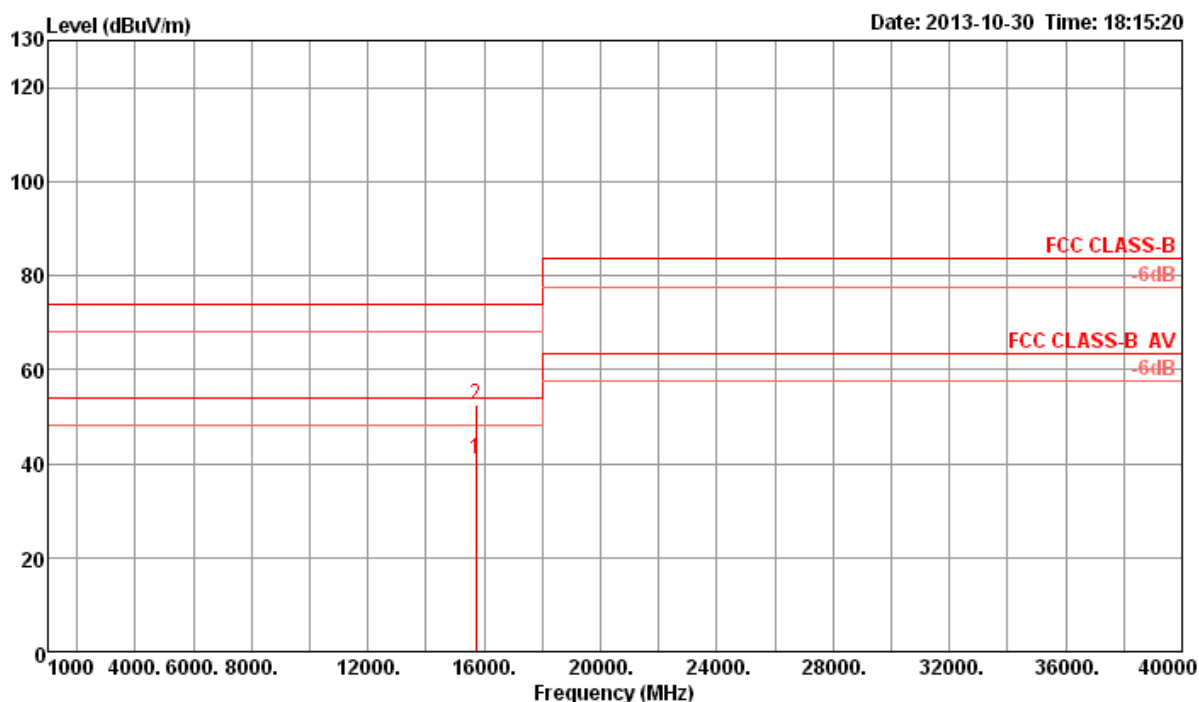
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15719.81	40.82	54.00	-13.18	32.59	6.14	37.48	35.39	Average	100	121	HORIZONTAL
2	15720.09	52.60	74.00	-21.40	44.37	6.14	37.48	35.39	Peak	100	121	HORIZONTAL

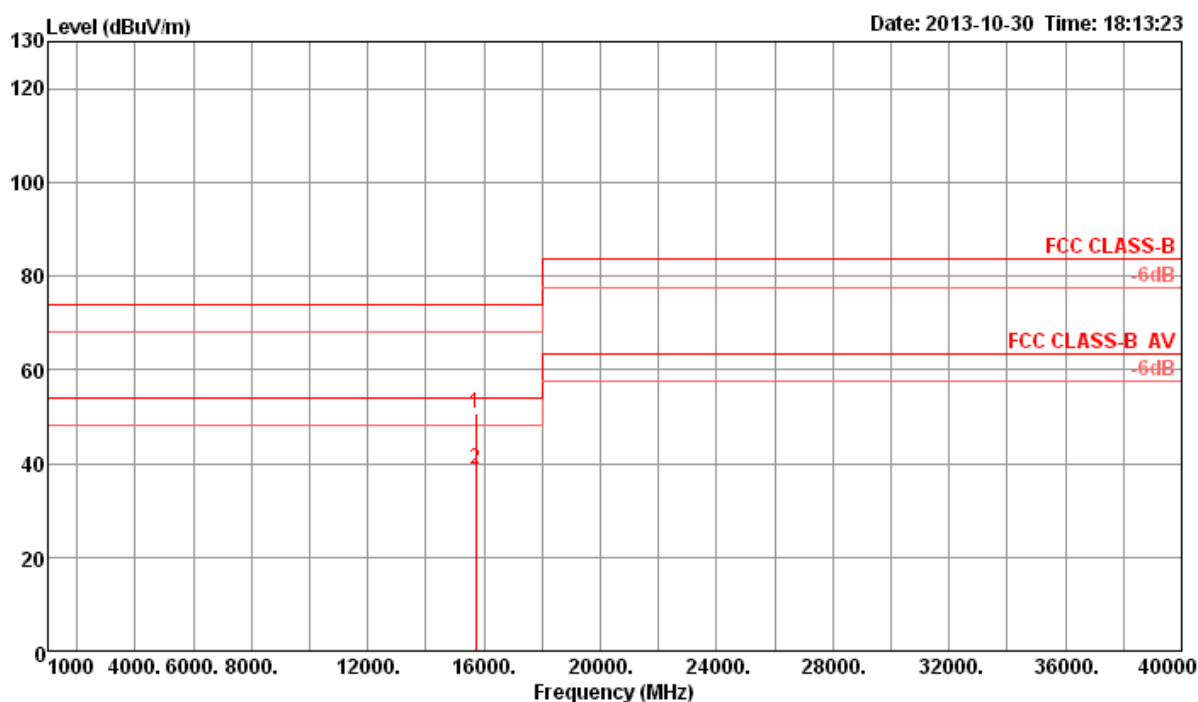
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	15719.72	50.71	74.00	-23.29	42.48	6.14	37.48	35.39	Peak	100	84	VERTICAL
2	15720.00	38.70	54.00	-15.30	30.47	6.14	37.48	35.39	Average	100	84	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

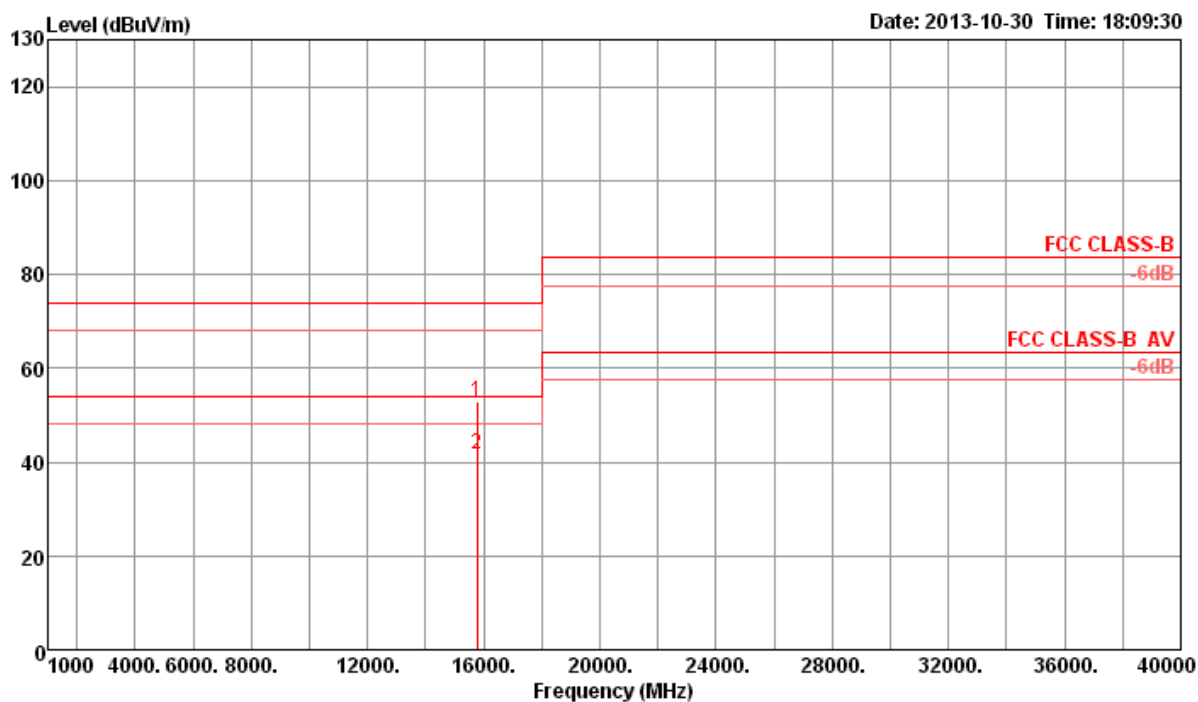
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	15779.80	52.72	74.00	-21.28	44.59	6.14	37.41	35.42	Peak	100	124	HORIZONTAL
2	15779.84	41.57	54.00	-12.43	33.44	6.14	37.41	35.42	Average	100	124	HORIZONTAL

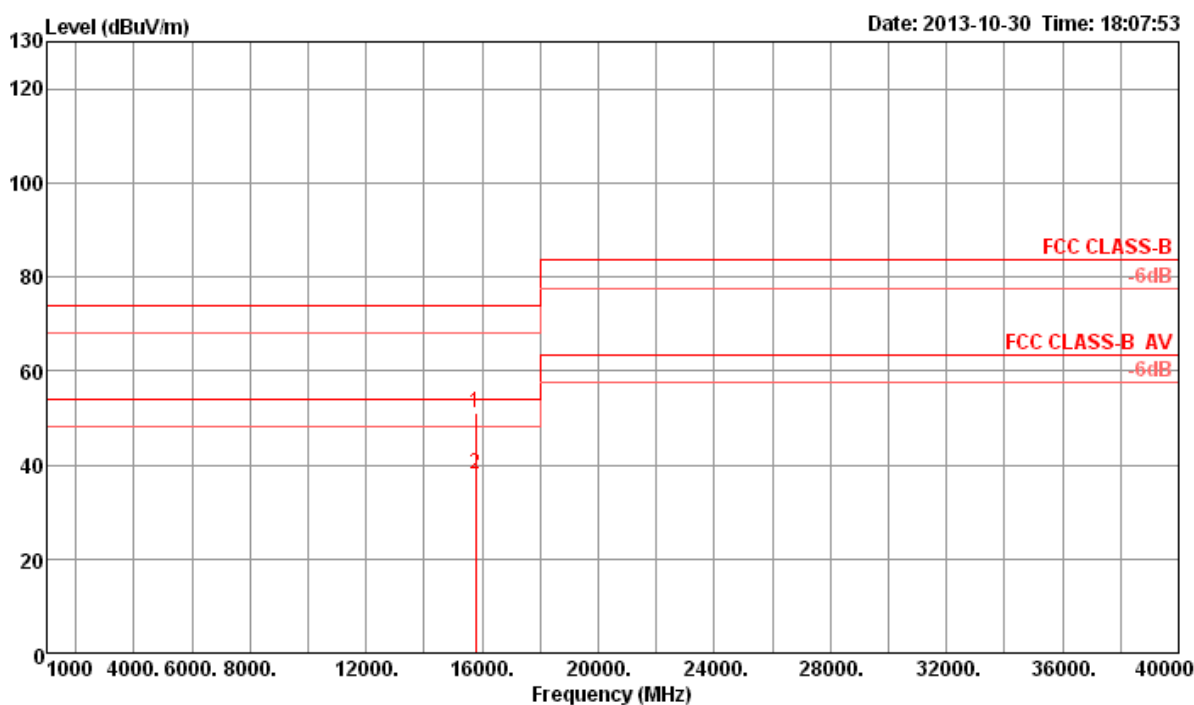
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	15779.83	51.05	74.00	-22.95	42.92	6.14	37.41	35.42	Peak	120	230	VERTICAL
2	15779.90	38.18	54.00	-15.82	30.05	6.14	37.41	35.42	Average	120	230	VERTICAL

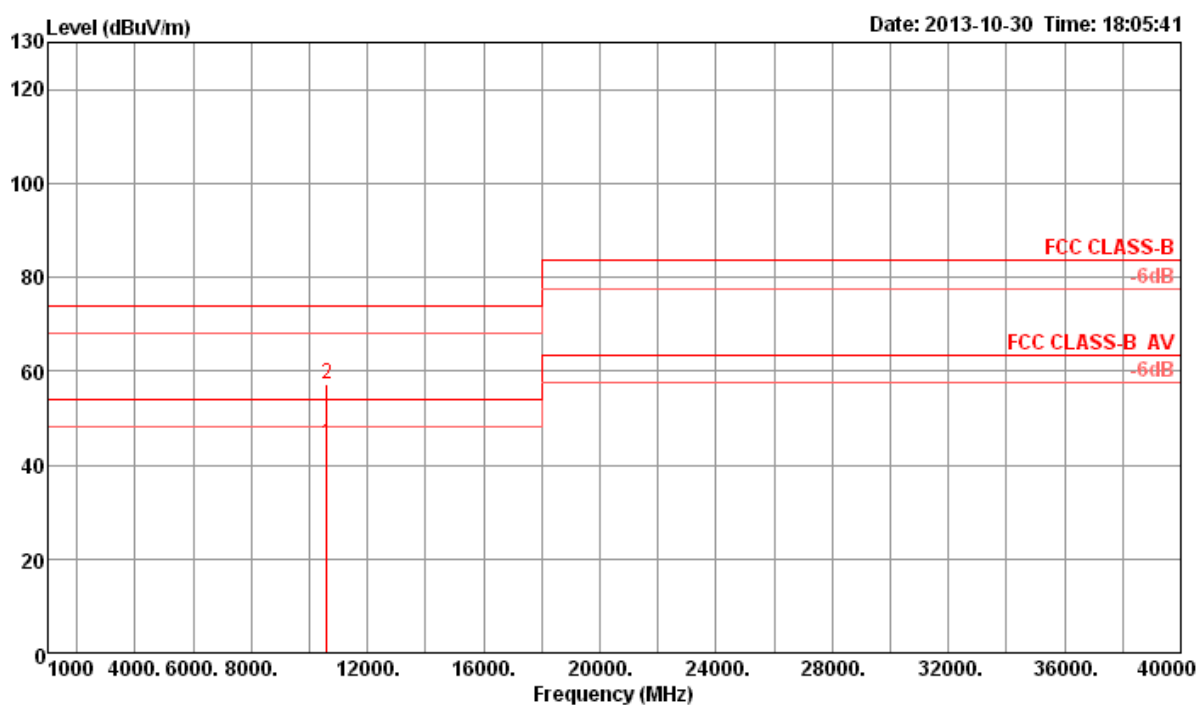
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.87	44.37	54.00	-9.63	36.40	5.01	38.38	35.42	Average	100	4	HORIZONTAL
2	10602.33	57.10	74.00	-16.90	49.13	5.01	38.38	35.42	Peak	100	4	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

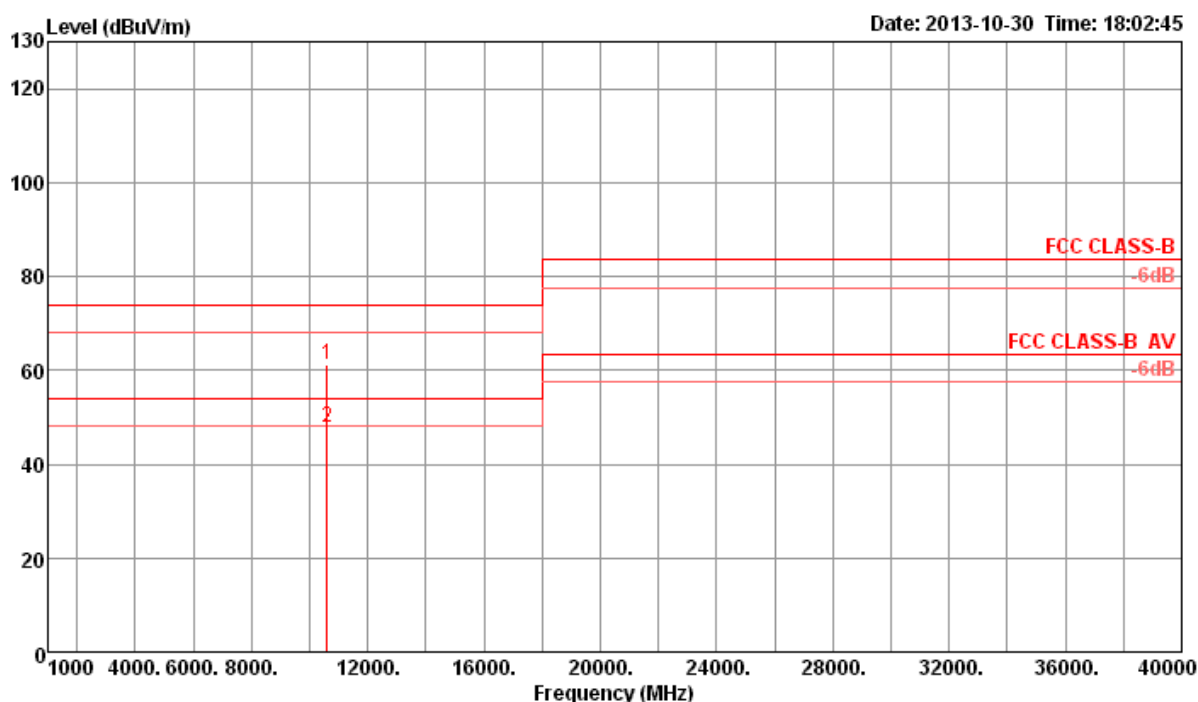
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.11	61.27	74.00	-12.73	53.30	5.01	38.38	35.42	Peak	109	164	VERTICAL
2	10601.87	47.81	54.00	-6.19	39.84	5.01	38.38	35.42	Average	109	164	VERTICAL

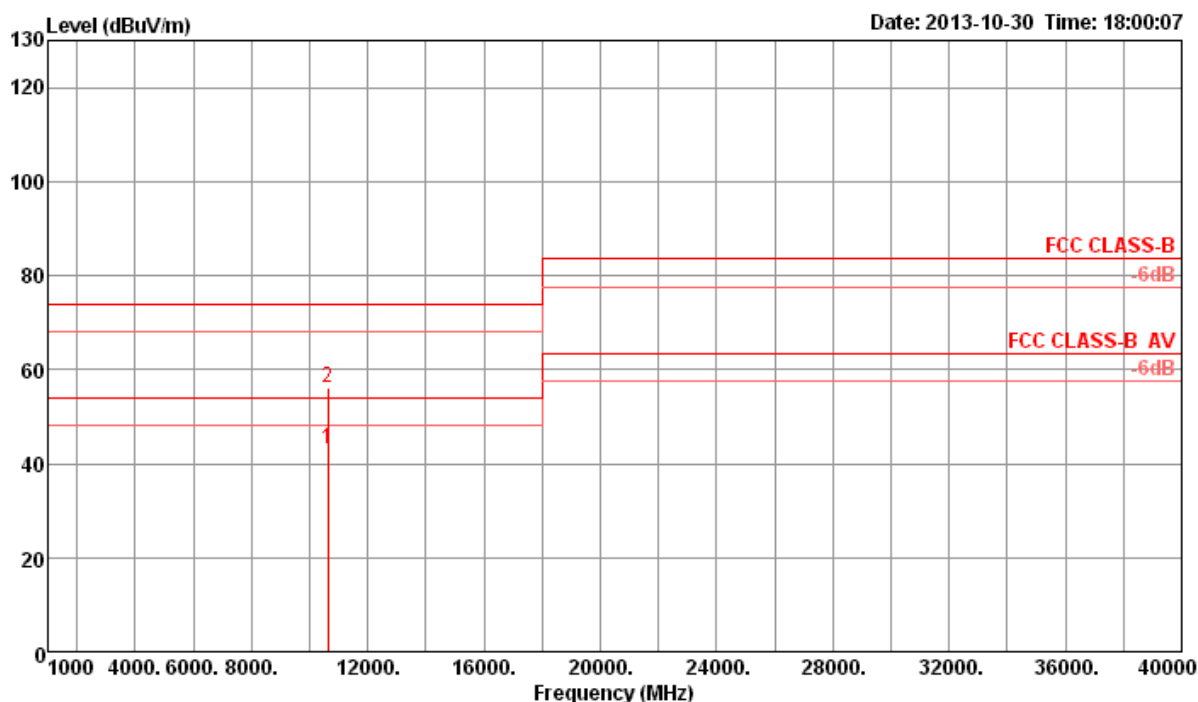
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10643.53	43.15	54.00	-10.85	35.16	5.01	38.37	35.39	Average	100	10	HORIZONTAL
2	10644.57	56.27	74.00	-17.73	48.28	5.01	38.37	35.39	Peak	100	10	HORIZONTAL

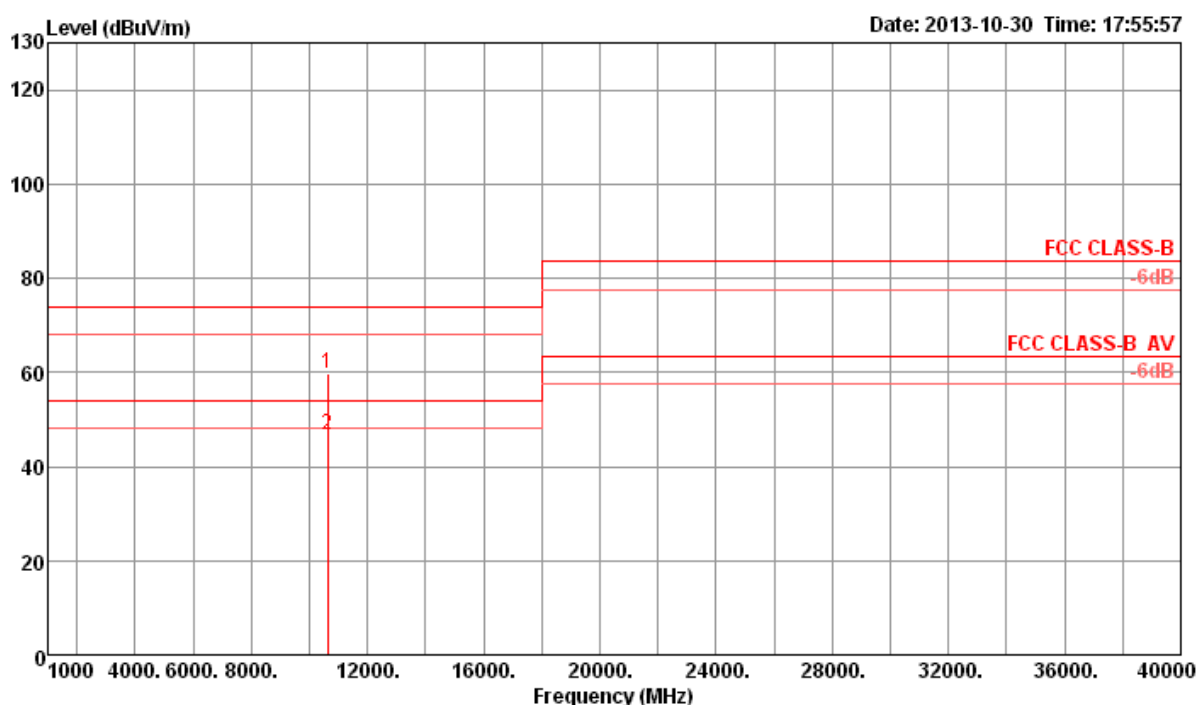
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	10636.47	59.89	74.00	-14.11	51.90	5.01	38.37	35.39	Peak	100	162	VERTICAL
2	10637.04	46.64	54.00	-7.36	38.65	5.01	38.37	35.39	Average	100	162	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

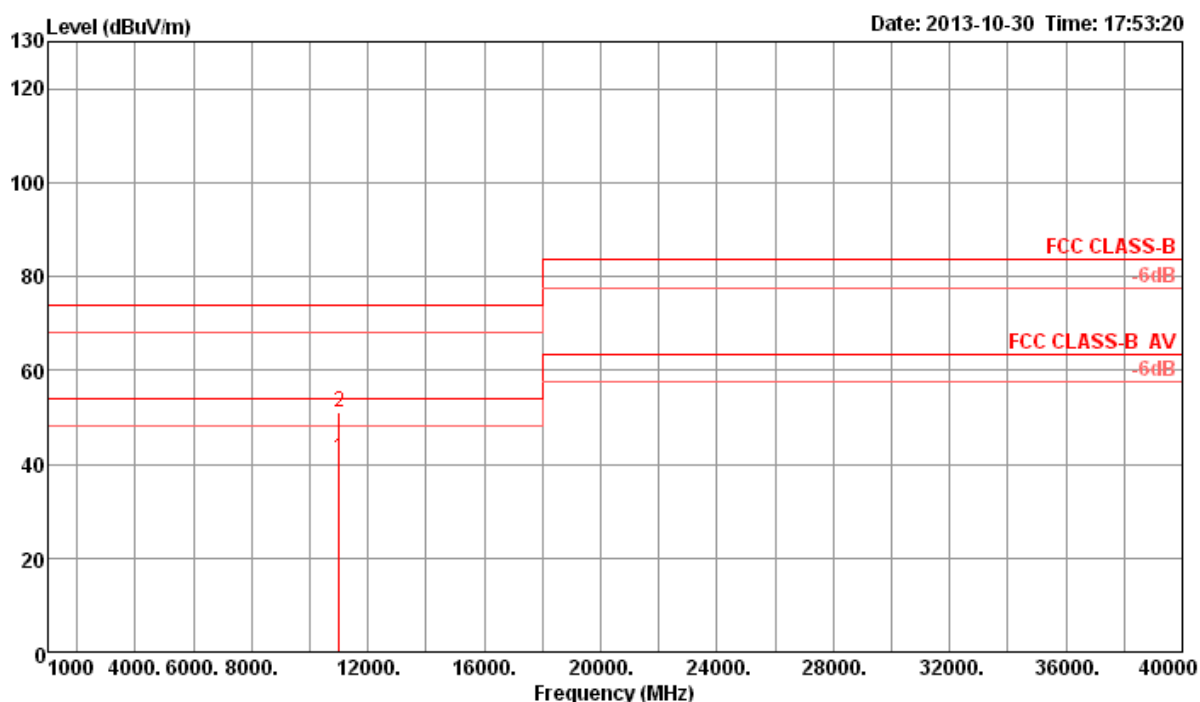
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	10999.93	41.29	54.00	-12.71	33.06	5.01	38.32	35.10	Average	119	120	HORIZONTAL
2	11000.34	51.12	74.00	-22.88	42.89	5.01	38.32	35.10	Peak	119	120	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

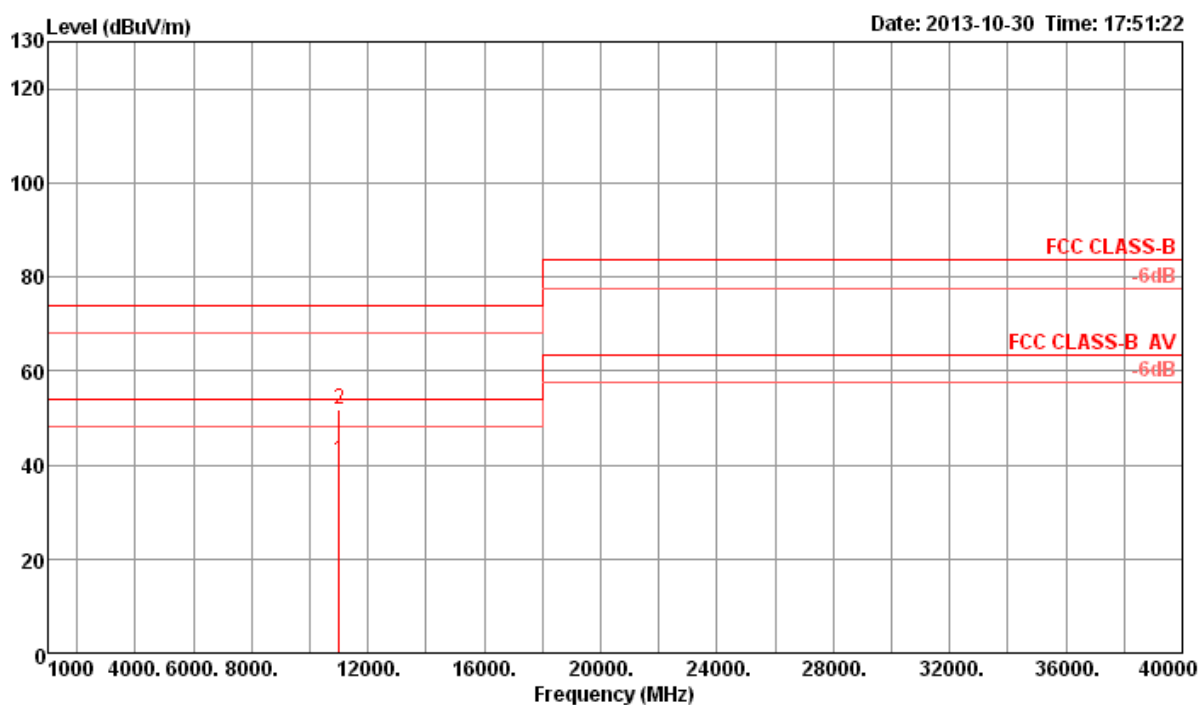
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	10999.90	41.03	54.00	-12.97	32.82	5.01	38.30	35.10	Average	100	15	VERTICAL
2	10999.95	51.73	74.00	-22.27	43.52	5.01	38.30	35.10	Peak	100	15	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

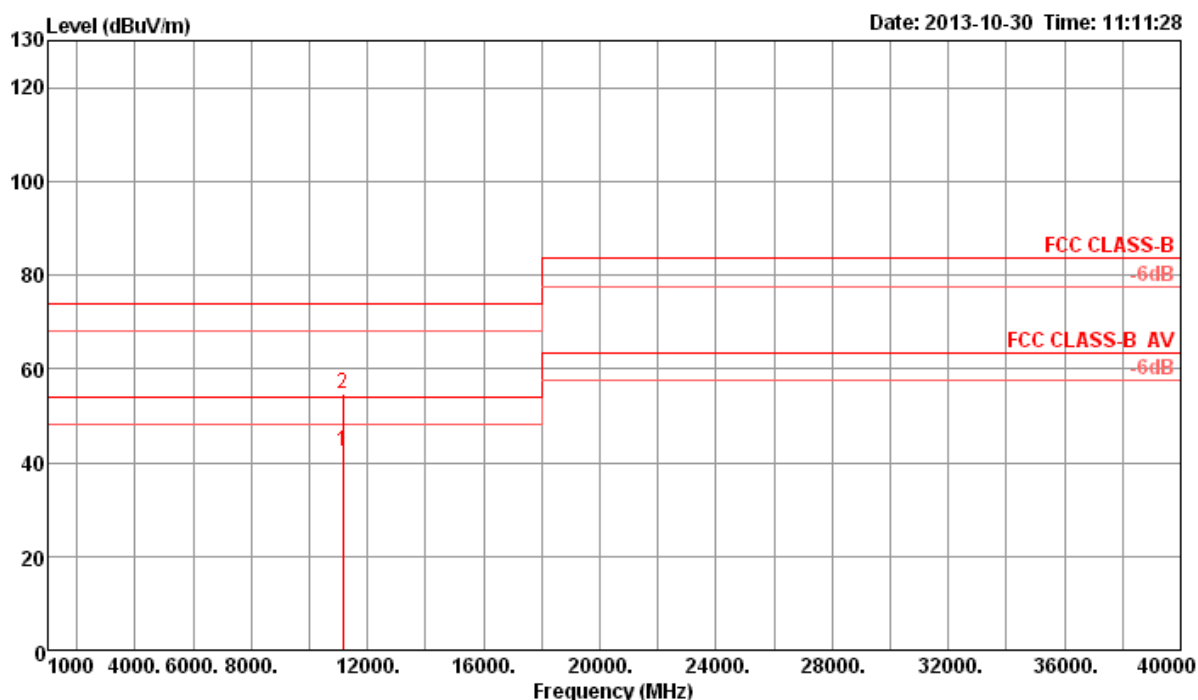
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	11159.92	42.21	54.00	-11.79	33.87	5.04	38.47	35.17	Average	100	238	HORIZONTAL
2	11160.96	54.63	74.00	-19.37	46.29	5.04	38.47	35.17	Peak	100	238	HORIZONTAL

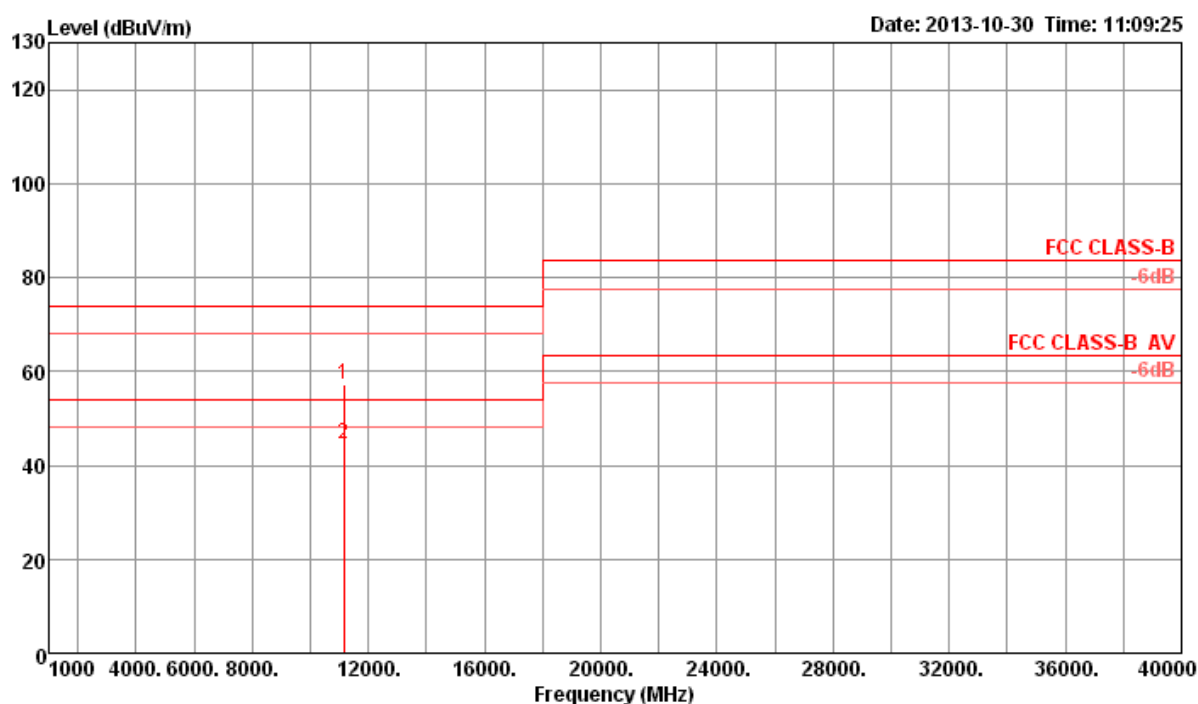
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11158.80	57.26	74.00	-16.74	48.92	5.04	38.47	35.17	Peak	100	178	VERTICAL
2	11159.60	44.64	54.00	-9.36	36.30	5.04	38.47	35.17	Average	100	178	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

