SPORTON International Inc.
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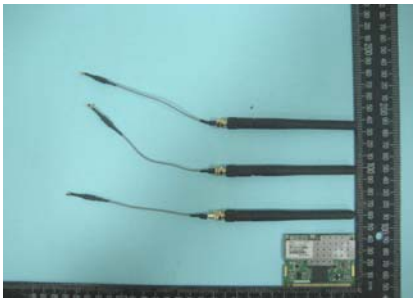
FCC RADIO TEST REPORT

Applicant's company	**MetaLink Ltd.**
Applicant Address	Yakum Business Park Yakum 60972 Israel
FCC ID	**VT6-250DB**
Manufacturer's company	**MetaLink Ltd.**
Manufacturer Address	Yakum Business Park Yakum 60972 Israel

Product Name	802.11n Wireless LAN Dual band mPCI module
Brand Name	MetaLink
Model Name	MtW_mPCI_DB_003
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5150 ~ 5350MHz / 5470 ~ 5725MHz
Received Date	Jun. 24, 2008
Final Test Date	Sep. 15, 2008
Submission Type	Original Equipment
Operating Mode	Client (without radar detection function)



Statement

Test result included is for the Draft n and 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 C63.4-2003** and **47 CFR FCC Part 15 Subpart E**.

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

Testing Laboratory
1190

Table of Contents

History of This Test Report

Original Issue Date: Sep. 19, 2008

Report No.: FR862415AA

■ No additional attachment.

□ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

Certificate No.: CB9709059

1. CERTIFICATE OF COMPLIANCE

Product Name	:	802.11n Wireless LAN Dual band mPCI module
Brand Name	:	MetaLink
Model Name	:	MtW_mPCI_DB_003
Applicant	:	MetaLink Ltd.
Test Rule Part(s)	:	47 CFR FCC Part 15 Subpart E § 15.407

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Jun. 24, 2008 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.

Wayne Hsu

SPORTON INTERNATIONAL INC.

2. 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	20.89 dB
4.2	15.407(a)	26dB Spectrum Bandwidth	Complies	-
4.3	15.407(a)	Maximum Conducted Output Power	Complies	0.08 dB
4.4	15.407(a)	Power Spectral Density	Complies	4.65 dB
4.5	15.407(a)	Peak Excursion	Complies	7.82 dB
4.6	15.407(b)	Radiated Emissions	Complies	0.34 dB
4.7	15.407(b)	Band Edge Emissions	Complies	1.22 dB
4.8	15.407(g)	Frequency Stability	Complies	-
4.9	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Maximum Conducted Output Power	±0.5dB	Confidence levels of 95%
Power Spectral Density	±0.5dB	Confidence levels of 95%
Peak Excursion	±0.5dB	Confidence levels of 95%
26dB Spectrum Bandwidth / Frequency Stability	$\pm 8.5\times10^{-8}$	Confidence levels of 95%
Radiated Emissions (9kHz~30MHz)	±0.8dB	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	±1.9dB	Confidence levels of 95%
Radiated / Band Edge Emissions (1GHz~18GHz)	±1.9dB	Confidence levels of 95%
Radiated Emissions (18GHz~40GHz)	±1.9dB	Confidence levels of 95%
Temperature	±0.7℃	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

3. GENERAL INFORMATION

3.1. Product Details

Draft n

Items	Description
Product Type	WLAN (2TX, 3RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	see the below table for draft n
Data Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	see the below table for Draft n
Frequency Range	5150 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	19 for 20MHz bandwidth ; 9 for 40MHz bandwidth
Channel Band Width (99%)	MCS0 (20MHz) : 17.05 MHz ; MCS0 (40MHz) : 34.87 MHz
Conducted Output Power	Band 1: MCS0 (20MHz) : 16.92 dBm MCS0 (40MHz) : 16.83 dBm Band 2: MCS0 (20MHz) : 22.37 dBm MCS0 (40MHz) : 21.93 dBm Band 3: MCS0 (20MHz) : 22.46 dBm MCS0 (40MHz) : 22.31 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

802.11a

Items	Description
Product Type	WLAN (2TX, 3RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	OFDM for IEEE 802.11a
Data Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	OFDM (6/9/12/18/24/36/48/54)
Frequency Range	5150 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	Band 1~2: 8 ; Band 3: 11
Channel Band Width (99%)	Band 1: 16.02 MHz ; Band 2: 16.02 MHz ; Band 3: 16.41 MHz
Conducted Output Power	Band 1: 16.84 dBm ; Band 2: 22.06 dBm ; Band 3: 22.01 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Antenna & Band width

Antenna	Single (TX)		Two (TX)	
Band width Mode	20 MHz	40 MHz	20 MHz	40 MHz
802.11a	X	X	V	X
802.11b	V	X	X	X
802.11g	X	X	V	X
Draft n	X	X	V	V

Draft n spec

MCS Index	Nss	Modulation	R	NBPSC	NCBPS		NDBPS		Datarate(Mbps)			
									800nsGI		400nsGI	
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.200	15
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.400	30
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.700	45
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.900	60
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.300	90
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.800	120
6	1	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.000	135
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.200	150
8	2	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.444	30
9	2	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.889	60
10	2	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.333	90
11	2	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.778	120
12	2	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.667	180
13	2	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.556	240
14	2	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.000	270
15	2	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.444	300

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	guard interval

3.2. Accessories

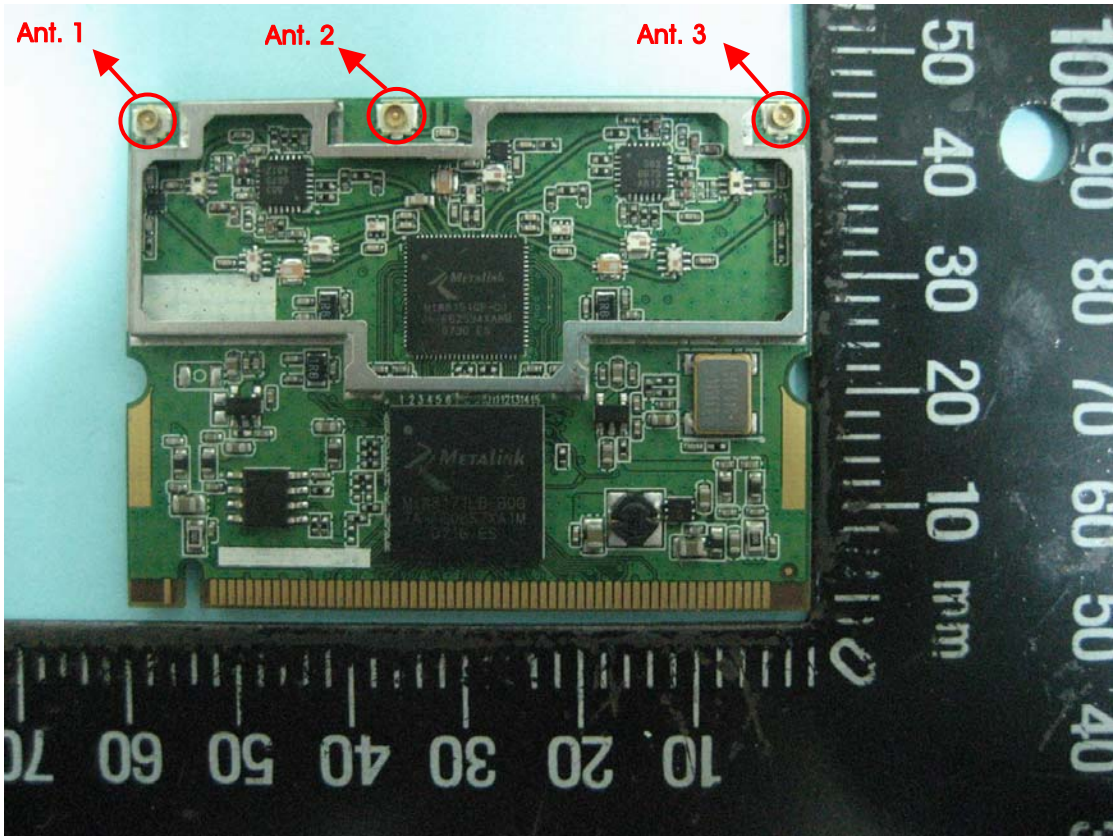
N/A

3.3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Remark
1	WHA YU	C1264-510006-A	Dipole Antenna	MHF	2	TX/RX
2	WHA YU	C1264-510006-A	Dipole Antenna	MHF	2	RX
3	WHA YU	C1264-510006-A	Dipole Antenna	MHF	2	TX/RX

Note: The EUT has three antennas (2TX, 3RX).

The EUT has three antenna connectors, the Ant. 1 and the Ant. 3 have both TX/RX function, Ant. 2 only have RX function.



3.4. Table for Carrier Frequencies

Frequency Allocation for 802.11a

There are two bandwidth systems for draft n.

For both 20MHz bandwidth systems, use Channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136.

For both 40MHz bandwidth systems, use Channel 38, 46, 54, 62, 102, 110, 118, 126, 134.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	36	5180 MHz	44	5220 MHz
	38	5190 MHz	46	5230 MHz
	40	5200 MHz	48	5240 MHz
5250~5350 MHz Band 2	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz Band 3	100	5500 MHz	120	5600 MHz
	102	5510 MHz	124	5620 MHz
	104	5520 MHz	126	5630 MHz
	108	5540 MHz	128	5640 MHz
	110	5550 MHz	132	5660 MHz
	112	5560 MHz	134	5670 MHz
	116	5580 MHz	136	5680 MHz
	118	5590 MHz	140	5700 MHz

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. 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		Data Rate	Channel	Antenna
AC Power Conducted Emission	Normal Link		Auto	-	-
Max. Conducted Output Power	MCS0/20MHz	Band 1~2	6.5Mbps	36/52/64	1/3/1+3
		Band 3	6.5Mbps	100/120/140	1/3/1+3
	MCS0/40MHz	Band 1~2	13.5Mbps	38/54/62	1/3/1+3
		Band 3	13.5Mbps	102/118/134	1/3/1+3
26dB Spectrum Bandwidth 99% Occupied Bandwidth Measurement Power Spectral Density Peak Excursion	MCS0/20MHz	Band 1~2	6.5Mbps	36/52/64	1+3
		Band 3	6.5Mbps	100/120/140	1+3
	MCS0/40MHz	Band 1~2	13.5Mbps	38/54/62	1+3
		Band 3	13.5Mbps	102/118/134	1+3
Radiated Emission Below 1GHz	Normal Link		Auto	-	-
Radiated Emission Above 1GHz	MCS0/20MHz	Band 1~2	6.5Mbps	36/52/64	1/3/1+3
		Band 3	6.5Mbps	100/120/140	1/3/1+3
	MCS0/40MHz	Band 1~2	13.5Mbps	38/54/62	1/3/1+3
		Band 3	13.5Mbps	102/118/134	1/3/1+3
Band Edge Emission	MCS0/20MHz	Band 1~2	6.5Mbps	36/64	1/3/1+3
		Band 3	6.5Mbps	100/140	1/3/1+3
	MCS0/40MHz	Band 1~2	13.5Mbps	38/62	1/3/1+3
		Band 3	13.5Mbps	102/134	1/3/1+3
Frequency Stability	Un-modulation		-	60	N/A

3.6. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH03-HY	SAC	Hwa Ya	101377	IC 4088	-
CO04-HY	Conduction	Hwa Ya	101377	IC 4088	-
TH01-HY	OVEN Room	Hwa Ya	-	-	-

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

Please refer section 6 for Test Site Address.

3.7. Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Modem	ACEEX	DM1414	IFAXDM1414
Mouse	HP	M-UV96	DoC
Notebook	DELL	D400	E2K24GBRL
Wireless AP	Planex	GW-AP54SGX	DoC

3.8. 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.

Power Parameters of Draft n MCS0 20MHz

Test Software Version	DUT								
Frequency	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
Ant. 1	22	23	23	18	18	17	16	18	22
Ant. 3	23	24	23	19	19	18	18	19	22

Power Parameters of Draft n MCS0 40MHz

Test Software Version	DUT						
Frequency	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz
Ant. 1	23	22	18	17	17	16	20
Ant. 3	23	23	18	18	16	17	21

Power Parameters of IEEE 802.11a

Test Software Version	DUT								
Frequency	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
Ant. 1	22	24	23	19	19	17	16	19	21
Ant. 3	22	24	24	19	19	19	17	20	22

An executive program, EMCTEST.EXE under WIN XP, which generates a complete line of continuously repeating " H " pattern was used as the test software.

The program was executed as follows :

a. Turn on the power of all equipment.

b. The NB sends " H" messages to the panel, and the panel displays " H " patterns on the screen.

c. The NB sends " H " messages to the modem.

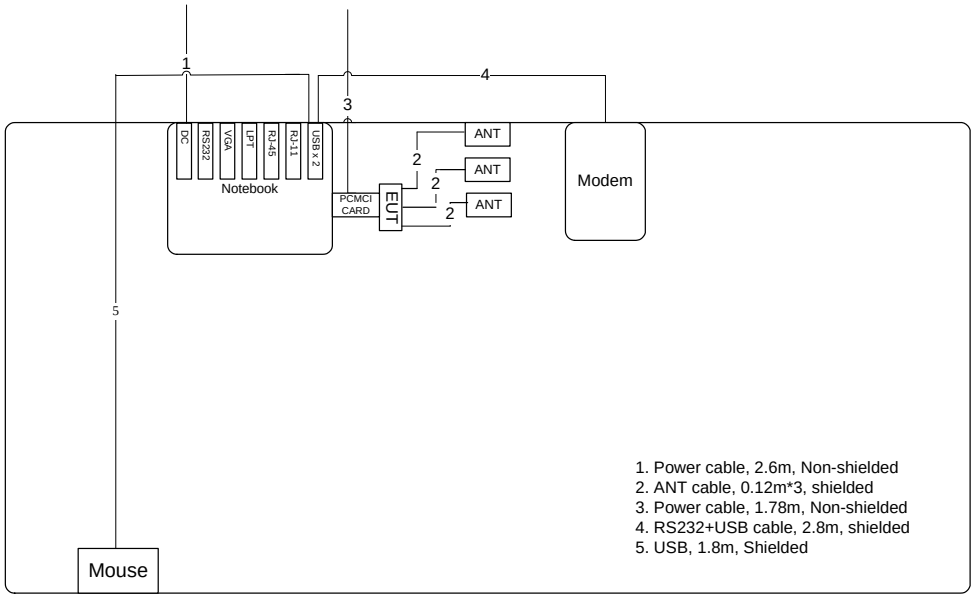
d. Repeat the steps from b to c.

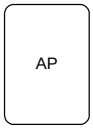
At the same time, "Metalink DUT Interface" was executed to control the EUT continuously transmit RF signal.

3.9. Test Configurations

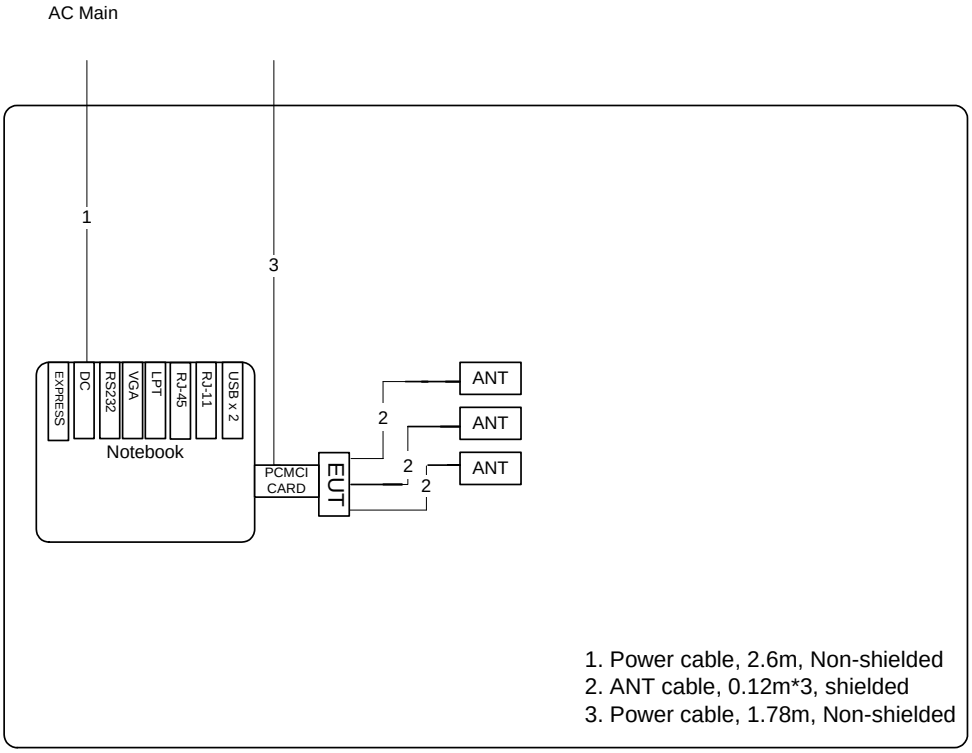
3.9.1. Radiation Emissions Test Configuration

Test Configuration: 9KHz~1GHz

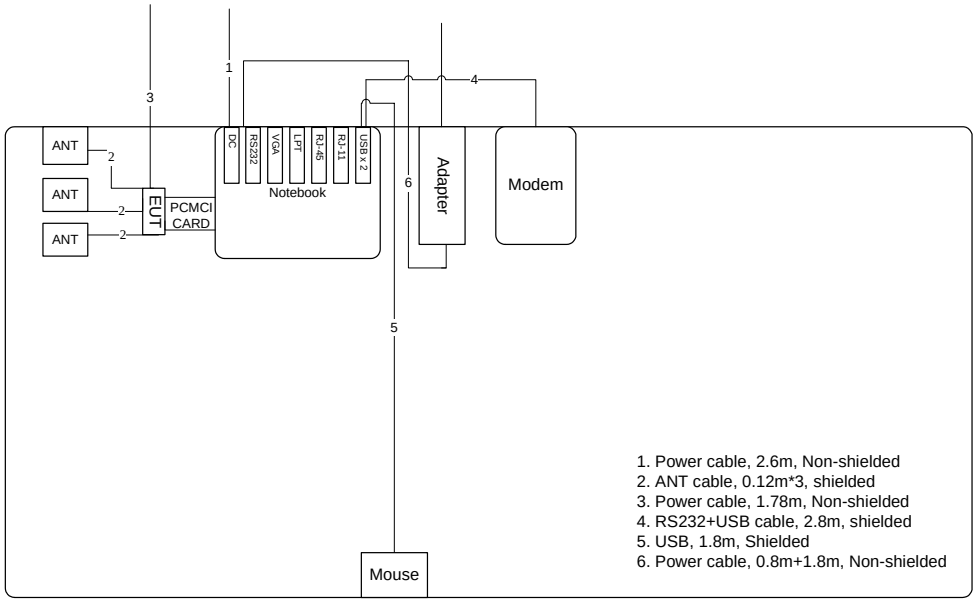




Test Configuration: Above 1GHz



3.9.2. AC Power Line Conduction Emissions Test Configuration



4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product that is designed to connect 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

4.1.2. Measuring Instruments and Setting

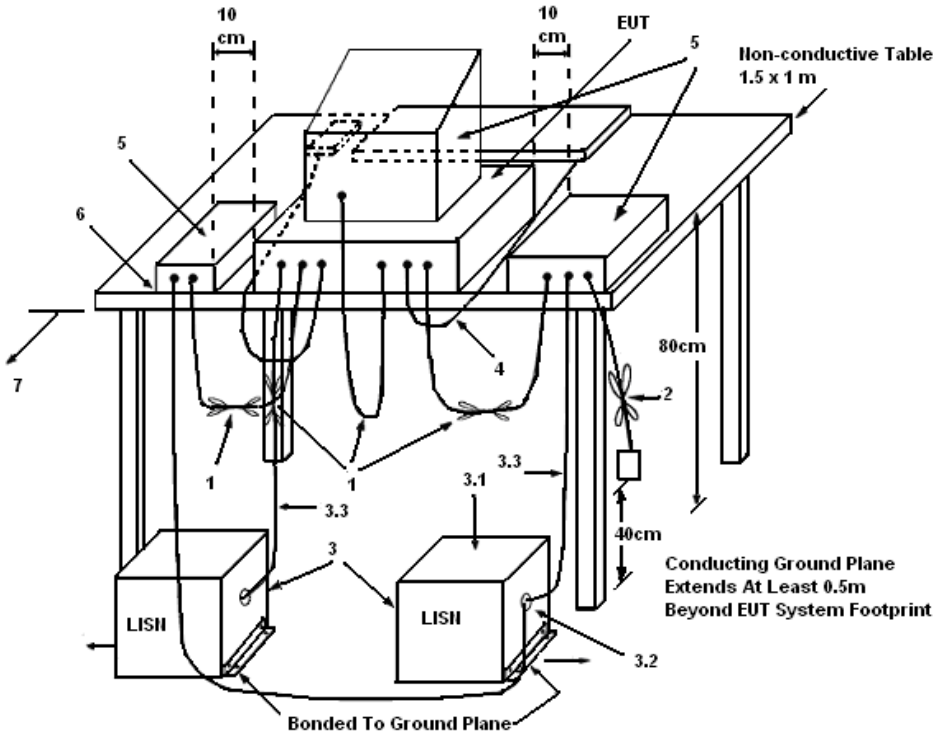
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.4. 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.

4.1.4. 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.

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

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

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

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

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

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

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

4.1.5. Test Deviation

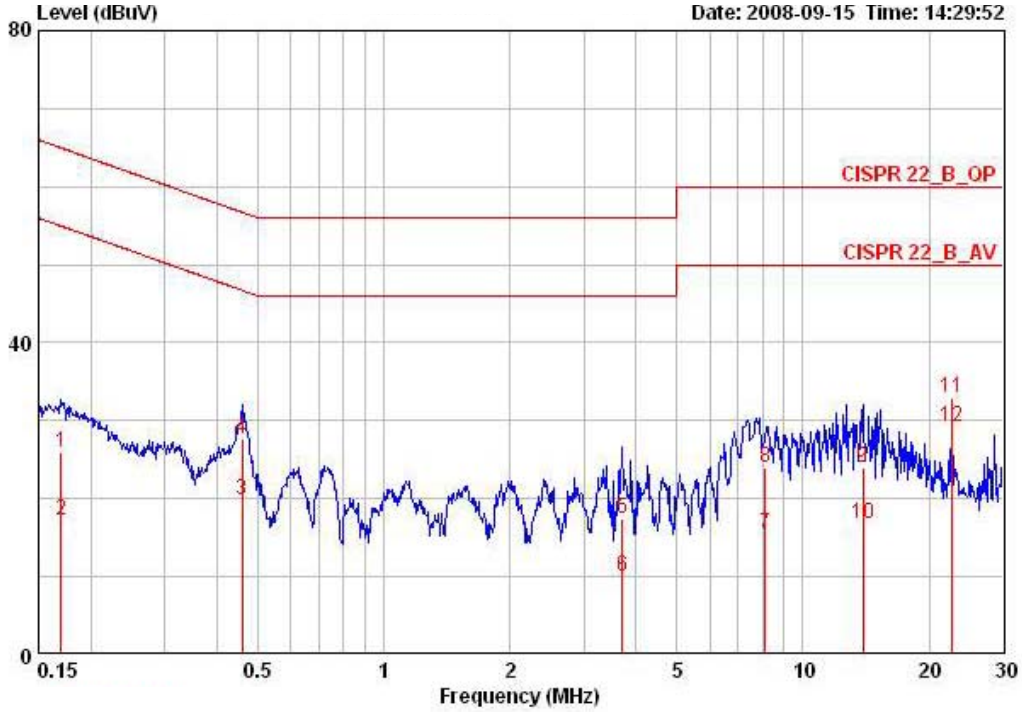
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

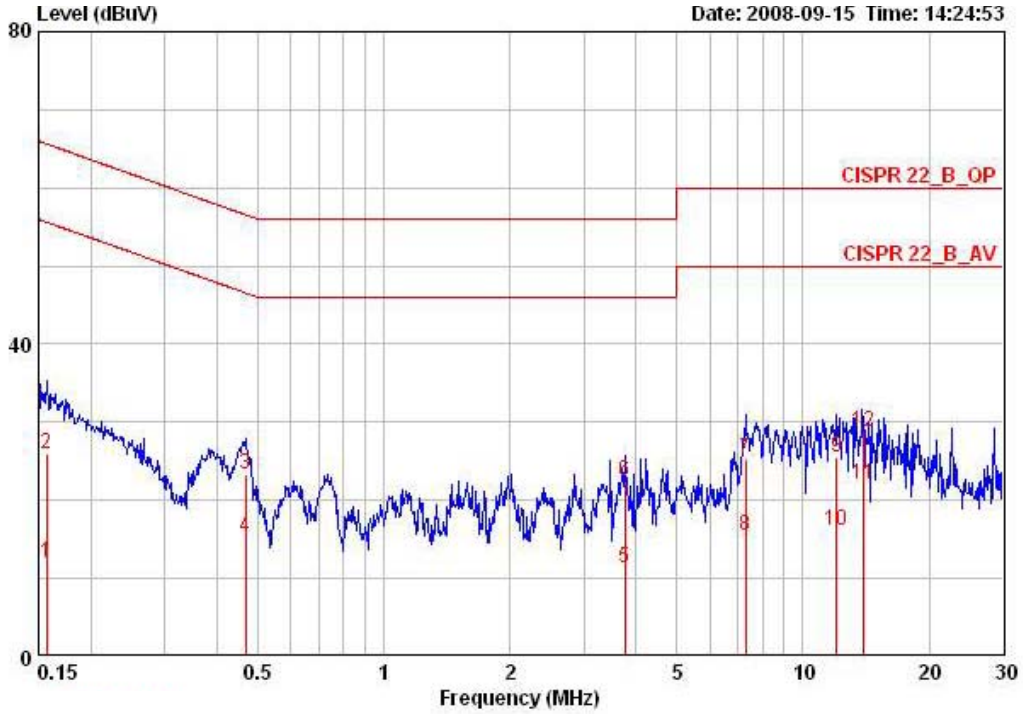
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	23℃	Humidity	54%
Test Engineer	Aric Li	Phase	Line
Configuration	Normal link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16944	25.94	-39.04	64.99	25.68	0.06	0.20	QP
2	0.16944	17.11	-37.87	54.99	16.85	0.06	0.20	AVERAGE
3	0.45878	19.82	-26.89	46.71	19.59	0.03	0.20	AVERAGE
4	0.45878	27.74	-28.97	56.71	27.51	0.03	0.20	QP
5	3.700	17.50	-38.50	56.00	17.11	0.09	0.30	QP
6	3.700	10.10	-35.90	46.00	9.71	0.09	0.30	AVERAGE
7	8.141	15.52	-34.48	50.00	14.85	0.29	0.37	AVERAGE
8	8.141	24.00	-36.00	60.00	23.33	0.29	0.37	QP
9	13.915	24.00	-36.00	60.00	23.09	0.51	0.40	QP
10	13.915	16.74	-33.26	50.00	15.83	0.51	0.40	AVERAGE
11	22.568	32.90	-27.10	60.00	31.41	0.99	0.50	QP
12 @	22.568	29.11	-20.89	50.00	27.62	0.99	0.50	AVERAGE

Temperature	23°C	Humidity	54%
Test Engineer	Aric Li	Phase	Neutral
Configuration	Normal link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15650	11.88	-43.77	55.65	11.58	0.10	0.20	AVERAGE
2	0.15650	26.03	-39.62	65.65	25.73	0.10	0.20	QP
3	0.46861	23.42	-33.12	56.54	23.15	0.07	0.20	QP
4	0.46861	15.32	-31.22	46.54	15.05	0.07	0.20	AVERAGE
5	3.759	11.28	-34.72	46.00	10.84	0.14	0.30	AVERAGE
6	3.759	22.56	-33.44	56.00	22.12	0.14	0.30	QP
7	7.290	25.25	-34.75	60.00	24.59	0.30	0.36	QP
8	7.290	15.39	-34.61	50.00	14.73	0.30	0.36	AVERAGE
9	12.060	25.42	-34.58	60.00	24.55	0.47	0.40	QP
10	12.060	16.13	-33.87	50.00	15.26	0.47	0.40	AVERAGE
11	13.916	21.93	-28.07	50.00	20.99	0.54	0.40	AVERAGE
12	13.916	28.71	-31.29	60.00	27.77	0.54	0.40	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. 99% Occupied Bandwidth Measurement

4.2.1. Limit

No restriction limits. But resolution bandwidth within band edge measurement is 1% of the 99% occupied bandwidth.

4.2.2. 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.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RB	300 kHz
VB	1000 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. The resolution bandwidth of 300 kHz and the video bandwidth of 1000 kHz were used.
3. Measured the spectrum width with power higher than 26dB below carrier.
4. Measuring multiple antennas, the connector is required to link with Power Meter through a combiner.

4.2.4. Test Setup Layout

4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of 99% Occupied Bandwidth

Temperature	26°C	Humidity	62%
Test Engineer	Sam Lee	Configurations	Draft n

Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	18.84	16.92
40	5200 MHz	18.84	17.05
48	5240 MHz	18.84	17.05
52	5260 MHz	18.84	16.92
60	5300 MHz	18.84	16.92
64	5320 MHz	18.97	16.92
100	5500 MHz	18.84	16.92
116	5580 MHz	18.71	16.79
140	5700 MHz	18.84	17.05

Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3

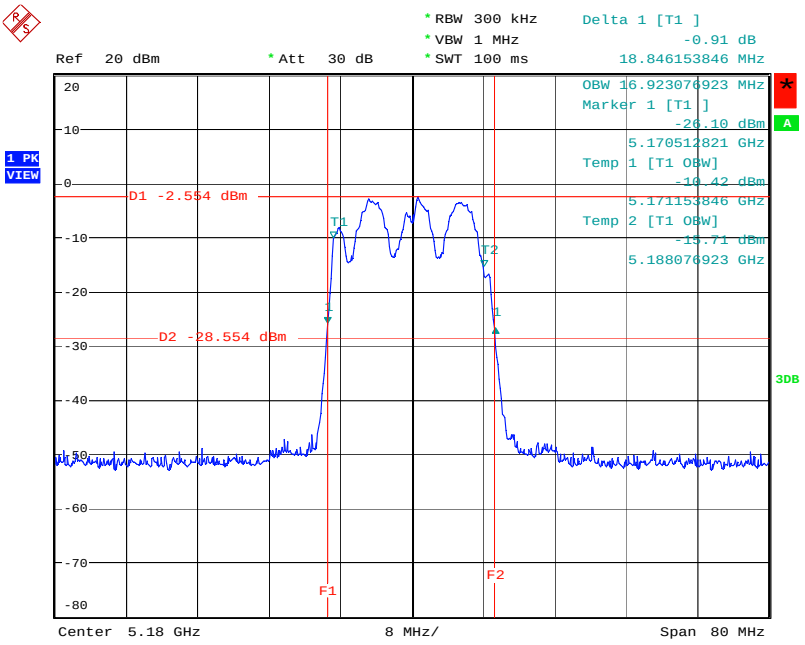
Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	37.56	33.84
46	5230 MHz	37.56	34.10
54	5270 MHz	37.56	34.23
62	5310 MHz	37.56	34.35
102	5510 MHz	37.69	34.87
110	5550 MHz	37.82	34.87
134	5670 MHz	37.56	34.35

Temperature	26°C	Humidity	62%
Test Engineer	Sam Lee	Configurations	802.11a

Configuration IEEE 802.11a Ant. 1 + Ant. 3

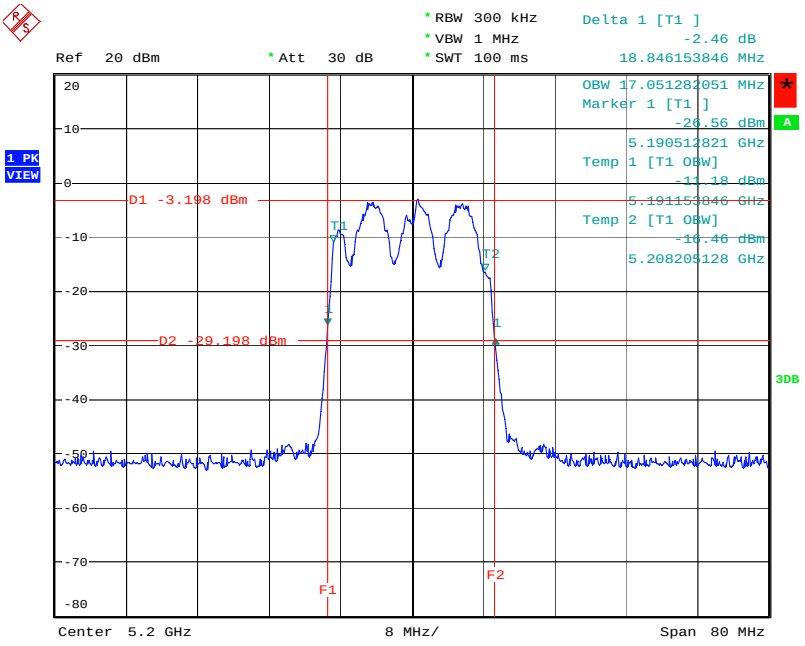
Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	18.46	15.89
40	5200 MHz	18.46	16.02
48	5240 MHz	18.33	15.89
52	5260 MHz	18.46	16.02
60	5300 MHz	18.46	16.02
64	5320 MHz	18.33	16.02
100	5500 MHz	18.58	16.41
116	5580 MHz	18.58	16.15
140	5700 MHz	18.46	16.02