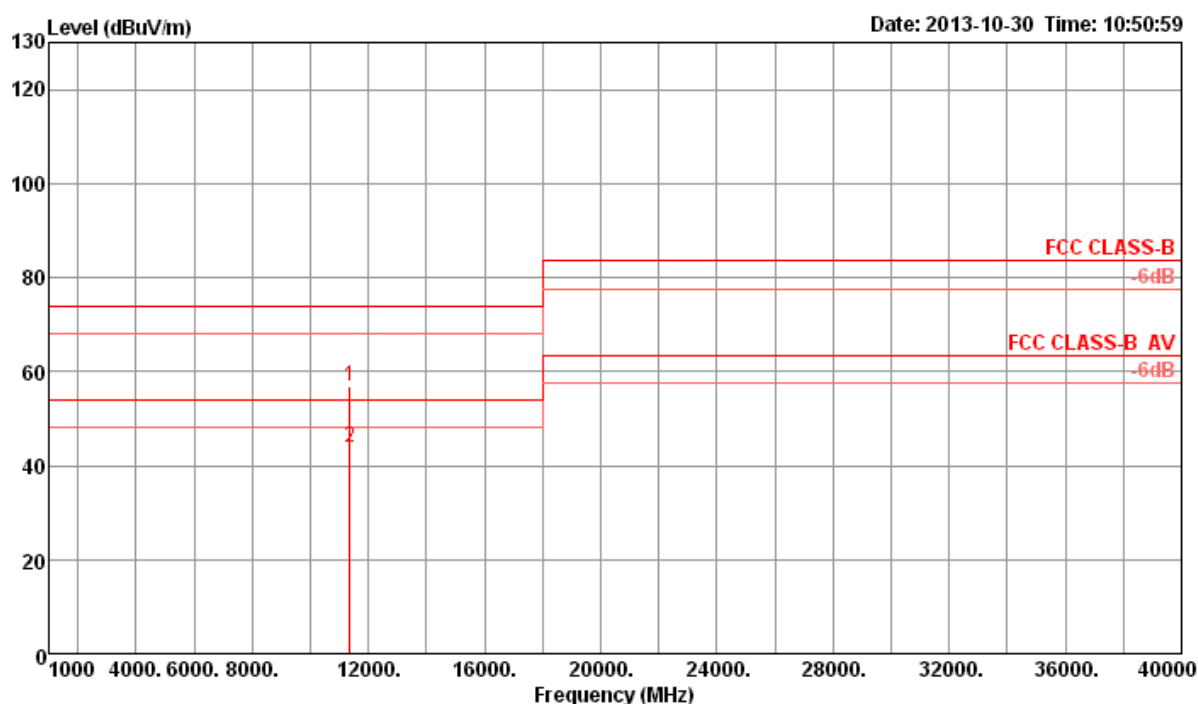
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 136 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11360.08	56.75	74.00	-17.25	48.25	5.09	38.65	35.24	Peak	100	237	HORIZONTAL
2	11360.32	43.76	54.00	-10.24	35.26	5.09	38.65	35.24	Average	100	237	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

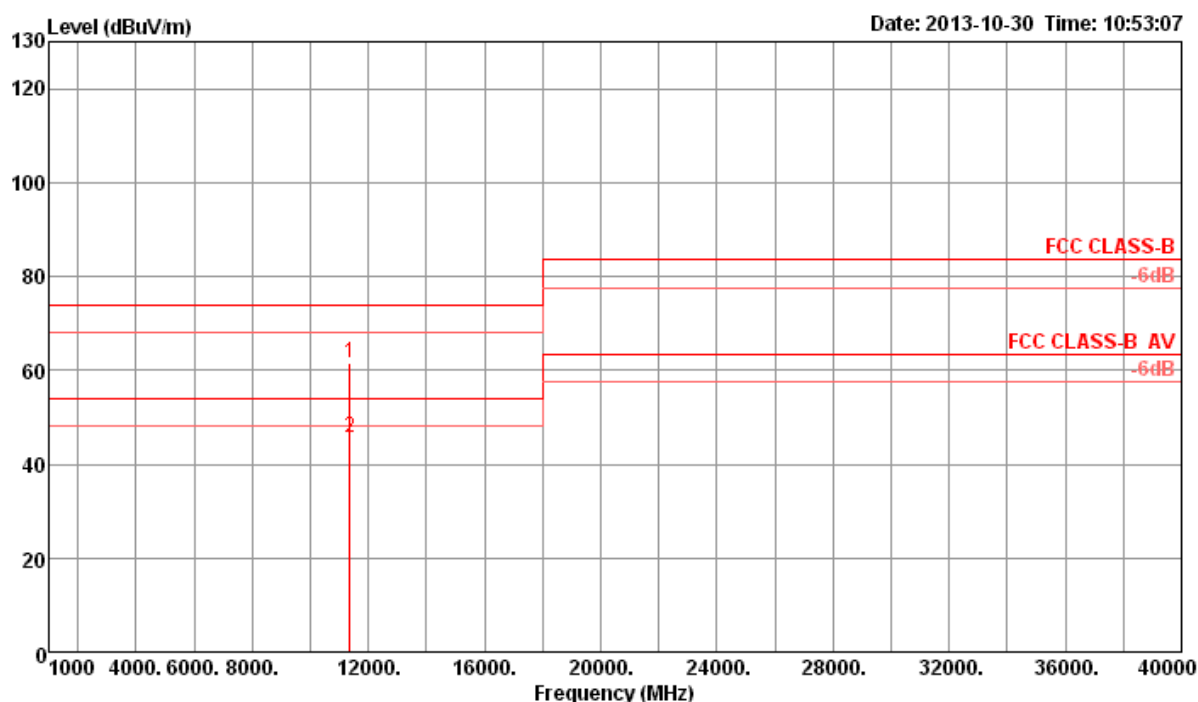
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 136 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11362.64	61.39	74.00	-12.61	52.90	5.09	38.65	35.25	Peak	100	166	VERTICAL
2	11363.37	45.70	54.00	-8.30	37.19	5.09	38.67	35.25	Average	100	166	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

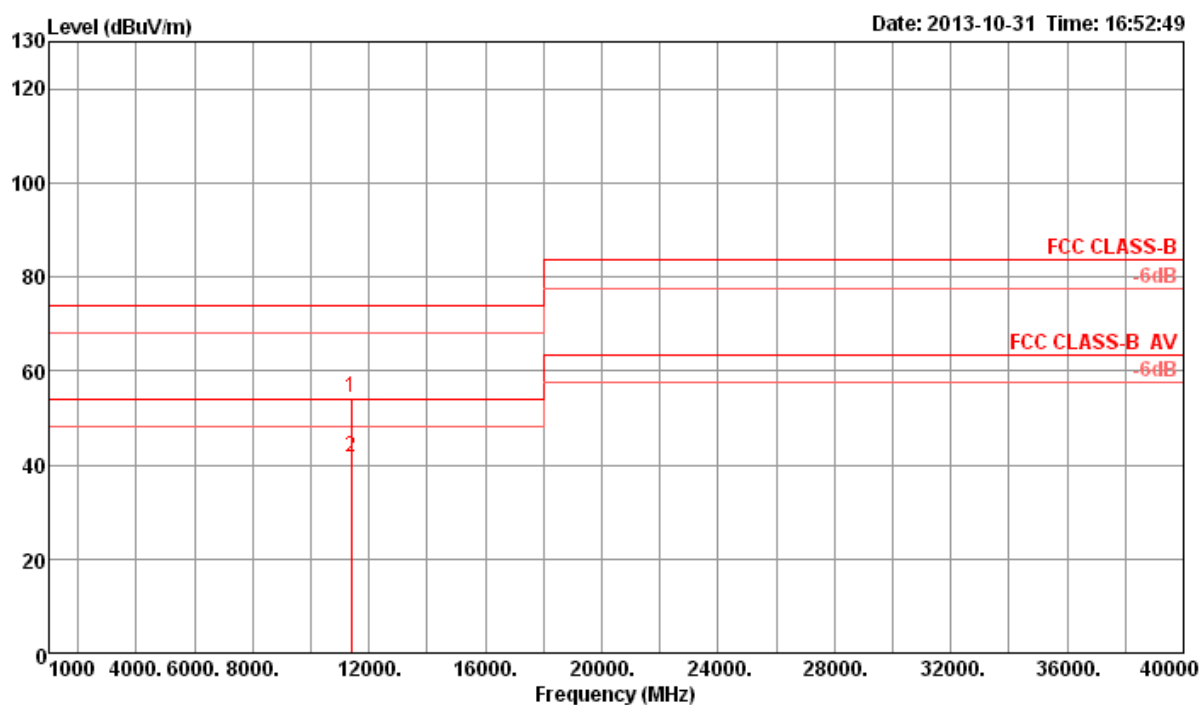
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	11399.40	54.15	74.00	-19.85	45.60	5.10	38.70	35.25	Peak	100	130	HORIZONTAL
2	11399.96	41.66	54.00	-12.34	33.11	5.10	38.70	35.25	Average	100	130	HORIZONTAL

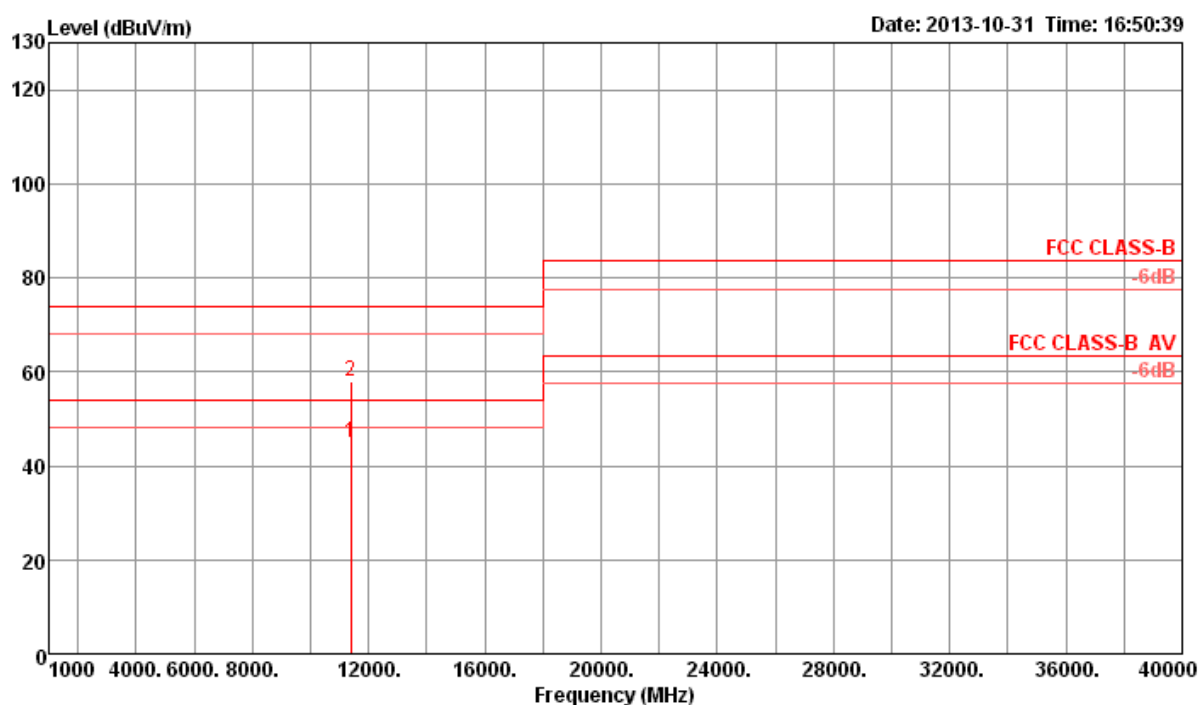
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11399.90	44.82	54.00	-9.18	36.27	5.10	38.70	35.25	Average	131	161	VERTICAL
2	11400.10	57.84	74.00	-16.16	49.29	5.10	38.70	35.25	Peak	131	161	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

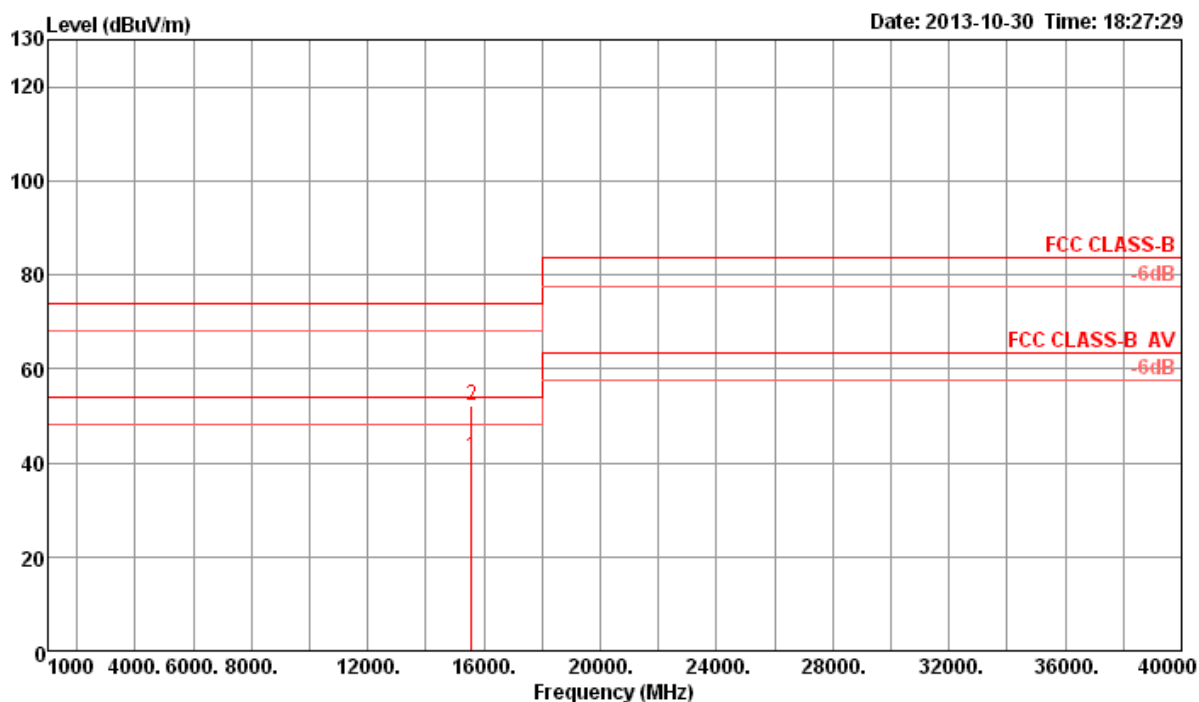
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 38 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	15569.84	41.36	54.00	-12.64	32.93	6.13	37.63	35.33	Average	100	123	HORIZONTAL
2	15569.93	52.11	74.00	-21.89	43.68	6.13	37.63	35.33	Peak	100	123	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

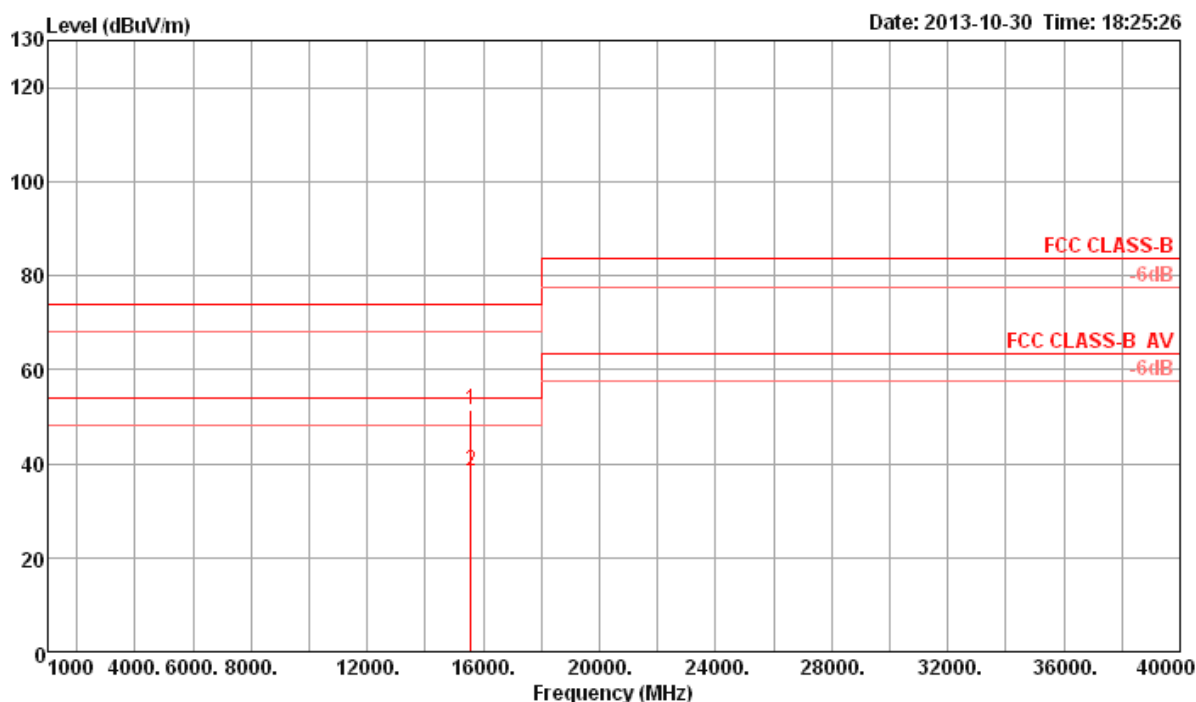
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 38 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	15569.54	51.30	74.00	-22.70	42.85	6.13	37.65	35.33	Peak	138	254	VERTICAL
2	15569.99	38.33	54.00	-15.67	29.88	6.13	37.65	35.33	Average	138	254	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

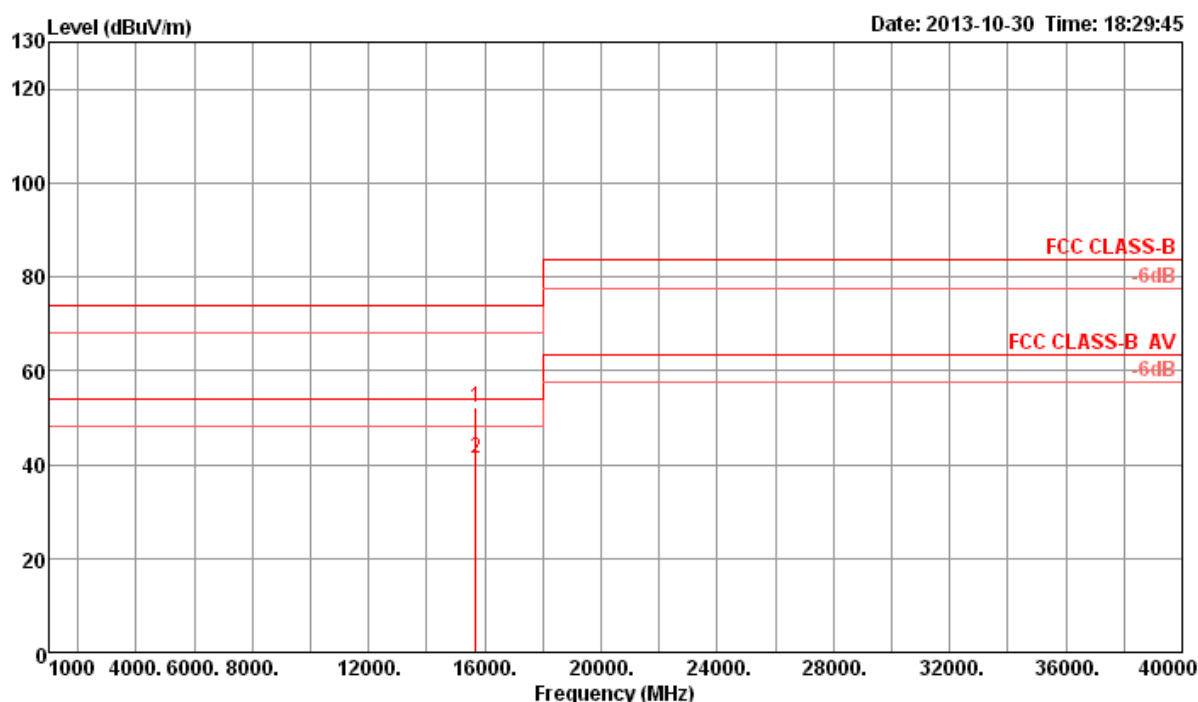
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 46 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	15689.80	52.26	74.00	-21.74	43.98	6.14	37.51	35.37	Peak	100	117	HORIZONTAL
2	15689.87	41.34	54.00	-12.66	33.06	6.14	37.51	35.37	Average	100	117	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

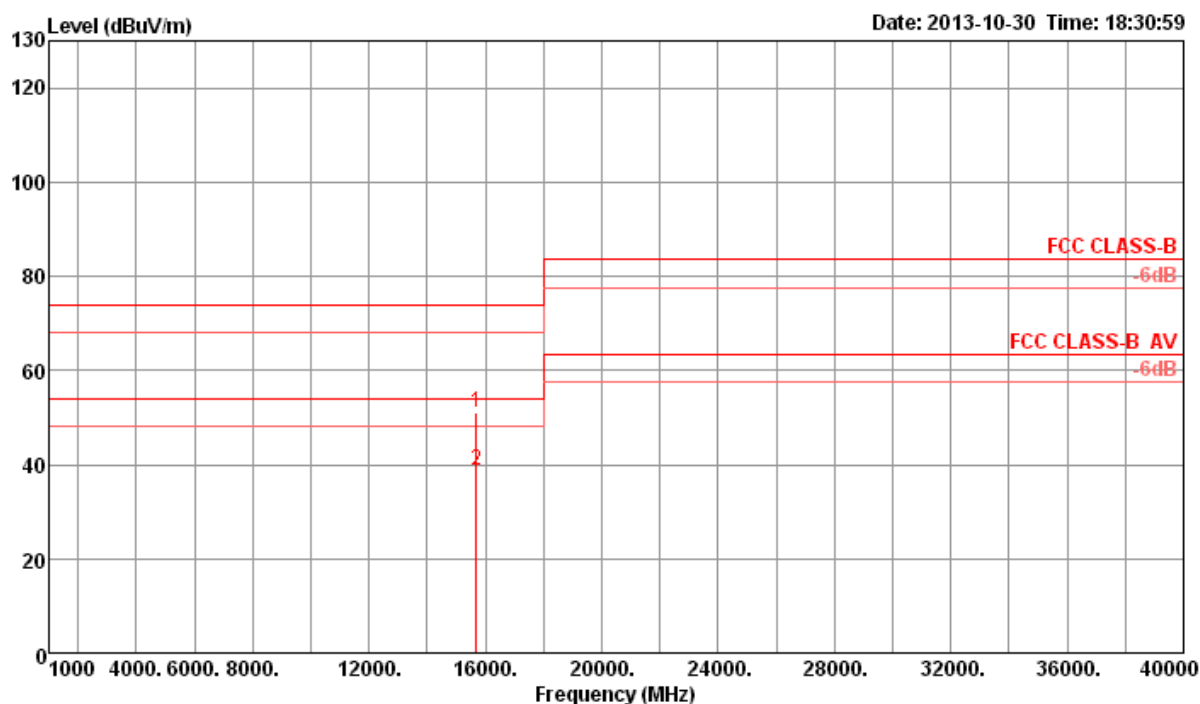
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 46 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	15689.46	51.23	74.00	-22.77	42.95	6.14	37.51	35.37	Peak	100	226	VERTICAL
2	15689.81	38.60	54.00	-15.40	30.32	6.14	37.51	35.37	Average	100	226	VERTICAL

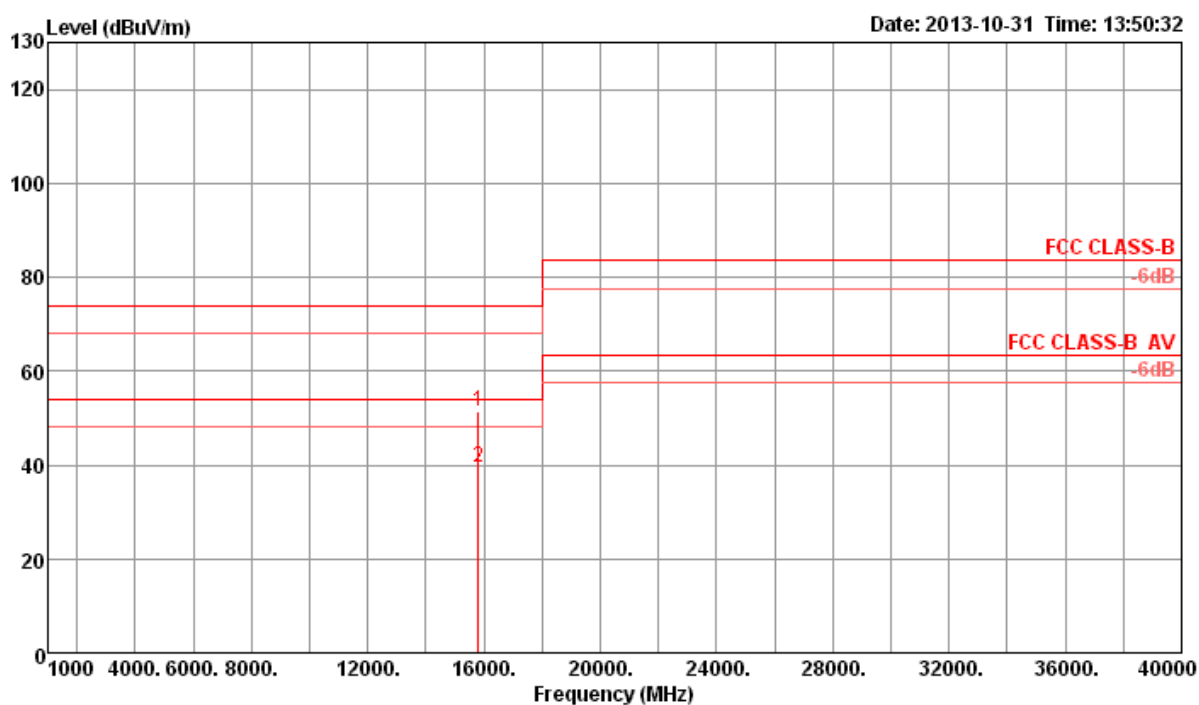
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 54 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	15809.54	51.26	74.00	-22.74	43.16	6.14	37.39	35.43	Peak	100	120	HORIZONTAL
2	15809.99	39.59	54.00	-14.41	31.49	6.14	37.39	35.43	Average	100	120	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

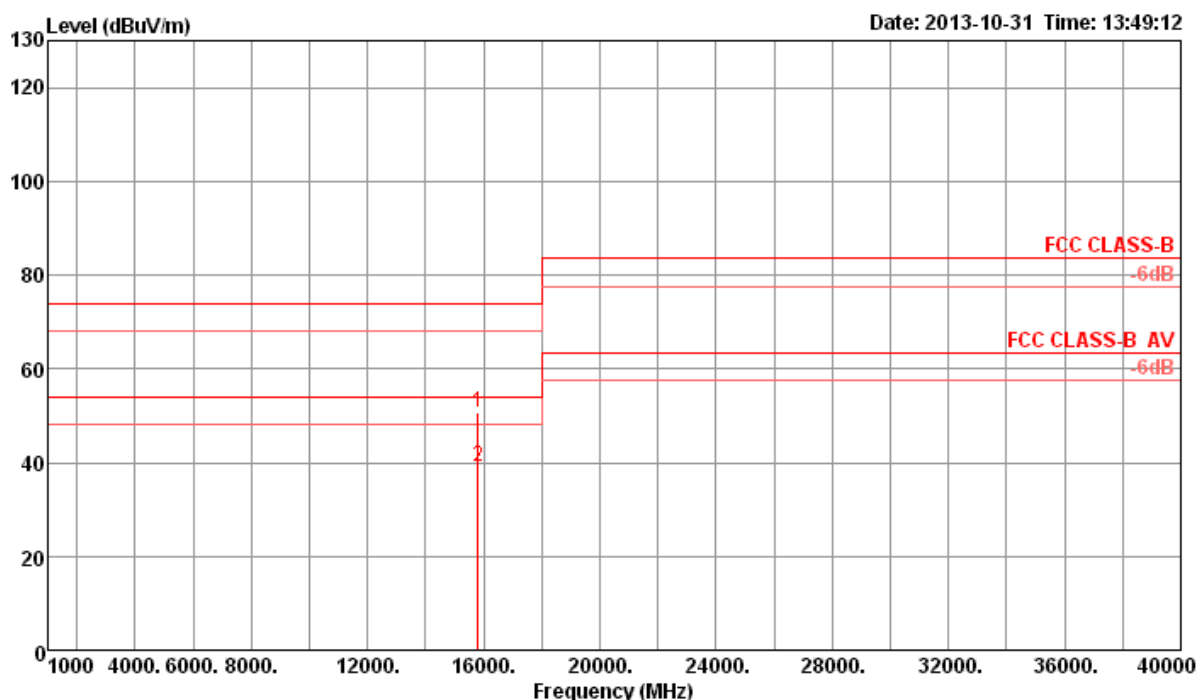
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 54 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15809.83	50.84	74.00	-23.16	42.74	6.14	37.39	35.43	Peak	147	192	VERTICAL
2	15810.00	39.28	54.00	-14.72	31.18	6.14	37.39	35.43	Average	147	192	VERTICAL

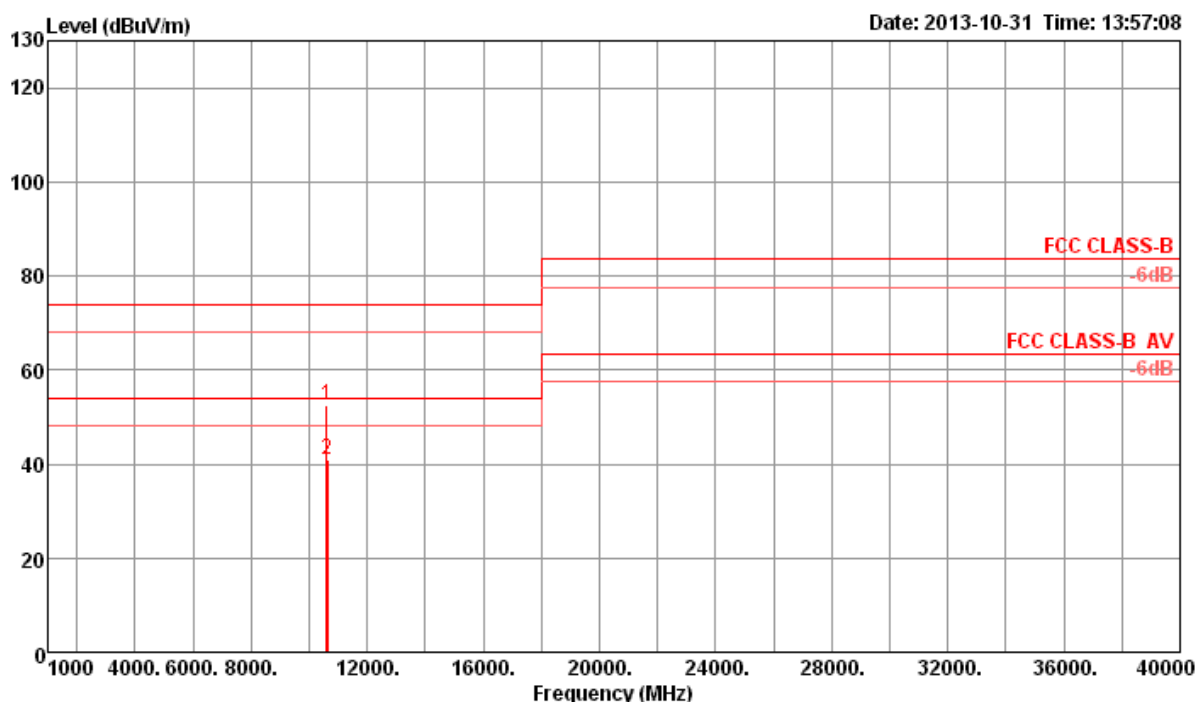
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 62 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10614.31	52.38	74.00	-21.62	44.41	5.01	38.38	35.42	Peak	100	357	HORIZONTAL
2	10625.45	40.99	54.00	-13.01	32.99	5.01	38.38	35.39	Average	100	357	HORIZONTAL

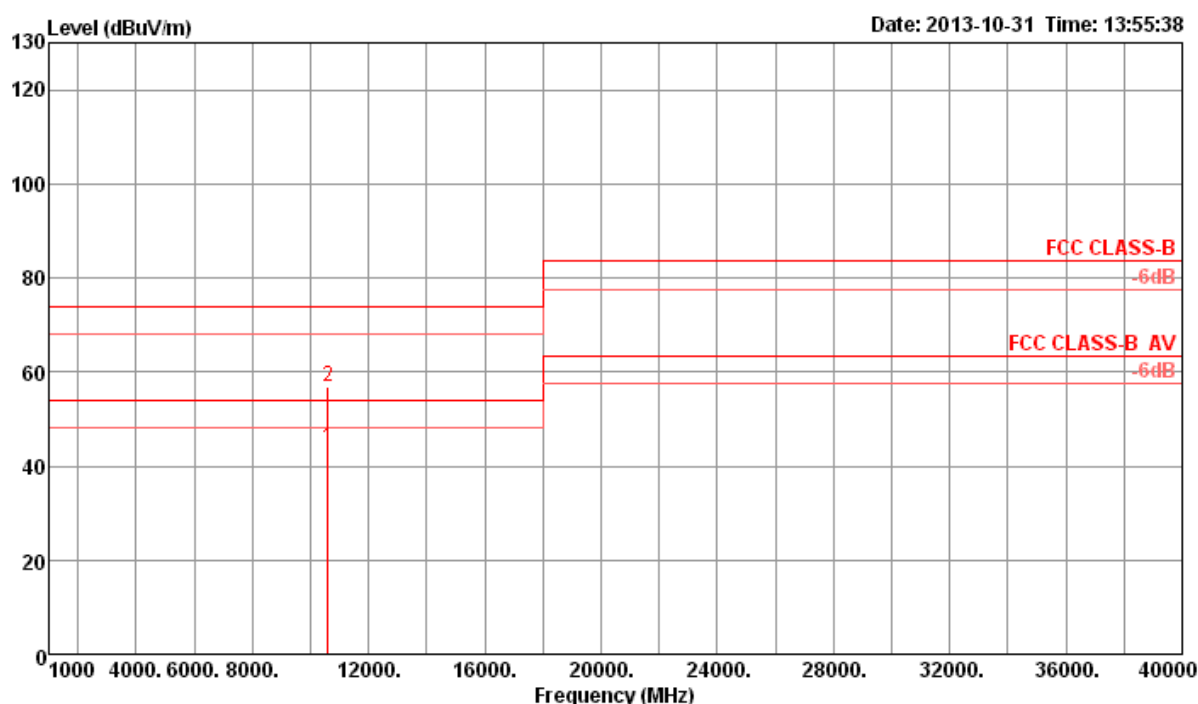
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 62 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	10614.31	43.93	54.00	-10.07	35.96	5.01	38.38	35.42	Average	100	162	VERTICAL
2	10614.47	56.73	74.00	-17.27	48.76	5.01	38.38	35.42	Peak	100	162	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