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5180 MHz



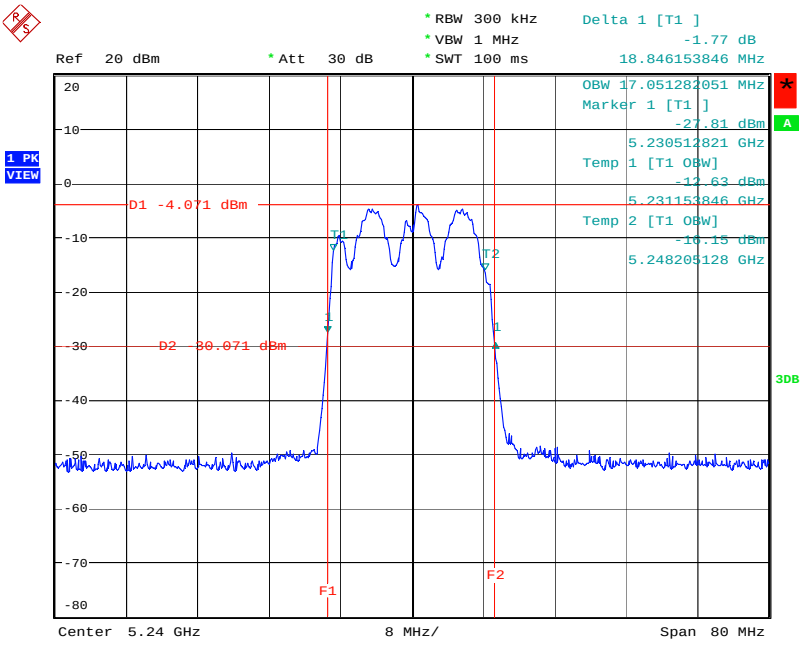
Date: 14.SEP.2008 10:56:28

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5200 MHz



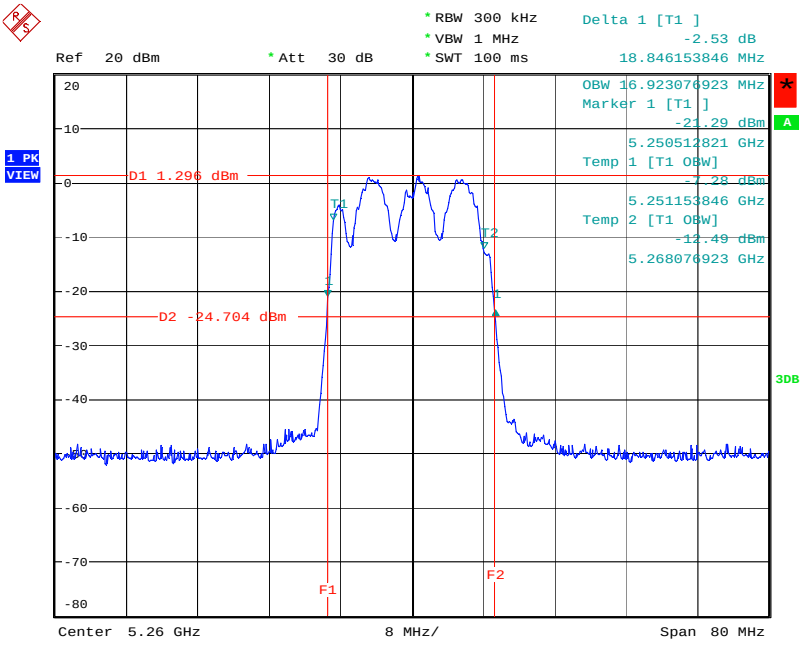
Date: 14.SEP.2008 10:57:27

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5240 MHz



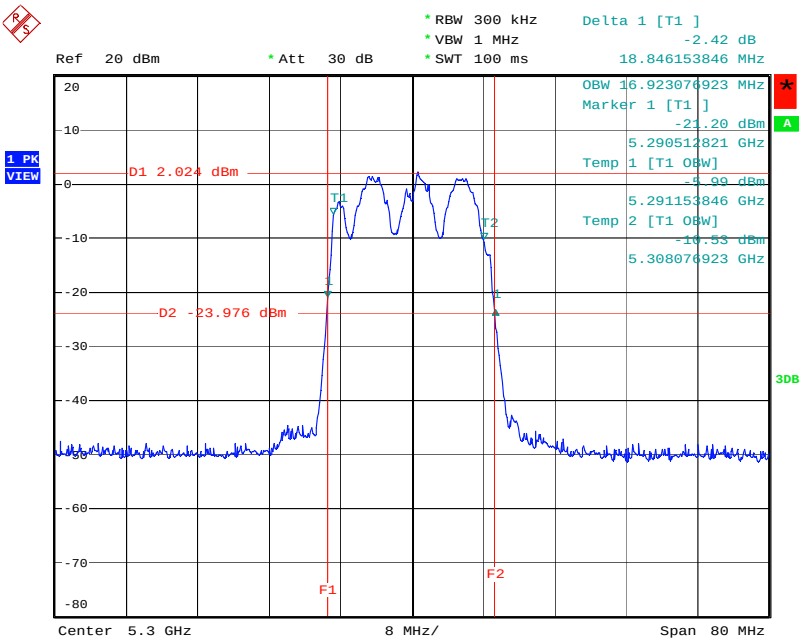
Date: 14.SEP.2008 10:58:23

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5260 MHz



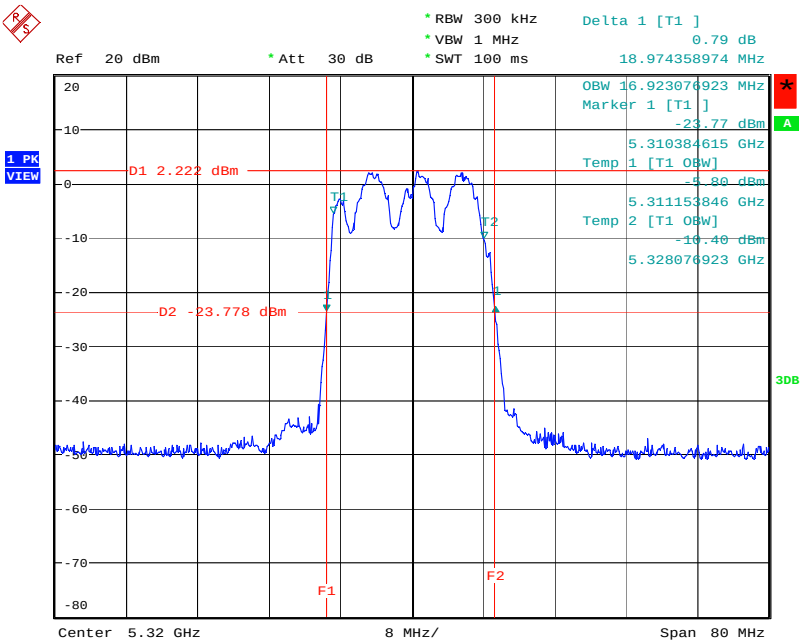
Date: 14.SEP.2008 10:59:24

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5300 MHz



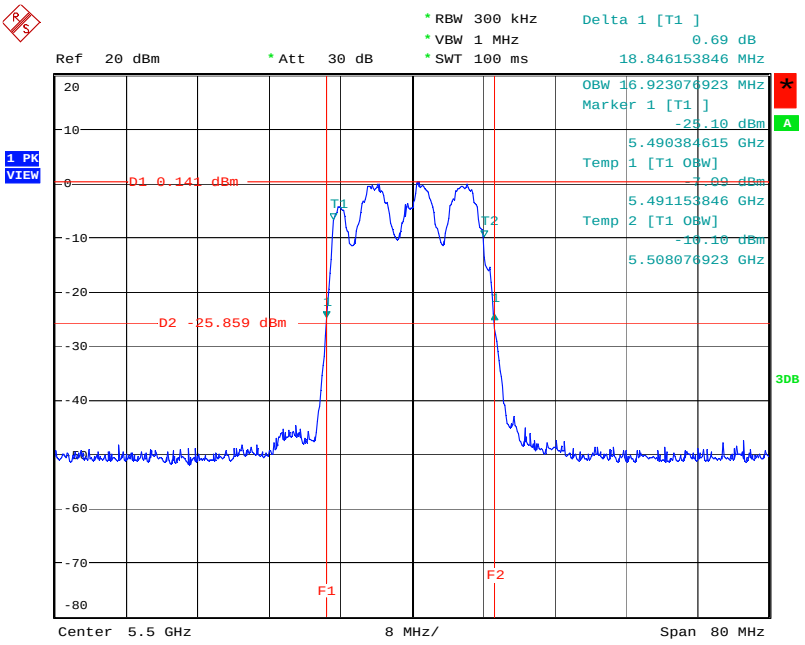
Date: 14.SEP.2008 11:00:20

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5320 MHz



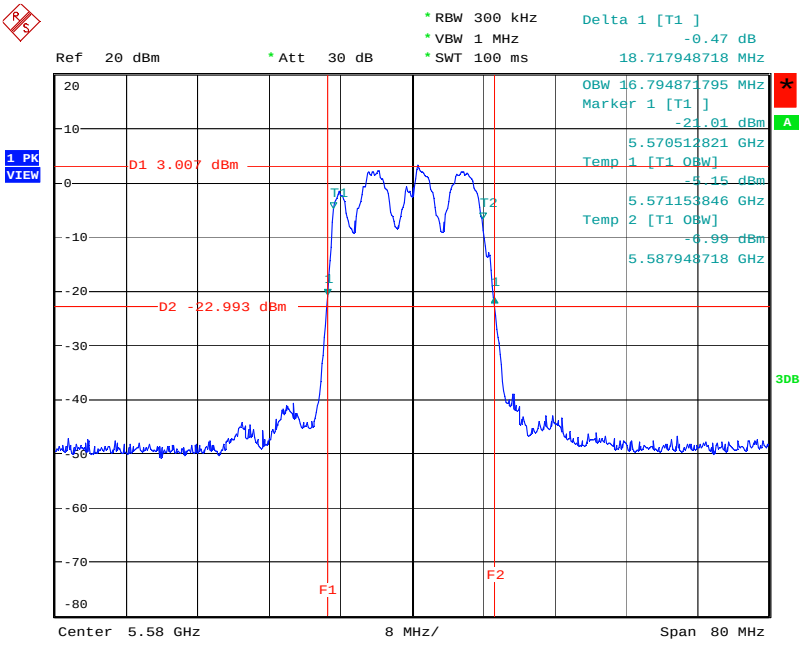
Date: 14.SEP.2008 11:02:20

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5500 MHz



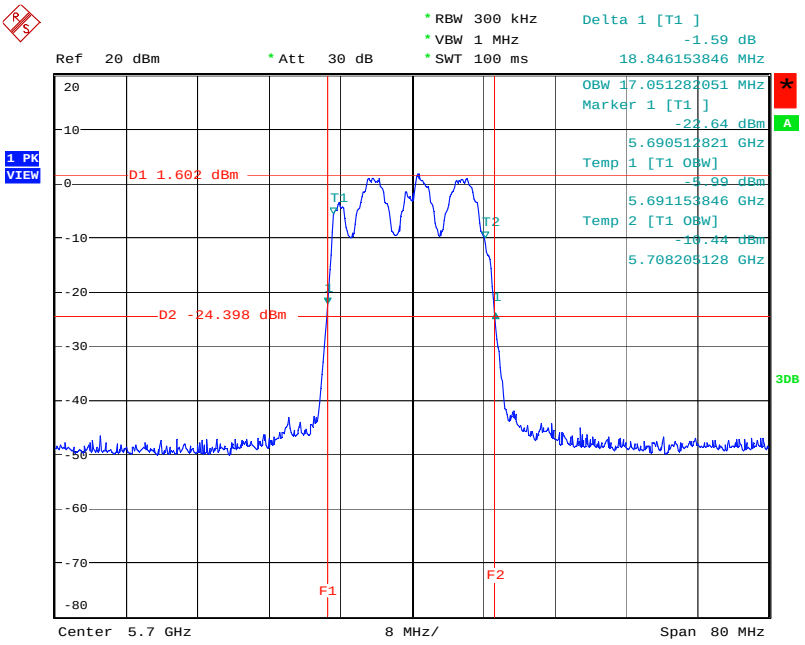
Date: 14.SEP.2008 11:04:12

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5580 MHz



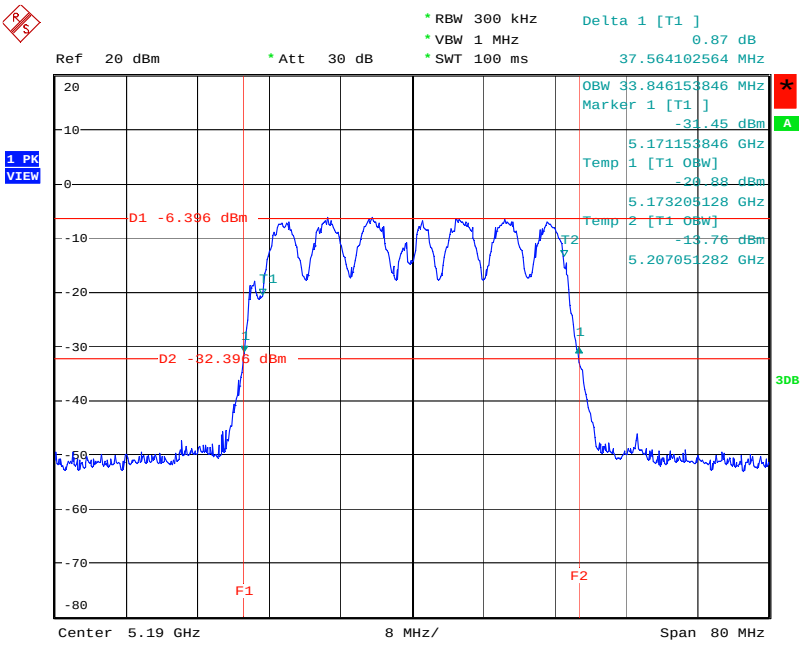
Date: 14.SEP.2008 11:05:27

26 dB Bandwidth Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5700 MHz



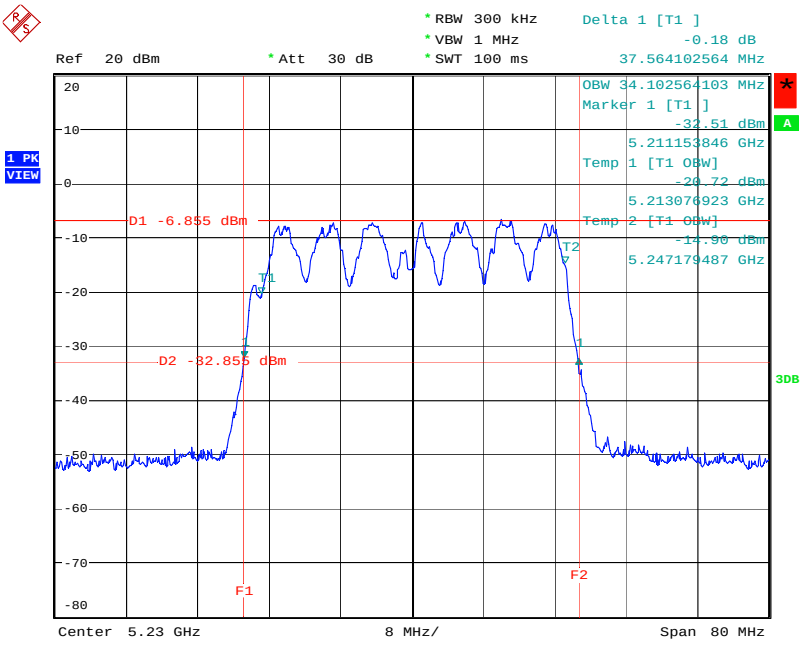
Date: 14.SEP.2008 11:06:42

26 dB Bandwidth Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5190 MHz



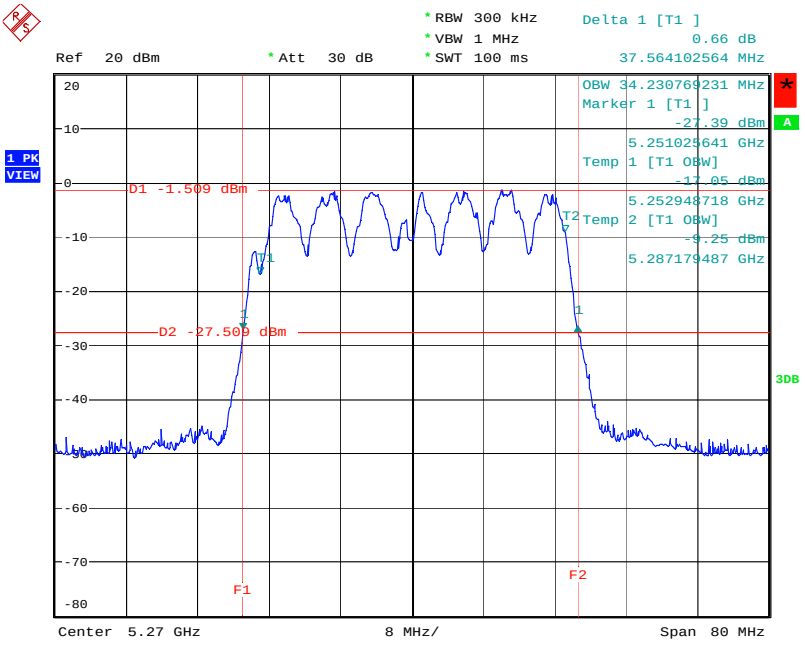
Date: 14.SEP.2008 11:16:46

26 dB Bandwidth Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5230 MHz



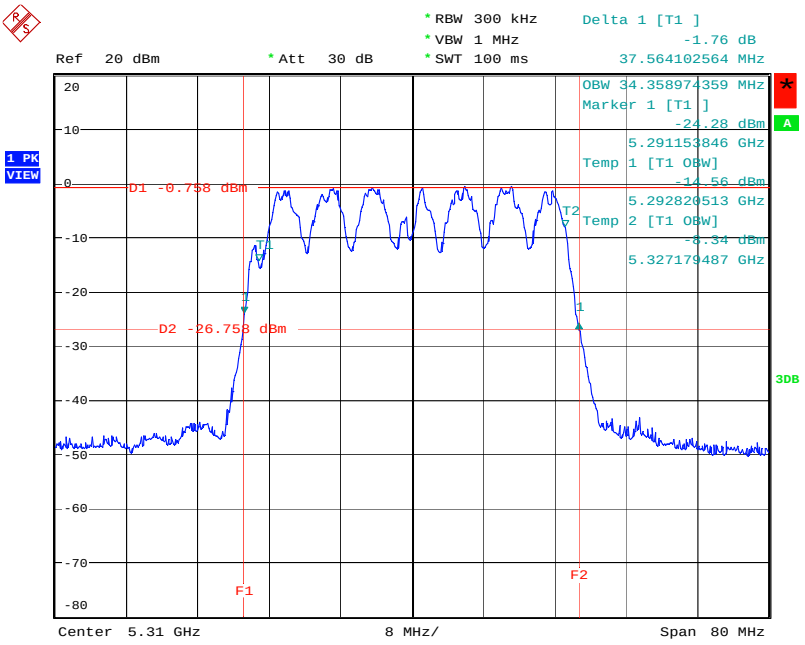
Date: 14.SEP.2008 11:15:47

26 dB Bandwidth Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5270 MHz



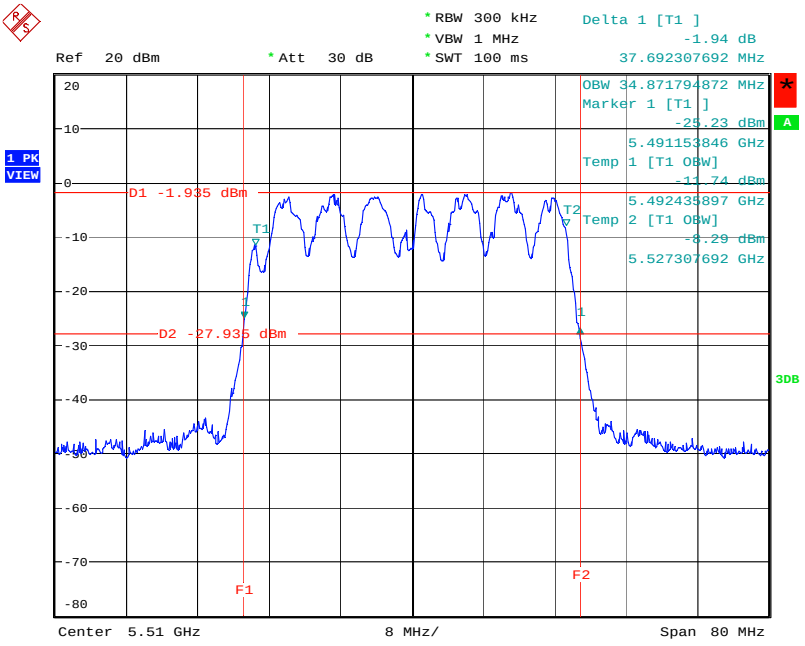
Date: 14.SEP.2008 11:14:32

26 dB Bandwidth Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5310 MHz



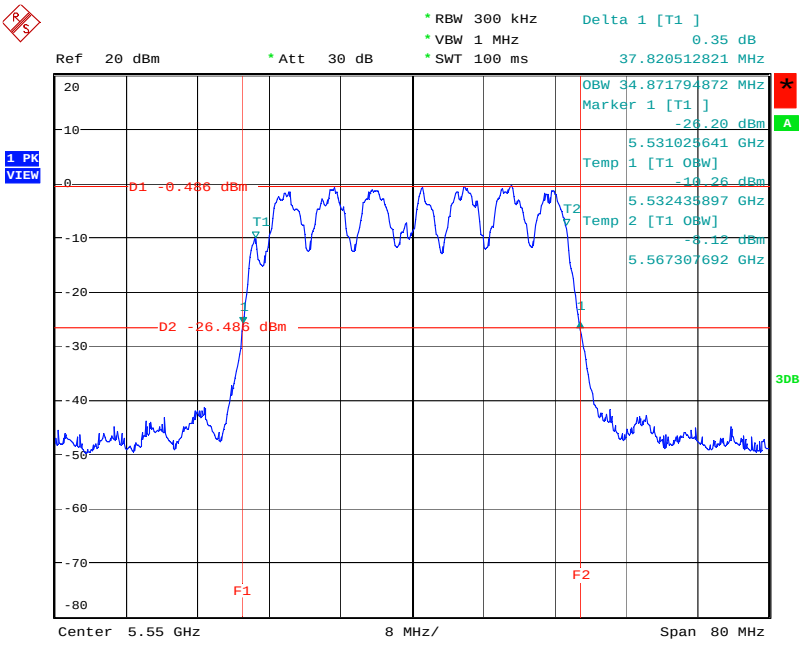
Date: 14.SEP.2008 11:13:40

26 dB Bandwidth Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5510 MHz



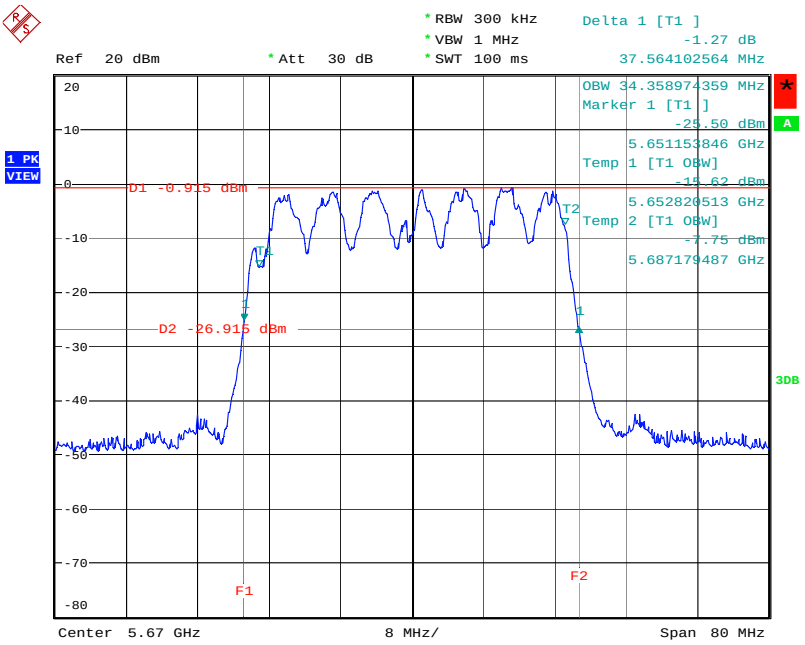
Date: 14.SEP.2008 11:12:23

26 dB Bandwidth Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5550 MHz



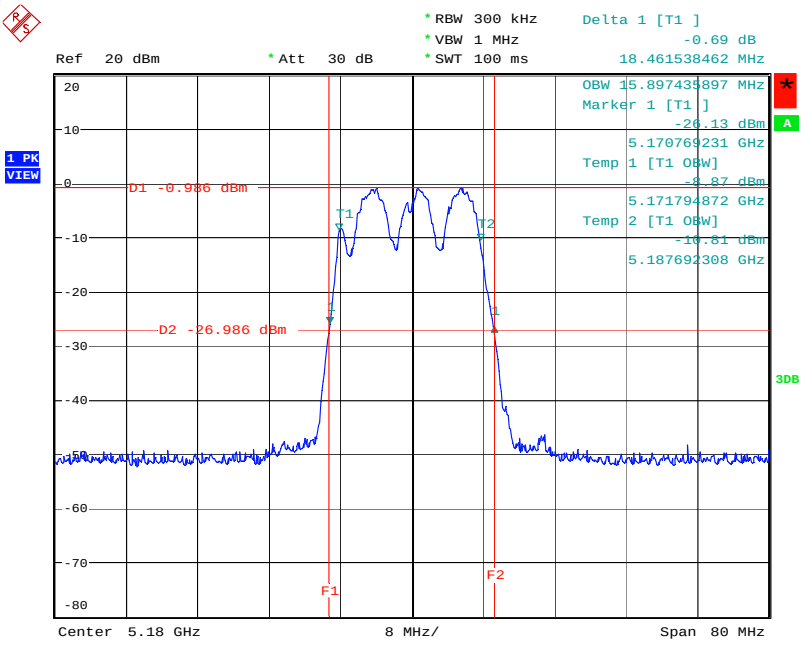
Date: 14.SEP.2008 11:10:02

26 dB Bandwidth Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5670 MHz



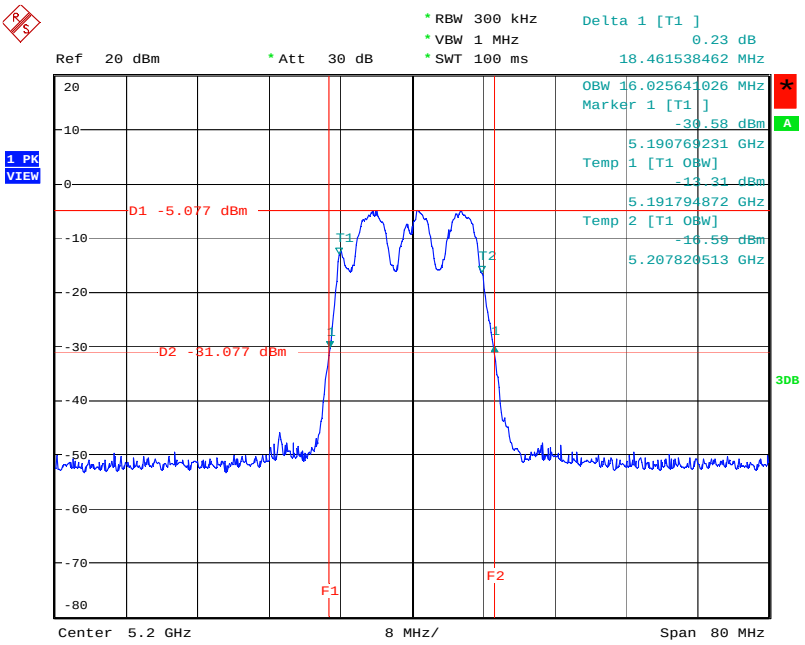
Date: 14.SEP.2008 11:08:10

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5180 MHz



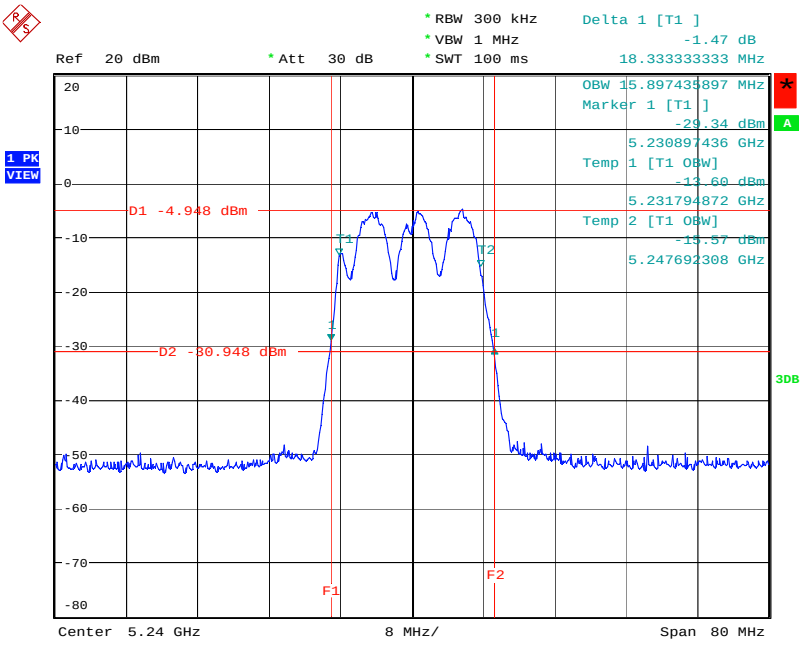
Date: 14.SEP.2008 10:27:36

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5200 MHz



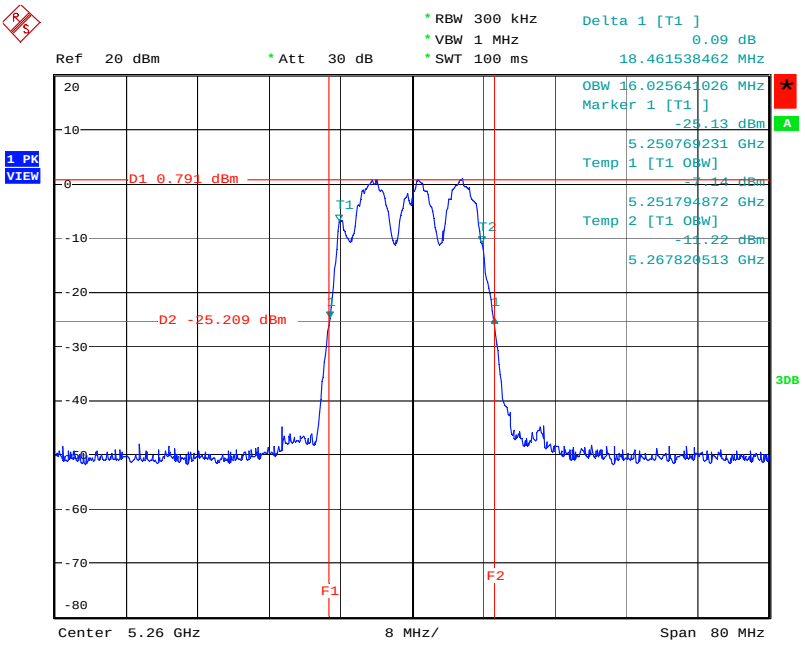
Date: 14.SEP.2008 10:32:49

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5240 MHz



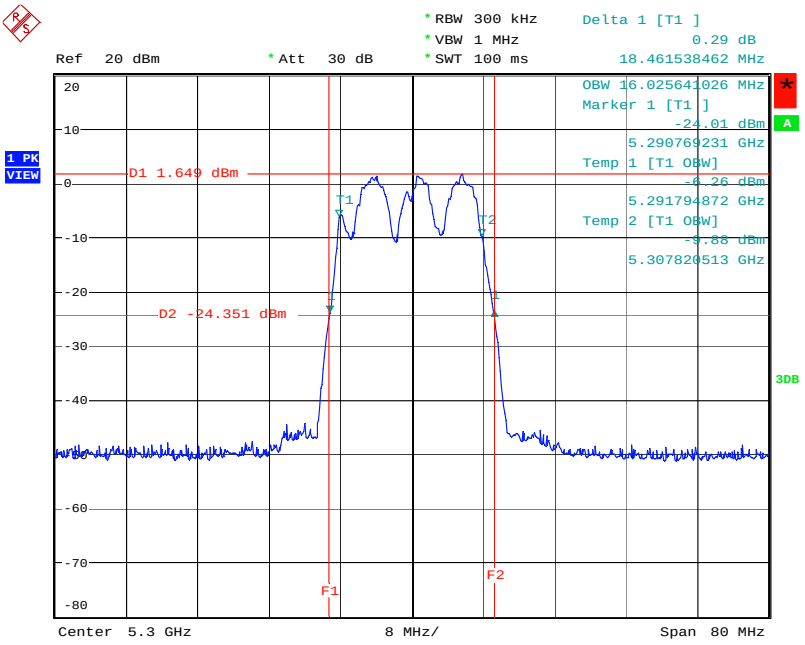
Date: 14.SEP.2008 10:34:40

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5260 MHz



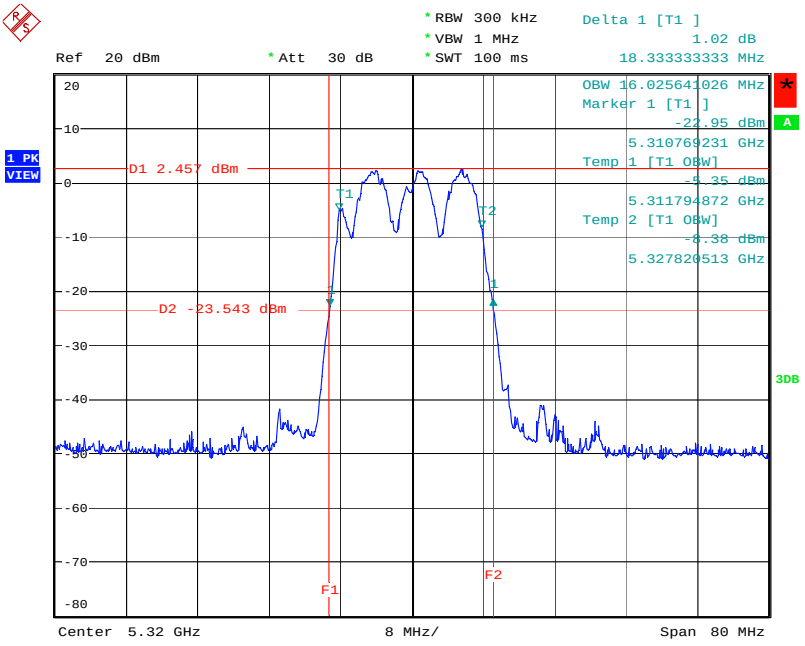
Date: 14.SEP.2008 10:36:34

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5300 MHz



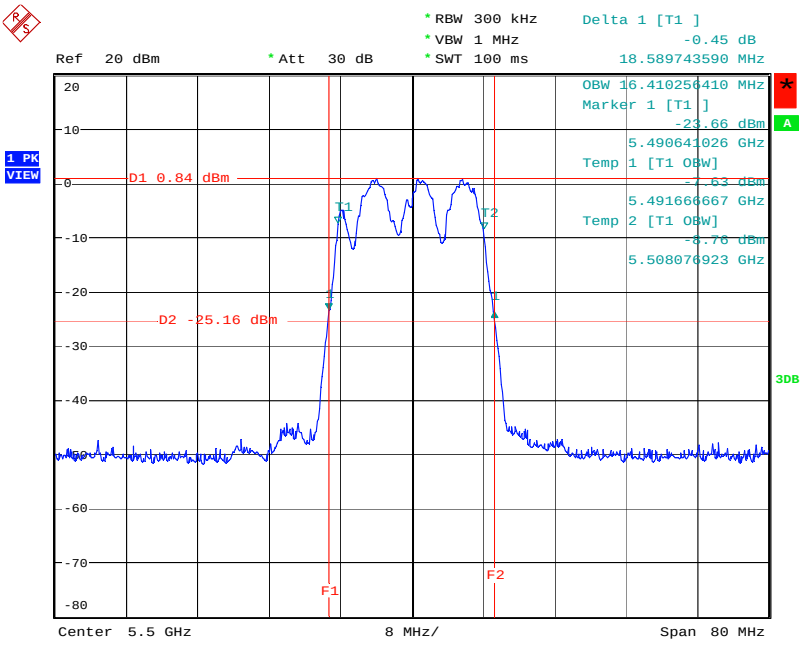
Date: 14.SEP.2008 10:37:38

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5320 MHz



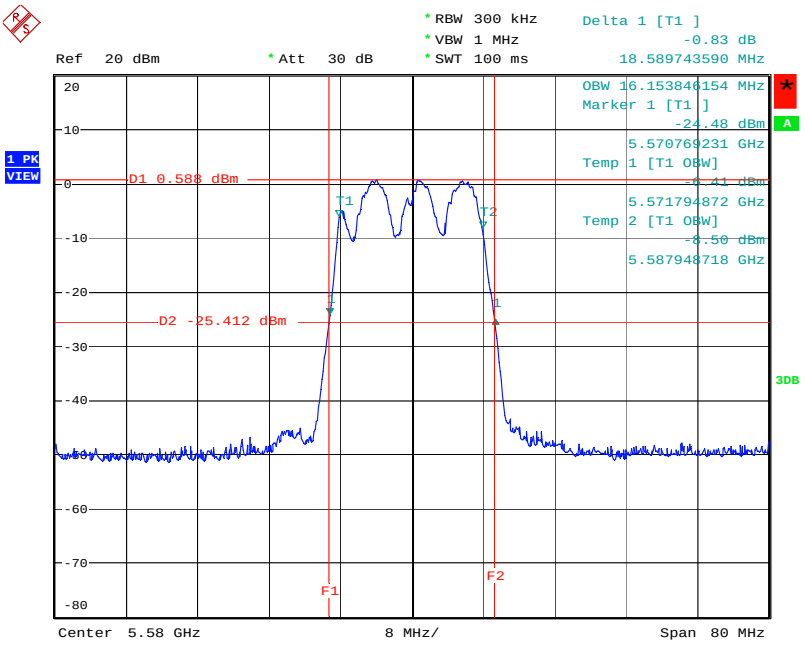
Date: 14.SEP.2008 10:38:42

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5500 MHz



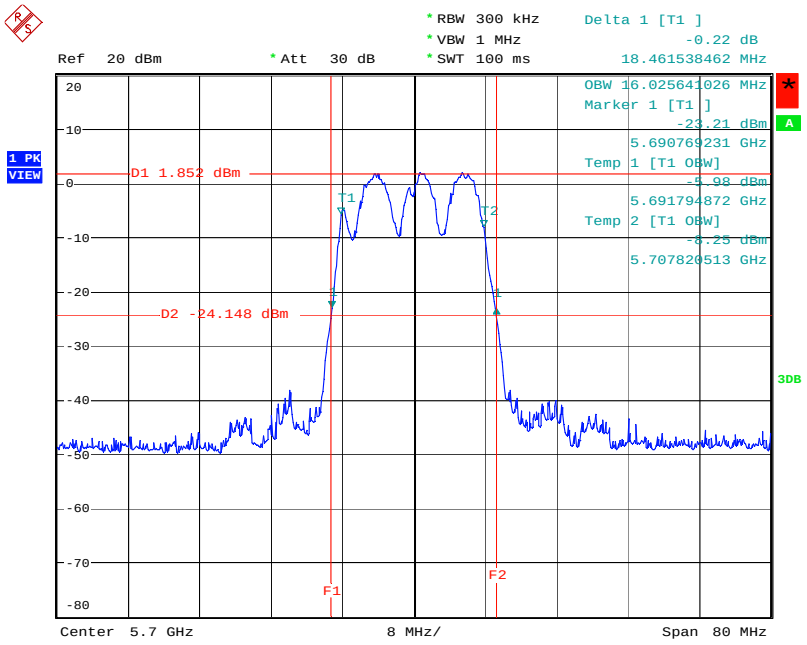
Date: 14.SEP.2008 10:40:57

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5580 MHz



Date: 14.SEP.2008 10:43:53

26 dB Bandwidth Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5700 MHz



4.3. Maximum Conducted Output Power Measurement

4.3.1. Limit

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

For the 5.25-5.35 GHz and 5.470-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power and power density from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log B. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power and power density from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power and peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required.