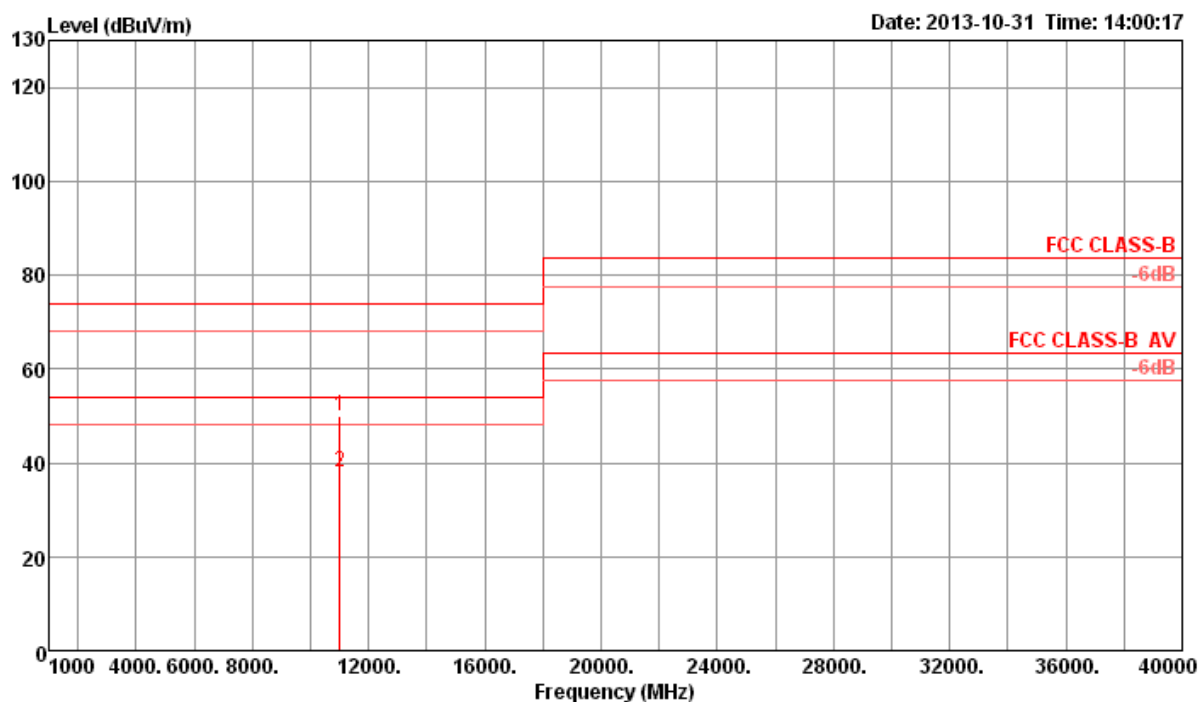
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 102 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	11019.73	50.01	74.00	-23.99	41.77	5.02	38.33	35.11	Peak	100	237	HORIZONTAL
2	11019.77	38.01	54.00	-15.99	29.77	5.02	38.33	35.11	Average	100	237	HORIZONTAL

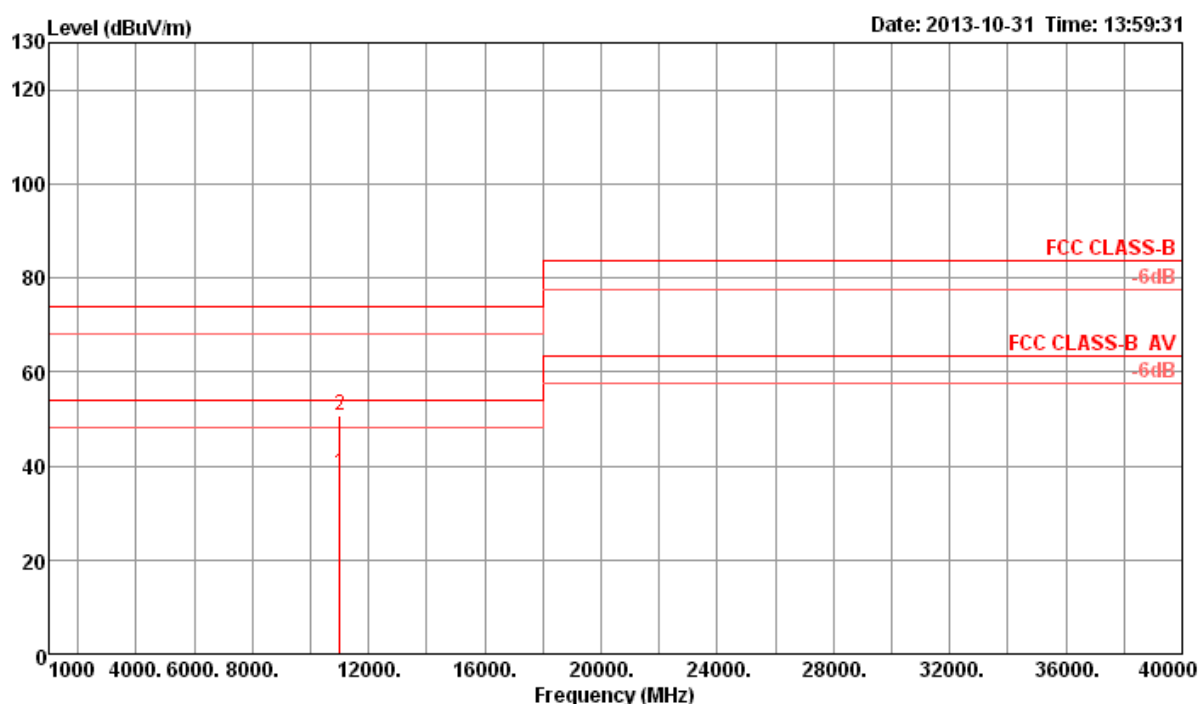
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 102 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	11020.00	38.36	54.00	-15.64	30.13	5.02	38.32	35.11	Average	120	127	VERTICAL
2	11020.02	50.62	74.00	-23.38	42.39	5.02	38.32	35.11	Peak	120	127	VERTICAL

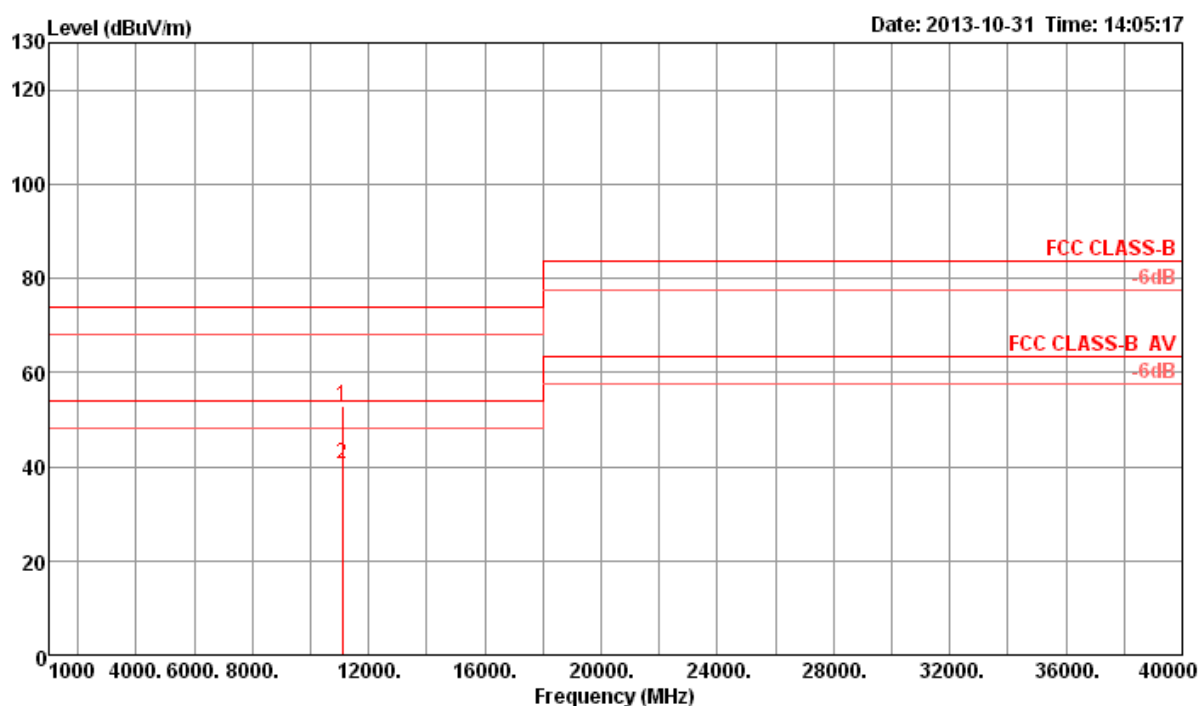
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 110 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11098.49	53.05	74.00	-20.95	44.76	5.03	38.40	35.14	Peak	133	341	HORIZONTAL
2	11100.22	40.65	54.00	-13.35	32.36	5.03	38.40	35.14	Average	133	341	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

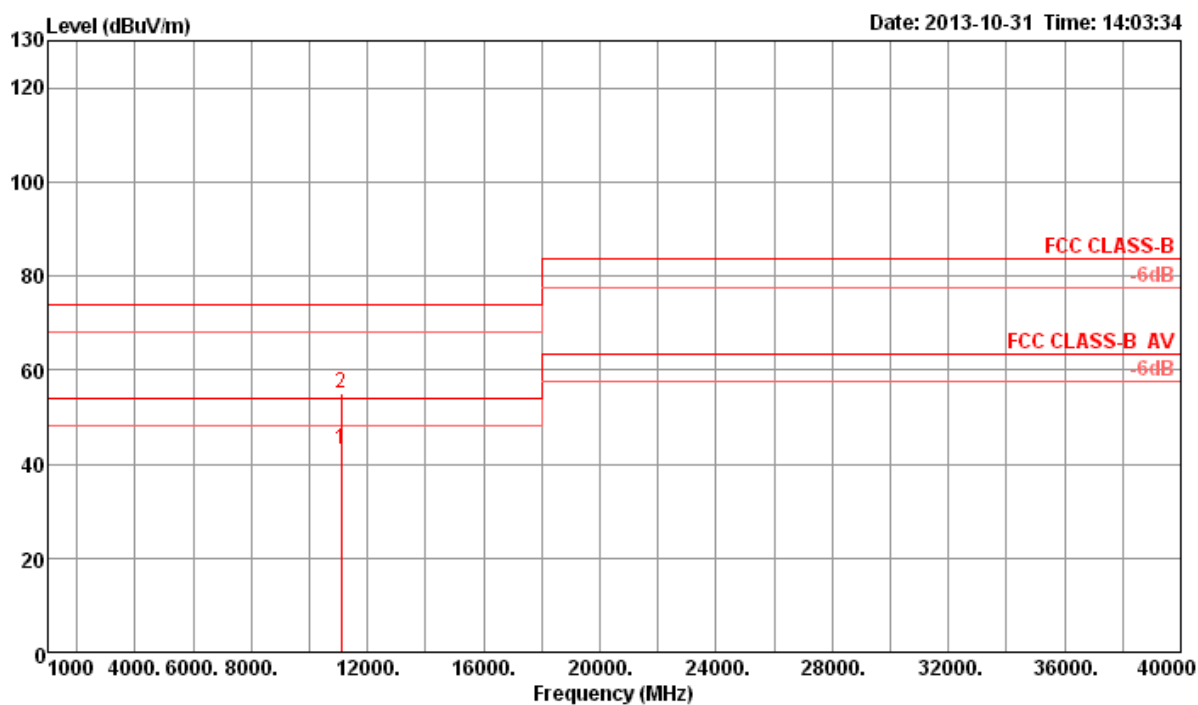
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 110 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	11099.81	43.16	54.00	-10.84	34.87	5.03	38.40	35.14	Average	100	172	VERTICAL
2	11100.38	55.17	74.00	-18.83	46.88	5.03	38.40	35.14	Peak	100	172	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

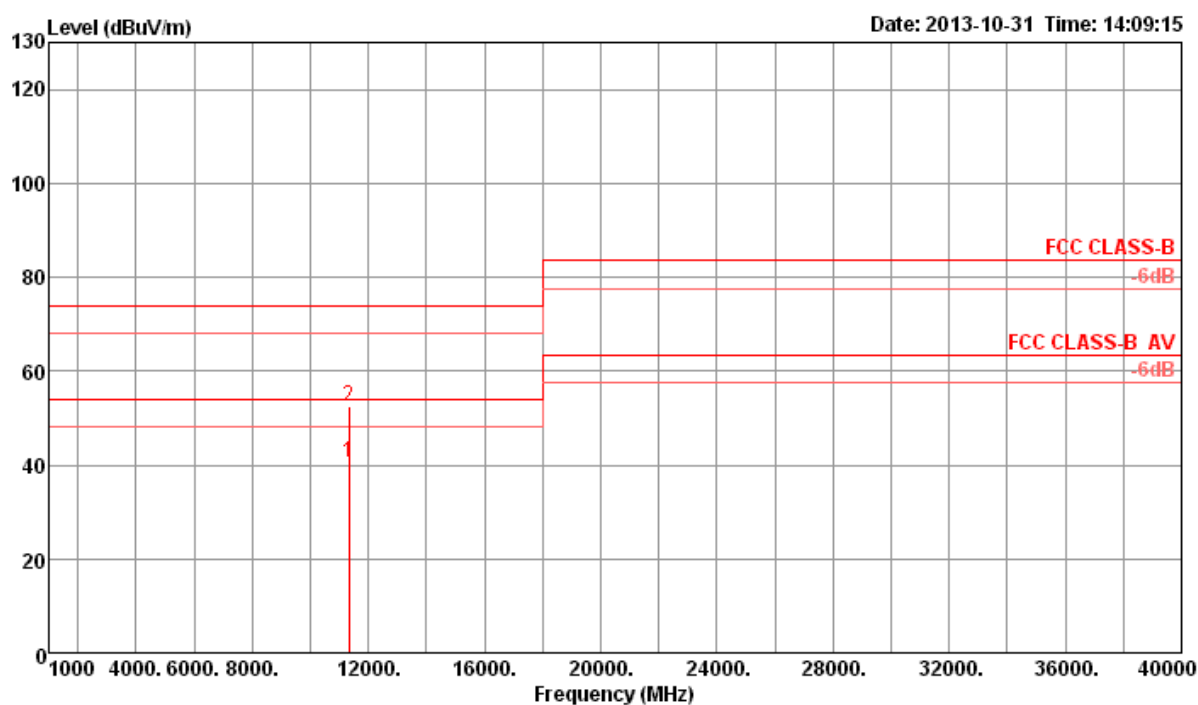
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 134 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	11340.08	40.64	54.00	-13.36	32.17	5.08	38.63	35.24	Average	110	231	HORIZONTAL
2	11340.72	52.58	74.00	-21.42	44.10	5.09	38.63	35.24	Peak	110	231	HORIZONTAL

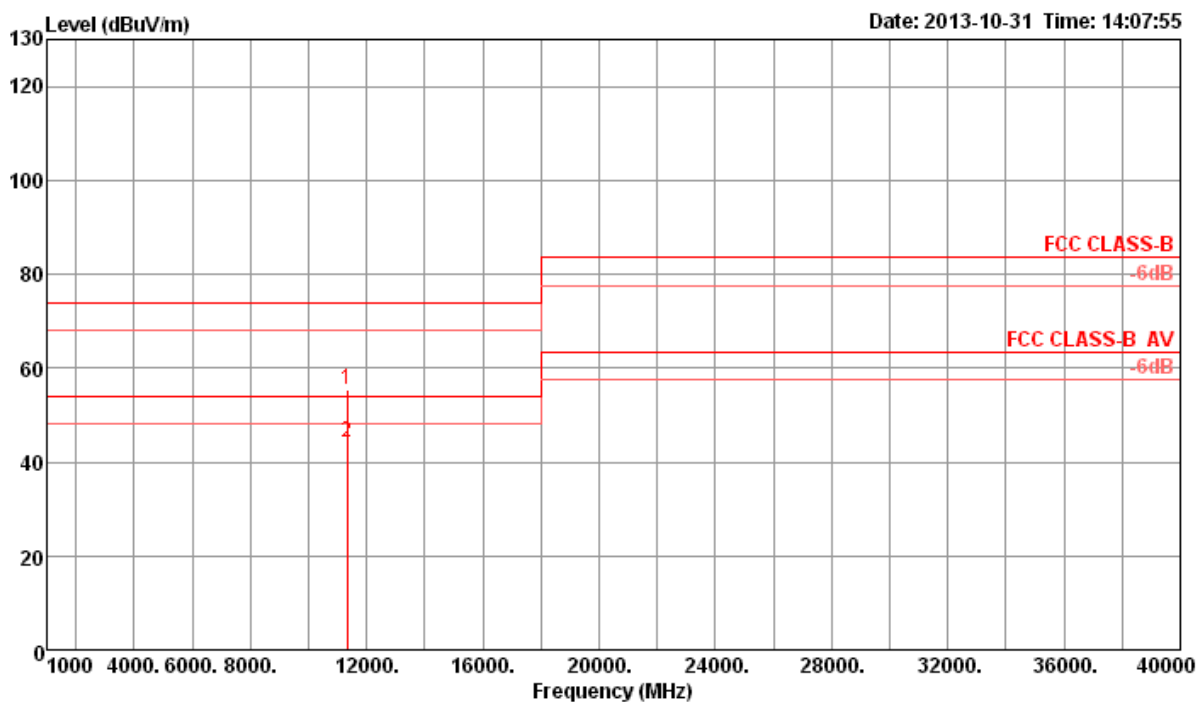
Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Emission not in Restricted Bands (Above 1GHz)			
Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 134 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	11332.39	55.42	74.00	-18.58	46.94	5.08	38.63	35.23	Peak	106	176	VERTICAL
2	11339.44	44.15	54.00	-9.85	35.68	5.08	38.63	35.24	Average	106	176	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

3.7 Band Edge Emissions Measurement

3.7.1 Limit

30dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (microvolt/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

3.7.2 Measuring Instruments and Setting

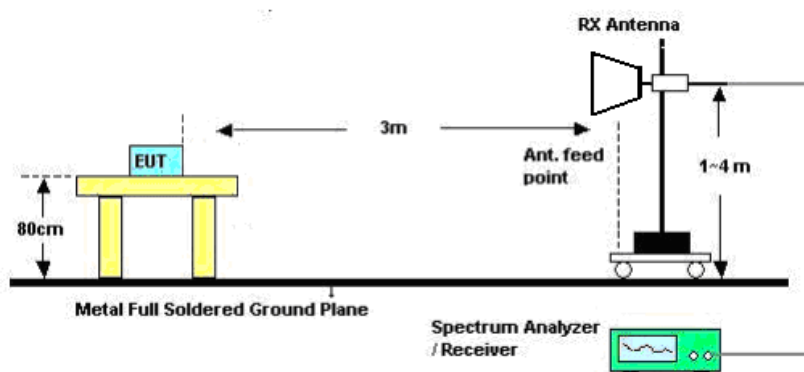
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Analyzer	Setting
Attenuation	Auto
Span Frequency	100 MHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 10Hz for Average
RBW / VBW (Emission in non-restricted band)	100 kHz / 300 kHz for Peak

3.7.3 Test Procedures

1. The test procedure is the same as section 3.6.4, only the frequency range investigated is limited to 100MHz around bandedges.
2. In case the emission is fail due to the used RBW/VBW is too wide, marker-delta method of FCC KDB789033 D01 V01R02 will be followed.

3.7.4 Test Setup Layout



3.7.5 Test Deviation

There are no deviations with the original standard.

3.7.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

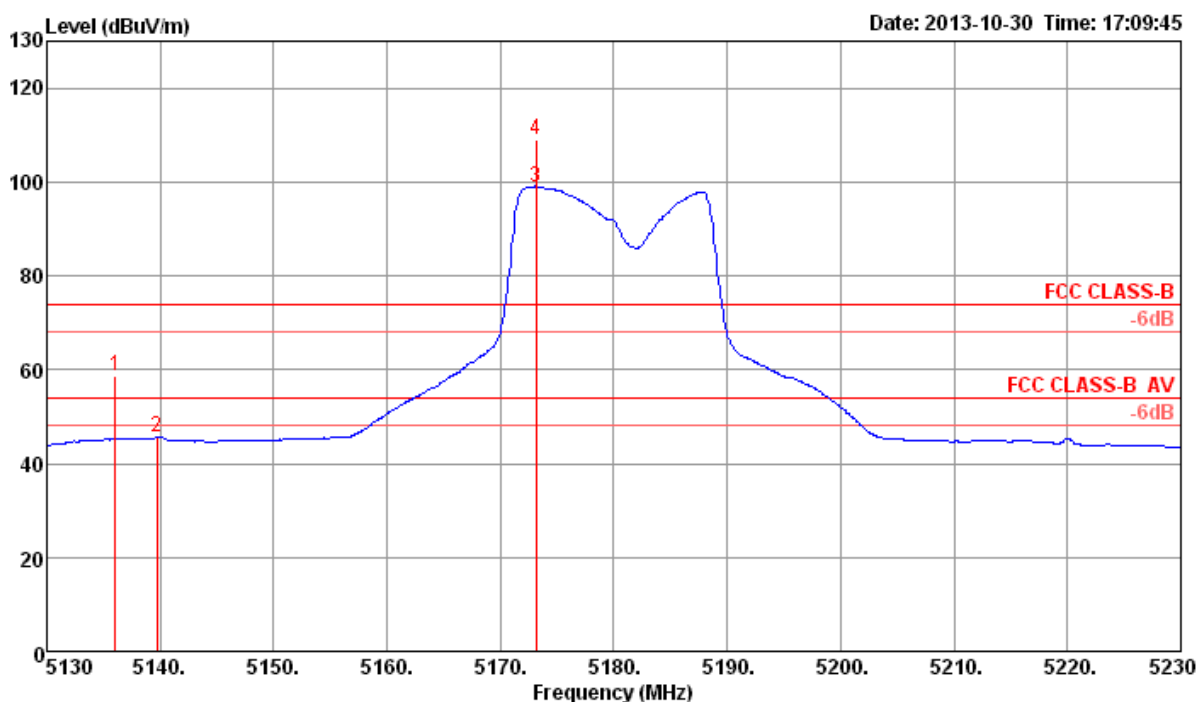
3.7.7 Test Result of Band Edge and Fundamental Emissions

Following channel(s) was (were) selected for the final test as listed below.

Mode	TX Chain	Test Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	Ant.1+2+3+4	36, 40, 48	OFDM	BPSK	6
802.11a	Ant.1+2+3+4	52, 60, 64	OFDM	BPSK	6
802.11a	Ant.1+2+3+4	100, 116, 136, 140	OFDM	BPSK	6
802.11n 20MHz	Ant.1+2+3+4	36, 40, 48	OFDM	BPSK	MCS0
802.11n 20MHz	Ant.1+2+3+4	52, 60, 64	OFDM	BPSK	MCS0
802.11n 20MHz	Ant.1+2+3+4	100, 116, 136, 140	OFDM	BPSK	MCS0
802.11n 40MHz	Ant.1+2+3+4	38, 46	OFDM	BPSK	MCS0
802.11n 40MHz	Ant.1+2+3+4	54, 62	OFDM	BPSK	MCS0
802.11n 40MHz	Ant.1+2+3+4	102, 110, 134	OFDM	BPSK	MCS0

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH36 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	5136.06	58.51	74.00	-15.49	56.47	3.43	33.64	35.03	Peak	121	7	HORIZONTAL
2	5139.74	45.60	54.00	-8.40	43.56	3.43	33.64	35.03	Average	121	7	HORIZONTAL
3	5173.11	99.02			96.91	3.44	33.70	35.03	Average	121	7	HORIZONTAL
4	5173.11	109.12			107.01	3.44	33.70	35.03	Peak	121	7	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz.

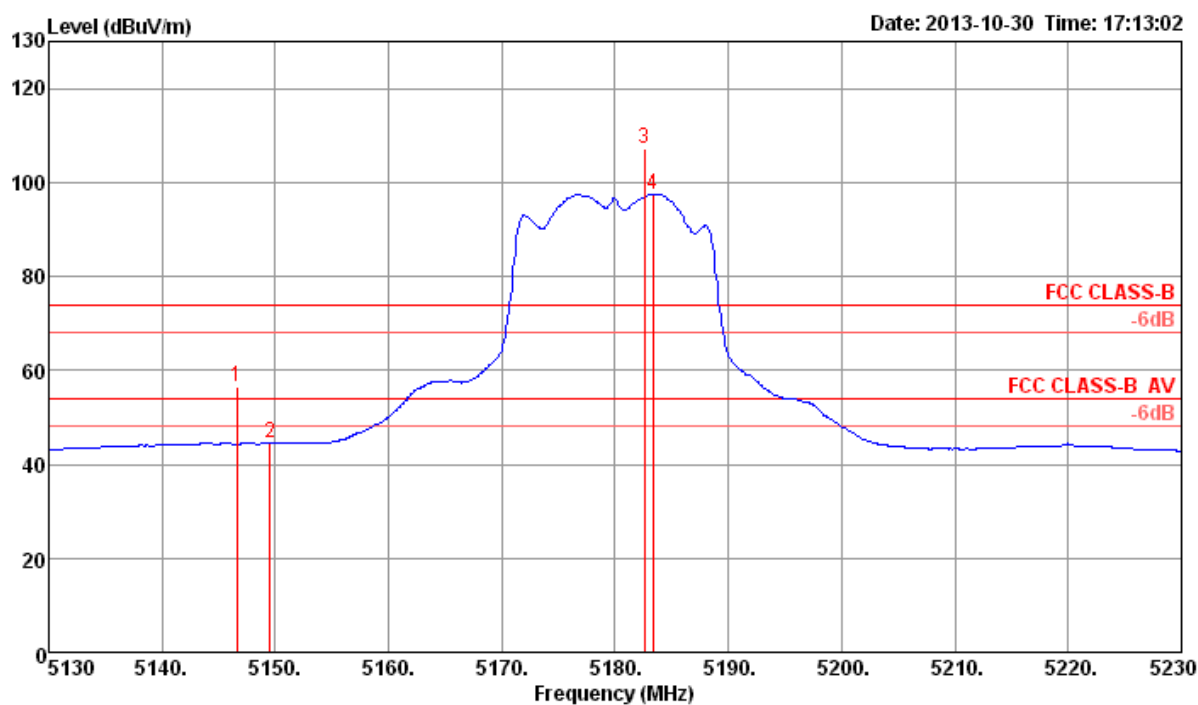
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH36 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	5146.64	56.67	74.00	-17.33	54.60	3.43	33.67	35.03	Peak	111	26	VERTICAL
2	5149.52	44.50	54.00	-9.50	42.43	3.43	33.67	35.03	Average	111	26	VERTICAL
3	5182.56	107.23			105.10	3.44	33.73	35.04	Peak	111	26	VERTICAL
4	5183.37	97.46			95.33	3.44	33.73	35.04	Average	111	26	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz.

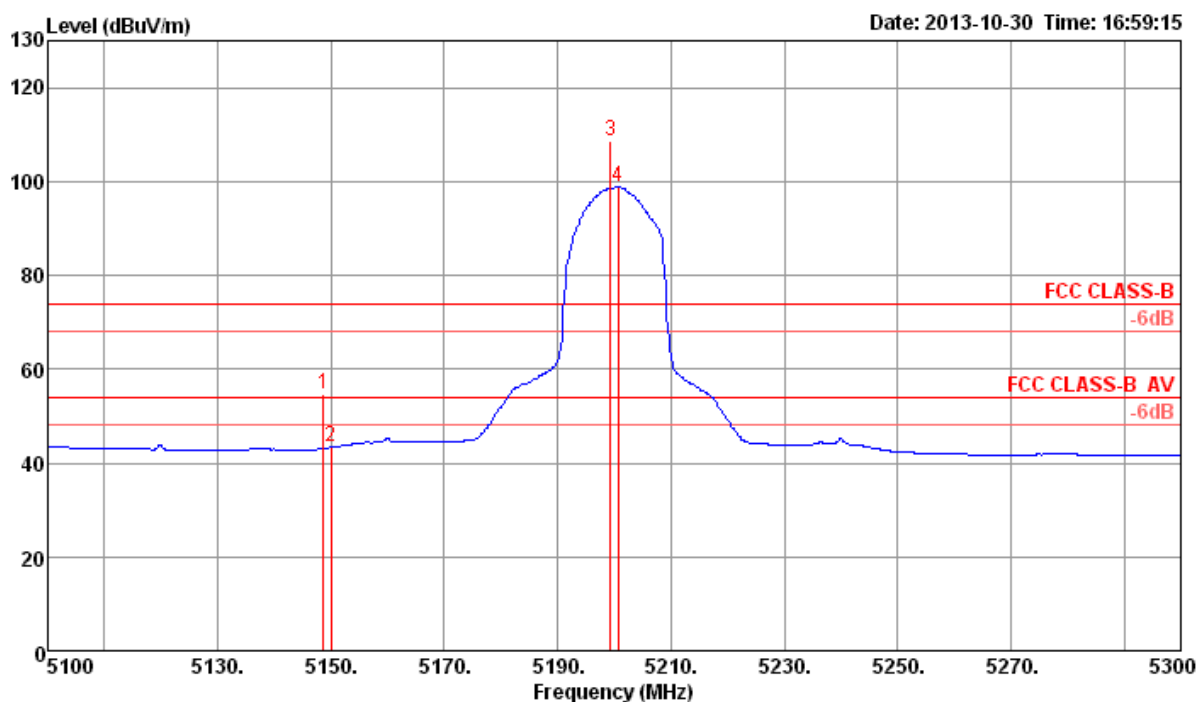
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH40 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5148.72	54.58	74.00	-19.42	52.51	3.43	33.67	35.03	Peak	100	22	HORIZONTAL
2	5150.00	43.30	54.00	-10.70	41.23	3.43	33.67	35.03	Average	100	22	HORIZONTAL
3	5199.36	108.74			106.57	3.45	33.76	35.04	Peak	100	22	HORIZONTAL
4	5200.64	98.91			96.74	3.45	33.76	35.04	Average	100	22	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz.

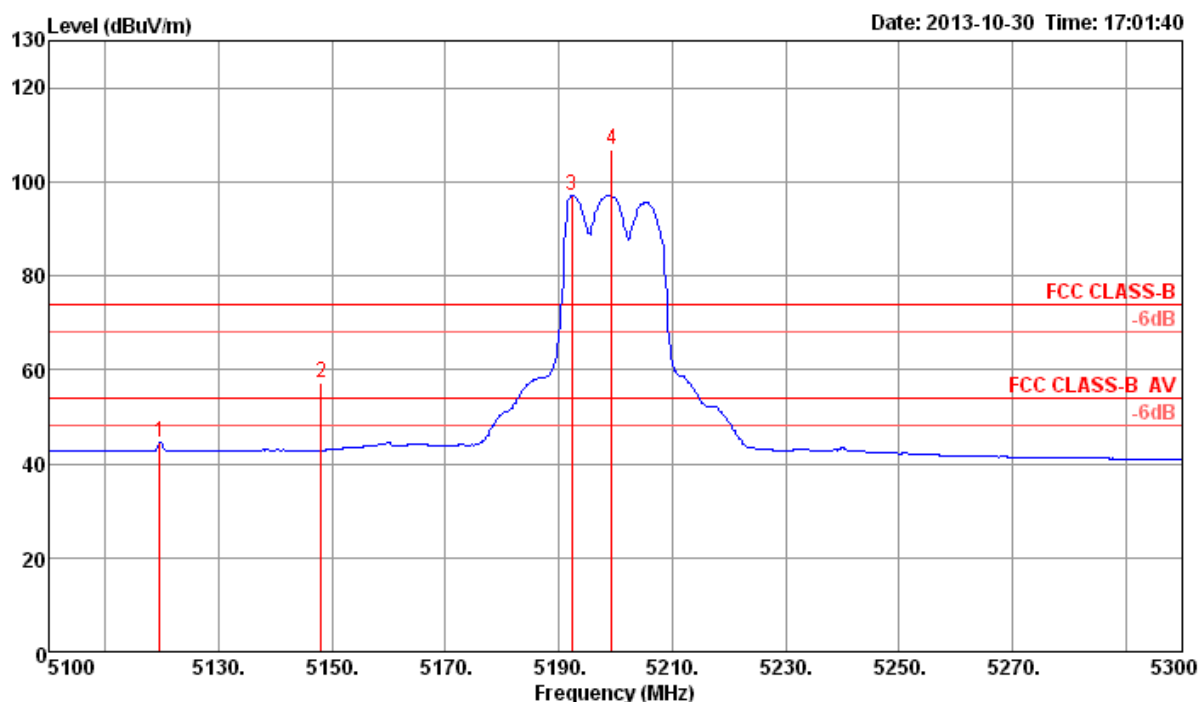
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH40 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5119.55	44.63	54.00	-9.37	42.61	3.43	33.61	35.02	100	150	VERTICAL
2	5148.08	57.11	74.00	-16.89	55.04	3.43	33.67	35.03	100	150	VERTICAL
3	5192.31	97.07			94.94	3.44	33.73	35.04	100	150	VERTICAL
4	5199.36	106.99			104.82	3.45	33.76	35.04	100	150	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz.

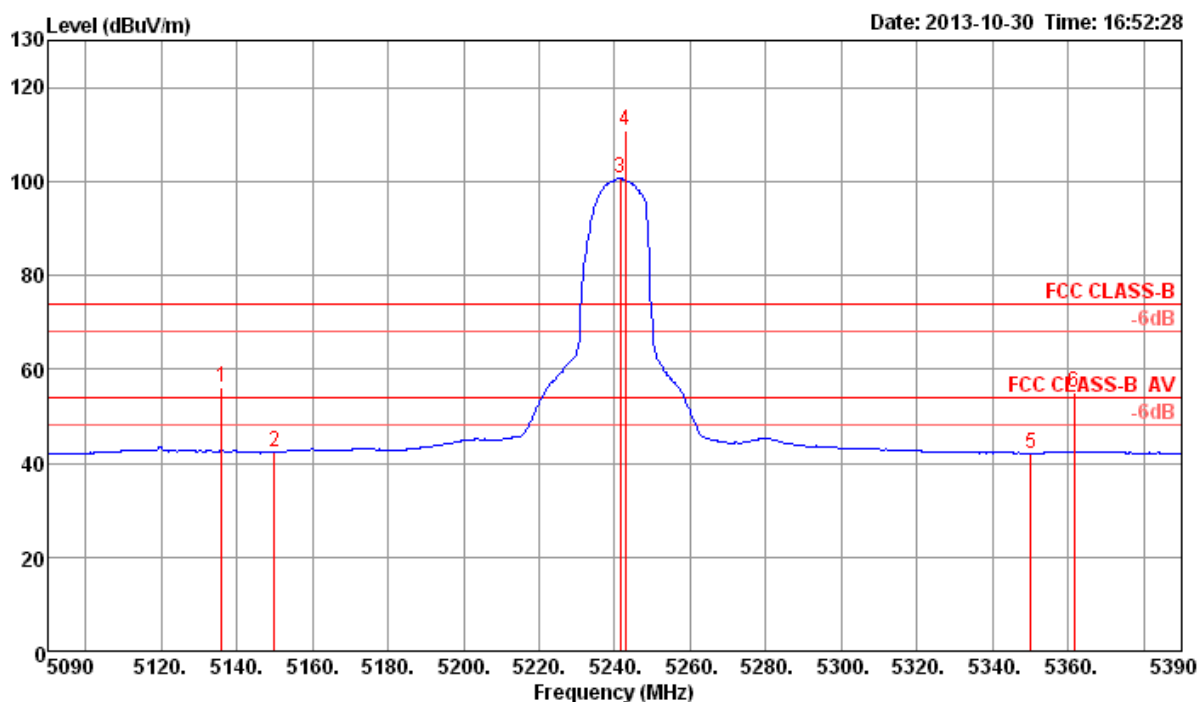
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	5136.06	55.96	74.00	-18.04	53.92	3.43	33.64	35.03	Peak	132	25	HORIZONTAL
2	5150.00	42.33	54.00	-11.67	40.26	3.43	33.67	35.03	Average	132	25	HORIZONTAL
3	5241.44	100.58			98.35	3.46	33.82	35.05	Average	132	25	HORIZONTAL
4	5242.89	110.86			108.63	3.46	33.82	35.05	Peak	132	25	HORIZONTAL
5	5350.00	42.05	54.00	-11.95	39.60	3.49	34.03	35.07	Average	132	25	HORIZONTAL
6	5361.54	55.12	74.00	-18.88	52.67	3.49	34.03	35.07	Peak	132	25	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz.

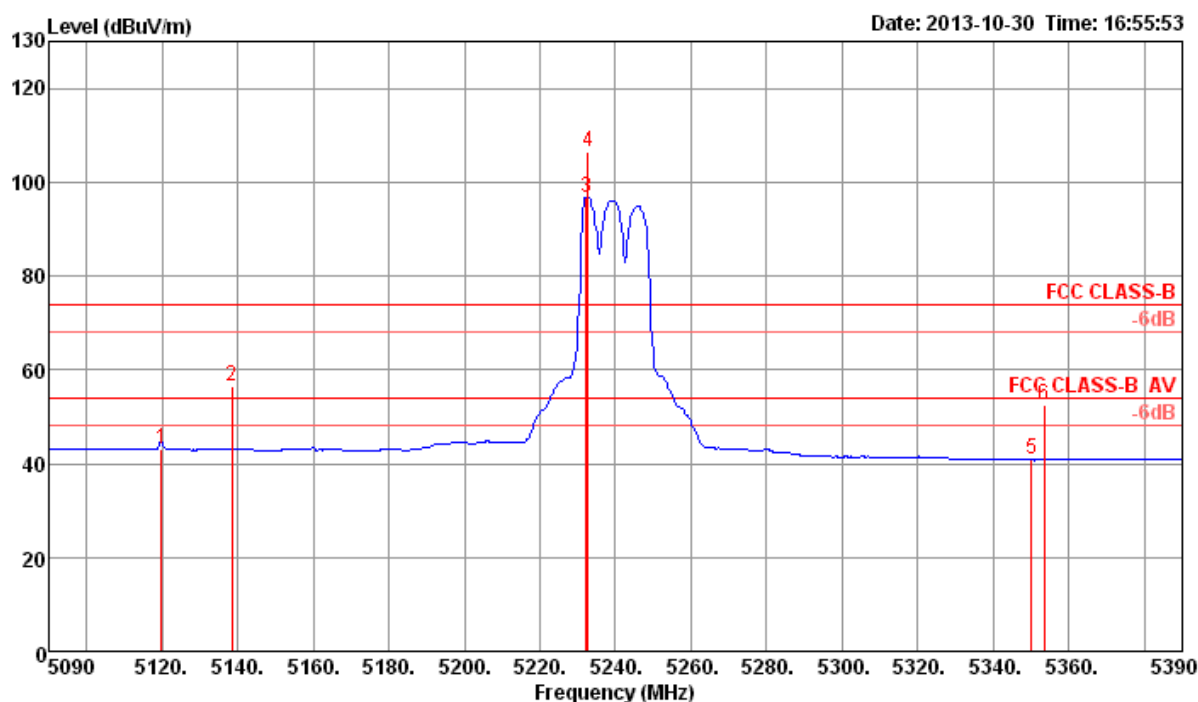
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5119.71	43.11	54.00	-10.89	41.09	3.43	33.61	35.02	Average	100	150	VERTICAL
2	5138.56	56.60	74.00	-17.40	54.56	3.43	33.64	35.03	Peak	100	150	VERTICAL
3	5232.31	96.72			94.49	3.46	33.82	35.05	Average	100	150	VERTICAL
4	5232.79	106.55			104.32	3.46	33.82	35.05	Peak	100	150	VERTICAL
5	5350.00	40.82	54.00	-13.18	38.37	3.49	34.03	35.07	Average	100	150	VERTICAL
6	5353.37	52.68	74.00	-21.32	50.23	3.49	34.03	35.07	Peak	100	150	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz.

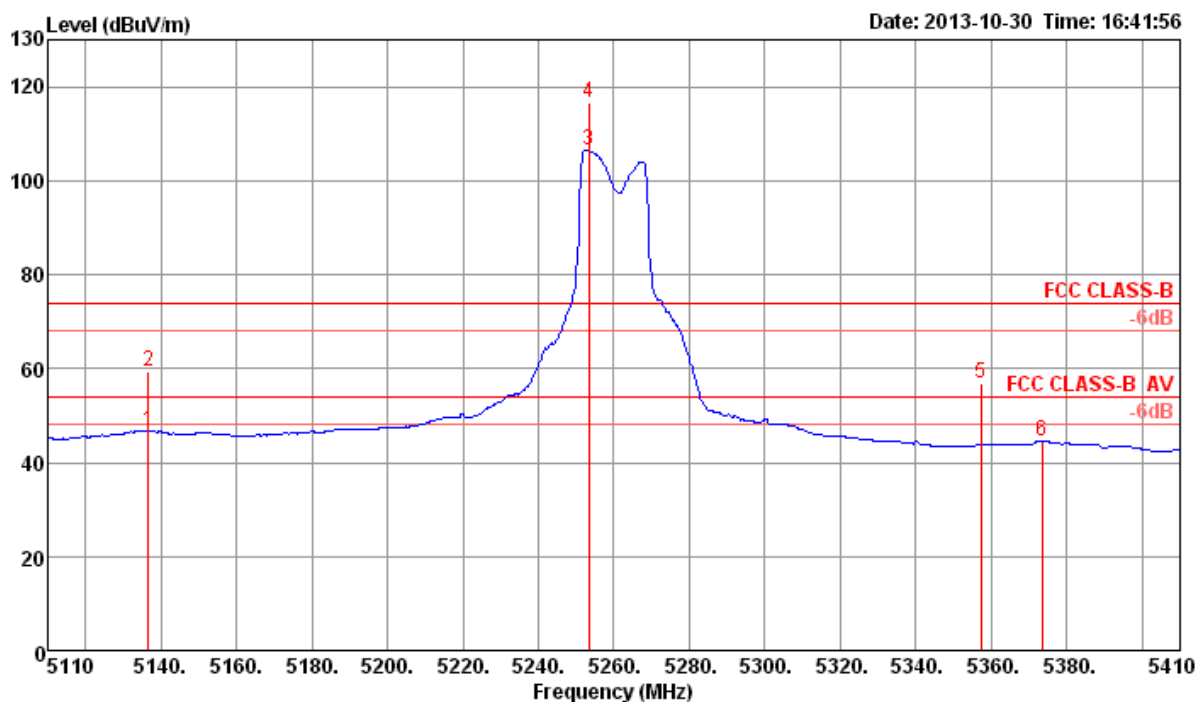
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor		cm	deg	
1	5136.54	46.74	54.00	-7.26	44.70	3.43	33.64	35.03	Average	122	6	HORIZONTAL
2	5136.54	59.36	74.00	-14.64	57.32	3.43	33.64	35.03	Peak	122	6	HORIZONTAL
3	5253.27	106.51			104.25	3.46	33.85	35.05	Average	122	6	HORIZONTAL
4	5253.27	116.57			114.31	3.46	33.85	35.05	Peak	122	6	HORIZONTAL
5	5357.21	56.99	74.00	-17.01	54.54	3.49	34.03	35.07	Peak	122	6	HORIZONTAL
6	5373.56	44.48	54.00	-9.52	41.99	3.50	34.06	35.07	Average	122	6	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5260 MHz.

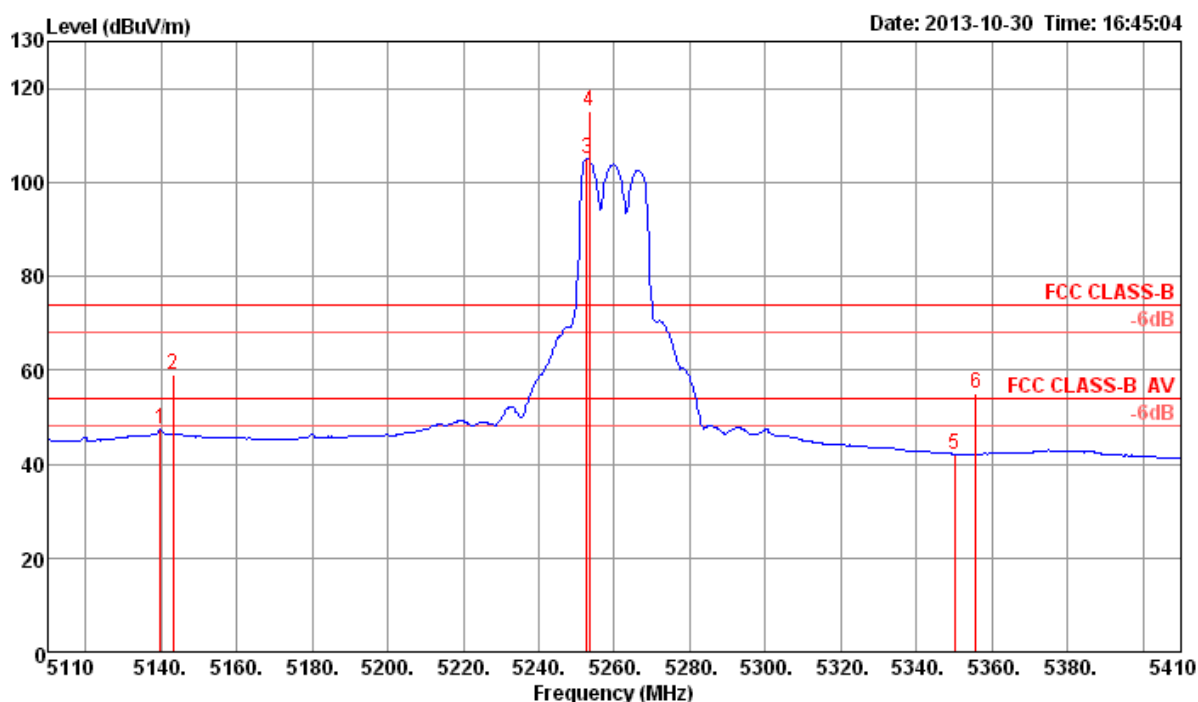
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	5139.90	47.30	54.00	-6.70	45.26	3.43	33.64	35.03	Average	113	150	VERTICAL
2	5143.27	59.13	74.00	-14.87	57.09	3.43	33.64	35.03	Peak	113	150	VERTICAL
3	5252.79	105.03			102.77	3.46	33.85	35.05	Average	113	150	VERTICAL
4	5253.27	115.03			112.77	3.46	33.85	35.05	Peak	113	150	VERTICAL
5	5350.00	42.09	54.00	-11.91	39.64	3.49	34.03	35.07	Average	113	150	VERTICAL
6	5355.77	54.96	74.00	-19.04	52.51	3.49	34.03	35.07	Peak	113	150	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5260 MHz.

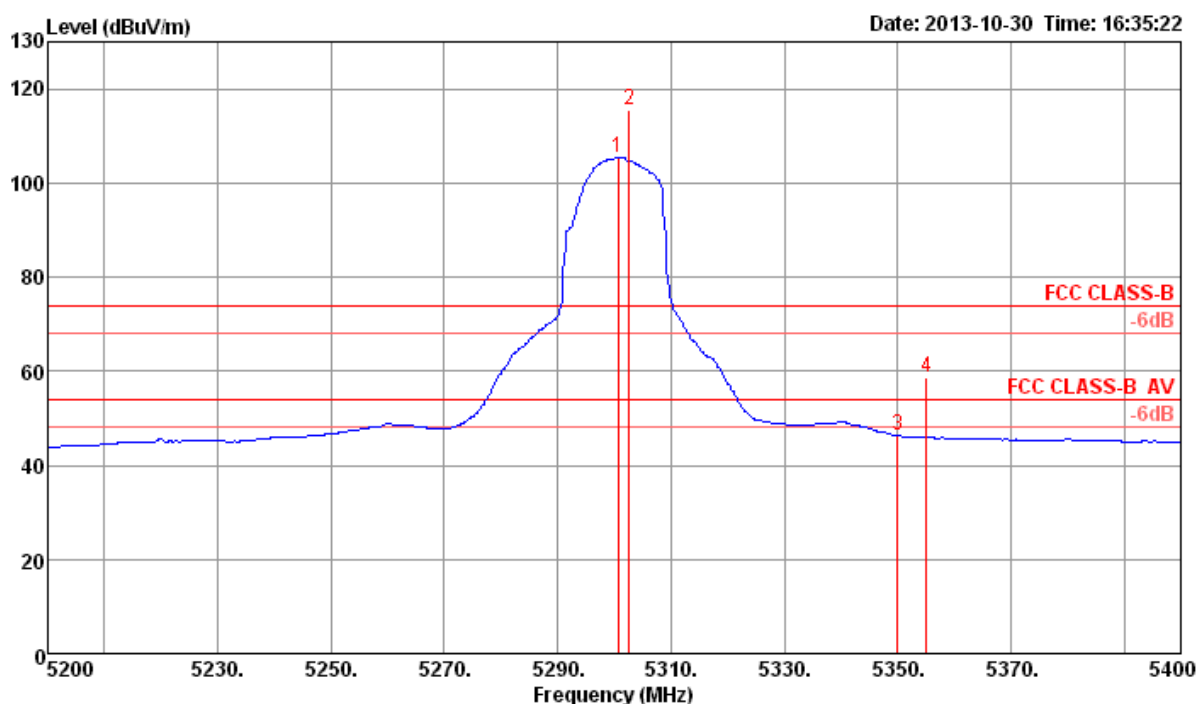
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5300.64	105.51			103.15	3.48	33.94	35.06	Average	130	24	HORIZONTAL
2	5302.56	115.55			113.19	3.48	33.94	35.06	Peak	130	24	HORIZONTAL
3	5350.00	46.25	54.00	-7.75	43.80	3.49	34.03	35.07	Average	130	24	HORIZONTAL
4	5355.13	58.72	74.00	-15.28	56.27	3.49	34.03	35.07	Peak	130	24	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5300 MHz.

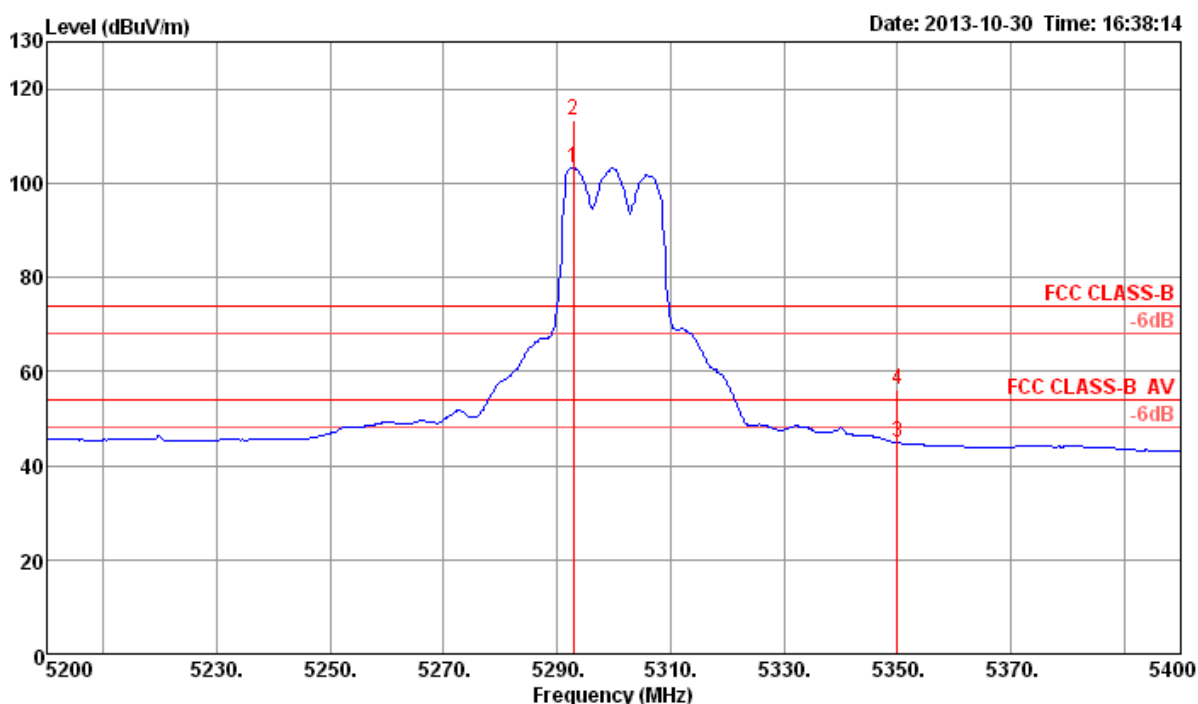
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5292.95	103.36			101.04	3.47	33.91	35.06	Average	110	151	VERTICAL
2	5292.95	113.34			111.02	3.47	33.91	35.06	Peak	110	151	VERTICAL
3	5350.00	44.77	54.00	-9.23	42.32	3.49	34.03	35.07	Average	110	151	VERTICAL
4	5350.00	56.25	74.00	-17.75	53.80	3.49	34.03	35.07	Peak	110	151	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5300 MHz.

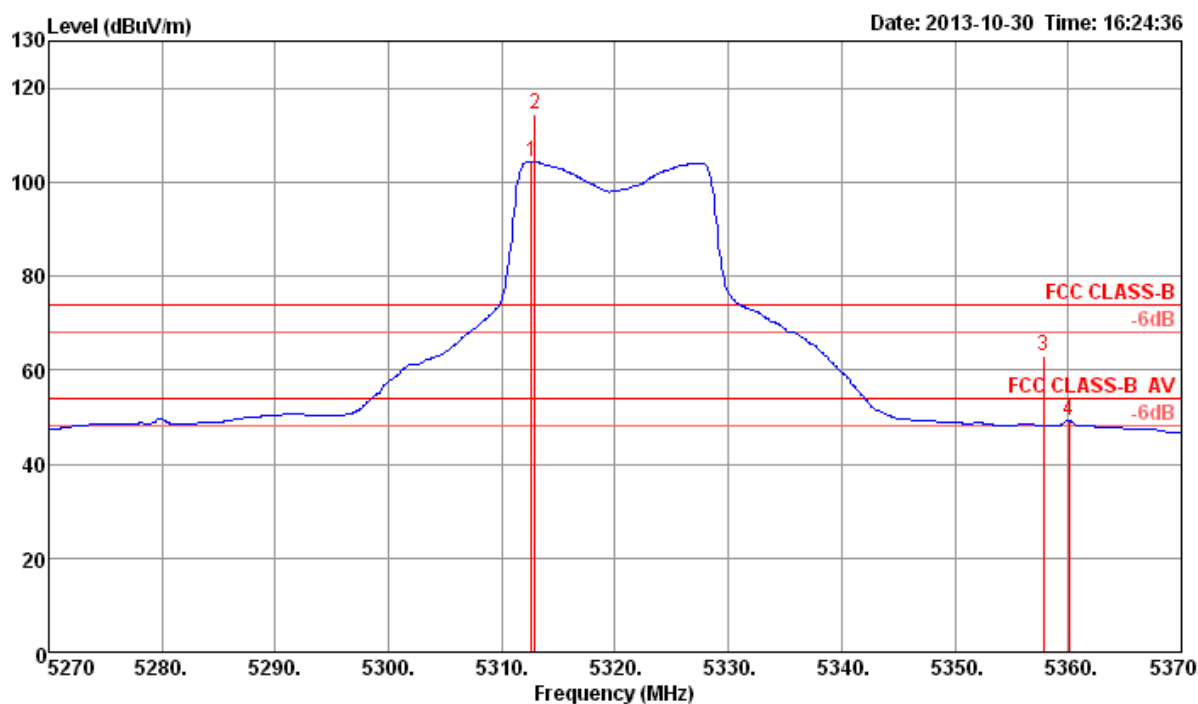
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5312.63	104.23			101.87	3.48	33.94	35.06	Average	120	2	HORIZONTAL
2	5312.95	114.55			112.19	3.48	33.94	35.06	Peak	120	2	HORIZONTAL
3	5357.85	63.01	74.00	-10.99	60.56	3.49	34.03	35.07	Peak	120	2	HORIZONTAL
4	5360.10	49.07	54.00	-4.93	46.62	3.49	34.03	35.07	Average	120	2	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5320 MHz.

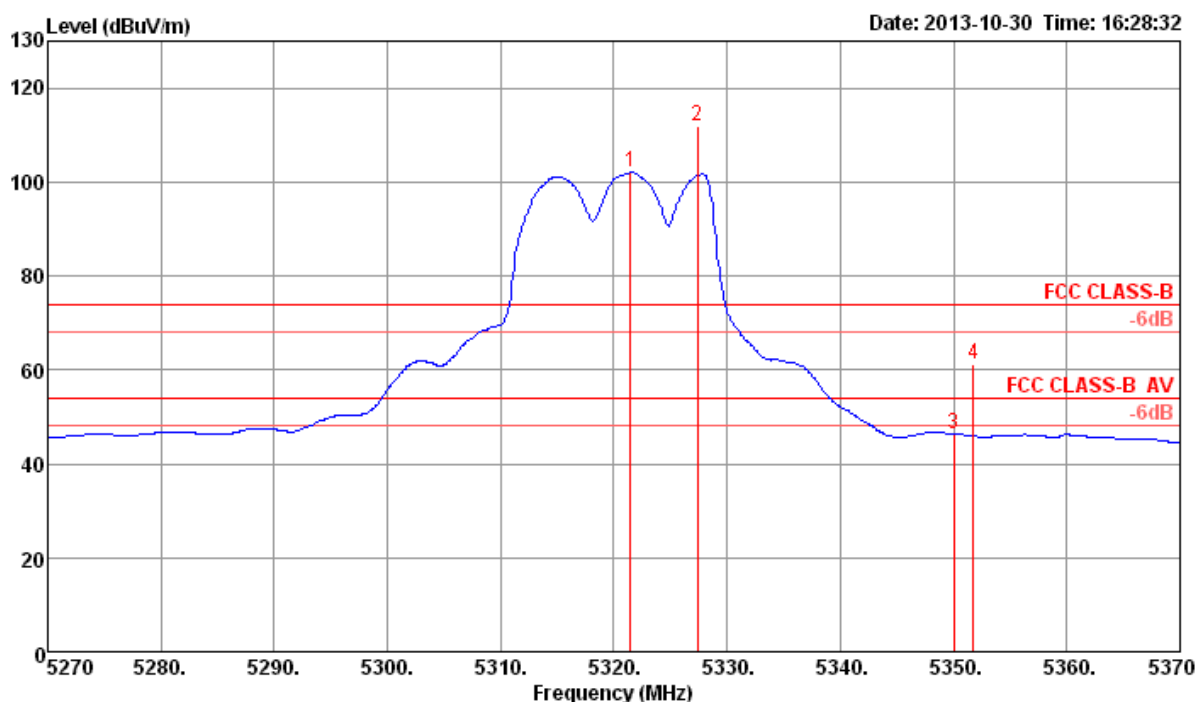
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	5321.44	102.00			99.61	3.48	33.97	35.06	Average	124	167	VERTICAL
2	5327.37	111.92			109.53	3.49	33.97	35.07	Peak	124	167	VERTICAL
3	5350.00	46.48	54.00	-7.52	44.03	3.49	34.03	35.07	Average	124	167	VERTICAL
4	5351.76	61.33	74.00	-12.67	58.88	3.49	34.03	35.07	Peak	124	167	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5320 MHz.

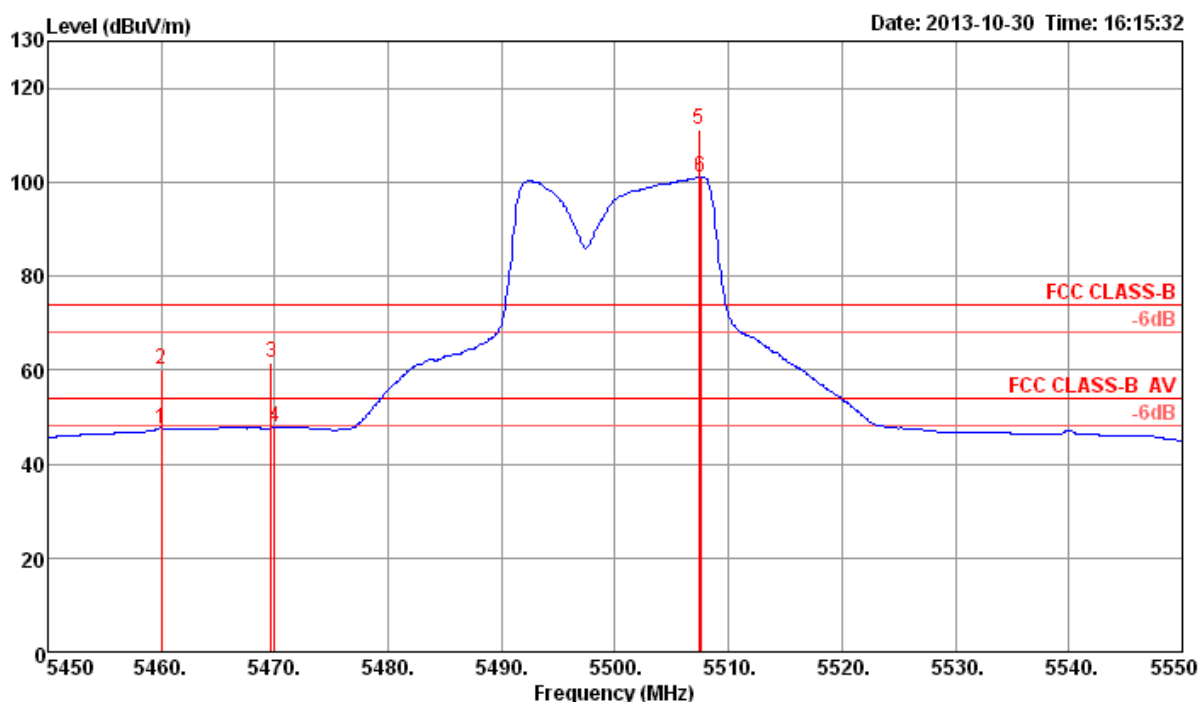
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	
1	5460.00	47.61	54.00	-6.39	44.99	3.52	34.19	35.09	Average	127	35	HORIZONTAL
2	5460.00	59.97	74.00	-14.03	57.35	3.52	34.19	35.09	Peak	127	35	HORIZONTAL
3	5469.68	61.44	74.00	-12.56	58.80	3.52	34.21	35.09	Peak	127	35	HORIZONTAL
4	5470.00	47.73	54.00	-6.27	45.09	3.52	34.21	35.09	Average	127	35	HORIZONTAL
5	5507.37	111.06			108.37	3.54	34.25	35.10	Peak	127	35	HORIZONTAL
6	5507.53	101.08			98.39	3.54	34.25	35.10	Average	127	35	HORIZONTAL

Note 1: Item 5, 6 are the fundamental frequency at 5500 MHz.

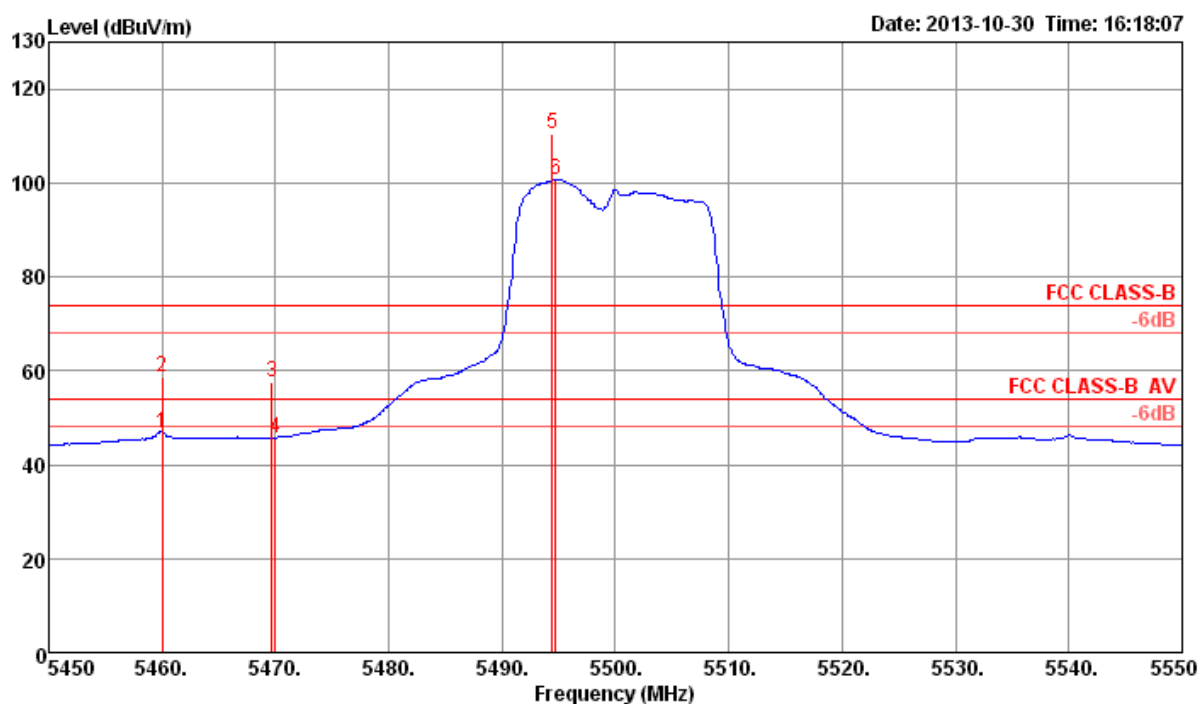
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5460.00	46.89	54.00	-7.11	44.25	3.52	34.21	35.09	Average	100	69	VERTICAL
2	5460.00	58.58	74.00	-15.42	55.94	3.52	34.21	35.09	Peak	100	69	VERTICAL
3	5469.68	57.59	74.00	-16.41	54.92	3.52	34.24	35.09	Peak	100	69	VERTICAL
4	5470.00	45.71	54.00	-8.29	43.04	3.52	34.24	35.09	Average	100	69	VERTICAL
5	5494.39	110.55			107.86	3.53	34.26	35.10	Peak	100	69	VERTICAL
6	5494.71	100.62			97.93	3.53	34.26	35.10	Average	100	69	VERTICAL

Note 1: Item 5, 6 are the fundamental frequency at 5500 MHz.