4.3.2. 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
RB	1000 kHz
VB	3000 kHz
Detector	Peak
Trace	MAX HOLD
Sweep Time	Auto

4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with FCC Public Notice DA 02-2138, August 30, 2002.
3. When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.
4. When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.

4.3.4. Test Setup Layout

4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Maximum Conducted Output Power

Temperature	26°C	Humidity	62%
Test Engineer	Sam Chen	Configurations	Draft n

Configuration Draft n MCS0 20MHz Ant. 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	13.80	17.00	Complies
40	5200 MHz	14.04	17.00	Complies
48	5240 MHz	13.81	17.00	Complies
52	5260 MHz	18.82	24.00	Complies
60	5300 MHz	18.70	24.00	Complies
64	5320 MHz	19.29	24.00	Complies
100	5500 MHz	18.69	24.00	Complies
116	5580 MHz	19.54	24.00	Complies
140	5700 MHz	18.98	24.00	Complies

Configuration Draft n MCS0 20MHz Ant. 3

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	13.38	17.00	Complies
40	5200 MHz	13.77	17.00	Complies
48	5240 MHz	13.73	17.00	Complies
52	5260 MHz	18.85	24.00	Complies
60	5300 MHz	19.07	24.00	Complies
64	5320 MHz	19.43	24.00	Complies
100	5500 MHz	18.83	24.00	Complies
116	5580 MHz	19.36	24.00	Complies
140	5700 MHz	19.03	24.00	Complies

Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	16.61	17.00	Complies
40	5200 MHz	16.92	17.00	Complies
48	5240 MHz	16.78	17.00	Complies
52	5260 MHz	21.85	24.00	Complies
60	5300 MHz	21.90	24.00	Complies
64	5320 MHz	22.37	24.00	Complies
100	5500 MHz	21.77	24.00	Complies
116	5580 MHz	22.46	24.00	Complies
140	5700 MHz	22.02	24.00	Complies

Configuration Draft n MCS0 40MHz Ant. 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	13.61	17.00	Complies
46	5230 MHz	13.77	17.00	Complies
54	5270 MHz	19.22	24.00	Complies
62	5310 MHz	18.80	24.00	Complies
102	5510 MHz	18.61	24.00	Complies
110	5550 MHz	19.49	24.00	Complies
134	5670 MHz	19.30	24.00	Complies

Configuration Draft n MCS0 40MHz Ant. 3

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	14.00	17.00	Complies
46	5230 MHz	13.87	17.00	Complies
54	5270 MHz	18.60	24.00	Complies
62	5310 MHz	18.90	24.00	Complies
102	5510 MHz	18.74	24.00	Complies
110	5550 MHz	19.10	24.00	Complies
134	5670 MHz	18.74	24.00	Complies

Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	16.82	17.00	Complies
46	5230 MHz	16.83	17.00	Complies
54	5270 MHz	21.93	24.00	Complies
62	5310 MHz	21.86	24.00	Complies
102	5510 MHz	21.69	24.00	Complies
110	5550 MHz	22.31	24.00	Complies
134	5670 MHz	22.04	24.00	Complies

Temperature	26°C	Humidity	62%
Test Engineer	Sam Chen	Configurations	802.11a

Configuration IEEE 802.11a Ant. 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	13.39	17.00	Complies
40	5200 MHz	13.75	17.00	Complies
48	5240 MHz	13.96	17.00	Complies
52	5260 MHz	18.70	24.00	Complies
60	5300 MHz	18.99	24.00	Complies
64	5320 MHz	19.28	24.00	Complies
100	5500 MHz	19.05	24.00	Complies
116	5580 MHz	19.15	24.00	Complies
140	5700 MHz	18.65	24.00	Complies

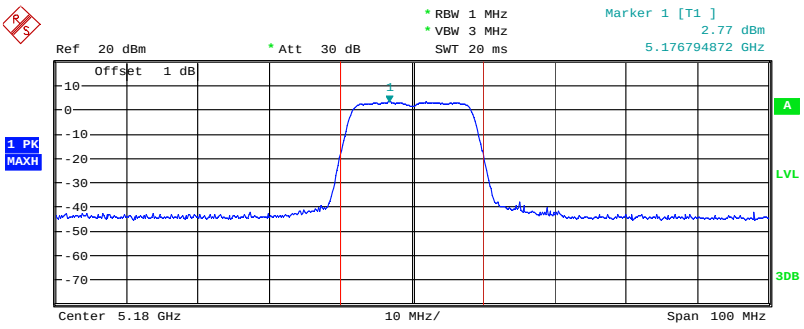
Configuration IEEE 802.11a Ant. 3

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	14.07	17.00	Complies
40	5200 MHz	13.41	17.00	Complies
48	5240 MHz	13.69	17.00	Complies
52	5260 MHz	18.92	24.00	Complies
60	5300 MHz	19.10	24.00	Complies
64	5320 MHz	18.69	24.00	Complies
100	5500 MHz	18.95	24.00	Complies
116	5580 MHz	18.65	24.00	Complies
140	5700 MHz	18.57	24.00	Complies

Configuration IEEE 802.11a Ant. 1 + Ant. 3

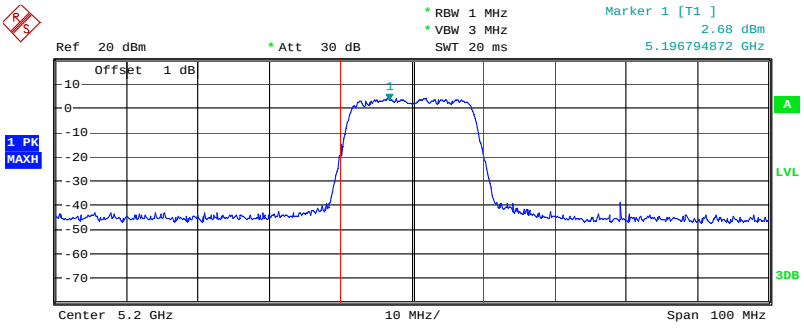
Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	16.75	17.00	Complies
40	5200 MHz	16.59	17.00	Complies
48	5240 MHz	16.84	17.00	Complies
52	5260 MHz	21.82	24.00	Complies
60	5300 MHz	22.06	24.00	Complies
64	5320 MHz	22.01	24.00	Complies
100	5500 MHz	22.01	24.00	Complies
116	5580 MHz	21.92	24.00	Complies
140	5700 MHz	21.62	24.00	Complies

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5180 MHz



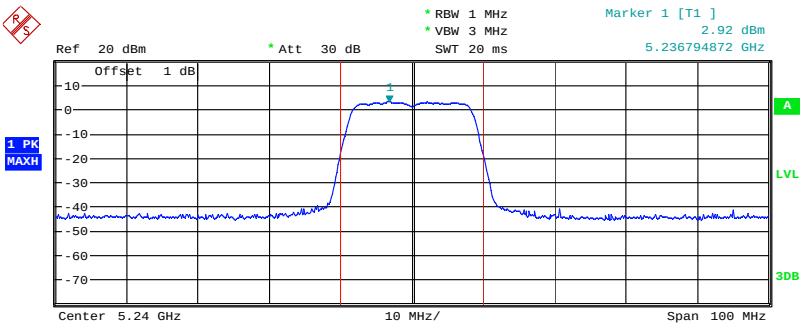
Date: 13.SEP.2008 16:25:40

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5200 MHz



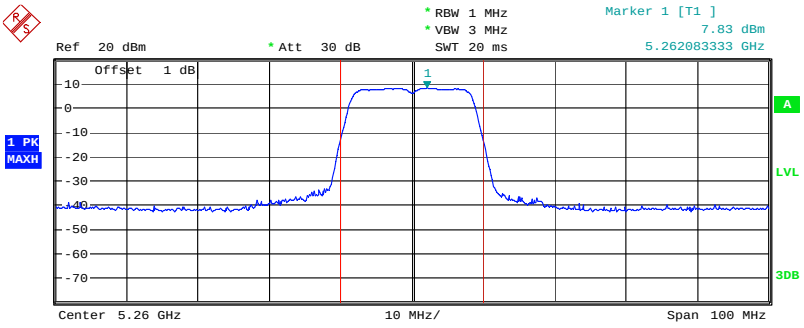
Date: 13.SEP.2008 16:39:27

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5240 MHz



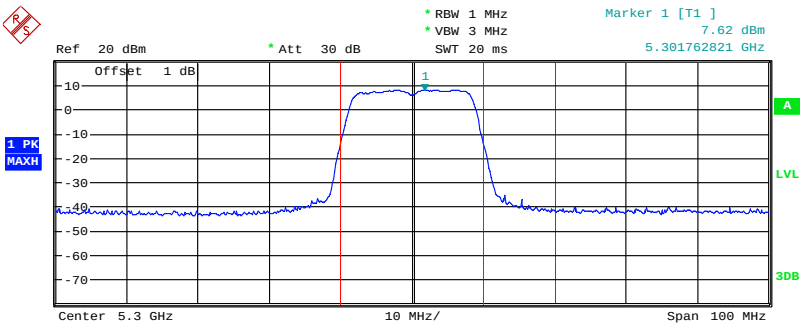
Date: 13.SEP.2008 16:42:33

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5260 MHz



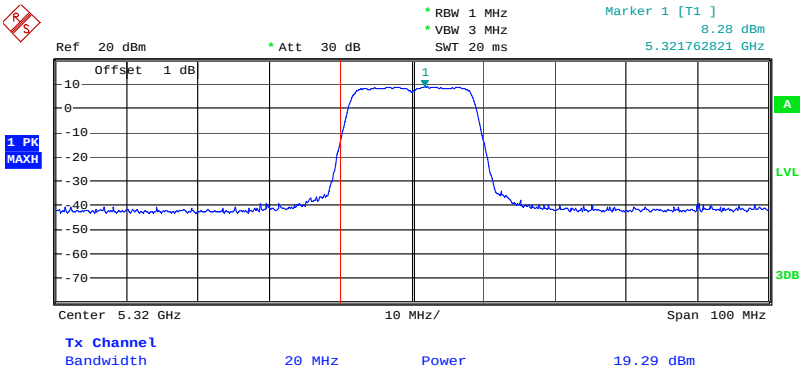
Date: 13.SEP.2008 16:45:04

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5300 MHz



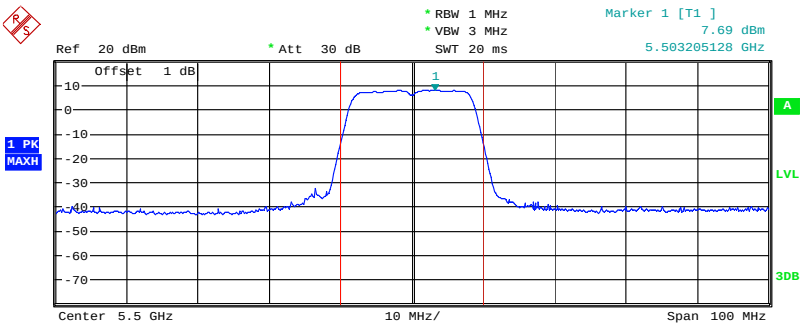
Date: 13.SEP.2008 16:49:58

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5320 MHz



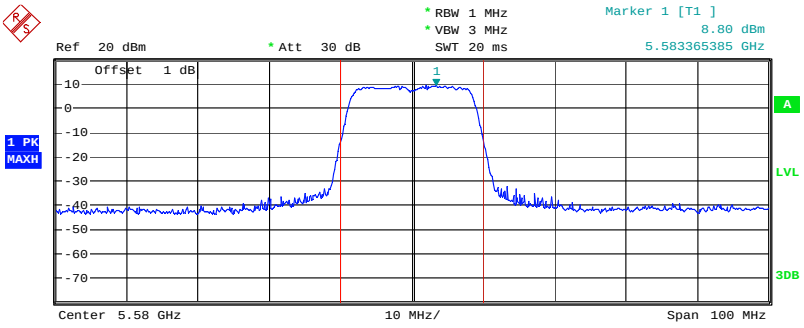
Date: 13.SEP.2008 16:51:13

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5500 MHz



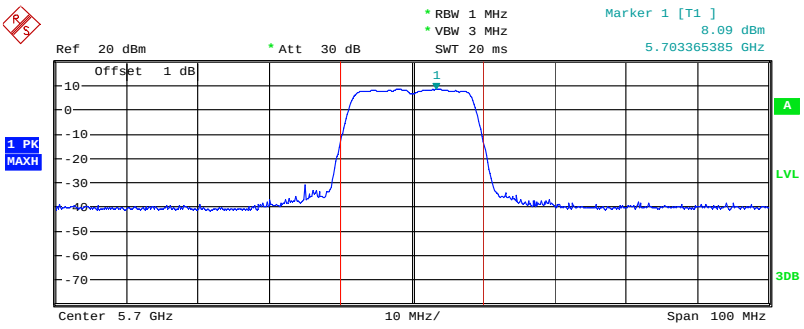
Date: 13.SEP.2008 16:58:22

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5580 MHz



Date: 13.SEP.2008 17:01:20

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 1 / 5700 MHz



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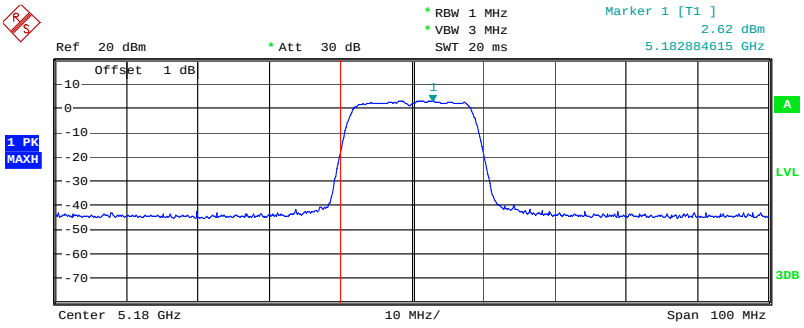
Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5180 MHz



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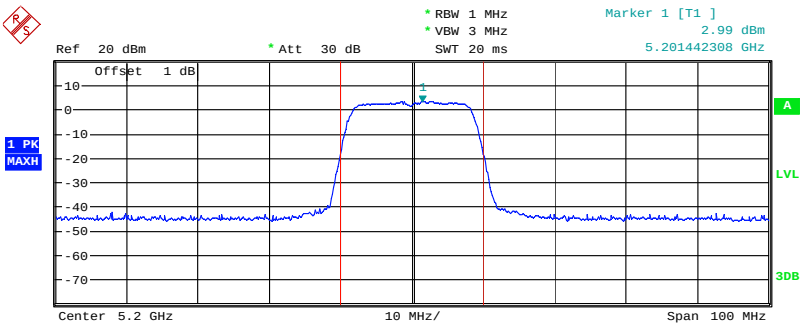

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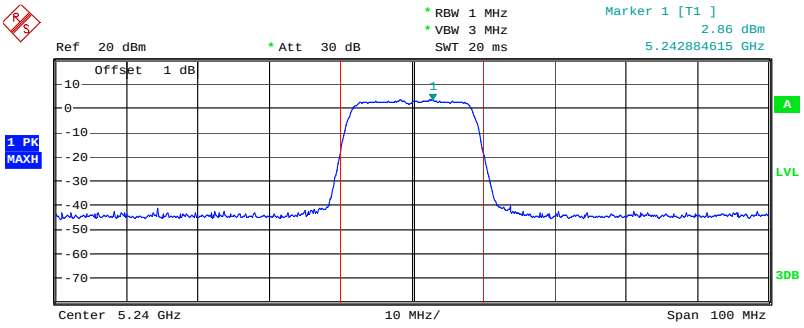
Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5240 MHz



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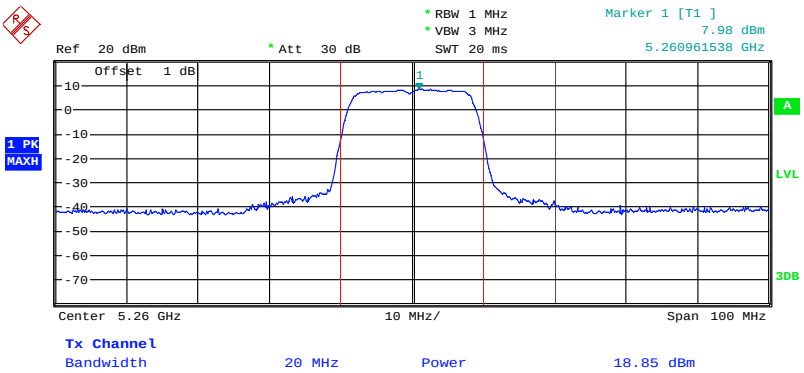
Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5260 MHz



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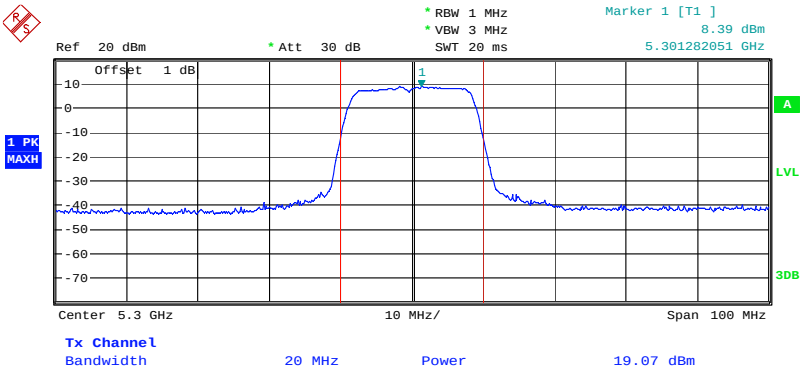
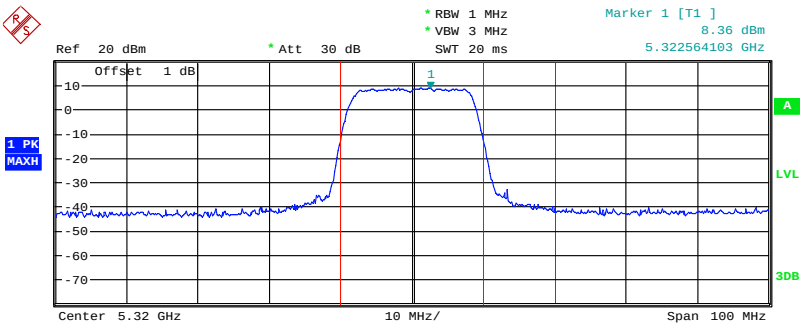
Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5300 MHz



Date: 13.SEP.2008 16:48:29

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5320 MHz



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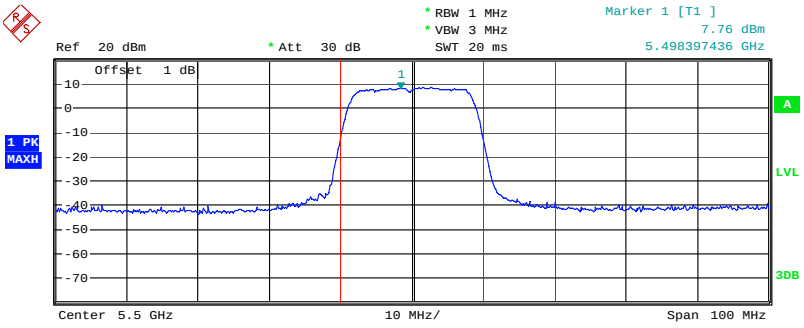
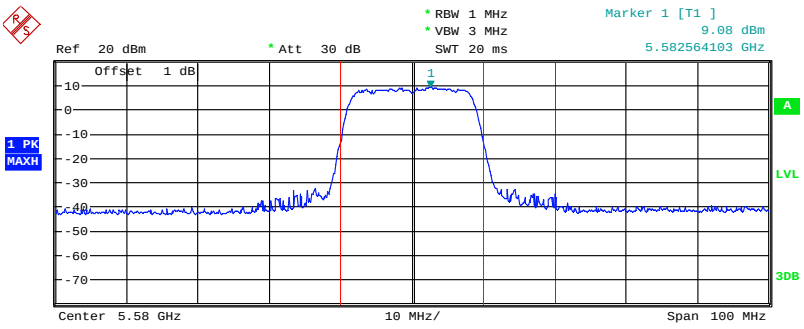
Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5500 MHz



Date: 13.SEP.2008 16:59:20

Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5580 MHz



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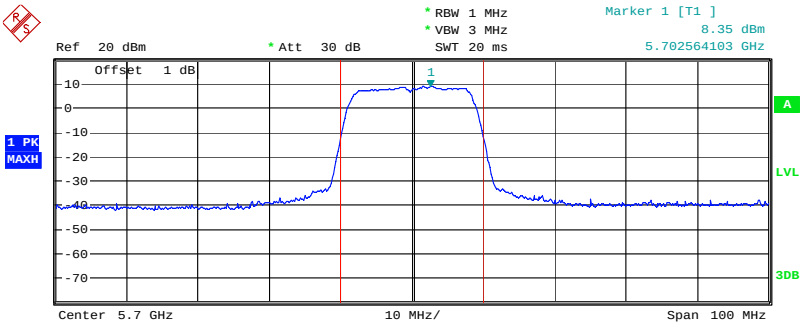
Channel Output Power Plot on Configuration Draft n MCS0 20MHz Ant. 3 / 5700 MHz



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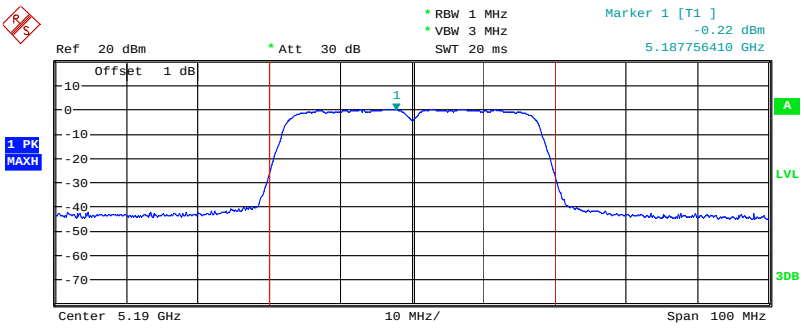
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 1 / 5190 MHz



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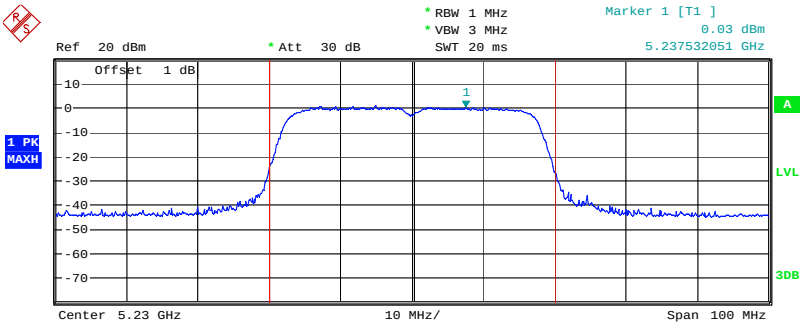
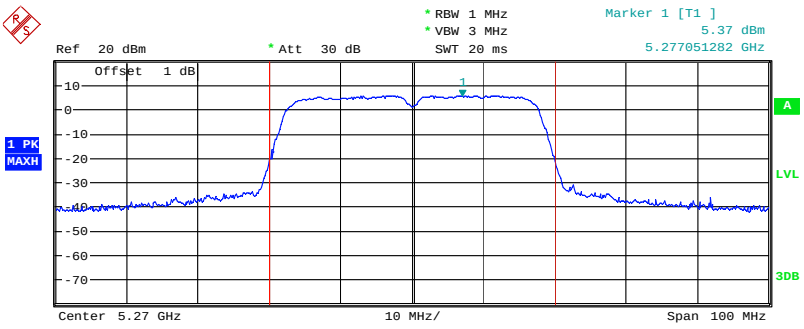
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 1 / 5230 MHz



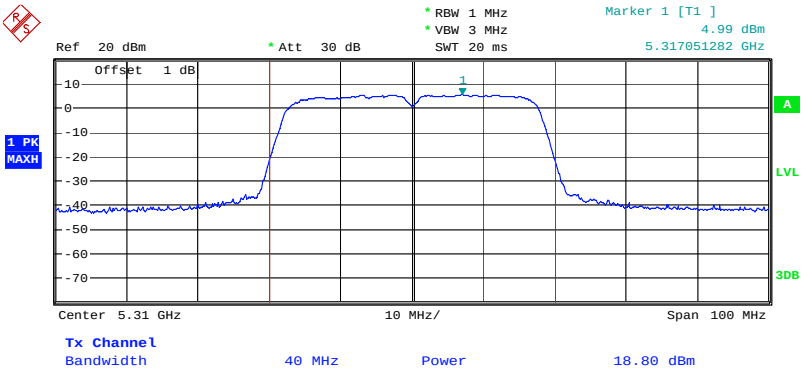
Date: 14.SEP.2008 09:36:32

Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 1 / 5270 MHz



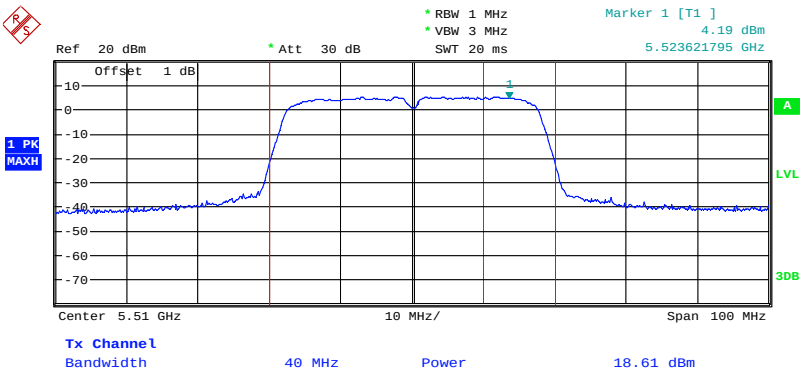
Date: 14.SEP.2008 09:42:45

Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 1 / 5310 MHz



Date: 14.SEP.2008 09:46:29

Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 1 / 5510 MHz



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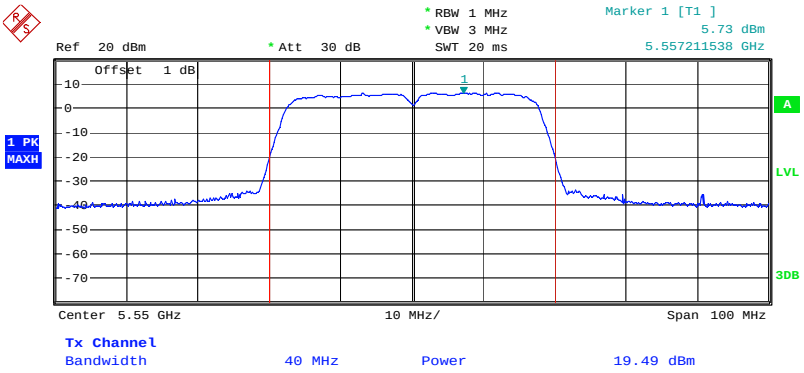
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 1 / 5550 MHz



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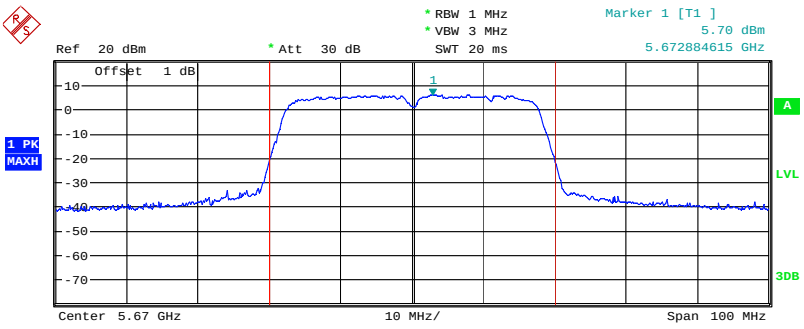
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 1 / 5670 MHz



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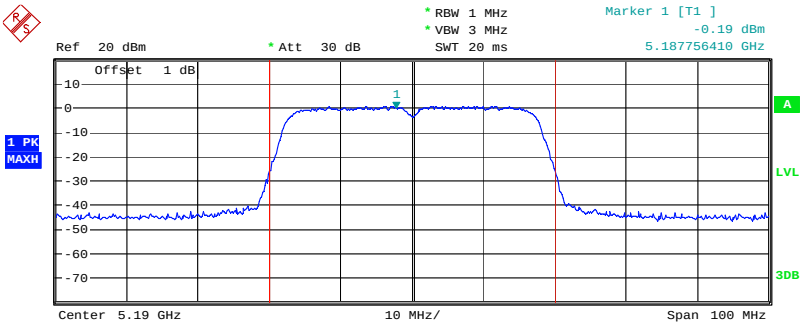
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 3 / 5190 MHz