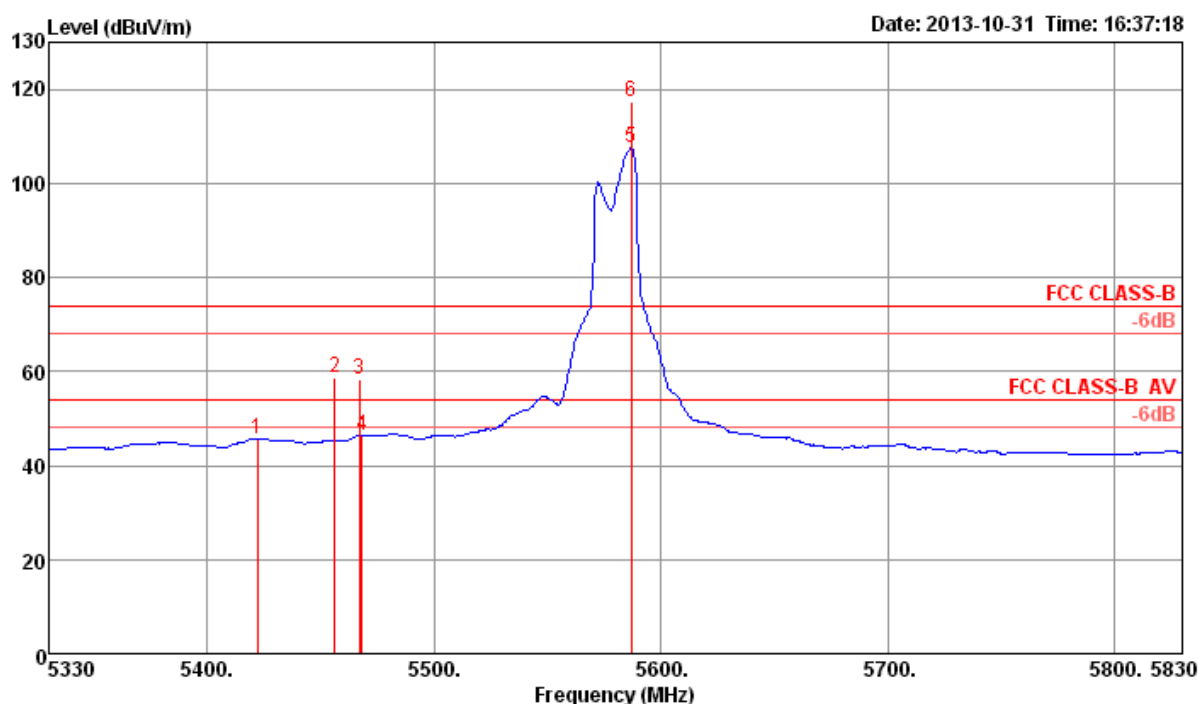
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	5422.00	45.78	54.00	-8.22	43.20	3.51	34.15	35.08	Average	100	350	HORIZONTAL
2	5456.00	58.57	74.00	-15.43	55.95	3.52	34.19	35.09	Peak	100	350	HORIZONTAL
3	5467.00	58.42	74.00	-15.58	55.80	3.52	34.19	35.09	Peak	100	350	HORIZONTAL
4	5468.00	46.42	54.00	-7.58	43.78	3.52	34.21	35.09	Average	100	350	HORIZONTAL
5	5587.00	107.39			104.63	3.56	34.32	35.12	Average	100	350	HORIZONTAL
6	5587.00	117.18			114.42	3.56	34.32	35.12	Peak	100	350	HORIZONTAL

Note 1: Item 5, 6 are the fundamental frequency at 5580 MHz.

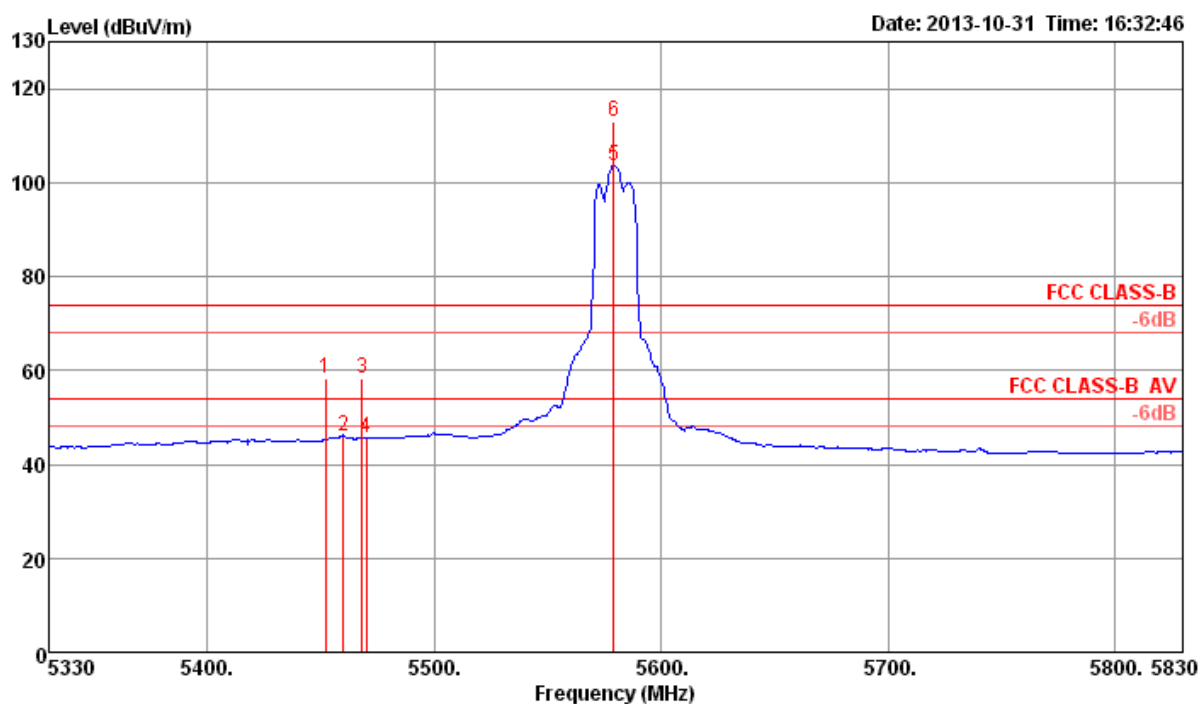
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5452.00	58.13	74.00	-15.87	55.49	3.52	34.21	35.09	Peak	100	46	VERTICAL
2	5460.00	46.16	54.00	-7.84	43.52	3.52	34.21	35.09	Average	100	46	VERTICAL
3	5468.00	58.18	74.00	-15.82	55.51	3.52	34.24	35.09	Peak	100	46	VERTICAL
4	5470.00	45.60	54.00	-8.40	42.93	3.52	34.24	35.09	Average	100	46	VERTICAL
5	5579.00	103.66			100.90	3.56	34.31	35.11	Average	100	46	VERTICAL
6	5579.00	113.07			110.31	3.56	34.31	35.11	Peak	100	46	VERTICAL

Note 1: Item 5, 6 are the fundamental frequency at 5580 MHz.

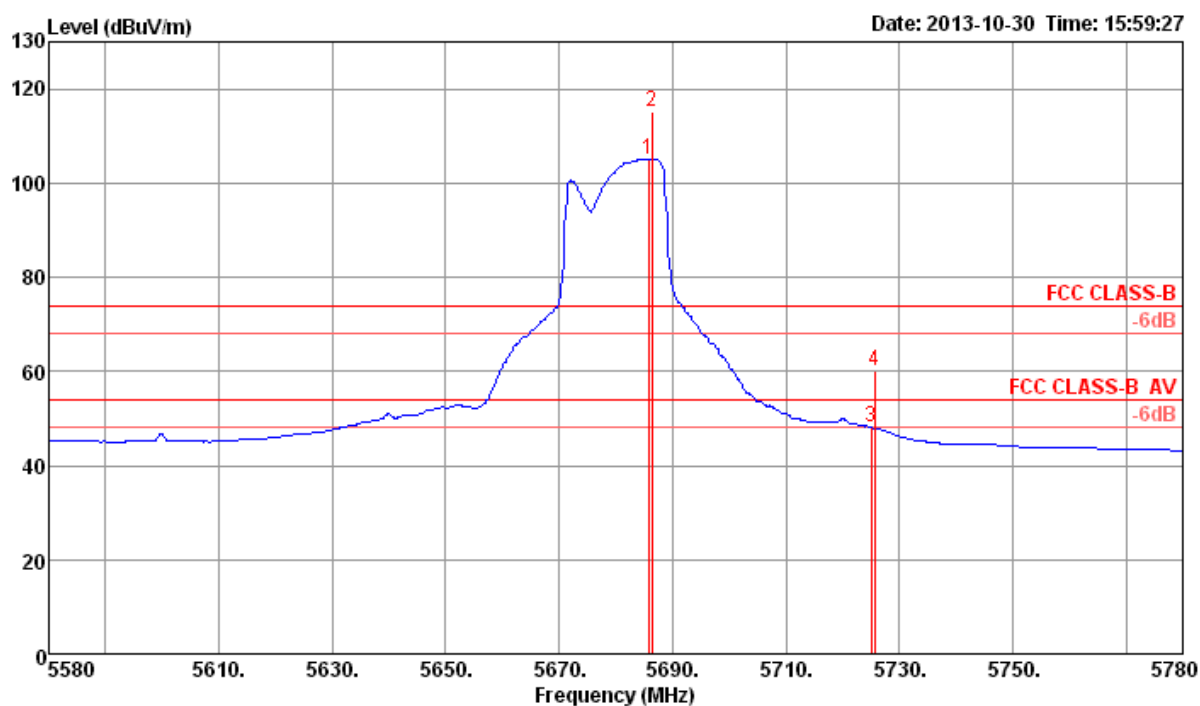
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH136 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5685.77	105.13			102.35	3.59	34.33	35.14	Average	119	26	HORIZONTAL
2	5686.41	115.19			112.41	3.59	34.33	35.14	Peak	119	26	HORIZONTAL
3	5725.00	48.10	54.00	-5.90	45.31	3.60	34.34	35.15	Average	119	26	HORIZONTAL
4	5725.64	60.20	74.00	-13.80	57.41	3.60	34.34	35.15	Peak	119	26	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5680 MHz.

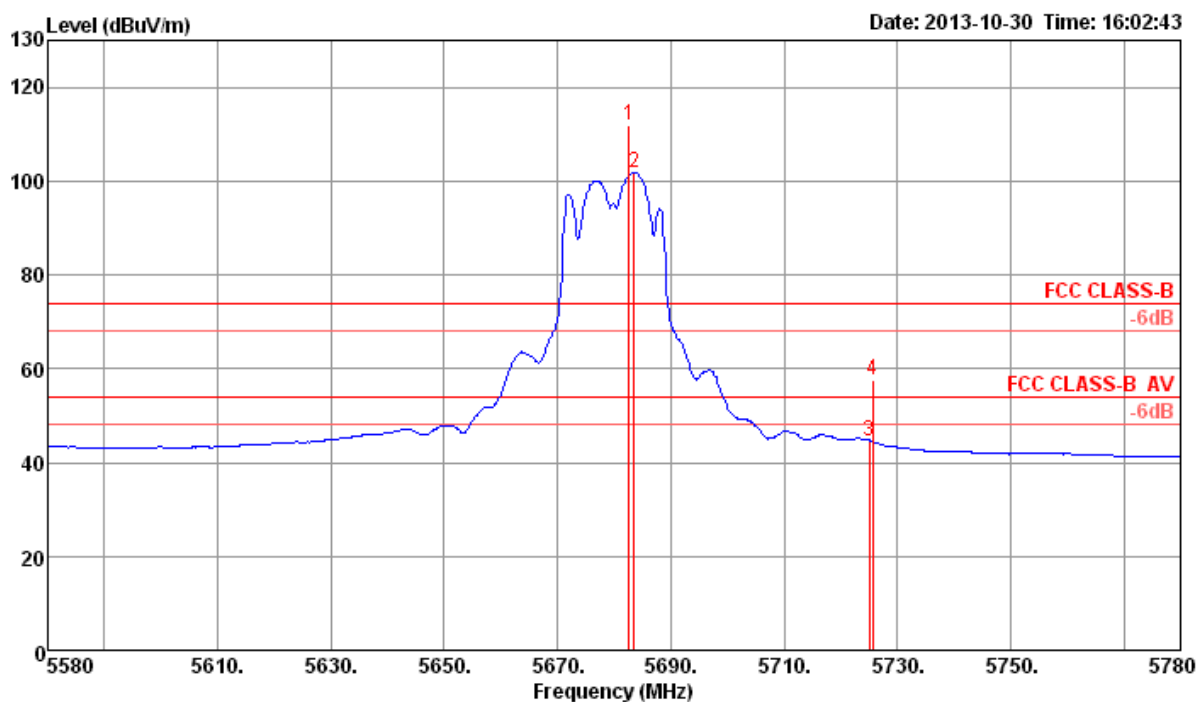
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH136 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5682.56	111.80			109.01	3.59	34.33	35.13	Peak	100	18	VERTICAL
2	5683.53	101.77			98.99	3.59	34.33	35.14	Average	100	18	VERTICAL
3	5725.00	44.68	54.00	-9.32	41.89	3.60	34.34	35.15	Average	100	18	VERTICAL
4	5725.64	57.49	74.00	-16.51	54.70	3.60	34.34	35.15	Peak	100	18	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5680 MHz.

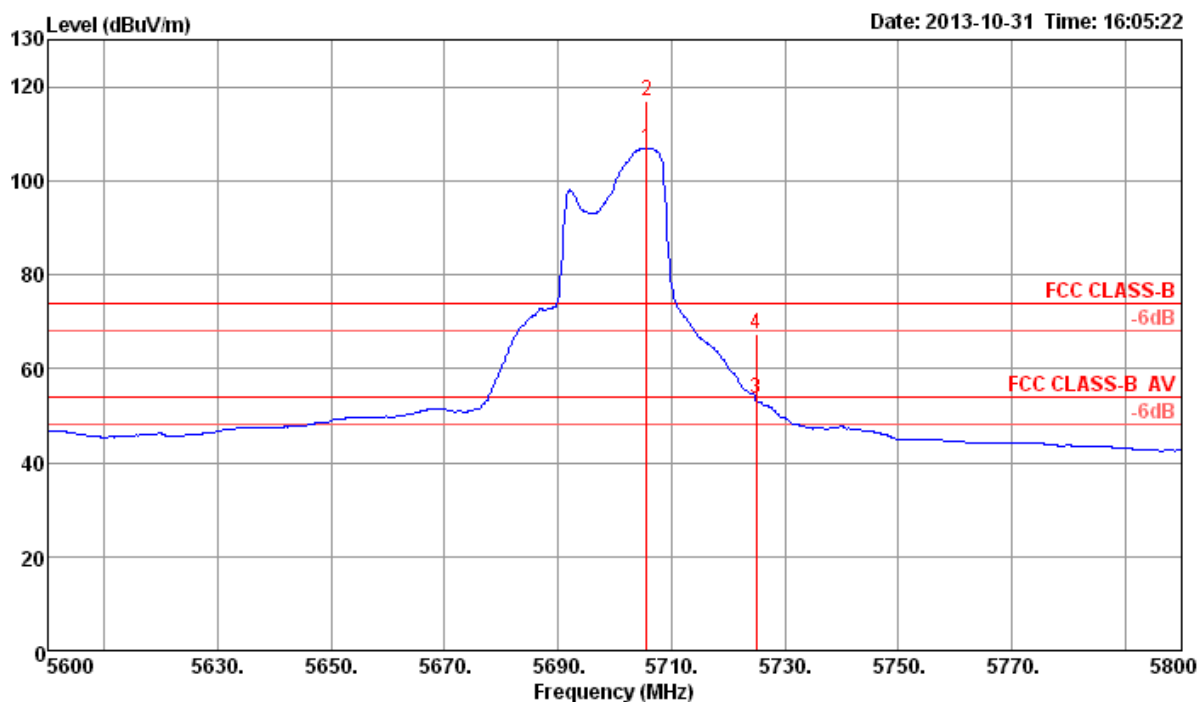
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5705.60	106.92			104.12	3.60	34.34	35.14	Average	109	347	HORIZONTAL
2	5705.60	116.86			114.06	3.60	34.34	35.14	Peak	109	347	HORIZONTAL
3	5725.00	53.45	54.00	-0.55	50.66	3.60	34.34	35.15	Average	109	347	HORIZONTAL
4	5725.00	67.27	74.00	-6.73	64.48	3.60	34.34	35.15	Peak	109	347	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5700 MHz.

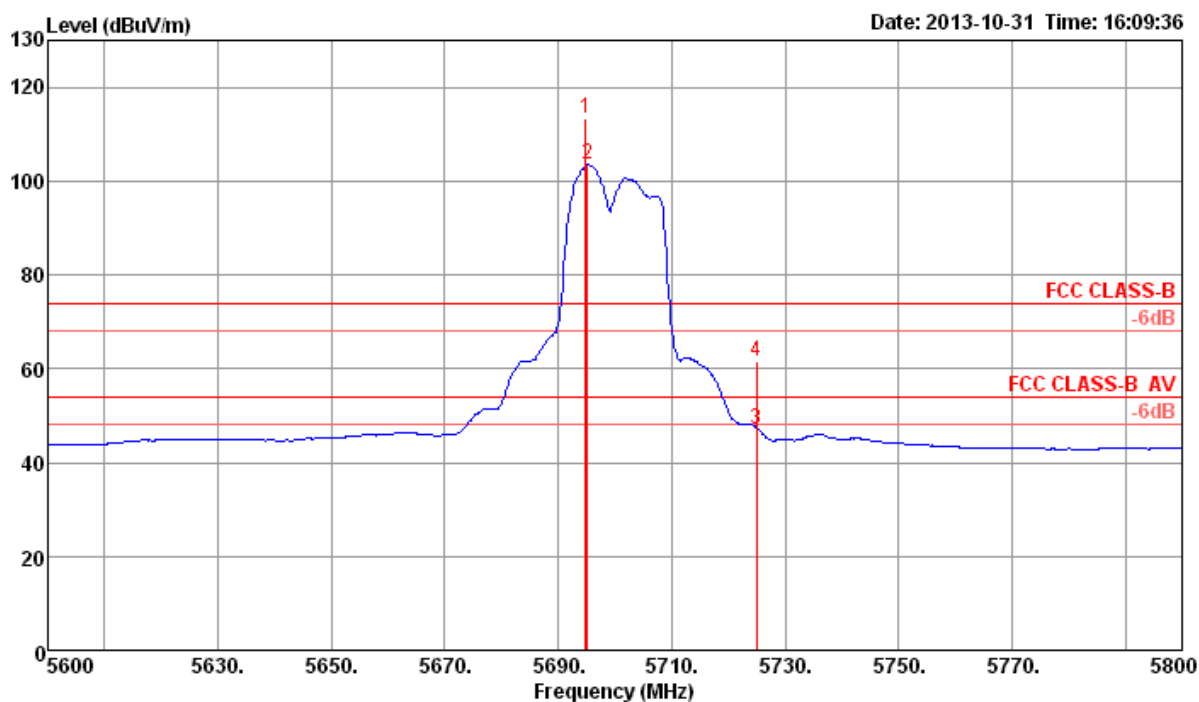
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 20MHz 6Mbps / CH140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	
1	5694.80	113.29			110.50	3.59	34.34	35.14	Peak	100	304	VERTICAL
2	5695.20	103.55			100.76	3.59	34.34	35.14	Average	100	304	VERTICAL
3	5725.00	47.09	54.00	-6.91	44.30	3.60	34.34	35.15	Average	100	304	VERTICAL
4	5725.00	61.43	74.00	-12.57	58.64	3.60	34.34	35.15	Peak	100	304	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5700 MHz.

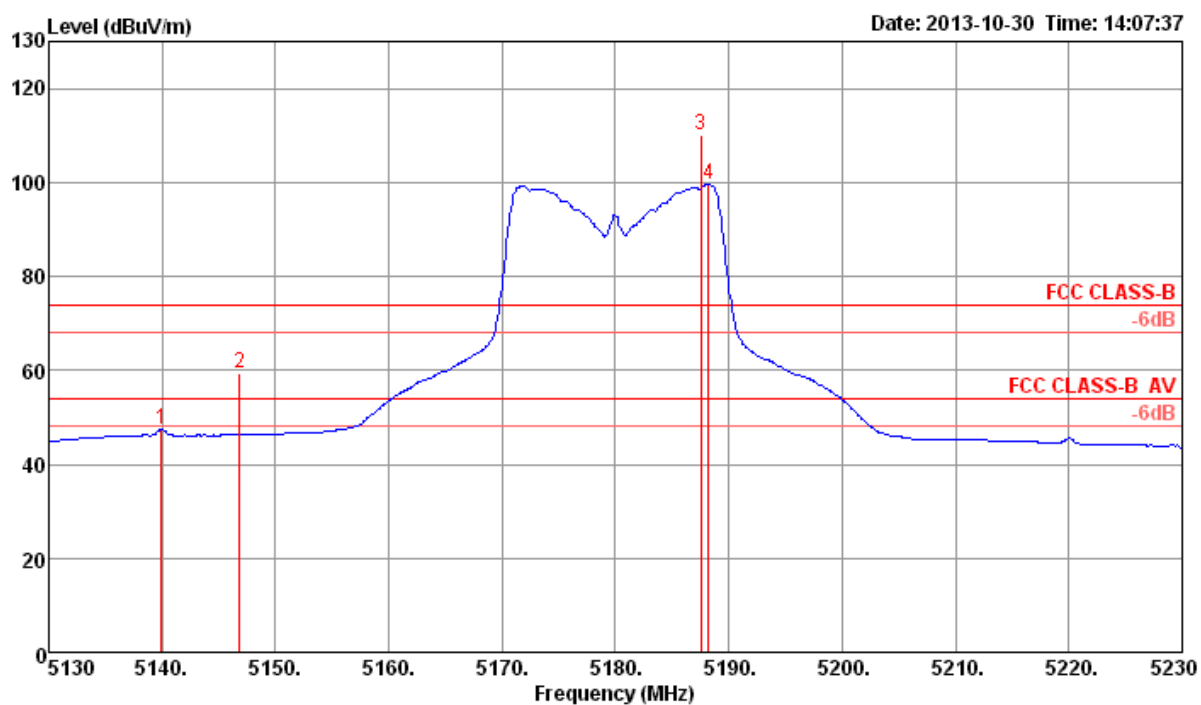
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH36 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5139.90	47.32	54.00	-6.68	45.28	3.43	33.64	35.03	Average	123	2	HORIZONTAL
2	5146.80	59.43	74.00	-14.57	57.36	3.43	33.67	35.03	Peak	123	2	HORIZONTAL
3	5187.53	109.92			107.79	3.44	33.73	35.04	Peak	123	2	HORIZONTAL
4	5188.17	99.55			97.42	3.44	33.73	35.04	Average	123	2	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz.

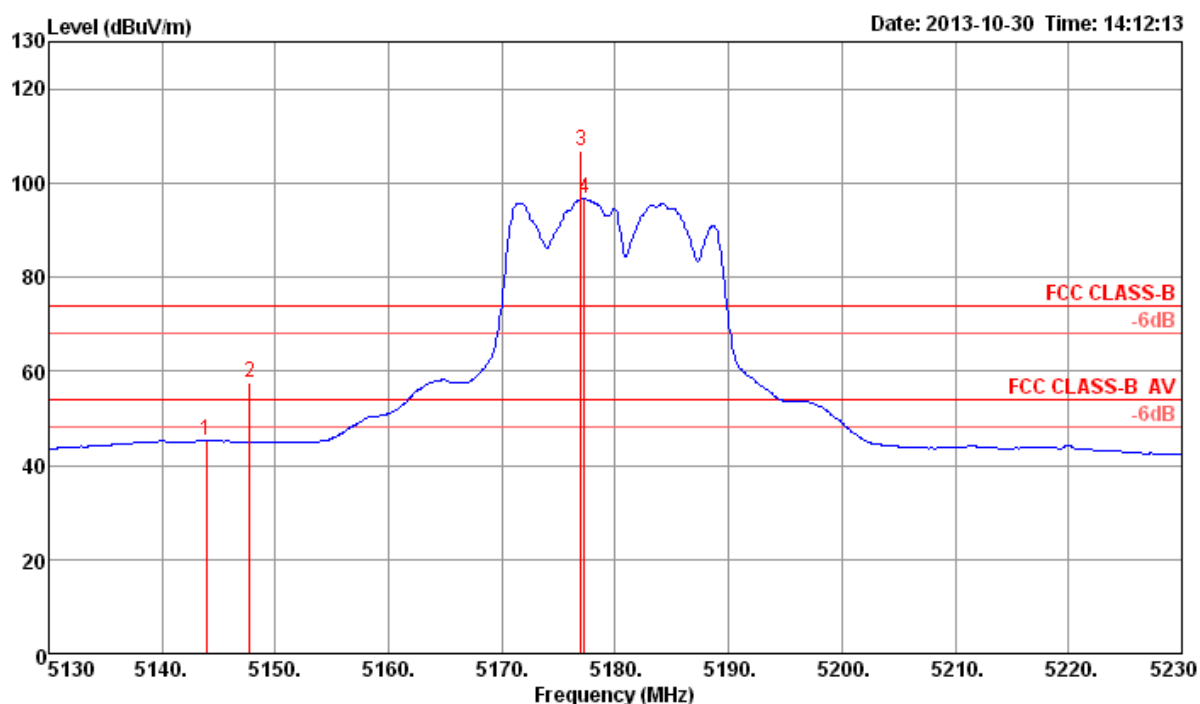
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 36 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5143.91	45.27	54.00	-8.73	43.20	3.43	33.67	35.03	Average	114	152	VERTICAL
2	5147.76	57.44	74.00	-16.56	55.37	3.43	33.67	35.03	Peak	114	152	VERTICAL
3	5176.96	106.65			104.55	3.44	33.70	35.04	Peak	114	152	VERTICAL
4	5177.28	96.57			94.47	3.44	33.70	35.04	Average	114	152	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz.

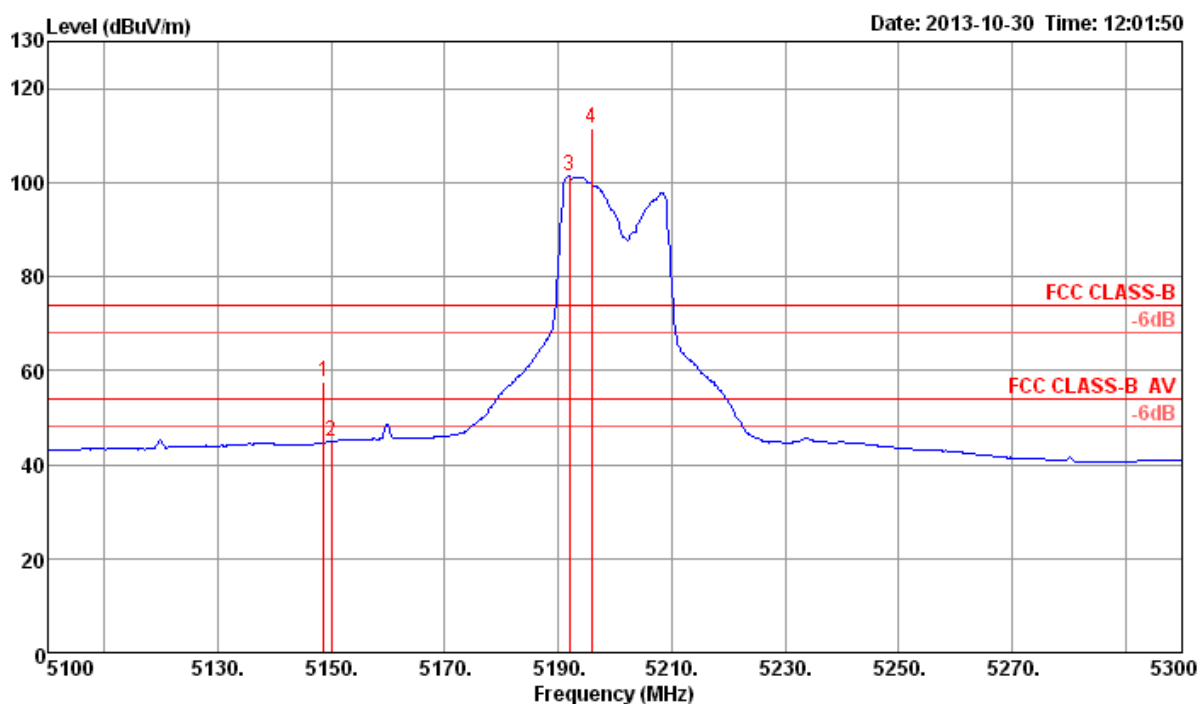
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 40 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5148.72	57.47	74.00	-16.53	55.40	3.43	33.67	35.03	Peak	124	366	HORIZONTAL
2	5150.00	44.82	54.00	-9.18	42.75	3.43	33.67	35.03	Average	124	366	HORIZONTAL
3	5191.99	101.24			99.11	3.44	33.73	35.04	Average	124	366	HORIZONTAL
4	5195.83	111.62			109.45	3.45	33.76	35.04	Peak	124	366	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz.

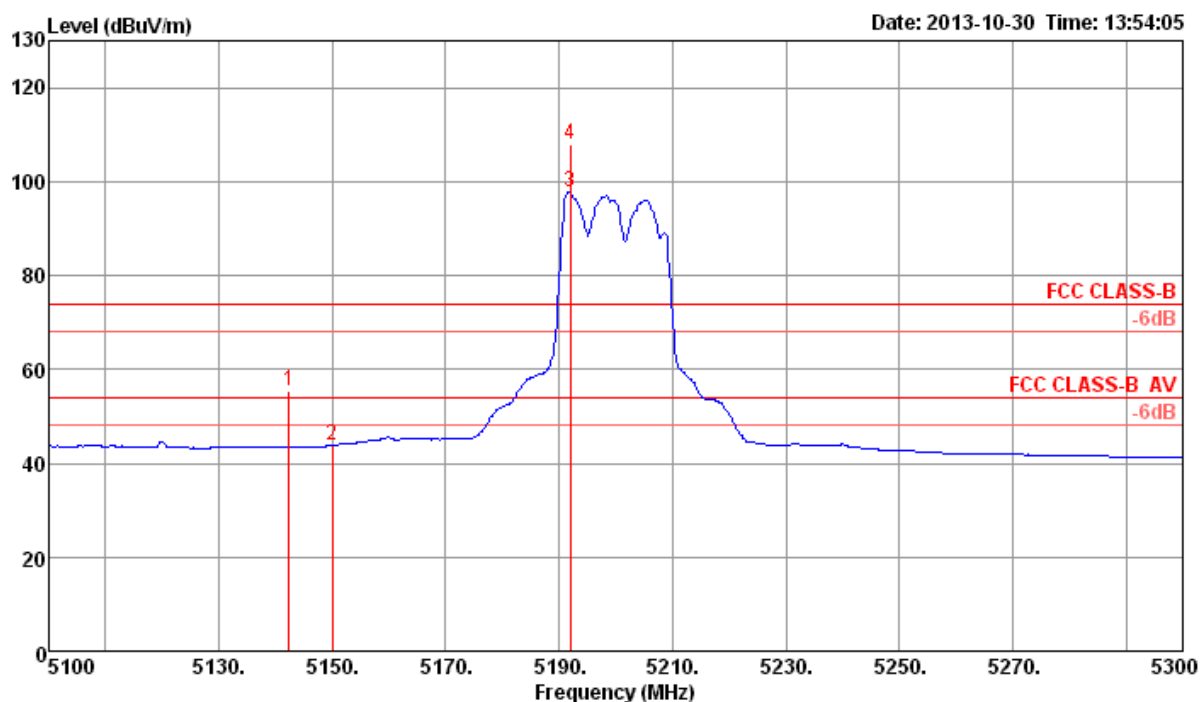
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 40 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5142.31	55.56	74.00	-18.44	53.52	3.43	33.64	35.03	Peak	100	150	VERTICAL
2	5150.00	43.74	54.00	-10.26	41.67	3.43	33.67	35.03	Average	100	150	VERTICAL
3	5191.99	97.79			95.66	3.44	33.73	35.04	Average	100	150	VERTICAL
4	5191.99	108.04			105.91	3.44	33.73	35.04	Peak	100	150	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz.

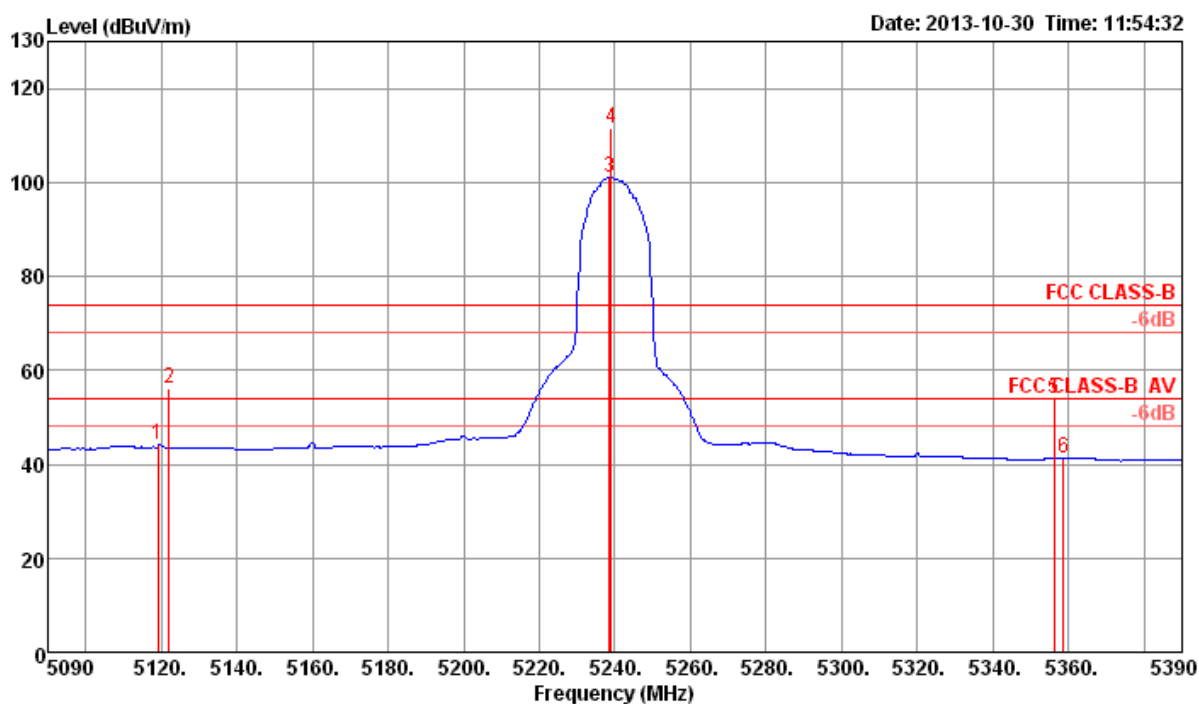
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5119.23	44.02	54.00	-9.98	42.00	3.43	33.61	35.02	Average	123	19	HORIZONTAL
2	5122.12	56.21	74.00	-17.79	54.19	3.43	33.61	35.02	Peak	123	19	HORIZONTAL
3	5238.56	101.04			98.81	3.46	33.82	35.05	Average	123	19	HORIZONTAL
4	5239.04	111.65			109.42	3.46	33.82	35.05	Peak	123	19	HORIZONTAL
5	5356.25	54.11	74.00	-19.89	51.66	3.49	34.03	35.07	Peak	123	19	HORIZONTAL
6	5358.65	41.32	54.00	-12.68	38.87	3.49	34.03	35.07	Average	123	19	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz.

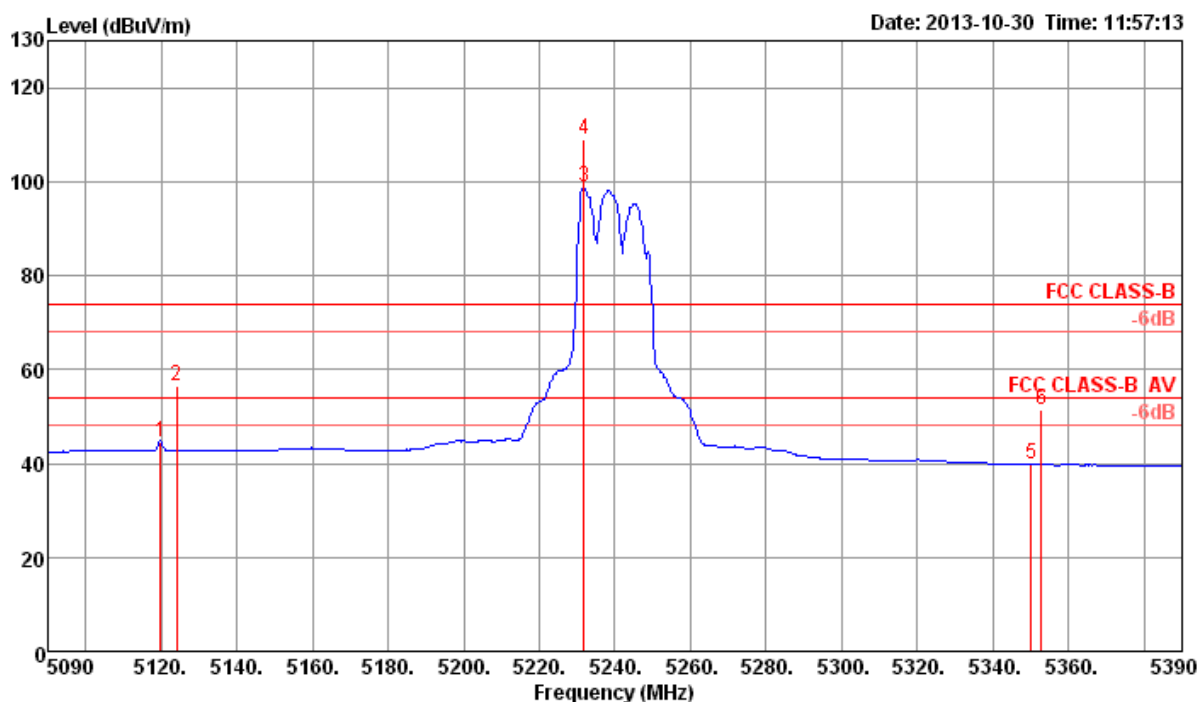
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 48 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	
1	5119.71	44.66	54.00	-9.34	42.64	3.43	33.61	35.02	Average	100	150	VERTICAL
2	5124.04	56.63	74.00	-17.37	54.62	3.43	33.61	35.03	Peak	100	150	VERTICAL
3	5231.83	98.75			96.52	3.46	33.82	35.05	Average	100	150	VERTICAL
4	5231.83	109.13			106.90	3.46	33.82	35.05	Peak	100	150	VERTICAL
5	5350.00	39.71	54.00	-14.29	37.26	3.49	34.03	35.07	Average	100	150	VERTICAL
6	5352.89	51.59	74.00	-22.41	49.14	3.49	34.03	35.07	Peak	100	150	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz.

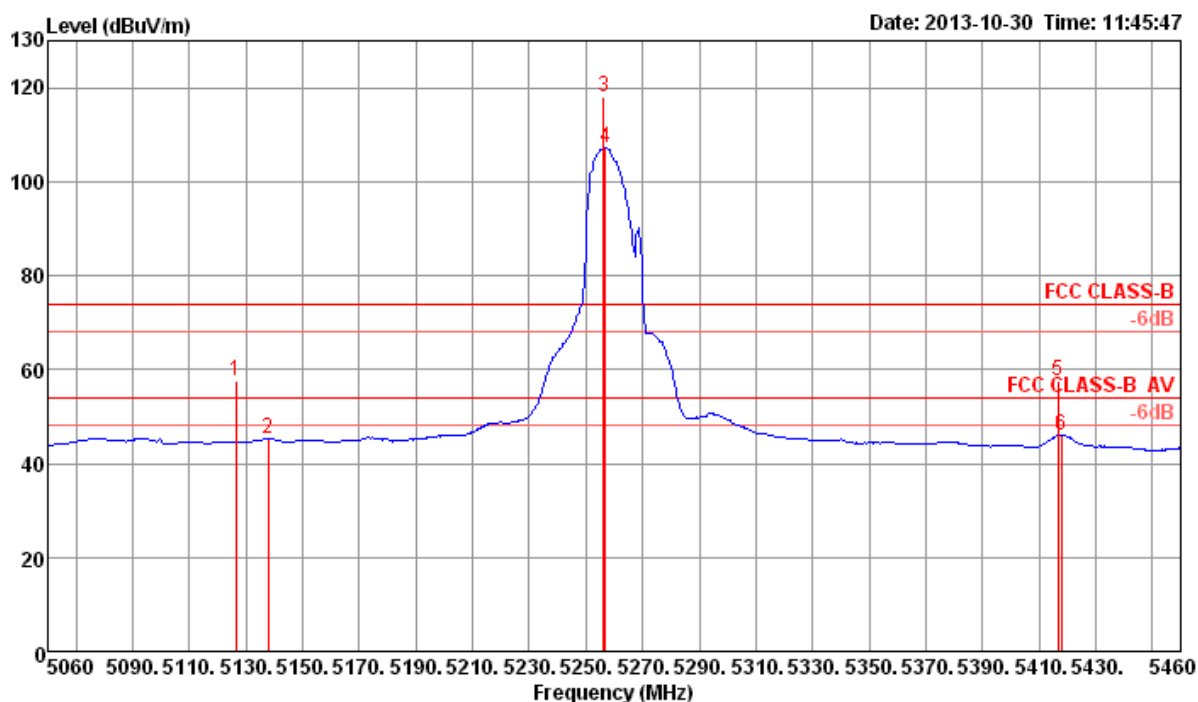
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5126.28	57.73	74.00	-16.27	55.69	3.43	33.64	35.03	Peak	114	53	HORIZONTAL
2	5137.82	45.17	54.00	-8.83	43.13	3.43	33.64	35.03	Average	114	53	HORIZONTAL
3	5256.15	118.15			115.89	3.46	33.85	35.05	Peak	114	53	HORIZONTAL
4	5256.80	107.20			104.94	3.46	33.85	35.05	Average	114	53	HORIZONTAL
5	5416.67	57.48	74.00	-16.52	54.90	3.51	34.15	35.08	Peak	114	53	HORIZONTAL
6	5417.95	46.06	54.00	-7.94	43.48	3.51	34.15	35.08	Average	114	53	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5260 MHz.

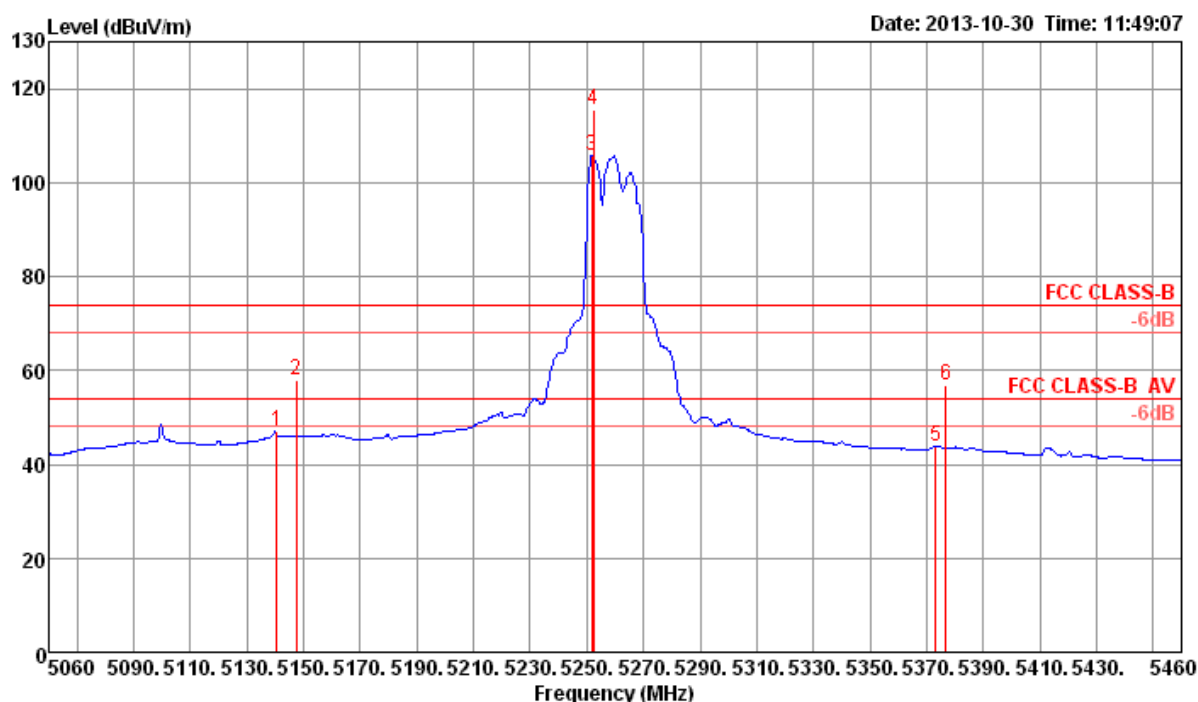
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 52 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5140.39	46.90	54.00	-7.10	44.86	3.43	33.64	35.03	Average	111	151	VERTICAL
2	5147.44	57.95	74.00	-16.05	55.88	3.43	33.67	35.03	Peak	111	151	VERTICAL
3	5251.67	105.85			103.59	3.46	33.85	35.05	Average	111	151	VERTICAL
4	5252.31	115.67			113.41	3.46	33.85	35.05	Peak	111	151	VERTICAL
5	5373.08	43.74	54.00	-10.26	41.26	3.49	34.06	35.07	Average	111	151	VERTICAL
6	5376.92	56.76	74.00	-17.24	54.27	3.50	34.06	35.07	Peak	111	151	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5260 MHz.

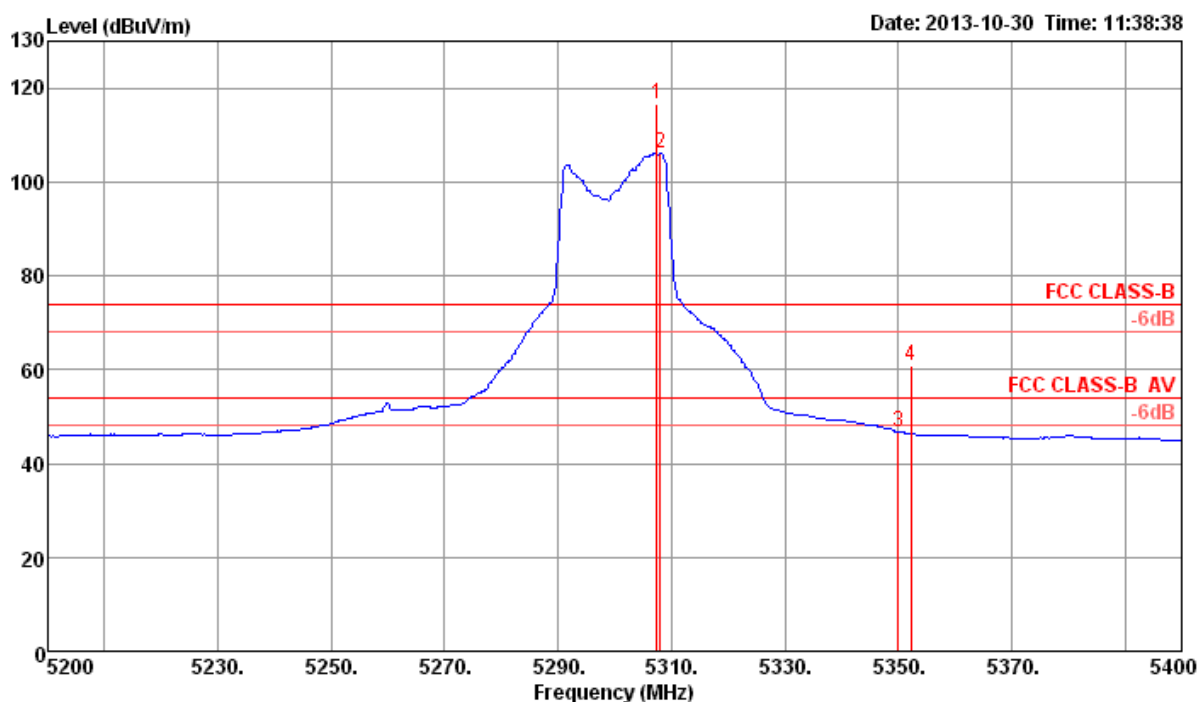
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	5307.37	116.63			114.27	3.48	33.94	35.06	Peak	119	358	HORIZONTAL
2	5308.01	106.02			103.66	3.48	33.94	35.06	Average	119	358	HORIZONTAL
3	5350.00	46.58	54.00	-7.42	44.13	3.49	34.03	35.07	Average	119	358	HORIZONTAL
4	5352.24	60.99	74.00	-13.01	58.54	3.49	34.03	35.07	Peak	119	358	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5300 MHz.

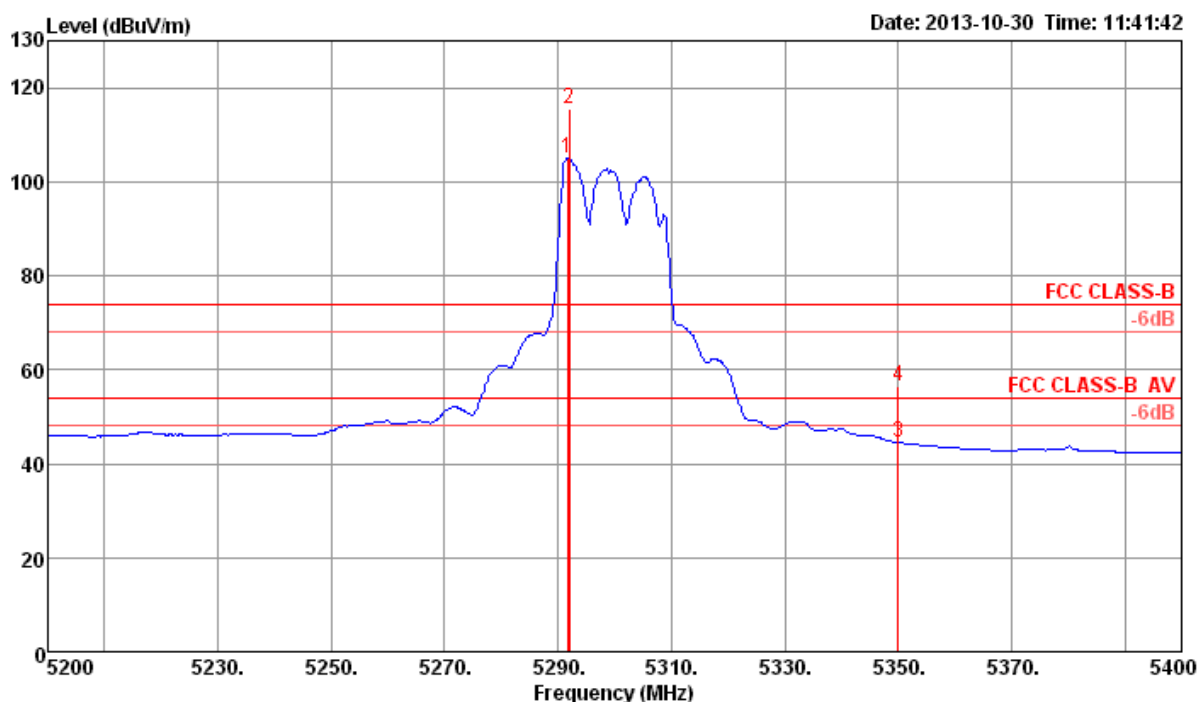
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 60 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	5291.67	105.10			102.78	3.47	33.91	35.06	Average	111	152	VERTICAL
2	5291.99	115.35			113.03	3.47	33.91	35.06	Peak	111	152	VERTICAL
3	5350.00	44.47	54.00	-9.53	42.02	3.49	34.03	35.07	Average	111	152	VERTICAL
4	5350.00	56.38	74.00	-17.62	53.93	3.49	34.03	35.07	Peak	111	152	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5300 MHz.

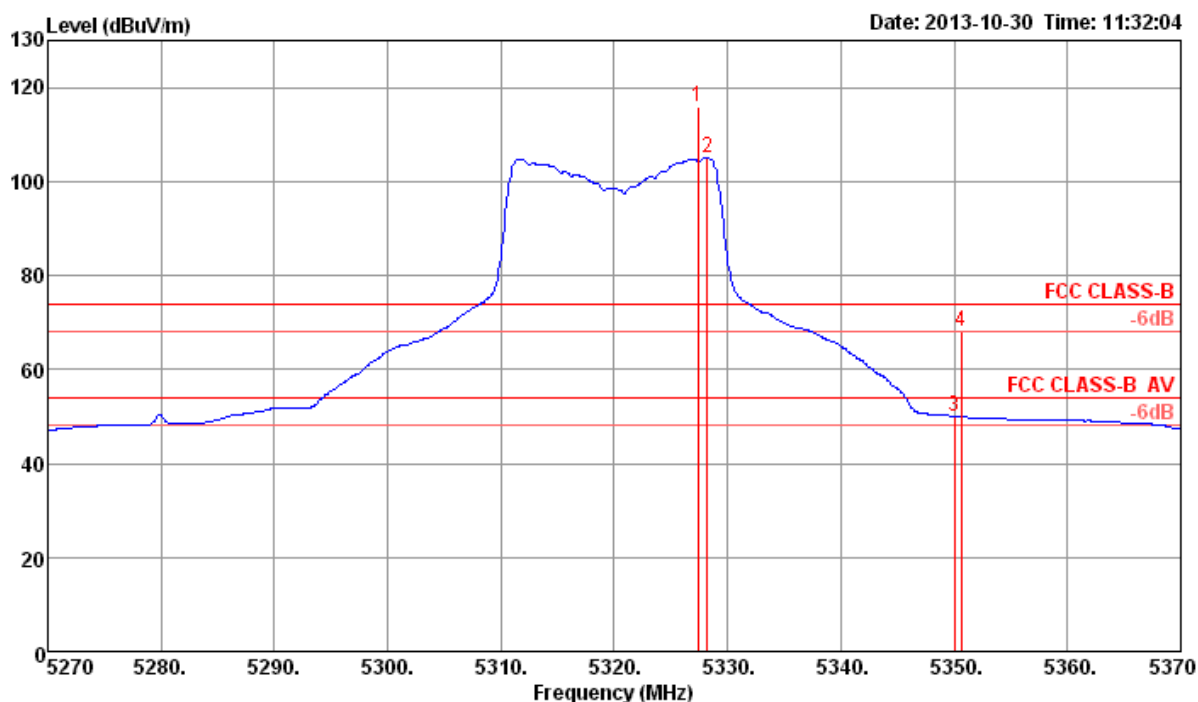
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5327.37	115.74			113.35	3.49	33.97	35.07	Peak	117	1	HORIZONTAL
2	5328.17	104.98			102.59	3.49	33.97	35.07	Average	117	1	HORIZONTAL
3	5350.00	50.02	54.00	-3.98	47.57	3.49	34.03	35.07	Average	117	1	HORIZONTAL
4	5350.64	67.90	74.00	-6.10	65.45	3.49	34.03	35.07	Peak	117	1	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5320 MHz.

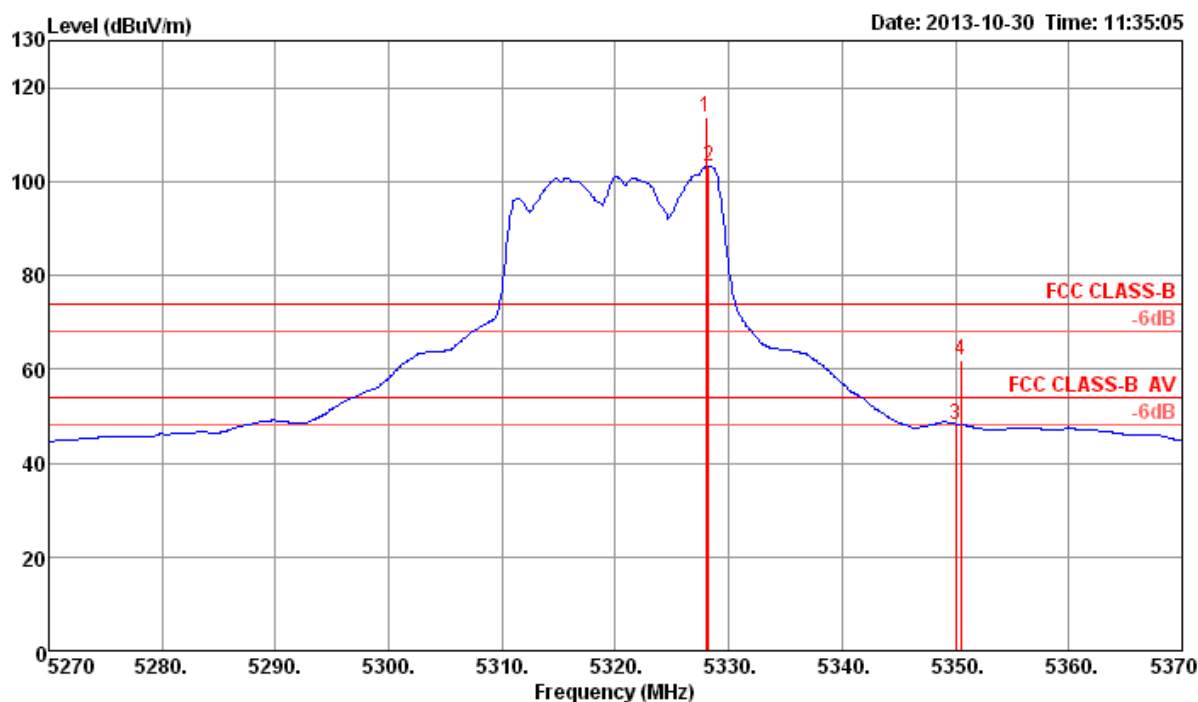
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 64 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5328.01	113.60			111.21	3.49	33.97	35.07	Peak	122	163	VERTICAL
2	5328.17	103.22			100.83	3.49	33.97	35.07	Average	122	163	VERTICAL
3	5350.00	48.33	54.00	-5.67	45.88	3.49	34.03	35.07	Average	122	163	VERTICAL
4	5350.48	61.77	74.00	-12.23	59.32	3.49	34.03	35.07	Peak	122	163	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5320 MHz.

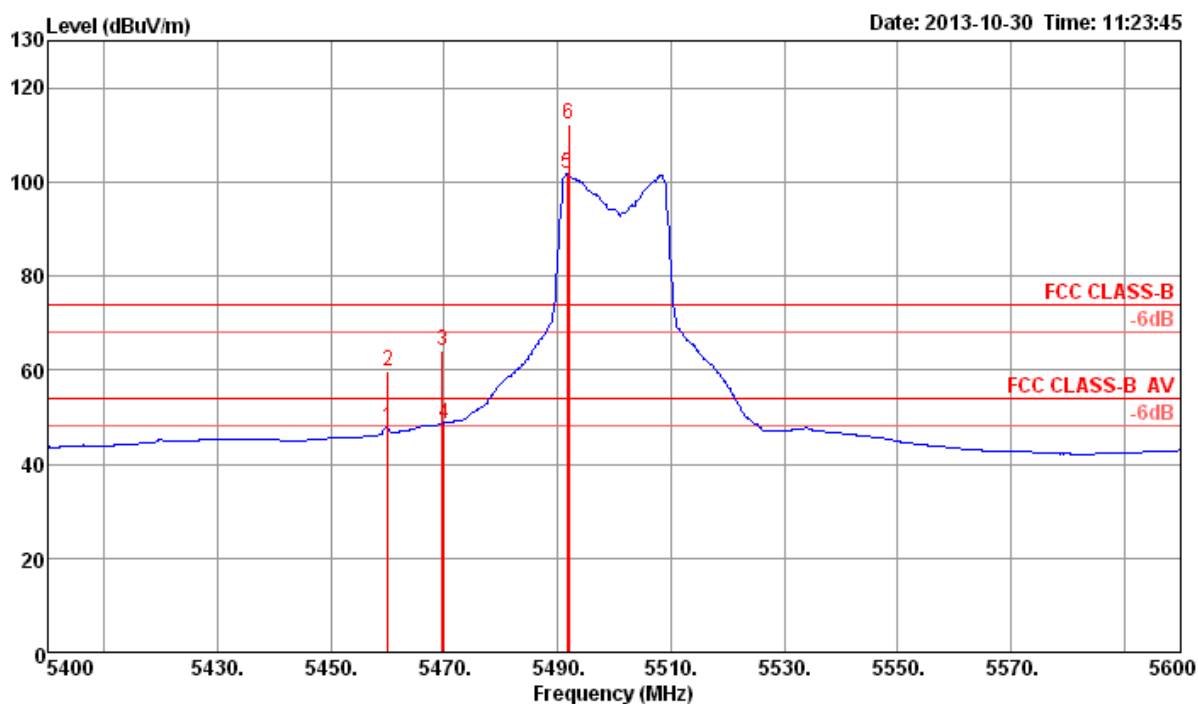
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	5460.00	47.89	54.00	-6.11	45.27	3.52	34.19	35.09	Average	127	5	HORIZONTAL
2	5460.00	59.92	74.00	-14.08	57.30	3.52	34.19	35.09	Peak	127	5	HORIZONTAL
3	5469.68	64.13	74.00	-9.87	61.49	3.52	34.21	35.09	Peak	127	5	HORIZONTAL
4	5470.00	48.68	54.00	-5.32	46.04	3.52	34.21	35.09	Average	127	5	HORIZONTAL
5	5491.67	101.60			98.94	3.53	34.23	35.10	Average	127	5	HORIZONTAL
6	5491.99	112.15			109.49	3.53	34.23	35.10	Peak	127	5	HORIZONTAL

Note 1: Item 5, 6 are the fundamental frequency at 5500 MHz.

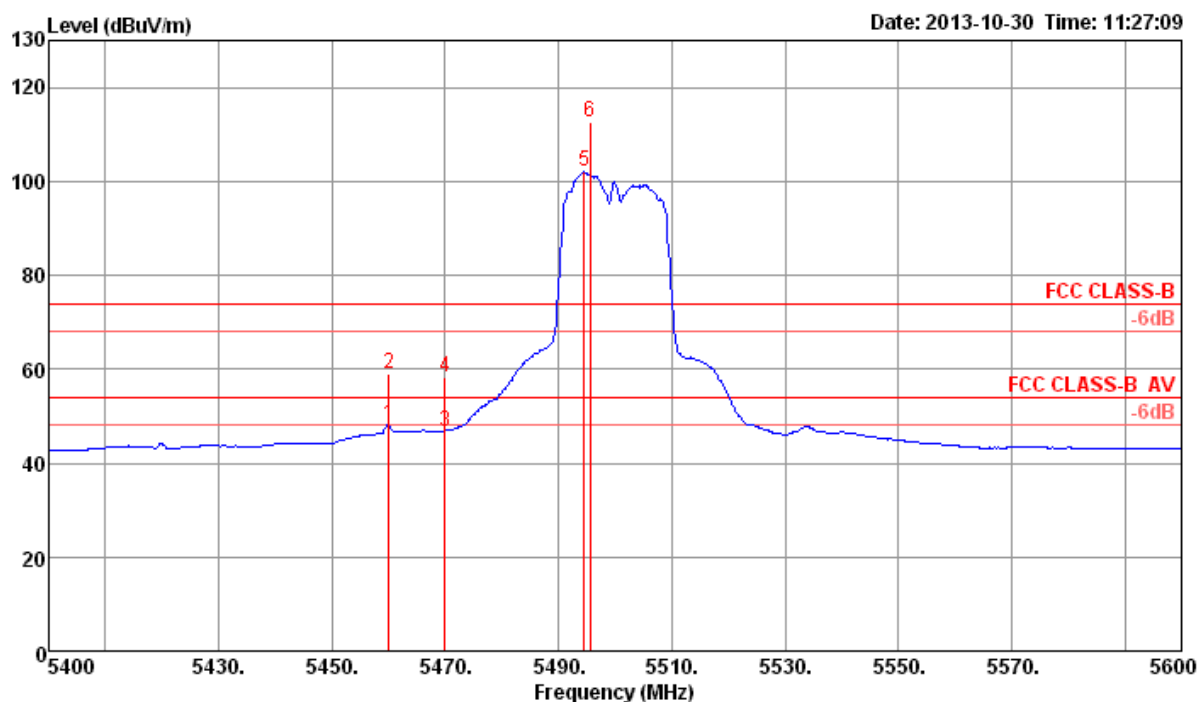
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 100 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5460.00	48.09	54.00	-5.91	45.45	3.52	34.21	35.09	Average	100	70	VERTICAL
2	5460.00	59.02	74.00	-14.98	56.38	3.52	34.21	35.09	Peak	100	70	VERTICAL
3	5470.00	46.80	54.00	-7.20	44.13	3.52	34.24	35.09	Average	100	70	VERTICAL
4	5470.00	58.41	74.00	-15.59	55.74	3.52	34.24	35.09	Peak	100	70	VERTICAL
5	5494.55	101.97			99.28	3.53	34.26	35.10	Average	100	70	VERTICAL
6	5495.51	112.64			109.95	3.53	34.26	35.10	Peak	100	70	VERTICAL

Note 1: Item 5, 6 are the fundamental frequency at 5500 MHz.

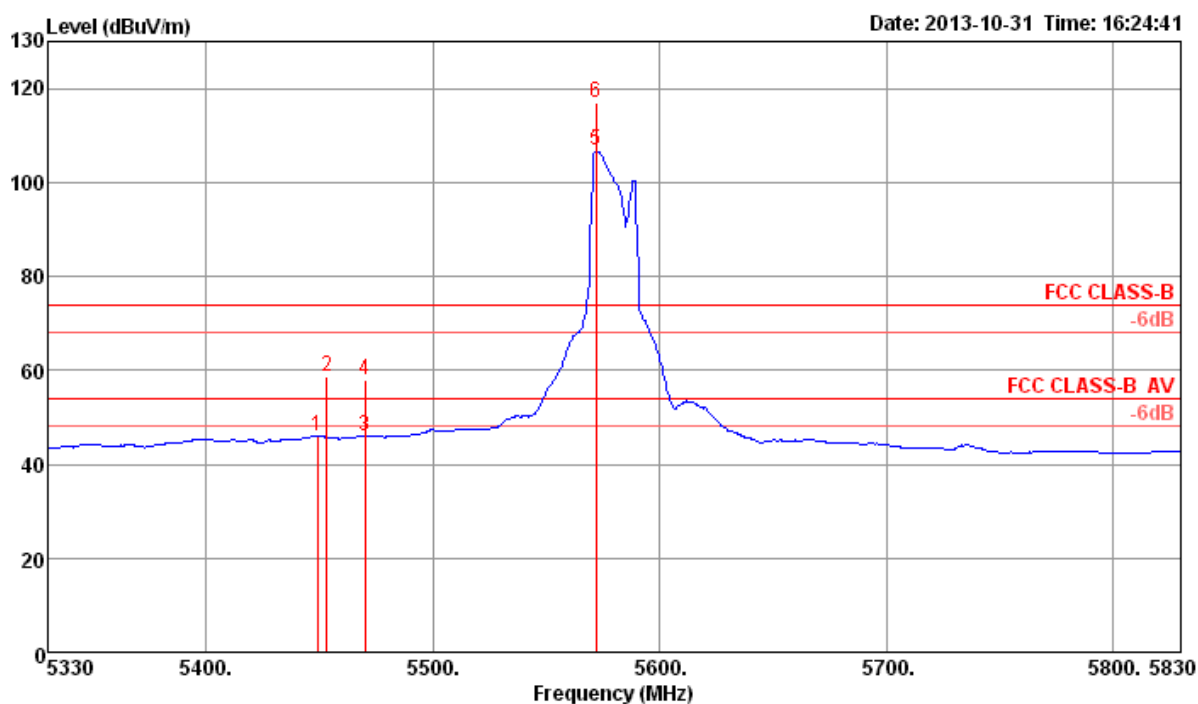
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5449.00	45.91	54.00	-8.09	43.31	3.52	34.17	35.09	Average	100	2	HORIZONTAL
2	5453.00	58.65	74.00	-15.35	56.03	3.52	34.19	35.09	Peak	100	2	HORIZONTAL
3	5470.00	46.01	54.00	-7.99	43.37	3.52	34.21	35.09	Average	100	2	HORIZONTAL
4	5470.00	58.10	74.00	-15.90	55.46	3.52	34.21	35.09	Peak	100	2	HORIZONTAL
5	5572.00	106.71			103.96	3.55	34.31	35.11	Average	100	2	HORIZONTAL
6	5572.00	117.13			114.38	3.55	34.31	35.11	Peak	100	2	HORIZONTAL

Note 1: Item 5, 6 are the fundamental frequency at 5580 MHz.

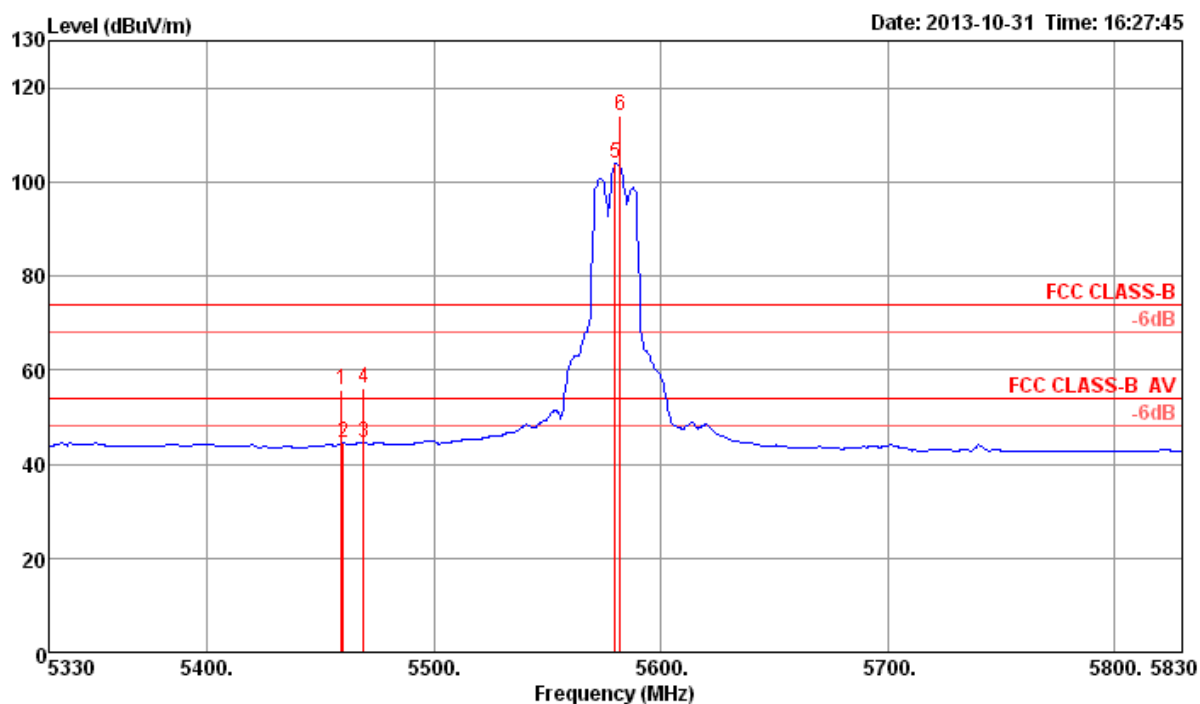
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 116 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5459.00	55.62	74.00	-18.38	52.98	3.52	34.21	35.09	Peak	134	48	VERTICAL
2	5460.00	44.39	54.00	-9.61	41.75	3.52	34.21	35.09	Average	134	48	VERTICAL
3	5469.00	44.48	54.00	-9.52	41.81	3.52	34.24	35.09	Average	134	48	VERTICAL
4	5469.00	56.25	74.00	-17.75	53.58	3.52	34.24	35.09	Peak	134	48	VERTICAL
5	5580.00	104.00			101.24	3.56	34.31	35.11	Average	134	48	VERTICAL
6	5582.00	114.01			111.26	3.56	34.31	35.12	Peak	134	48	VERTICAL

Note 1: Item 5, 6 are the fundamental frequency at 5580 MHz.