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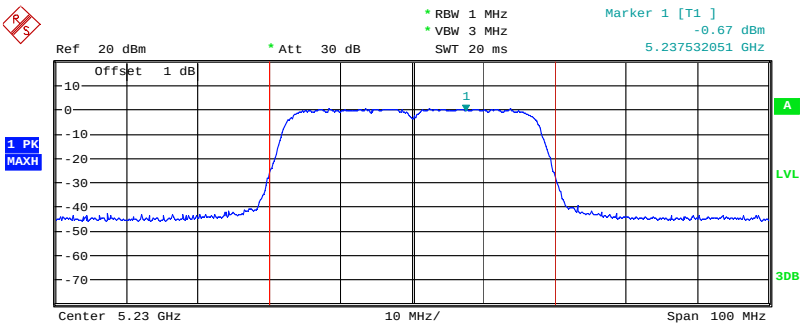
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 3 / 5230 MHz



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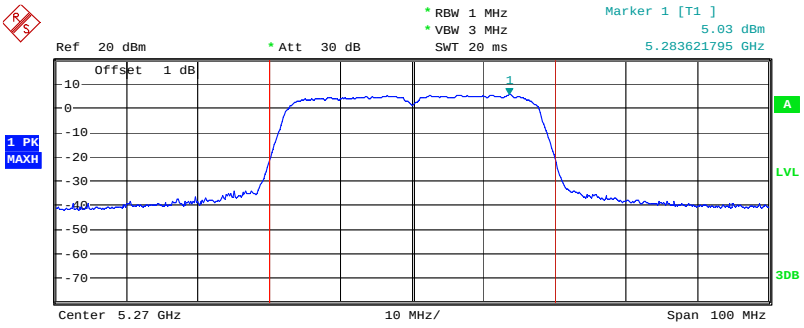
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 3 / 5270 MHz



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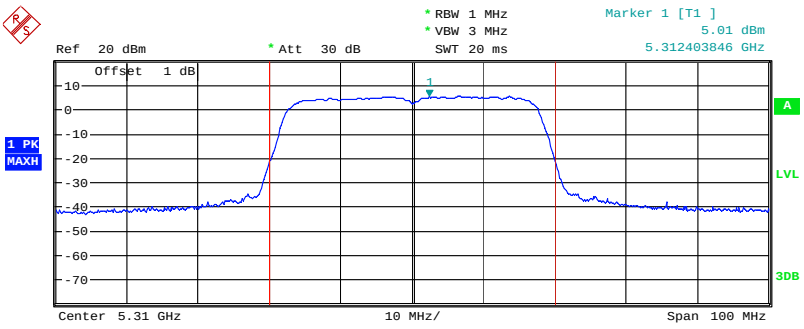
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 3 / 5310 MHz



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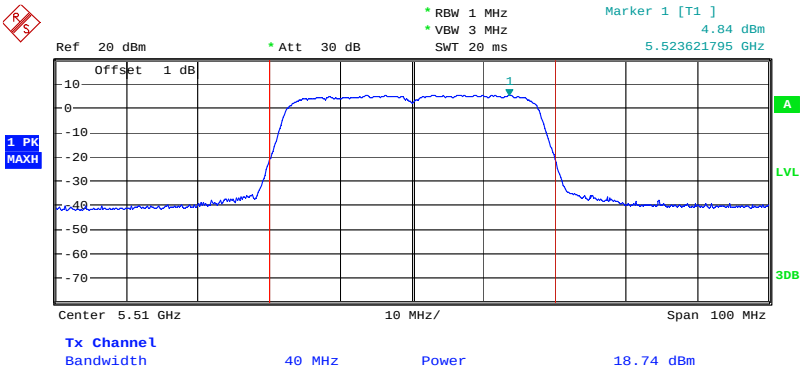
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 3 / 5510 MHz



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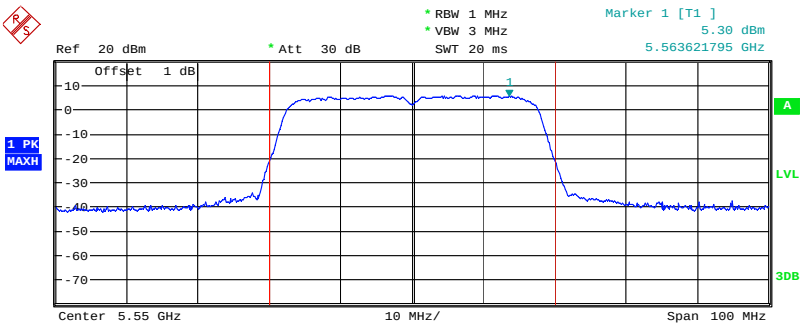
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 3 / 5550 MHz



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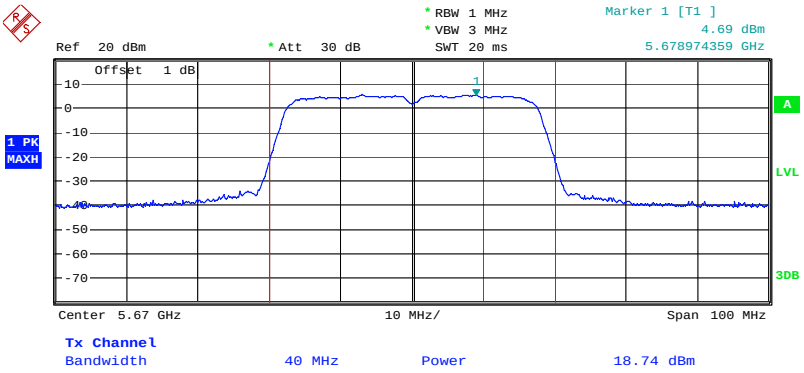
Channel Output Power Plot on Configuration Draft n MCS0 40MHz Ant. 3 / 5670 MHz



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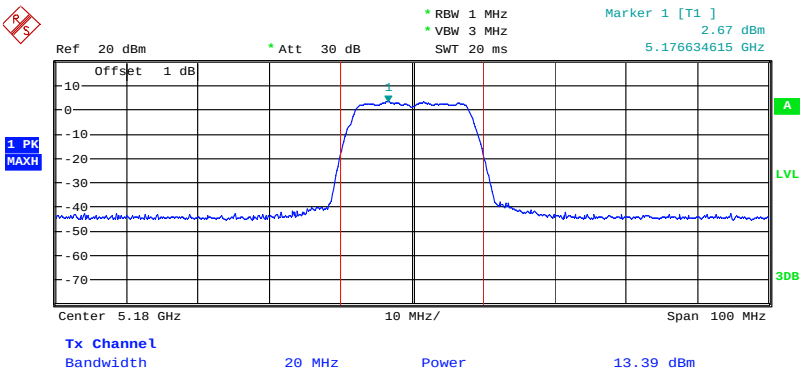
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5180 MHz



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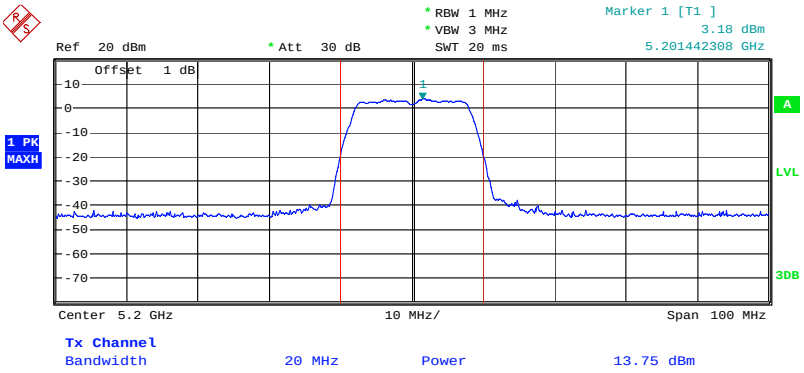
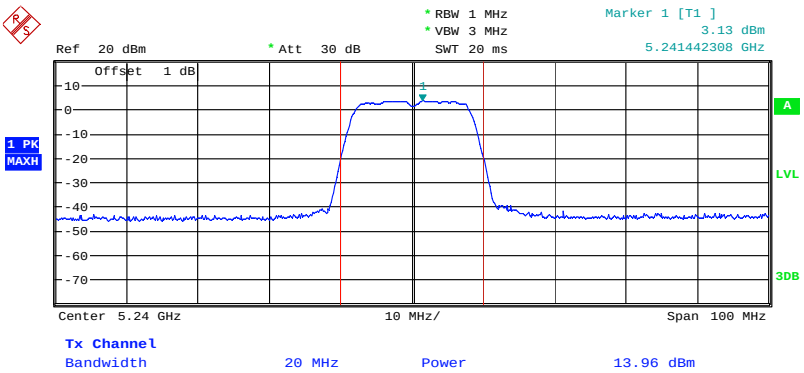
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5200 MHz



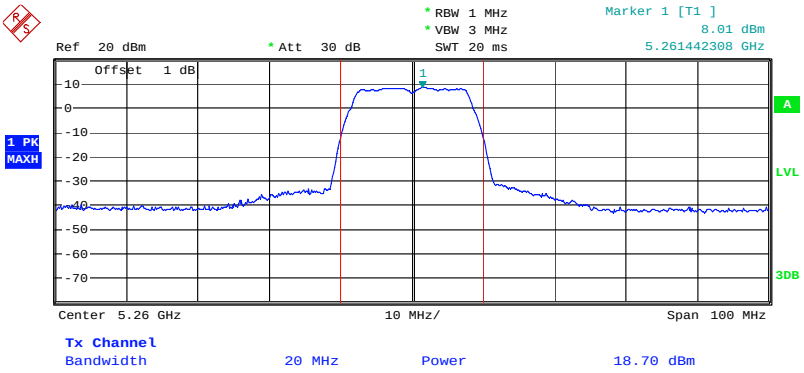
Date: 13.SEP.2008 14:58:06

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5240 MHz



Date: 13.SEP.2008 15:04:01

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5260 MHz



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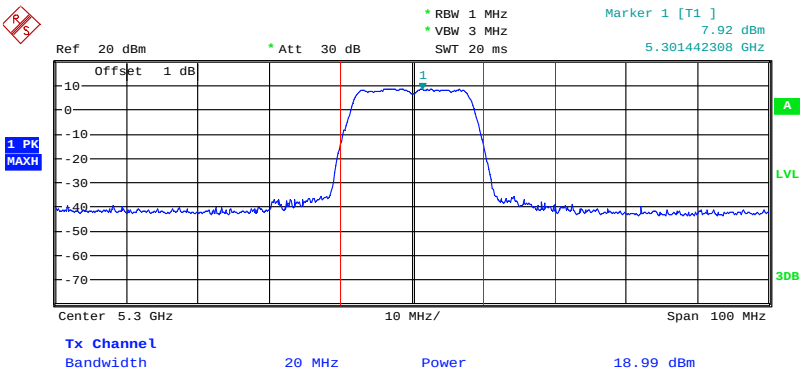
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5300 MHz



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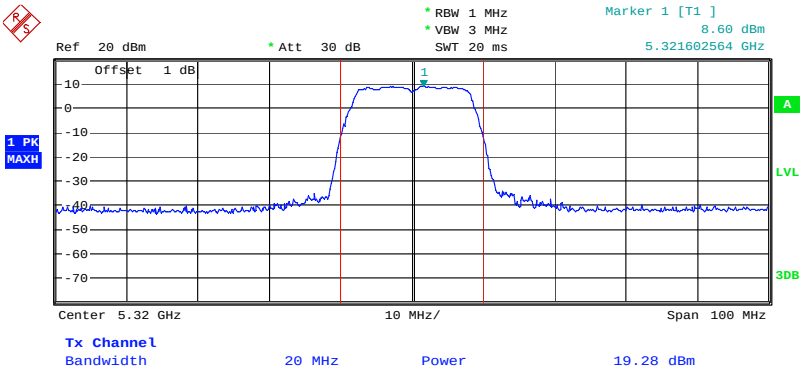
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5320 MHz



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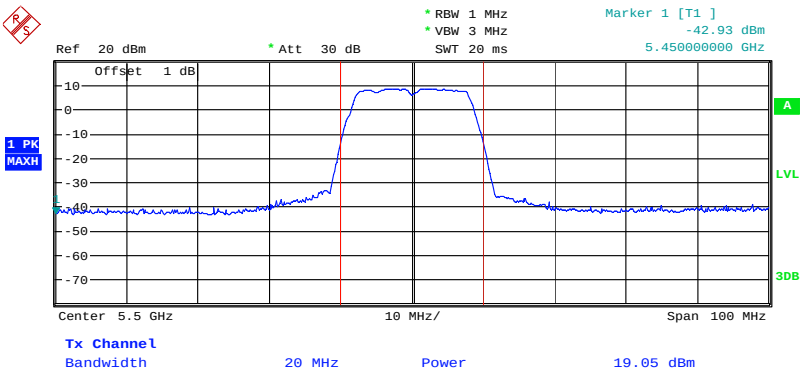
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5500 MHz



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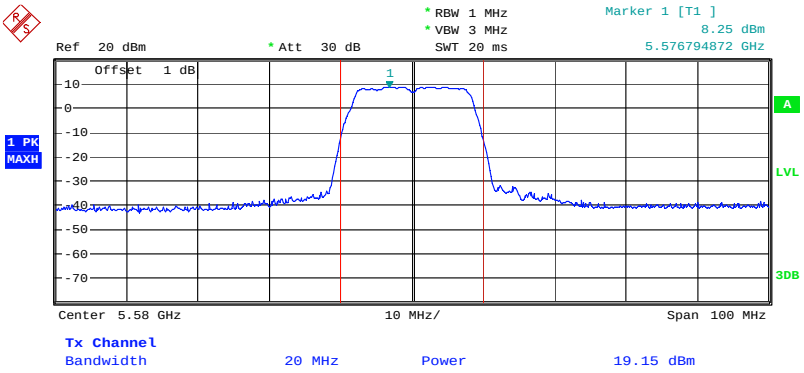
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5580 MHz



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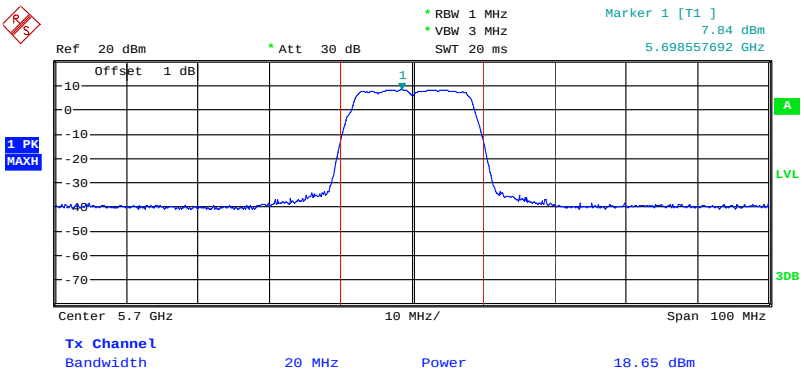
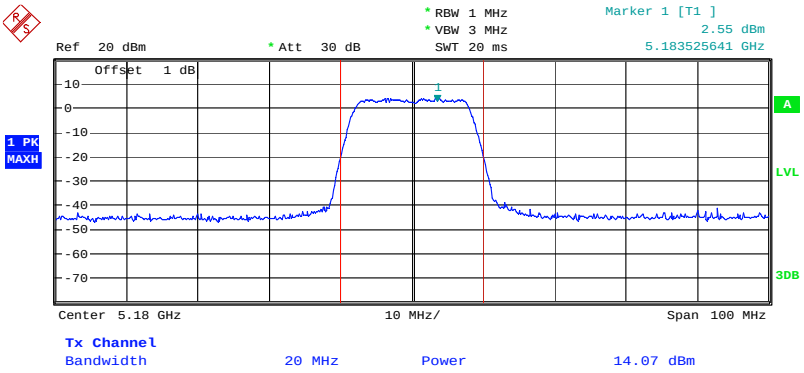
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 1 / 5700 MHz



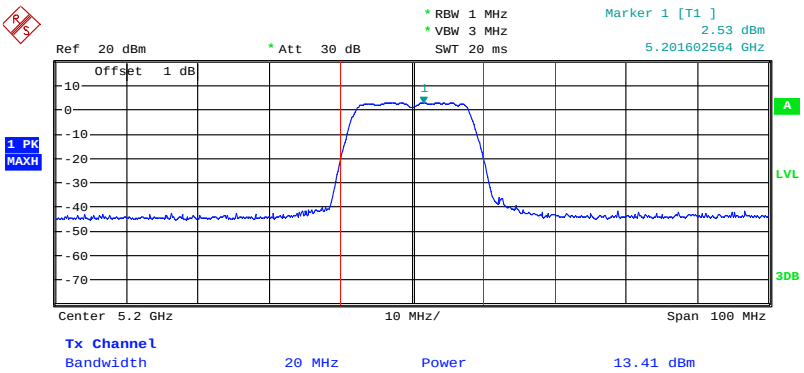
Date: 13.SEP.2008 16:05:45

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5180 MHz



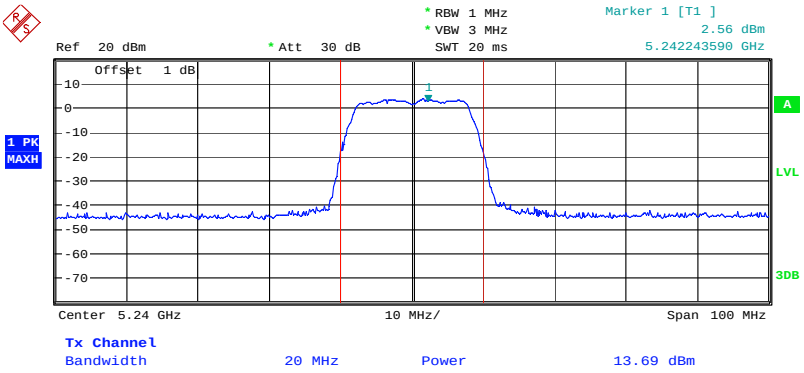
Date: 13.SEP.2008 14:49:28

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5200 MHz



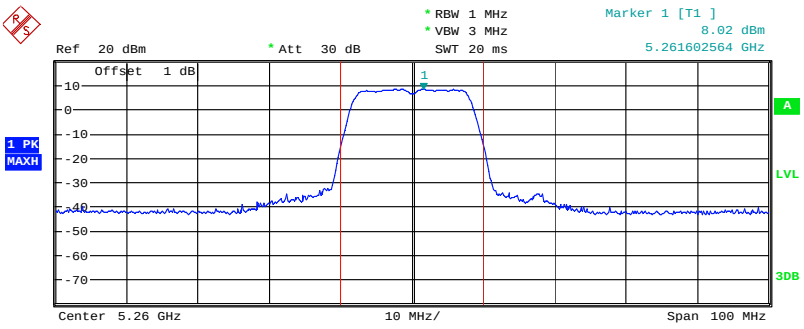
Date: 13.SEP.2008 15:01:58

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5240 MHz



Date: 13.SEP.2008 15:19:38

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5260 MHz



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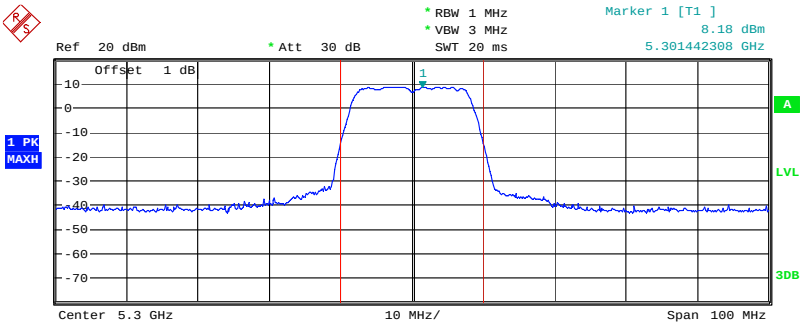
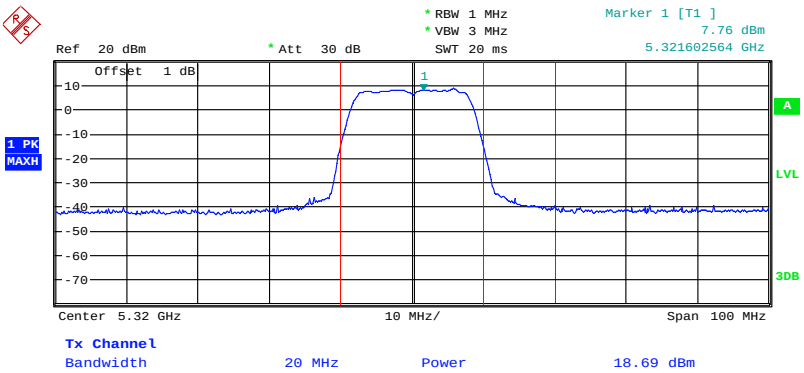
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5300 MHz