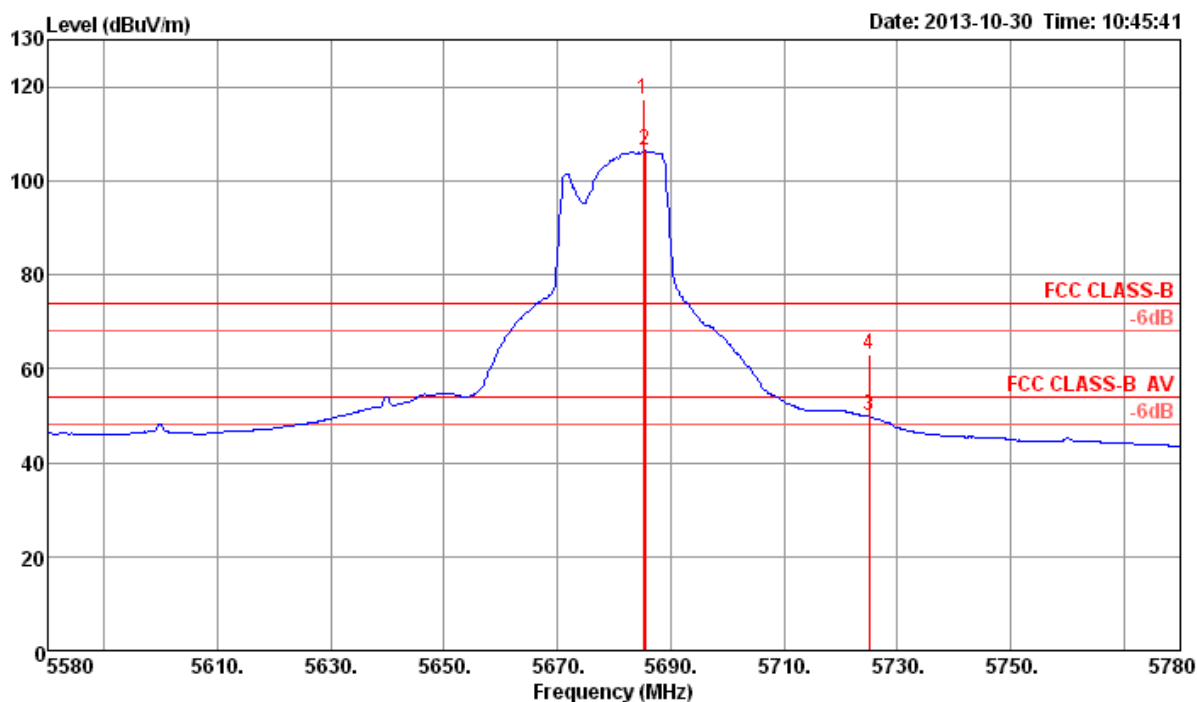
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 136 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	
1	5685.13	117.19			114.41	3.59	34.33	35.14	Peak	120	21	HORIZONTAL
2	5685.45	106.42			103.64	3.59	34.33	35.14	Average	120	21	HORIZONTAL
3	5725.00	49.81	54.00	-4.19	47.02	3.60	34.34	35.15	Average	120	21	HORIZONTAL
4	5725.00	62.98	74.00	-11.02	60.19	3.60	34.34	35.15	Peak	120	21	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5680 MHz.

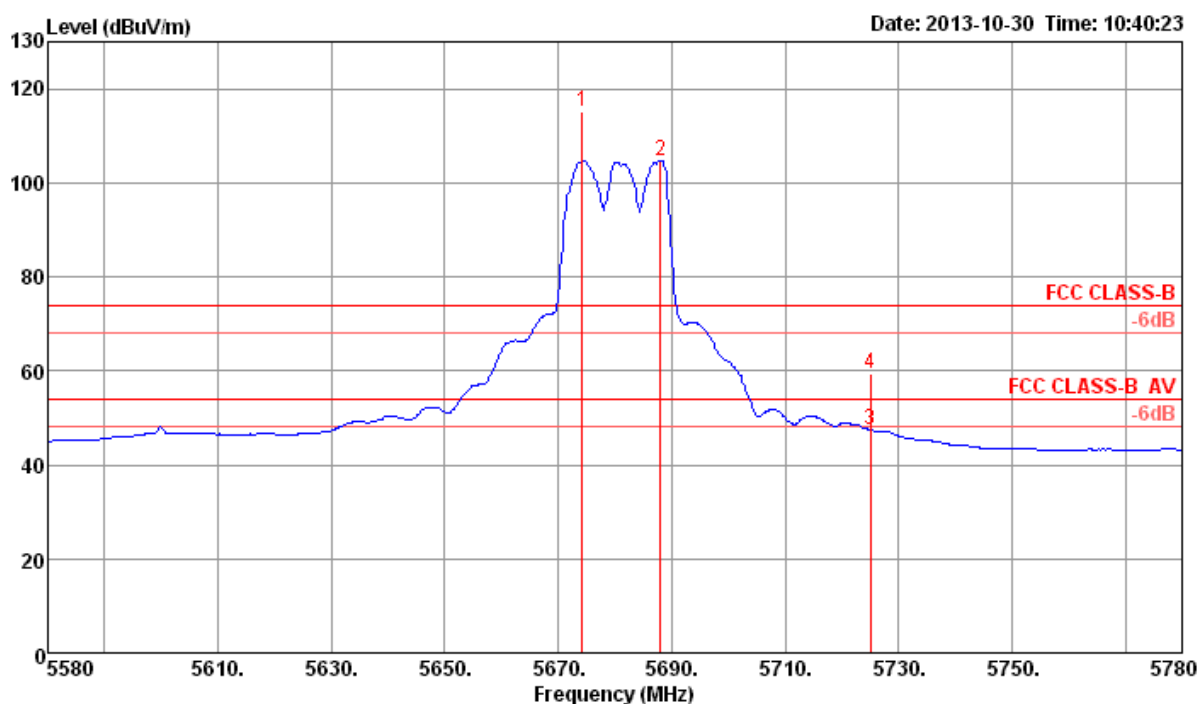
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 136 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5674.23	115.10			112.31	3.59	34.33	35.13	Peak	102	149	VERTICAL
2	5688.01	104.76			101.98	3.59	34.33	35.14	Average	102	149	VERTICAL
3	5725.00	47.43	54.00	-6.57	44.64	3.60	34.34	35.15	Average	102	149	VERTICAL
4	5725.00	59.51	74.00	-14.49	56.72	3.60	34.34	35.15	Peak	102	149	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5680 MHz.

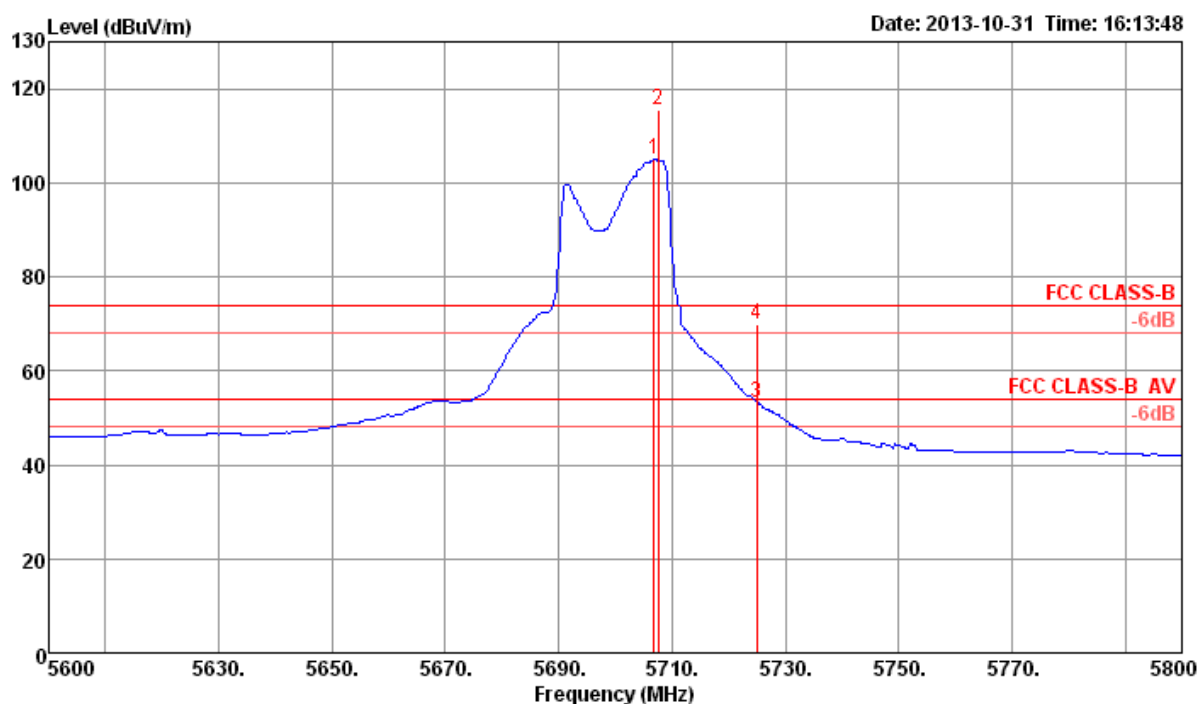
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5706.80	104.90			102.10	3.60	34.34	35.14	121	349	HORIZONTAL
2	5707.60	115.39			112.59	3.60	34.34	35.14	121	349	HORIZONTAL
3	5725.00	53.33	54.00	-0.67	50.54	3.60	34.34	35.15	121	349	HORIZONTAL
4	5725.00	70.04	74.00	-3.96	67.25	3.60	34.34	35.15	121	349	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5700 MHz.

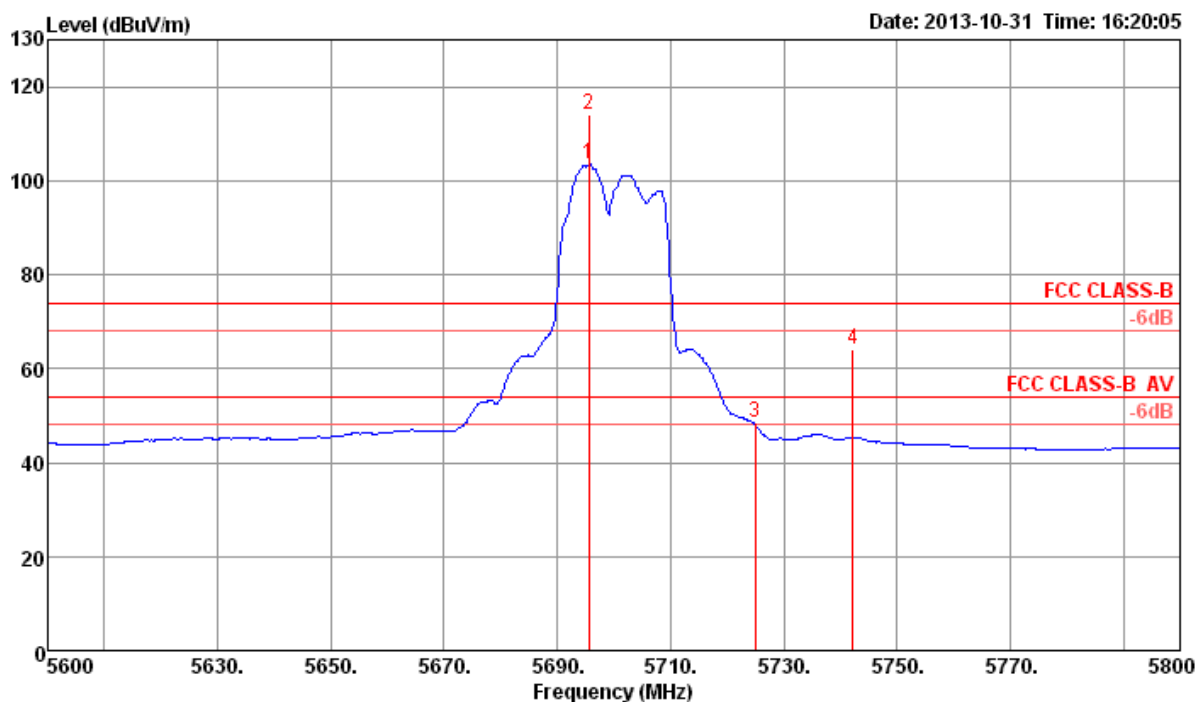
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 20MHz MCS0 / CH 140 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5695.60	103.60			100.81	3.59	34.34	35.14	Average	100	303	VERTICAL
2	5695.60	114.15			111.36	3.59	34.34	35.14	Peak	100	303	VERTICAL
3	5725.00	48.53	54.00	-5.47	45.74	3.60	34.34	35.15	Average	100	303	VERTICAL
4	5742.20	64.16	74.00	-9.84	61.35	3.61	34.35	35.15	Peak	100	303	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5700 MHz.

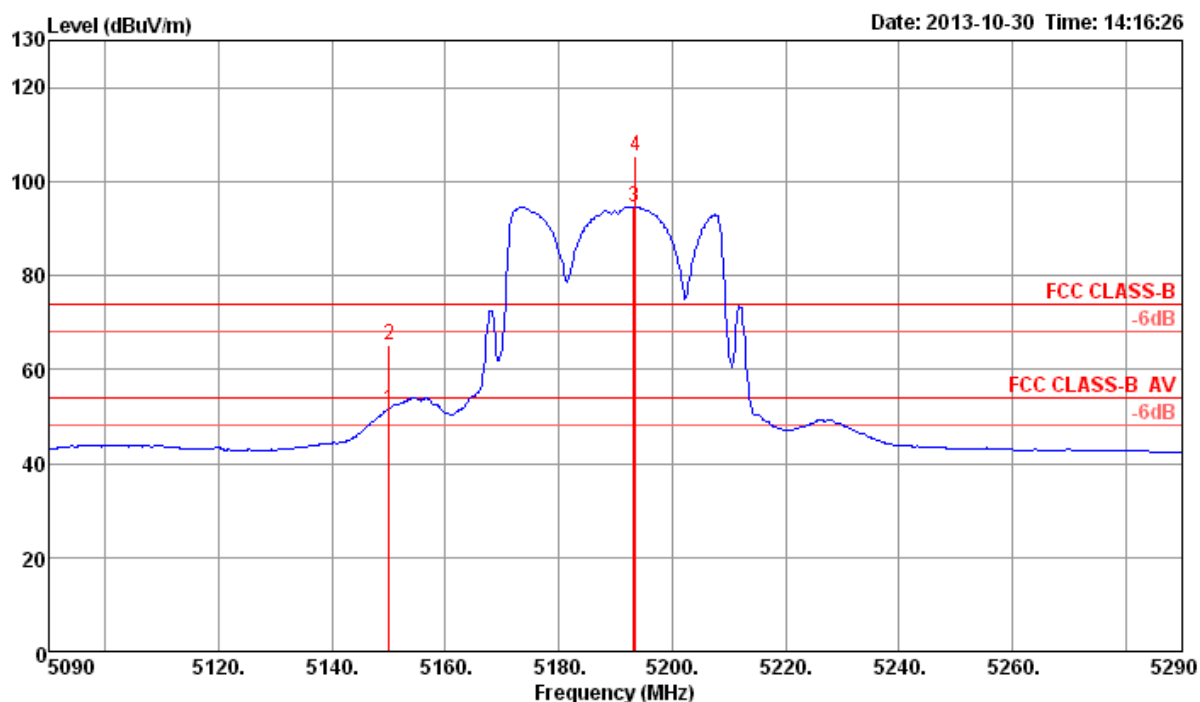
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 38 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5150.00	51.51	54.00	-2.49	49.44	3.43	33.67	35.03	Average	121	24	HORIZONTAL
2	5150.00	65.30	74.00	-8.70	63.23	3.43	33.67	35.03	Peak	121	24	HORIZONTAL
3	5193.21	94.58			92.45	3.44	33.73	35.04	Average	121	24	HORIZONTAL
4	5193.53	105.28			103.15	3.44	33.73	35.04	Peak	121	24	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5190 MHz.

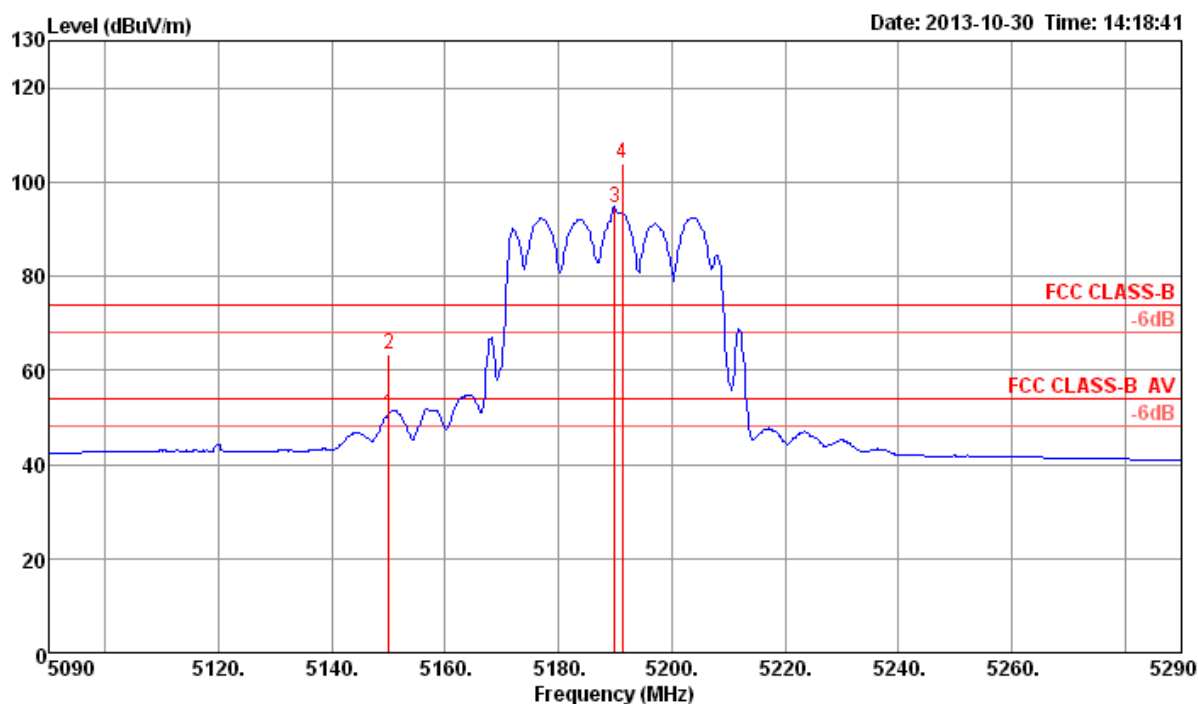
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 38 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	Pol/Phase
1	5150.00	50.55	54.00	-3.45	48.48	3.43	33.67	35.03	Average	100	351	VERTICAL
2	5150.00	63.39	74.00	-10.61	61.32	3.43	33.67	35.03	Peak	100	351	VERTICAL
3	5190.00	94.68			92.55	3.44	33.73	35.04	Average	100	351	VERTICAL
4	5191.28	103.83			101.70	3.44	33.73	35.04	Peak	100	351	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5190 MHz.

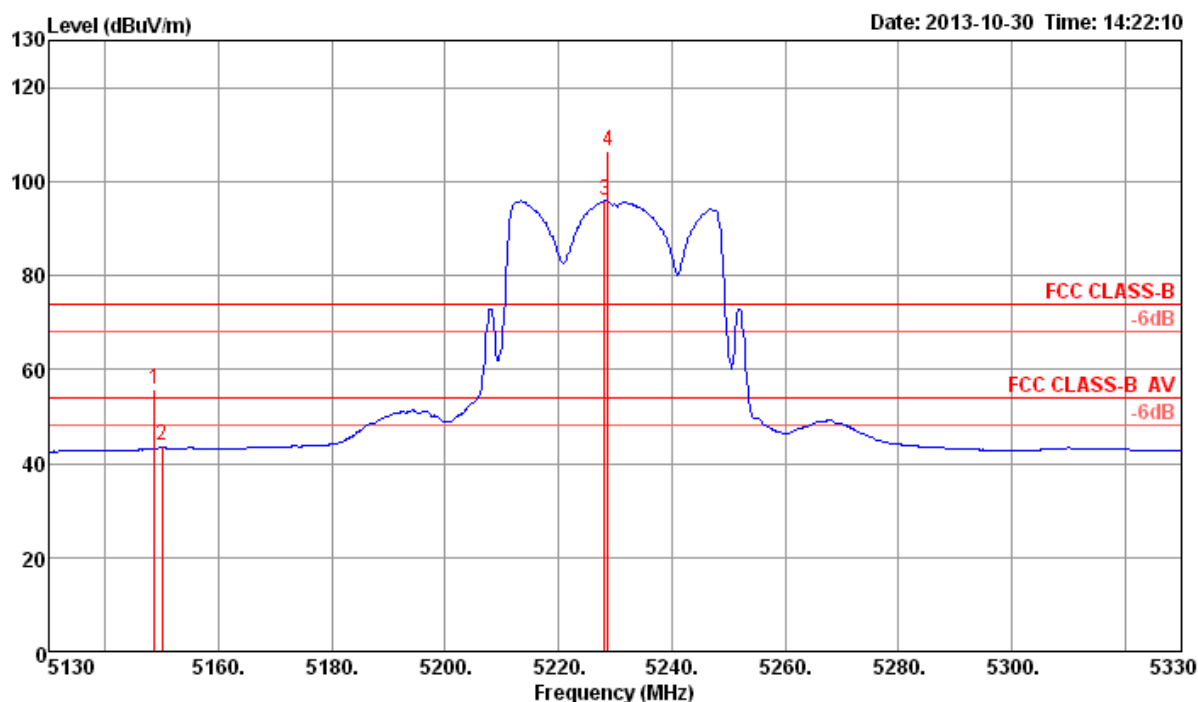
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 46 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5148.72	55.75	74.00	-18.25	53.68	3.43	33.67	35.03	Peak	120	20	HORIZONTAL
2	5150.00	43.76	54.00	-10.24	41.69	3.43	33.67	35.03	Average	120	20	HORIZONTAL
3	5228.08	95.87			93.67	3.46	33.79	35.05	Average	120	20	HORIZONTAL
4	5228.72	106.61			104.38	3.46	33.82	35.05	Peak	120	20	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5230 MHz.

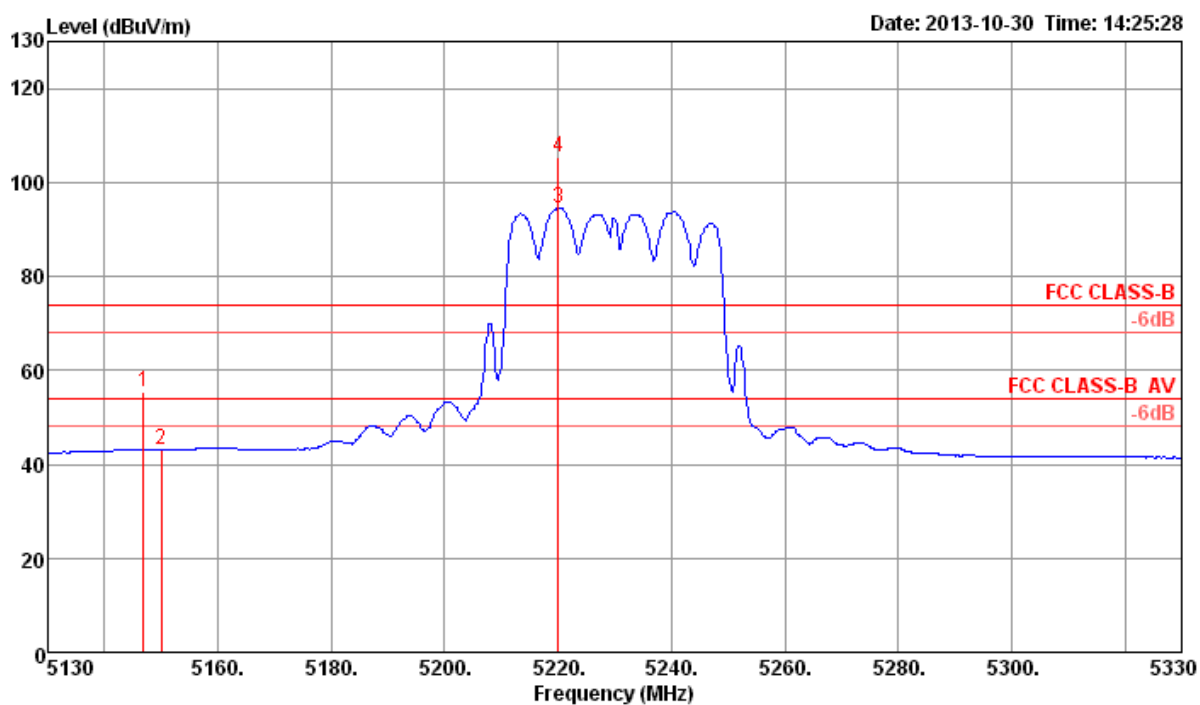
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 46 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5146.80	55.35	74.00	-18.65	53.28	3.43	33.67	35.03	Peak	111	154	VERTICAL
2	5150.00	43.24	54.00	-10.76	41.17	3.43	33.67	35.03	Average	111	154	VERTICAL
3	5220.06	94.59			92.39	3.45	33.79	35.04	Average	111	154	VERTICAL
4	5220.06	105.35			103.15	3.45	33.79	35.04	Peak	111	154	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5230 MHz.

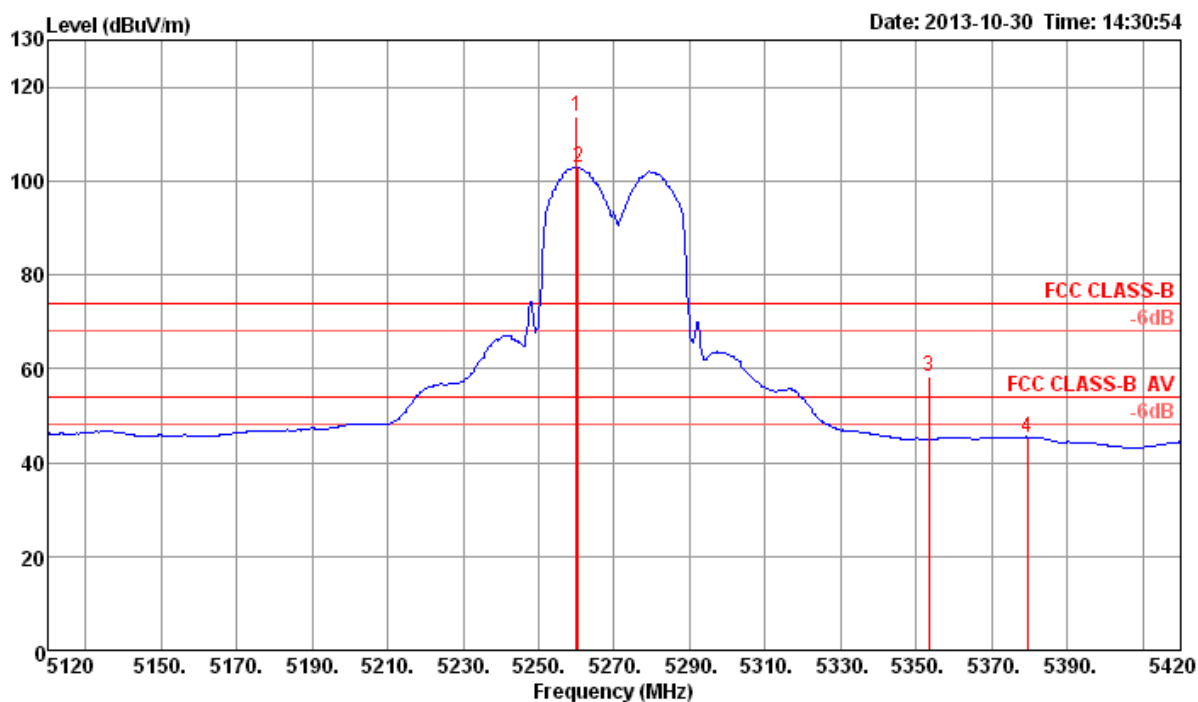
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 54 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	Pol/Phase
1	5259.90	113.78			111.52	3.46	33.85	35.05	Peak	120	1	HORIZONTAL
2	5260.39	102.81			100.55	3.46	33.85	35.05	Average	120	1	HORIZONTAL
3	5353.37	58.46	74.00	-15.54	56.01	3.49	34.03	35.07	Peak	120	1	HORIZONTAL
4	5379.33	45.42	54.00	-8.58	42.94	3.50	34.06	35.08	Average	120	1	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5270 MHz.

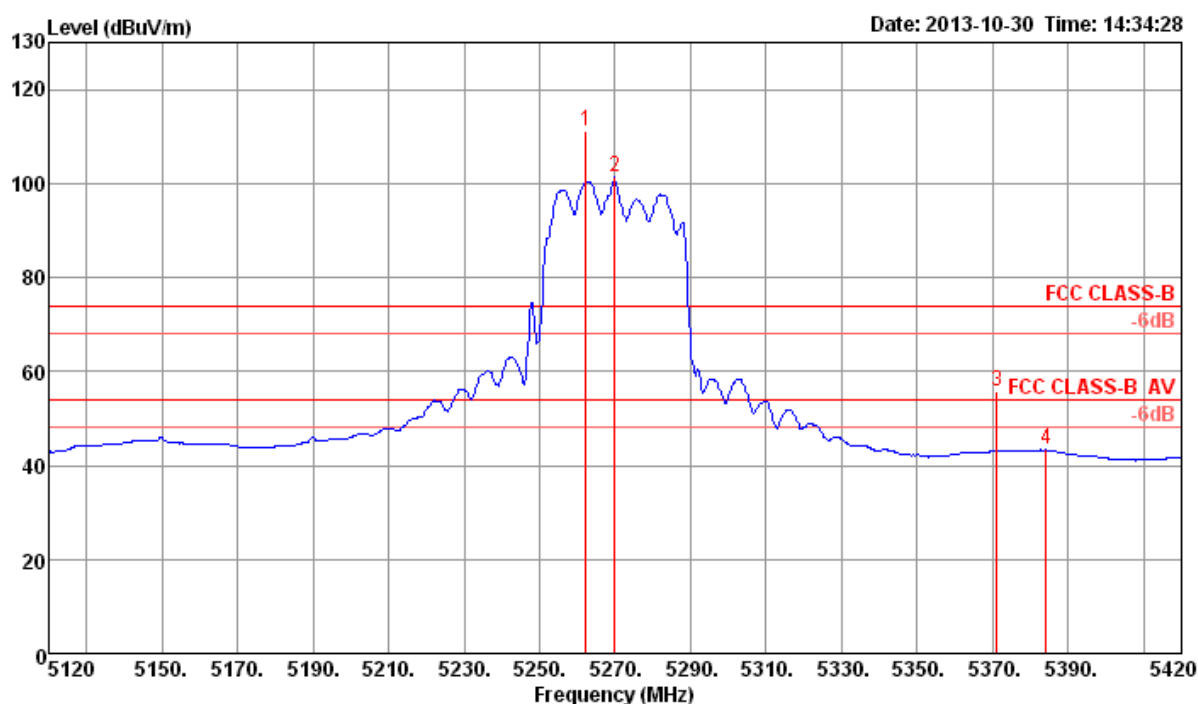
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 54 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5262.31	111.31			109.05	3.46	33.85	35.05	Peak	124	149	VERTICAL
2	5270.00	101.37			99.08	3.46	33.88	35.05	Average	124	149	VERTICAL
3	5371.15	55.68	74.00	-18.32	53.20	3.49	34.06	35.07	Peak	124	149	VERTICAL
4	5384.14	43.28	54.00	-10.72	40.77	3.50	34.09	35.08	Average	124	149	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5270 MHz.