Date: 13.SEP.2008 15:46:13

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5320 MHz



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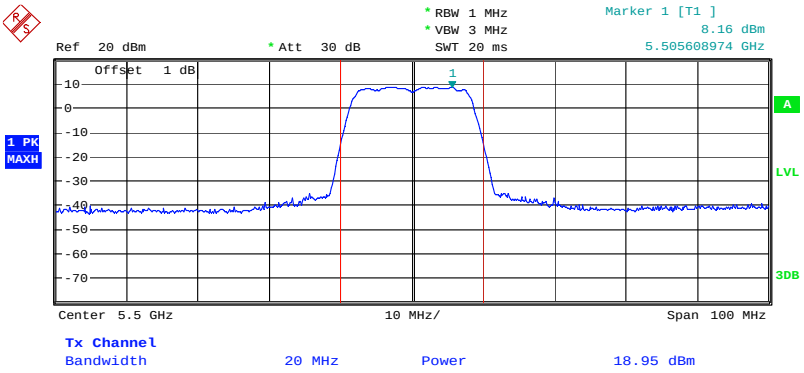
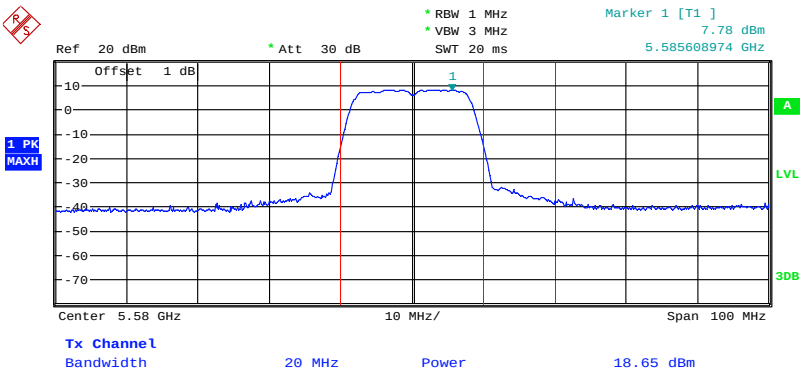
Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5500 MHz



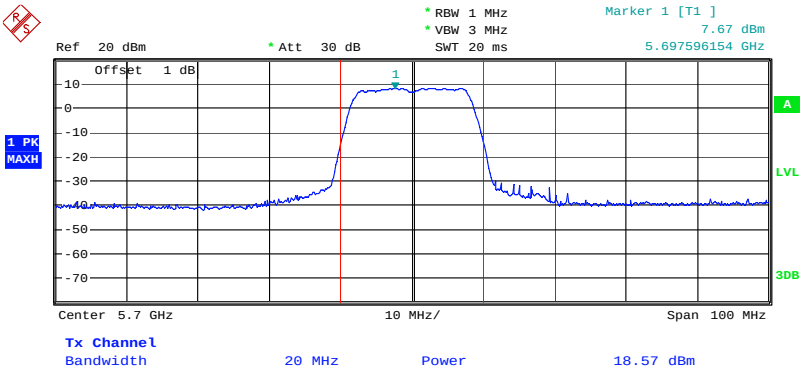
Date: 13.SEP.2008 16:00:12

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5580 MHz



Date: 13.SEP.2008 16:03:35

Channel Output Power Plot on Configuration IEEE 802.11a Ant. 3 / 5700 MHz



Date: 13.SEP.2008 16:07:21

4.4. Power Spectral Density Measurement

4.4.1. Limit

The power spectral density is defined as the highest level of power in dBm per MHz generated by the transmitter within the power envelope. The following table is power spectral density limits and decrease power density limit rule refer to section 4.3.1.

Frequency Range	Power Spectral Density limit (dBm/MHz)
5.15~5.25 GHz	4
5.25-5.35 GHz	11
5470-5725	11

4.4.2. Measuring Instruments and Setting

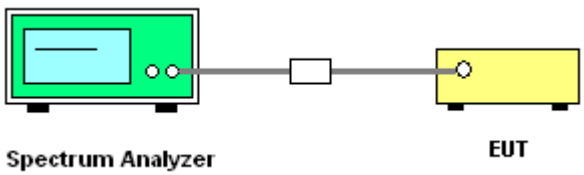
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1000 kHz
VB	3000 kHz
Detector	SAMPLE
Trace	Max Hold
Sweep Time	Auto

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 1000kHz and VBW to 3000kHz. Set Detector to Peak, Trace to Max Hold. Mark the frequency with maximum peak power as the center of the display of the spectrum.
3. Measuring multiple antennas, the connector is required to link with Power Meter through a combiner.
4. When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.

4.4.4. Test Setup Layout



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of Power Spectral Density

Temperature	26℃	Humidity	62%
Test Engineer	Sam Chen	Configurations	Draft n

Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	-2.46	4.00	Complies
40	5200 MHz	-2.83	4.00	Complies
48	5240 MHz	-4.52	4.00	Complies
52	5260 MHz	1.12	11.00	Complies
60	5300 MHz	1.77	11.00	Complies
64	5320 MHz	3.27	11.00	Complies
100	5500 MHz	0.64	11.00	Complies
116	5580 MHz	3.12	11.00	Complies
140	5700 MHz	1.76	11.00	Complies

Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3

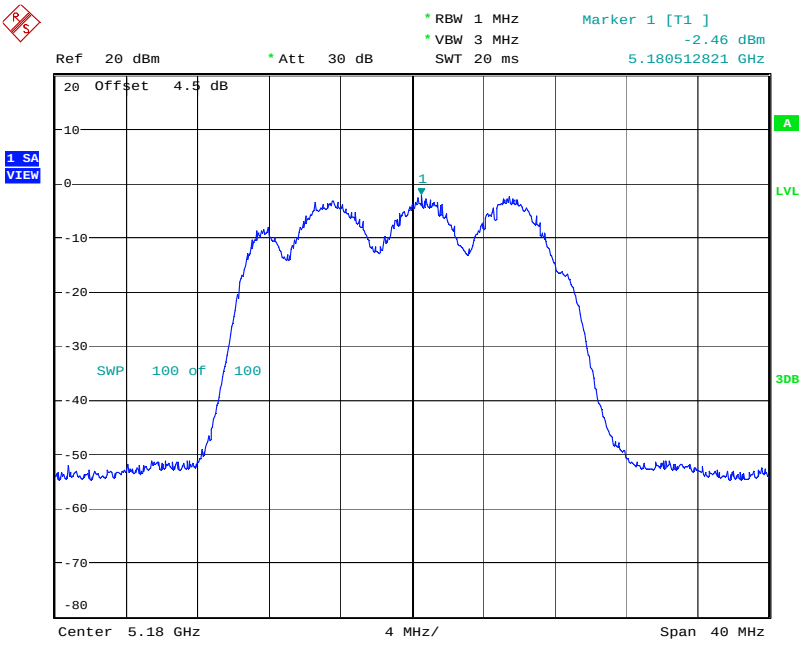
Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	-7.77	4.00	Complies
46	5230MHz	-6.39	4.00	Complies
54	5270 MHz	-1.45	11.00	Complies
62	5310 MHz	-0.20	11.00	Complies
102	5510 MHz	-1.66	11.00	Complies
110	5550 MHz	-0.12	11.00	Complies
134	5670 MHz	-0.32	11.00	Complies

Temperature	26°C	Humidity	62%
Test Engineer	Sam Chen	Configurations	802.11a

Configuration IEEE 802.11a Ant. 1 + Ant. 3

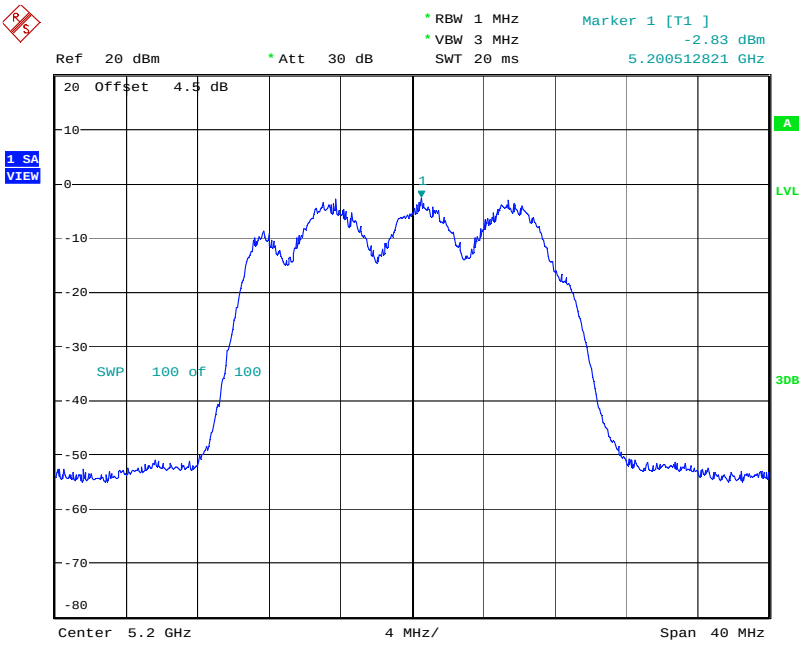
Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	-0.65	4.00	Complies
40	5200 MHz	-3.77	4.00	Complies
48	5240 MHz	-4.17	4.00	Complies
52	5260 MHz	1.27	11.00	Complies
60	5300 MHz	2.10	11.00	Complies
64	5320 MHz	2.72	11.00	Complies
100	5500 MHz	1.27	11.00	Complies
116	5580 MHz	1.59	11.00	Complies
140	5700 MHz	2.87	11.00	Complies