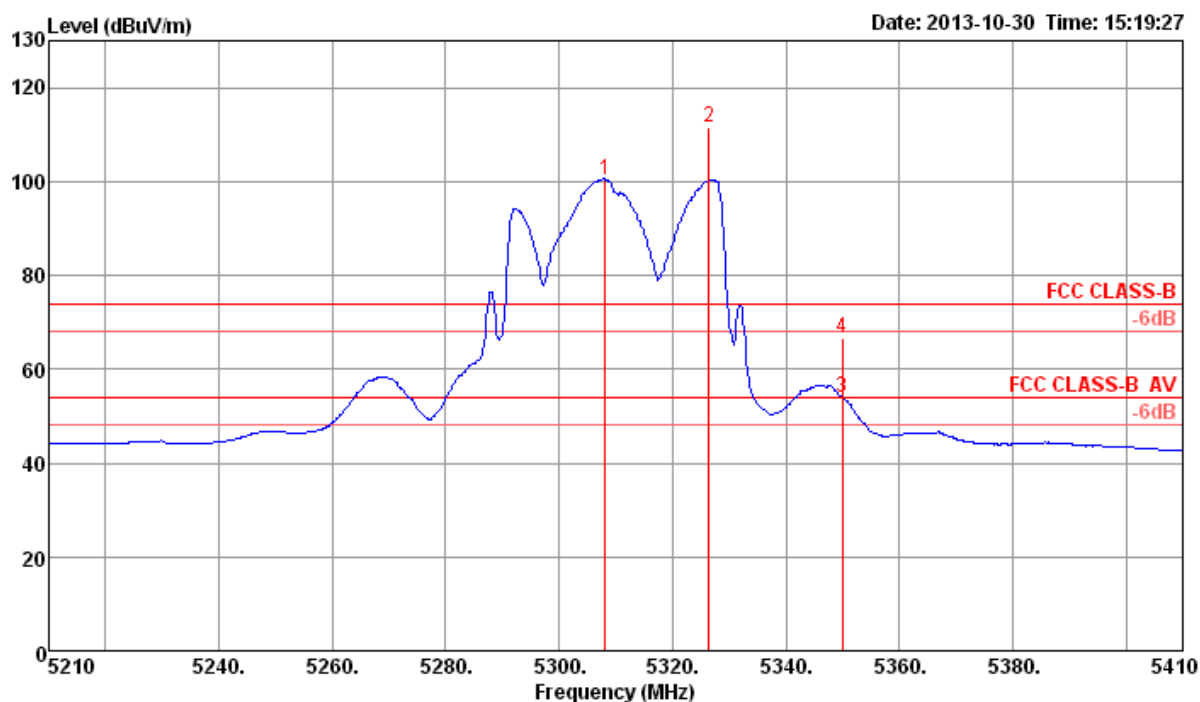
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 62 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5308.08	100.48			98.12	3.48	33.94	35.06	Average	128	57	HORIZONTAL
2	5326.35	111.36			108.96	3.49	33.97	35.06	Peak	128	57	HORIZONTAL
3	5350.00	53.78	54.00	-0.22	51.33	3.49	34.03	35.07	Average	128	57	HORIZONTAL
4	5350.00	66.56	74.00	-7.44	64.11	3.49	34.03	35.07	Peak	128	57	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5310 MHz.

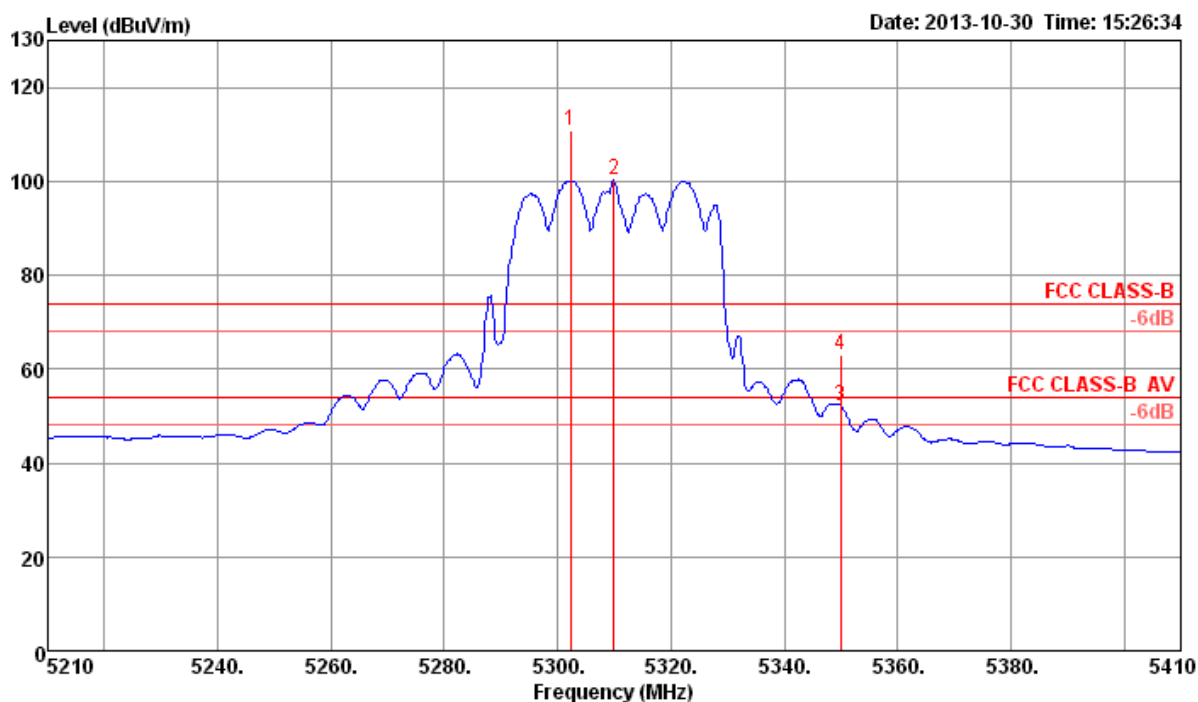
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 62 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5302.31	110.90			108.54	3.48	33.94	35.06	Peak	110	153	VERTICAL
2	5310.00	100.18			97.82	3.48	33.94	35.06	Average	110	153	VERTICAL
3	5350.00	52.11	54.00	-1.89	49.66	3.49	34.03	35.07	Average	110	153	VERTICAL
4	5350.00	62.83	74.00	-11.17	60.38	3.49	34.03	35.07	Peak	110	153	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5310 MHz.

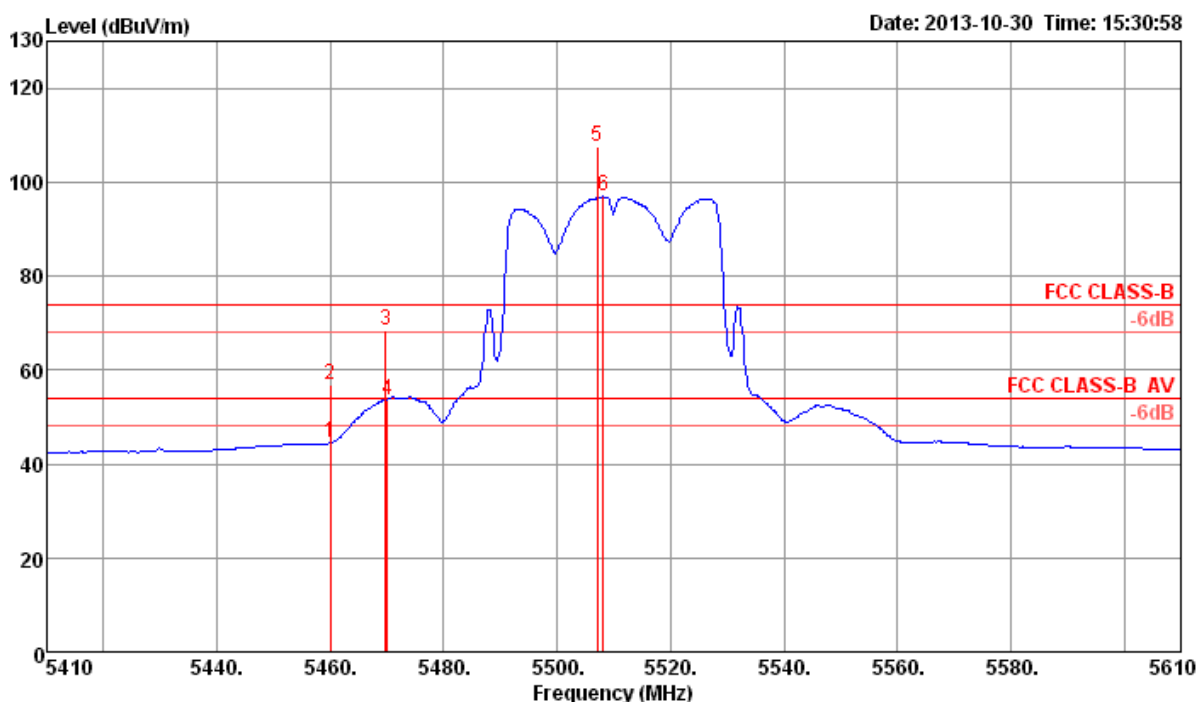
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 102 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5460.00	44.39	54.00	-9.61	41.77	3.52	34.19	35.09	Average	123	19	HORIZONTAL
2	5460.00	56.75	74.00	-17.25	54.13	3.52	34.19	35.09	Peak	123	19	HORIZONTAL
3	5469.68	68.27	74.00	-5.73	65.63	3.52	34.21	35.09	Peak	123	19	HORIZONTAL
4	5470.00	53.73	54.00	-0.27	51.09	3.52	34.21	35.09	Average	123	19	HORIZONTAL
5	5507.12	107.69			105.00	3.54	34.25	35.10	Peak	123	19	HORIZONTAL
6	5508.08	96.92			94.23	3.54	34.25	35.10	Average	123	19	HORIZONTAL

Note 1: Item 5, 6 are the fundamental frequency at 5510 MHz.

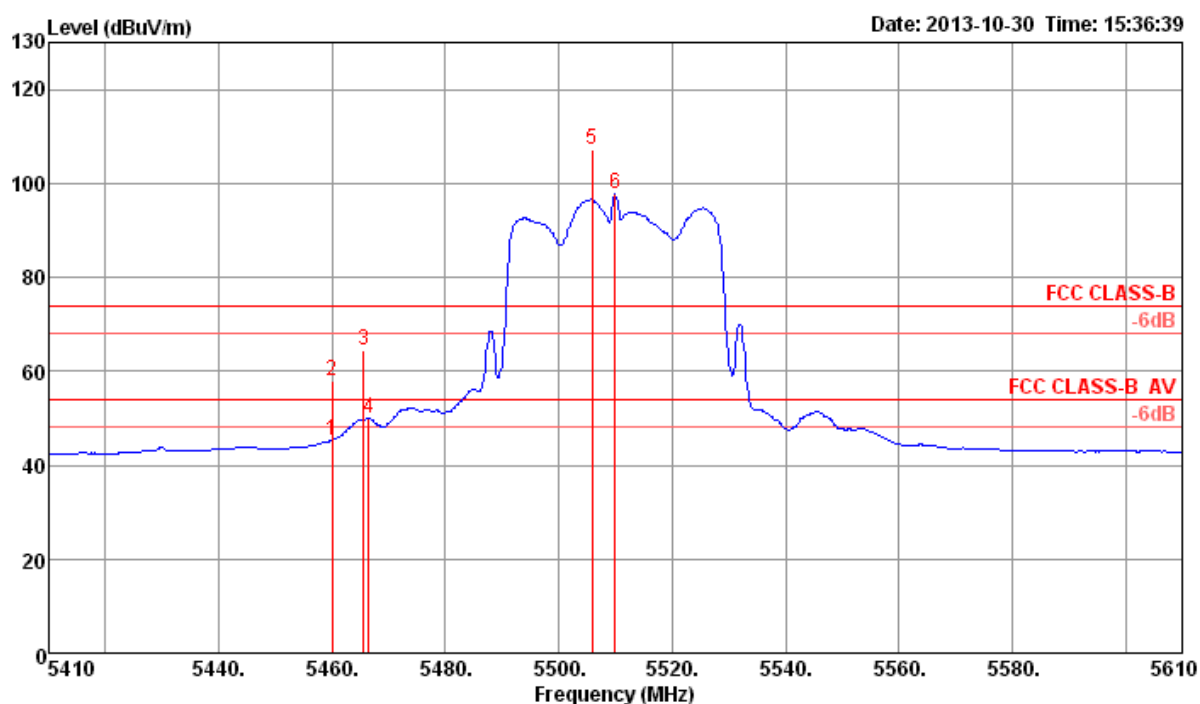
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 102 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5460.00	45.28	54.00	-8.72	42.64	3.52	34.21	35.09	Average	100	71	VERTICAL
2	5460.00	57.88	74.00	-16.12	55.24	3.52	34.21	35.09	Peak	100	71	VERTICAL
3	5465.51	64.38	74.00	-9.62	61.74	3.52	34.21	35.09	Peak	100	71	VERTICAL
4	5466.47	49.92	54.00	-4.08	47.28	3.52	34.21	35.09	Average	100	71	VERTICAL
5	5505.83	107.05			104.33	3.54	34.28	35.10	Peak	100	71	VERTICAL
6	5510.00	97.88			95.16	3.54	34.28	35.10	Average	100	71	VERTICAL

Note 1: Item 5, 6 are the fundamental frequency at 5510 MHz.

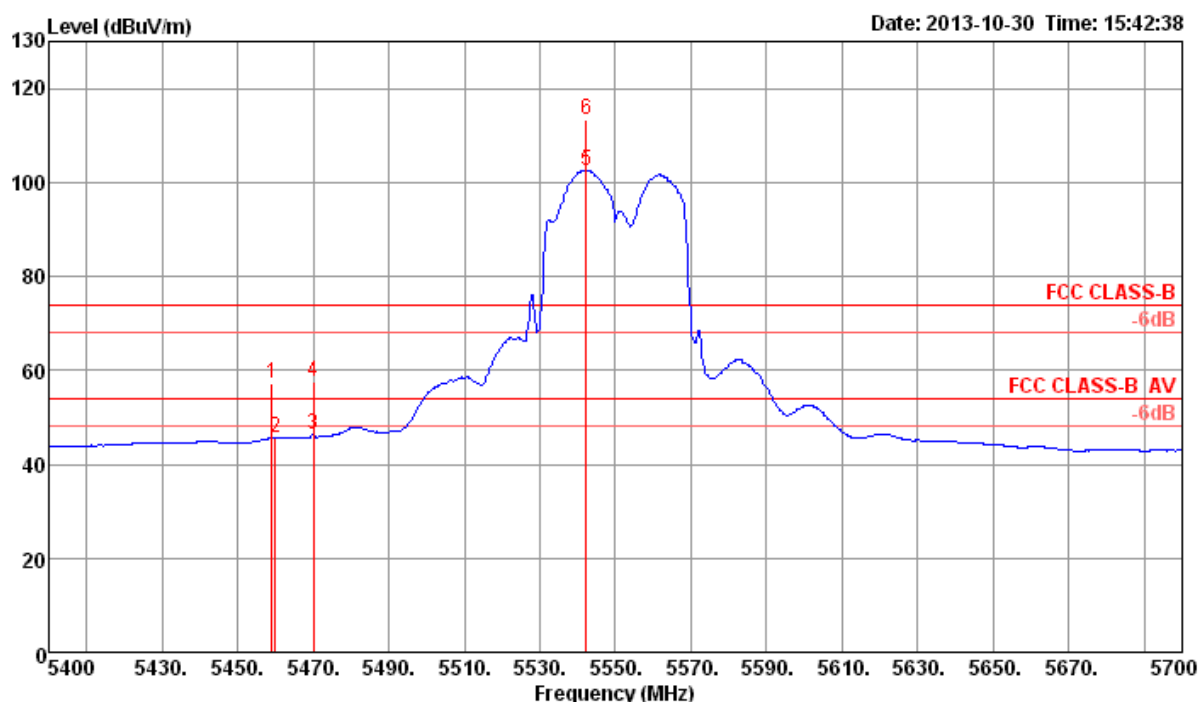
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 110 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5459.04	57.28	74.00	-16.72	54.66	3.52	34.19	35.09	Peak	113	8	HORIZONTAL
2	5460.00	45.57	54.00	-8.43	42.95	3.52	34.19	35.09	Average	113	8	HORIZONTAL
3	5470.00	46.18	54.00	-7.82	43.54	3.52	34.21	35.09	Average	113	8	HORIZONTAL
4	5470.00	57.67	74.00	-16.33	55.03	3.52	34.21	35.09	Peak	113	8	HORIZONTAL
5	5542.31	102.57			99.84	3.55	34.29	35.11	Average	113	8	HORIZONTAL
6	5542.31	113.39			110.66	3.55	34.29	35.11	Peak	113	8	HORIZONTAL

Note 1: Item 5, 6 are the fundamental frequency at 5550 MHz.

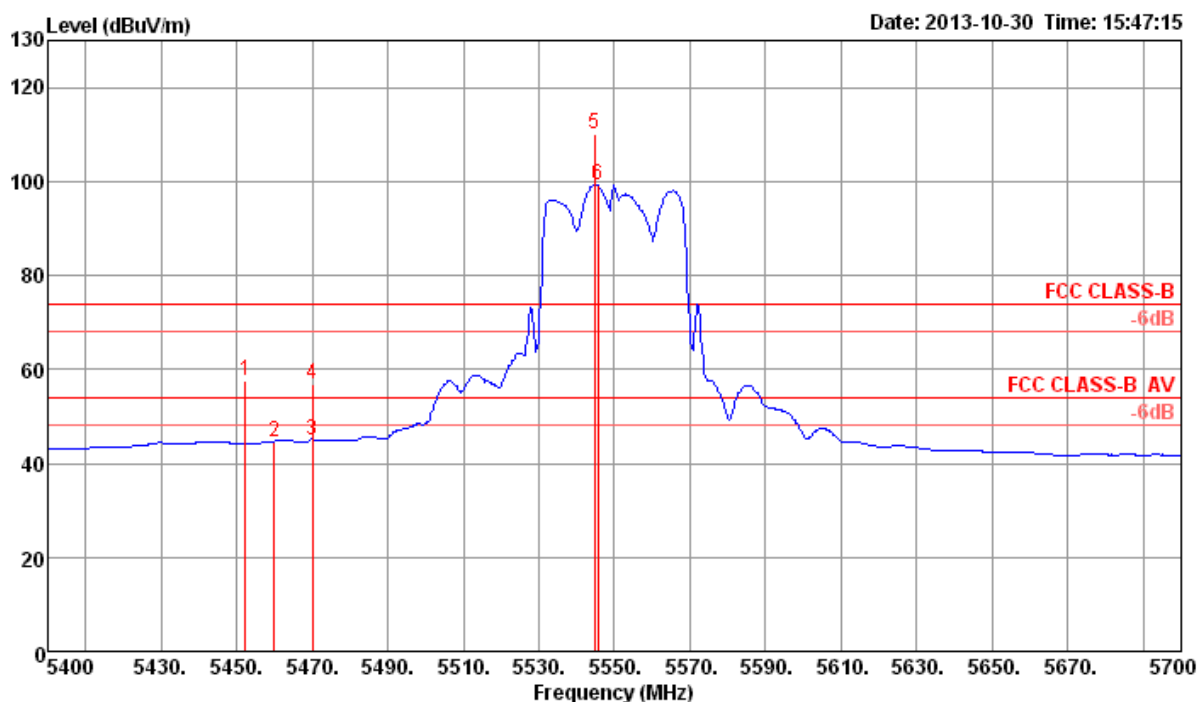
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 110 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	cm	deg	
1	5452.31	57.49	74.00	-16.51	54.85	3.52	34.21	35.09	Peak	100	69	VERTICAL
2	5460.00	44.68	54.00	-9.32	42.04	3.52	34.21	35.09	Average	100	69	VERTICAL
3	5470.00	45.06	54.00	-8.94	42.39	3.52	34.24	35.09	Average	100	69	VERTICAL
4	5470.00	56.74	74.00	-17.26	54.07	3.52	34.24	35.09	Peak	100	69	VERTICAL
5	5544.71	110.09			107.34	3.55	34.31	35.11	Peak	100	69	VERTICAL
6	5545.67	99.29			96.54	3.55	34.31	35.11	Average	100	69	VERTICAL

Note 1: Item 5, 6 are the fundamental frequency at 5550 MHz.

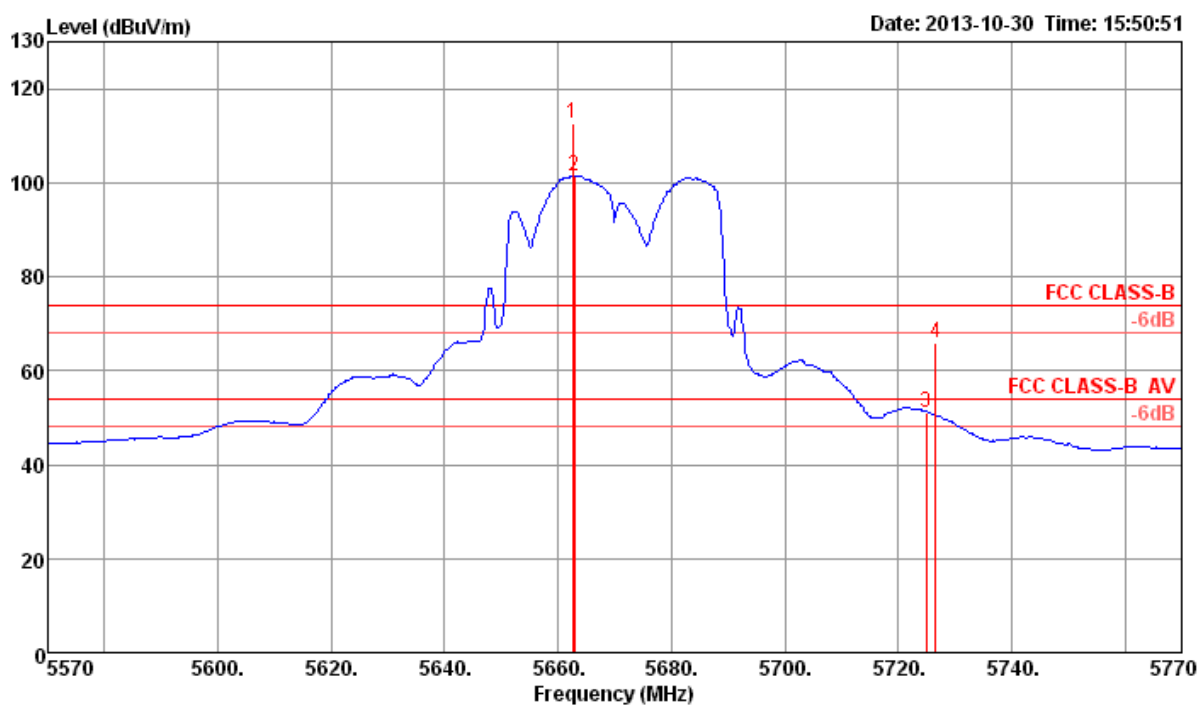
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 134 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5662.63	112.62			109.83	3.59	34.33	35.13	Peak	120	9	HORIZONTAL
2	5662.95	101.51			98.72	3.59	34.33	35.13	Average	120	9	HORIZONTAL
3	5725.00	51.17	54.00	-2.83	48.38	3.60	34.34	35.15	Average	120	9	HORIZONTAL
4	5726.60	65.74	74.00	-8.26	62.95	3.60	34.34	35.15	Peak	120	9	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5670 MHz.

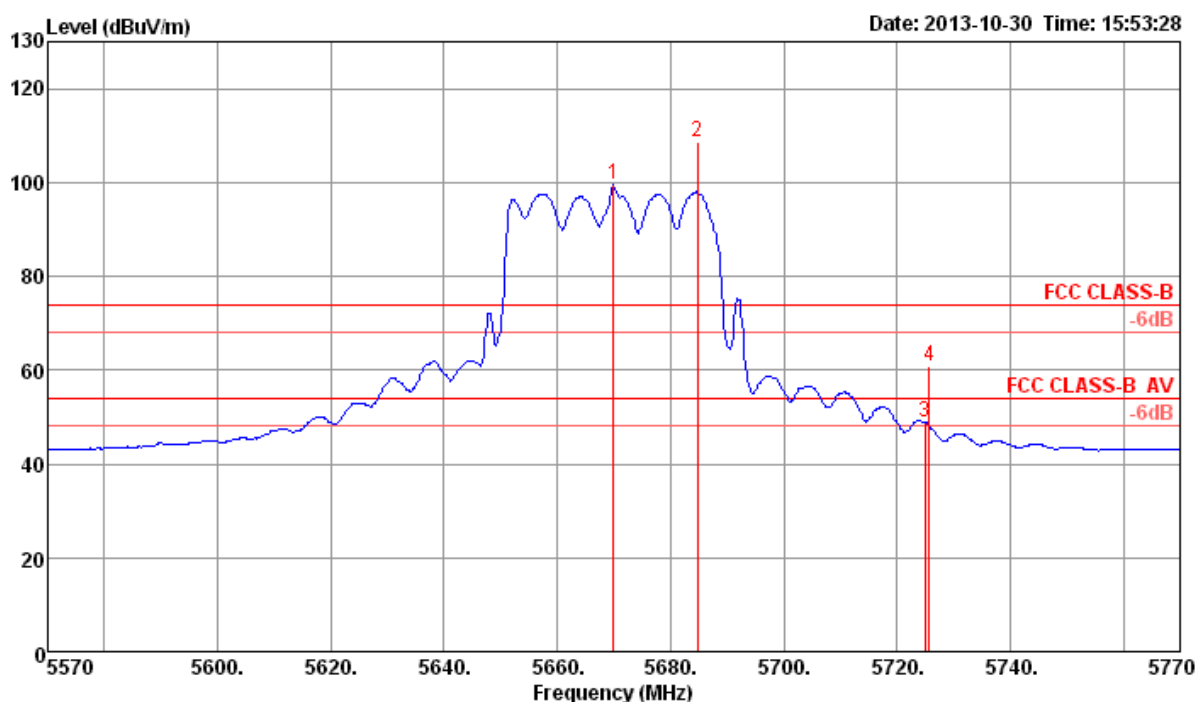
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11n 40MHz MCS0 / CH 134 / Ant. 1 + 2 + 3 + 4		
Temperature	24°C	Humidity	59%
Test Engineer	Kenneth Huang	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	cm	deg	
1	5670.00	99.40			96.61	3.59	34.33	35.13	Average	100	149	VERTICAL
2	5684.74	108.61			105.83	3.59	34.33	35.14	Peak	100	149	VERTICAL
3	5725.00	48.71	54.00	-5.29	45.92	3.60	34.34	35.15	Average	100	149	VERTICAL
4	5725.64	60.90	74.00	-13.10	58.11	3.60	34.34	35.15	Peak	100	149	VERTICAL

Note 1: Item 1, 2 are the fundamental frequency at 5670 MHz.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

3.8 Frequency Stability Measurement

3.8.1 Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or ± 20 ppm (IEEE 802.11n specification).

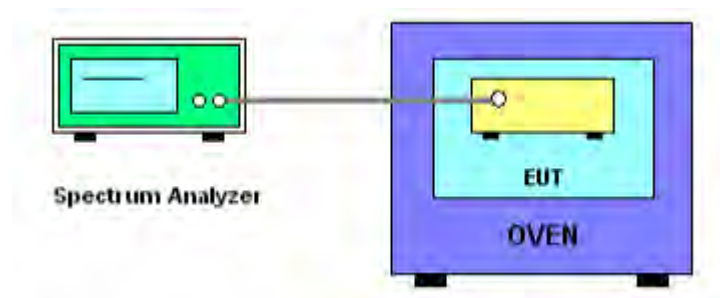
3.8.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

3.8.3 Test Procedures

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. The EUT was programmed to be in continuously un-modulation transmitting mode.
3. Set the spectrum analyzer span to view the entire un-modulation emissions bandwidth.
4. Turn the EUT on and couple its output to a spectrum analyzer.
5. Turn the EUT off and set the chamber to the highest temperature specified.
6. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
7. Extreme temperature rule is -30°C~50°C.
8. Repeat step 4 and 5 with the temperature chamber set to the lowest temperature.
9. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

3.8.4 Test Setup Layout**3.8.5 Test Deviation**

There is no deviation with the original standard.

3.8.6 EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

3.8.7 Test Result of Frequency Stability

Test date	Nov. 05, 2013	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Wen Chao		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)		
(V)	5200	5300	5500
126.50	5199.9000	5299.9000	5499.9000
110.00	5199.9000	5299.9000	5499.9000
93.50	5199.9000	5299.9000	5499.9000
Max. Deviation (MHz)	0.100000	0.100000	0.100000
Max. Deviation (ppm)	19.23	18.87	18.18

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)		
(°C)	5200	5300	5500
-30	5199.9004	5299.9003	5499.9002
-20	5199.9003	5299.9002	5499.9002
-10	5199.9002	5299.9001	5499.9001
0	5199.9002	5299.9002	5499.9001
10	5199.9001	5299.9001	5499.9000
20	5199.9000	5299.9000	5499.9000
30	5199.9000	5299.8999	5499.8999
40	5199.9001	5299.9000	5499.8998
50	5199.9002	5299.9001	5499.9000
Max. Deviation (MHz)	0.100000	0.100100	0.100200
Max. Deviation (ppm)	19.23	18.8868	18.22

3.9 Antenna Requirements

3.9.1 Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

3.9.2 Antenna Connector Construction

Please refer to section 2.3 in this test report; antenna connector complied with the requirements.

4 LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100355	9 kHz ~ 2.75 GHz	Apr. 12, 2013	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150 kHz~100 MHz	Nov. 26, 2012	Conduction (CO01-CB)
Artificial Mains Network	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Nov. 11, 2013	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150 kHz ~ 30 MHz	Dec. 04, 2012	Conduction (CO01-CB)
Software	Audix	E3	5.410e	-	-	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	Apr. 16, 2013	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9 kHz - 30 MHz	Nov. 05, 2012*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz~18GHz	Nov. 27, 2012	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBEAK	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Nov. 23, 2012	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Nov. 12, 2013	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Nov. 23, 2012	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Oct. 23, 2013	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100056	9kHz~40GHz	Nov. 16, 2012	Radiation (03CH01-CB)
EMI Test Receiver	Agilent	N9038A	MY52260123	9kHz ~ 8GHz	Nov. 26, 2012	Radiation (03CH01-CB)
Turn Table	INN CO	CO 2000	N/A	0 ~ 360 degree	N.C.R	Radiation (03CH01-CB)
Antenna Mast	INN CO	CO2000	N/A	1 m - 4 m	N.C.R	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz - 1 GHz	Nov. 18, 2012	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-1	N/A	1 GHz ~ 26.5 GHz	Nov. 18, 2012	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-2	N/A	1 GHz ~ 26.5 GHz	Nov. 18, 2012	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-3	N/A	1 GHz - 40 GHz	Nov. 18, 2012	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-4	N/A	1 GHz - 40 GHz	Nov. 18, 2012	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 27, 2012	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 04, 2013	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-7	-	1 GHz ~ 26.5 GHz	Nov. 18, 2012	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-8	-	1 GHz ~ 26.5 GHz	Nov. 18, 2012	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	High Cable-9	-	1 GHz – 26.5 GHz	Nov. 18, 2012	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-10	-	1 GHz – 26.5 GHz	Nov. 18, 2012	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-11	-	1 GHz – 26.5 GHz	Nov. 18, 2012	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	0917223	300MHz~40GHz	Sep. 18, 2013	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Sep. 18, 2013	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

*Calibration Interval of instruments listed above is two year.

N.C.R. means Non-Calibration required.

5 TEST LOCATION

SHIJR	ADD : 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C. TEL : 886-2-2696-2468 FAX : 886-2-2696-2255
HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
LINKOU	ADD : No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C TEL : 886-2-2601-1640 FAX : 886-2-2601-1695
DUNGHU	ADD : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C. TEL : 886-2-2631-4739 FAX : 886-2-2631-9740
JUNGHE	ADD : 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C. TEL : 886-2-8227-2020 FAX : 886-2-8227-2626
NEIHU	ADD : 4Fl., No. 339, Hsin Hu 2 nd Rd., Taipei 114, Taiwan, R.O.C. TEL : 886-2-2794-8886 FAX : 886-2-2794-9777
JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

6 MEASUREMENT UNCERTAINTY

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

Contribution	Uncertainty of x_i			$u(x_i)$
	Value	Unit	Probability Distribution k	
Receiver reading	0.026	dB	normal(k=2)	0.013
Cable loss	0.002	dB	normal(k=2)	0.001
AMN/LISN specification	1.200	dB	normal(k=2)	0.600
Mismatch Receiver VSWR 1= AMN/LISN VSWR 2=	-0.080	dB	U-shaped	0.060
Combined standard uncertainty Uc(y)				1.2
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)				2.4

Uncertainty of Radiated Emission Measurement (30MHz ~ 1,000MHz)

Contribution	Uncertainty of x_i			$u(x_i)$
	Value	Unit	Probability Distribution k	
Receiver reading	±0.173	dB	K=1	0.086
Cable loss	±0.174	dB	K=2	0.087
Antenna gain	±0.169	dB	K=2	0.084
Site imperfection	±0.433	dB	Triangular	0.214
Pre-amplifier gain	±0.366	dB	K=2	0.183
Transmitter antenna	±1.200	dB	Rectangular	0.600
Signal generator	±0.461	dB	Rectangular	0.231
Mismatch	±0.080	dB	U-shape	0.040
Spectrum analyzer	±0.500	dB	Rectangular	0.250
Combined standard uncertainty Uc(y)				1.778
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)				3.555

Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)

Contribution	Uncertainty of x_i			$u(x_i)$
	Value	Unit	Probability Distribution k	
Receiver reading	±0.191	dB	K=1	0.095
Cable loss	±0.169	dB	K=2	0.084
Antenna gain	±0.191	dB	K=2	0.096
Site imperfection	±0.582	dB	Triangular	0.291
Pre-amplifier gain	±0.304	dB	K=2	0.152
Transmitter antenna	±1.200	dB	Rectangular	0.600
Signal generator	±0.461	dB	Rectangular	0.231
Mismatch	±0.080	dB	U-shape	0.040
Spectrum analyzer	±0.500	dB	Rectangular	0.250
Combined standard uncertainty Uc(y)				1.839
Measuring uncertainty for a level of confidence of 95% $U=2Uc(y)$				3.678

Uncertainty of Radiated Emission Measurement (18GHz ~ 40GHz)

Contribution	Uncertainty of x_i			$u(x_i)$
	Value	Unit	Probability Distribution k	
Receiver reading	±0.186	dB	K=1	0.093
Cable loss	±0.167	dB	K=2	0.083
Antenna gain	±0.190	dB	K=2	0.095
Site imperfection	±0.488	dB	Triangular	0.244
Pre-amplifier gain	±0.269	dB	K=2	0.134
Transmitter antenna	±1.200	dB	Rectangular	0.600
Signal generator	±0.461	dB	Rectangular	0.231
Mismatch	±0.080	dB	U-shape	0.040
Spectrum analyzer	±0.500	dB	Rectangular	0.250
Combined standard uncertainty Uc(y)				1.771
Measuring uncertainty for a level of confidence of 95% $U=2Uc(y)$				3.541

Uncertainty of Conducted Emission Measurement

Contribution	Uncertainty of x_i			$u(x_i)$
	Value	Unit	Probability Distribution k	
Cable loss	±0.038	dB	K=2	0.019
Attenuator	±0.047	dB	K=2	0.024
Power Meter specification	±0.300	dB	Triangular	0.150
Power Sensor specification	±0.300	dB	Rectangular	0.150
Signal generator	±0.461	dB	Rectangular	0.231
Mismatch	±0.080	dB	U-shape	0.040
Spectrum analyzer	±0.500	dB	Rectangular	0.250
Combined standard uncertainty $U_c(y)$				0.863
Measuring uncertainty for a level of confidence of 95% $U=2U_c(y)$				1.726