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5180 MHz



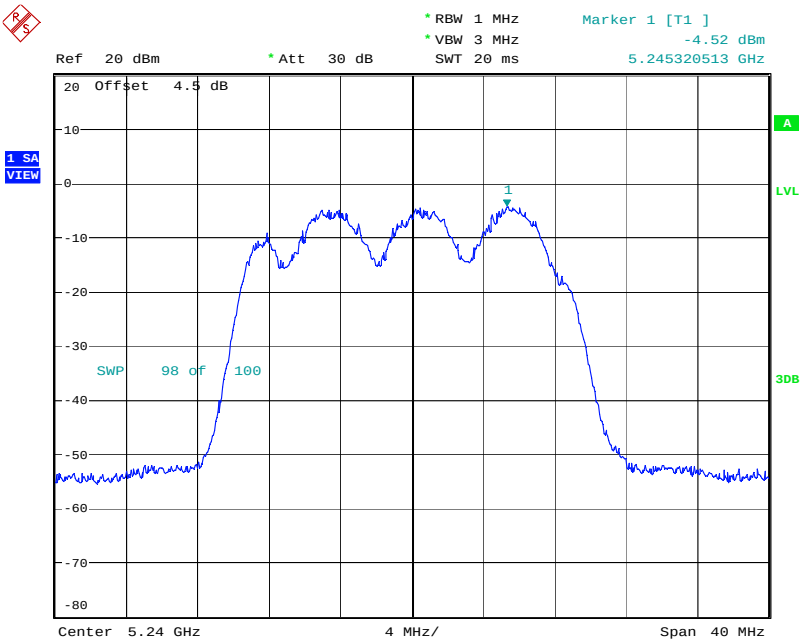
Date: 14.SEP.2008 10:56:34

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5200 MHz



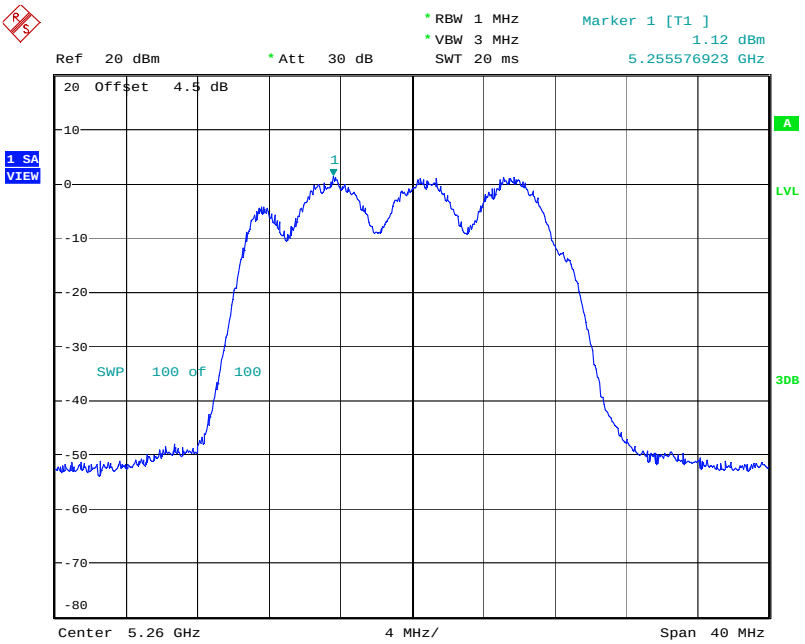
Date: 14.SEP.2008 10:57:34

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5240 MHz



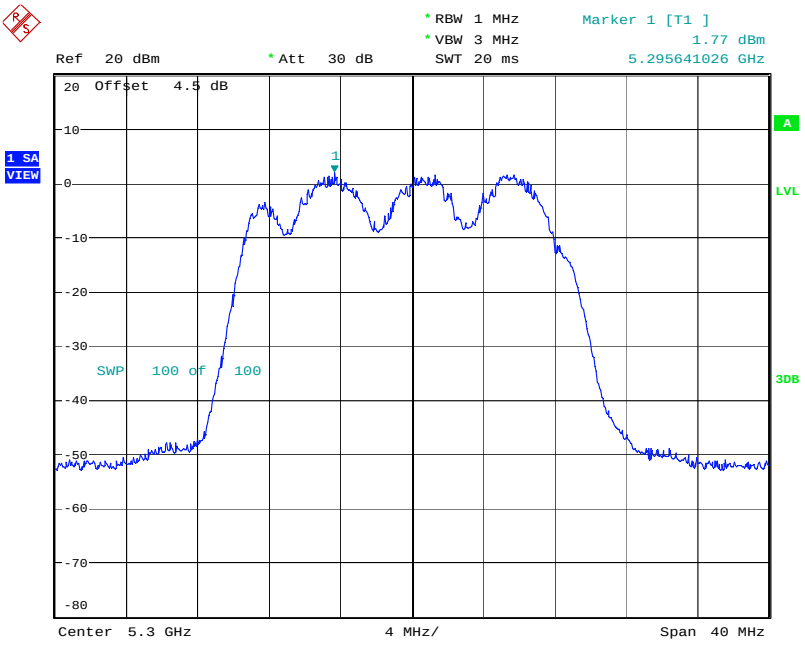
Date: 14.SEP.2008 10:58:30

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5260 MHz



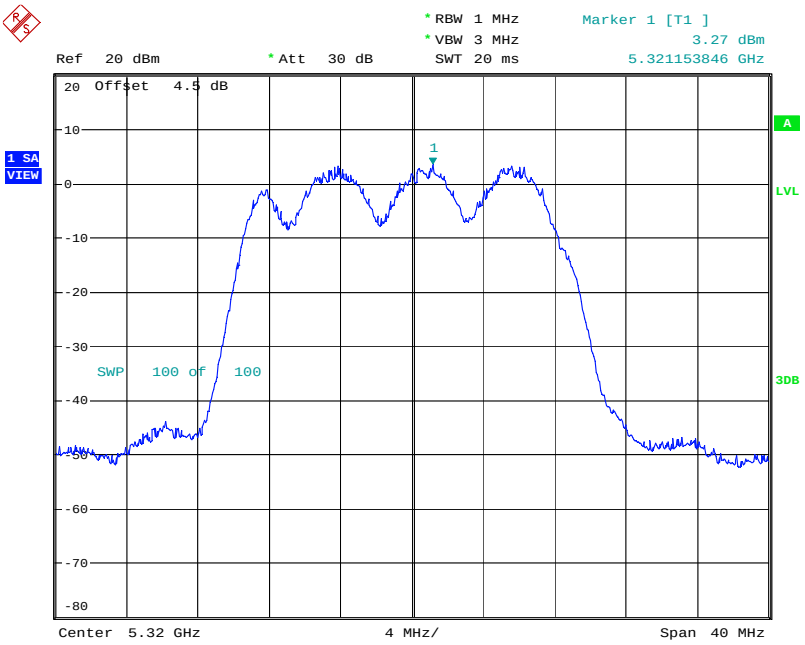
Date: 14.SEP.2008 10:59:31

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5300 MHz



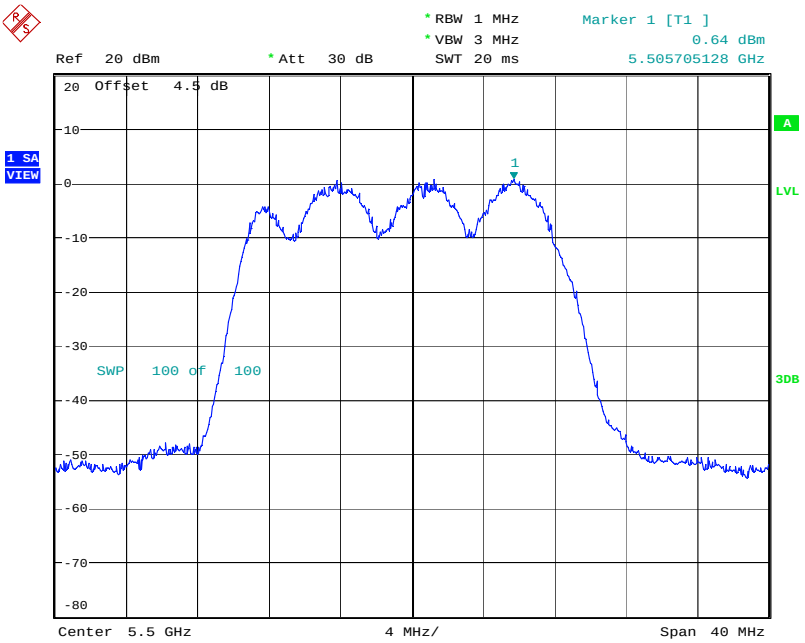
Date: 14.SEP.2008 11:00:27

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5320 MHz



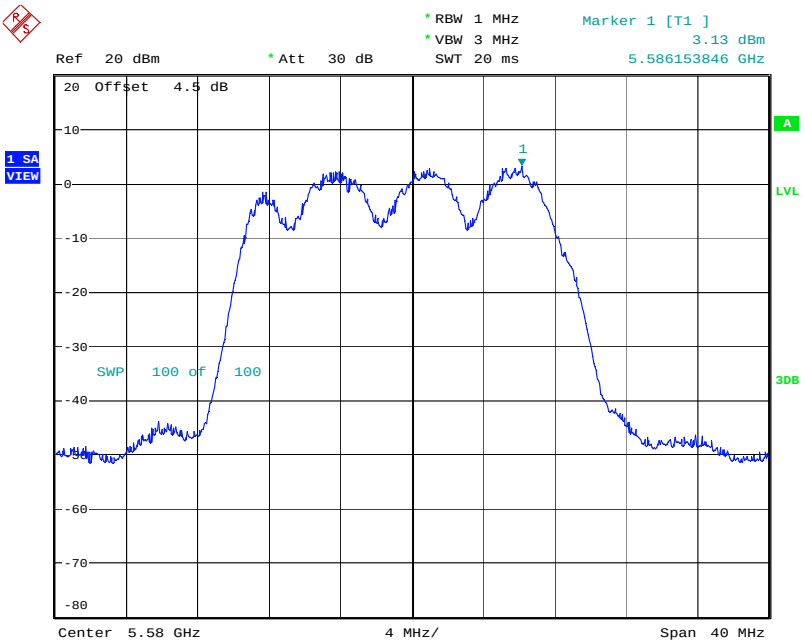
Date: 14.SEP.2008 12:55:41

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5500 MHz



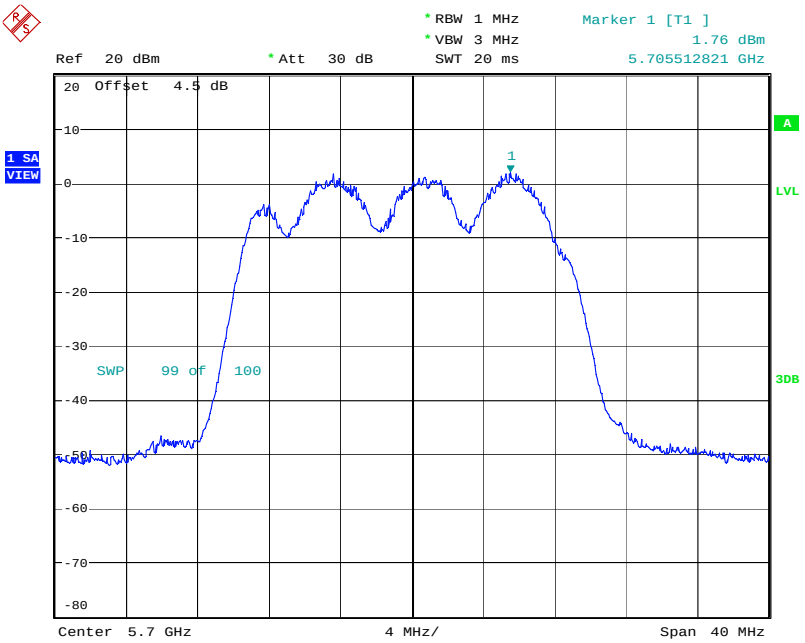
Date: 14.SEP.2008 11:04:20

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5580 MHz



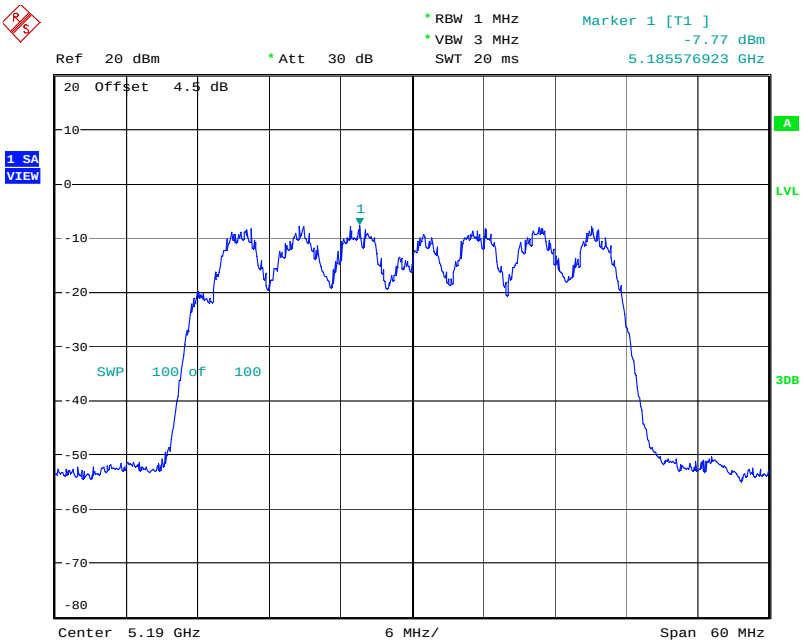
Date: 14.SEP.2008 11:05:35

Power Density Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5700 MHz



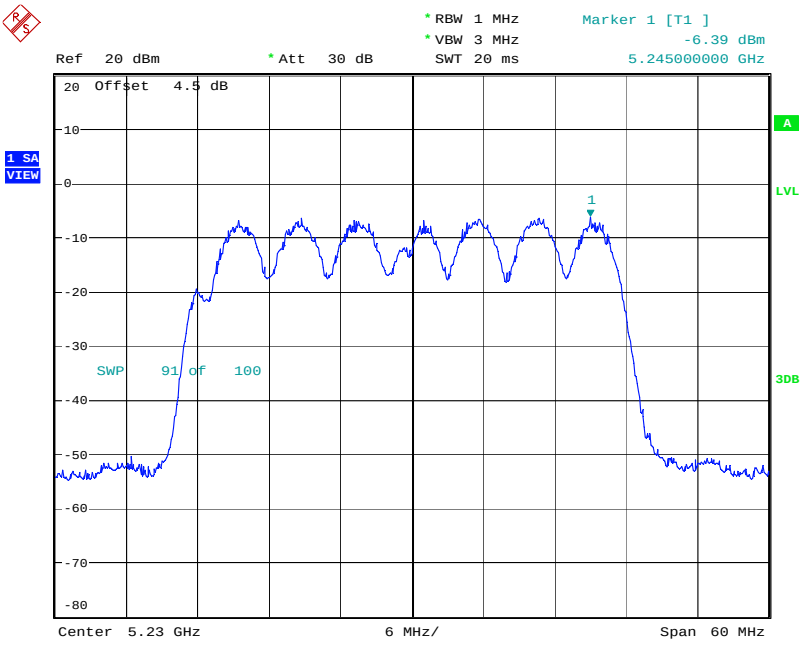
Date: 14.SEP.2008 11:06:50

Power Density Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5190 MHz



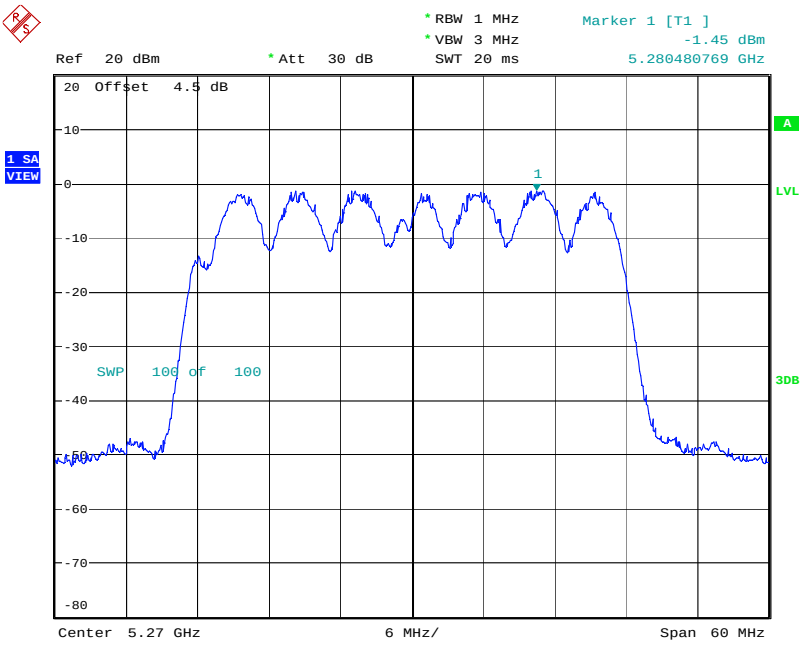
Date: 14.SEP.2008 11:16:53

Power Density Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5230 MHz



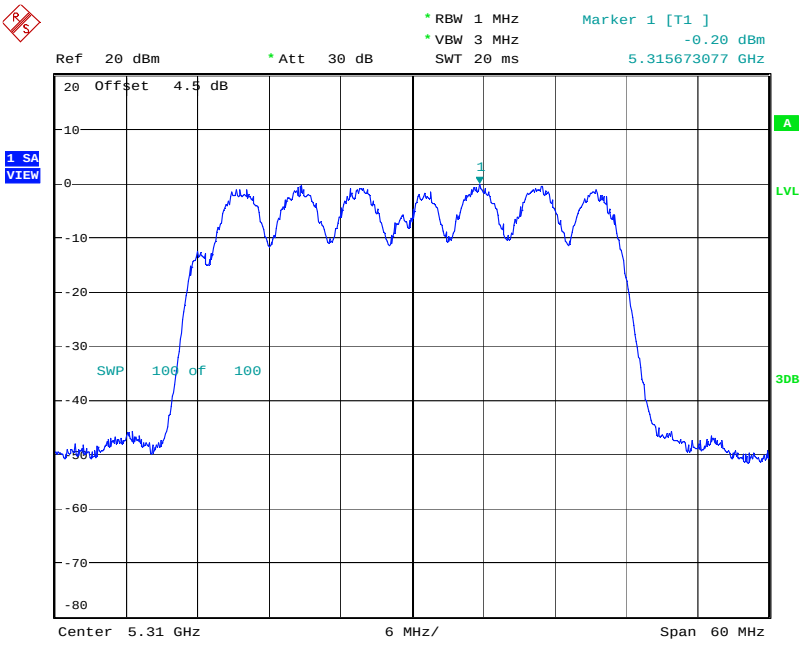
Date: 14.SEP.2008 11:15:54

Power Density Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5270 MHz



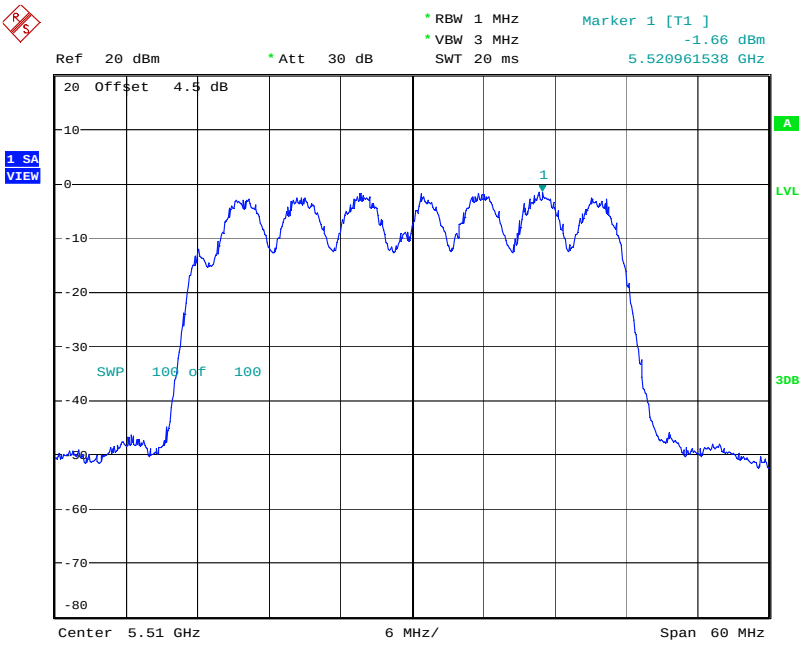
Date: 14.SEP.2008 11:14:39

Power Density Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5310 MHz



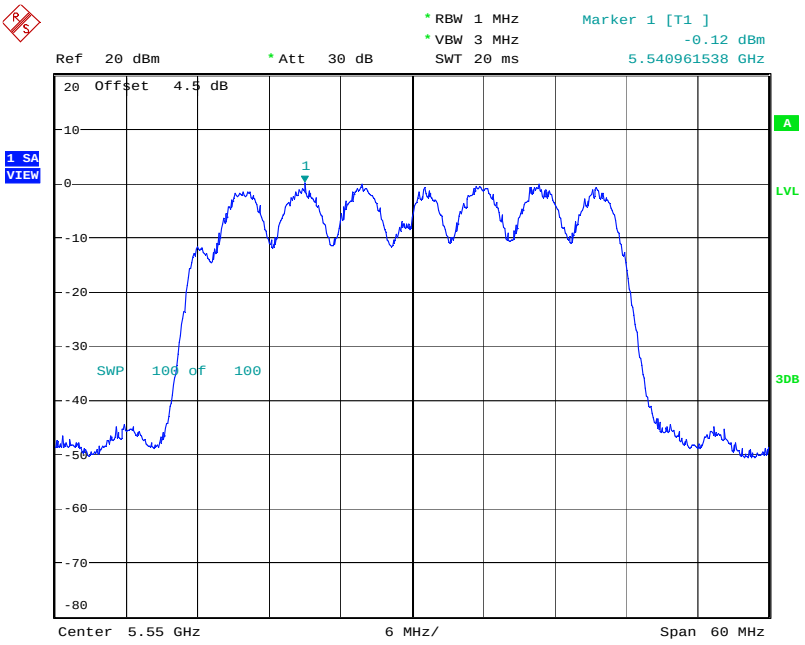
Date: 14.SEP.2008 11:13:47

Power Density Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5510 MHz



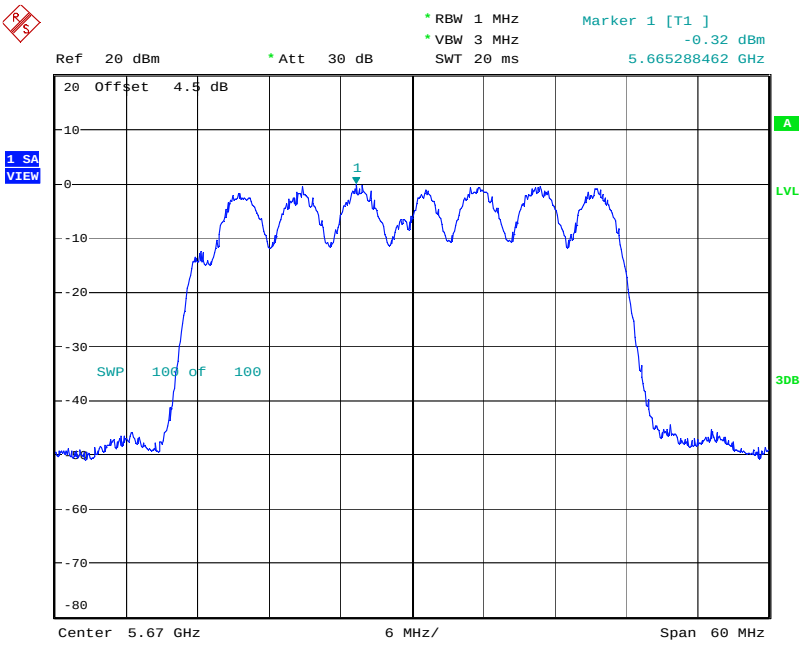
Date: 14.SEP.2008 11:12:30

Power Density Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5550 MHz



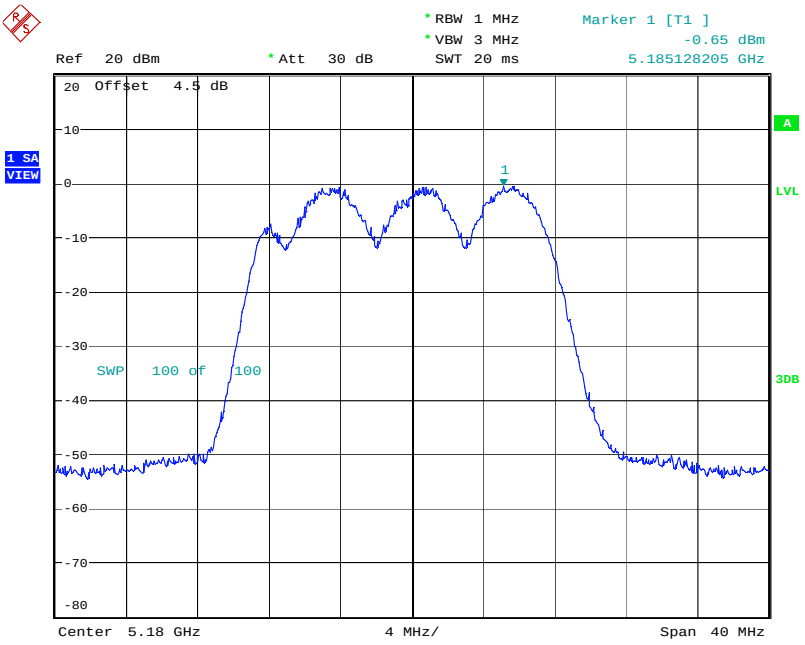
Date: 14.SEP.2008 11:10:09

Power Density Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5670 MHz



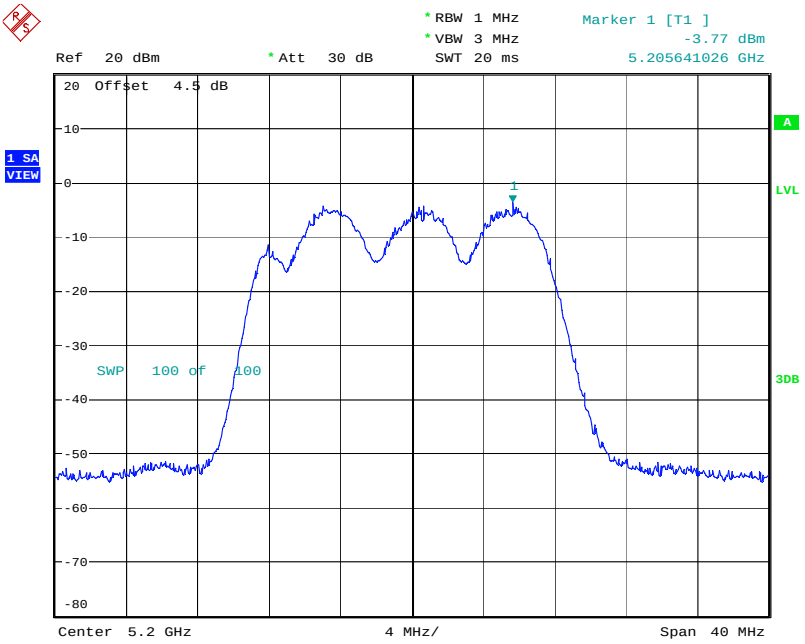
Date: 14.SEP.2008 11:08:17

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



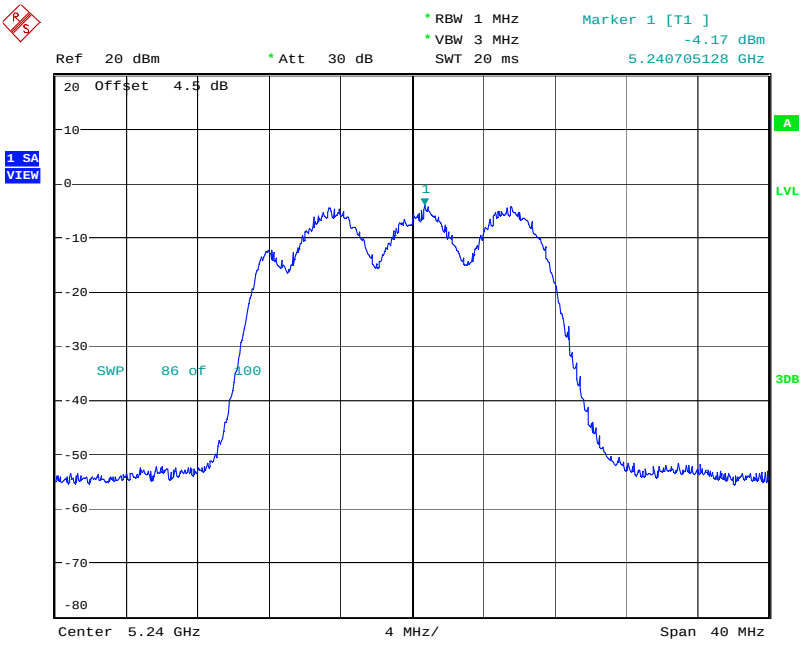
Date: 14.SEP.2008 10:27:43

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



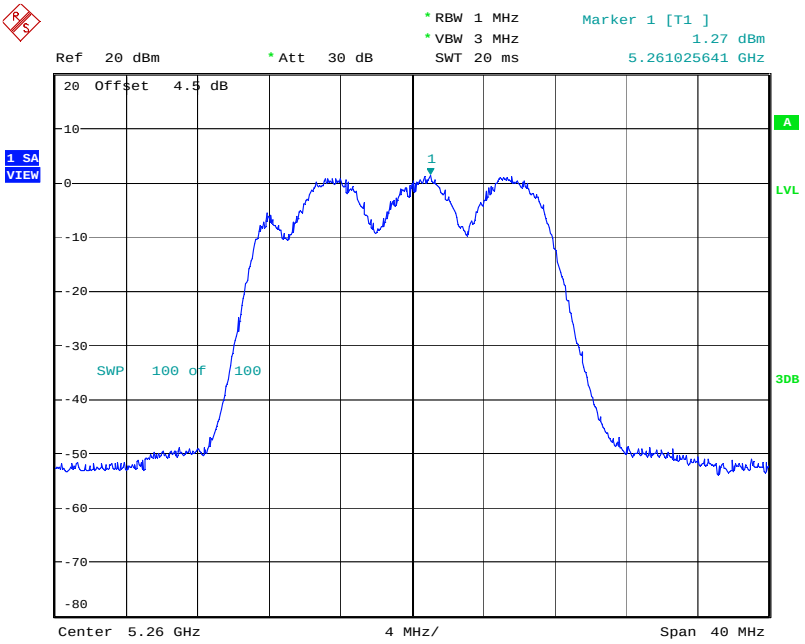
Date: 14.SEP.2008 10:32:56

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



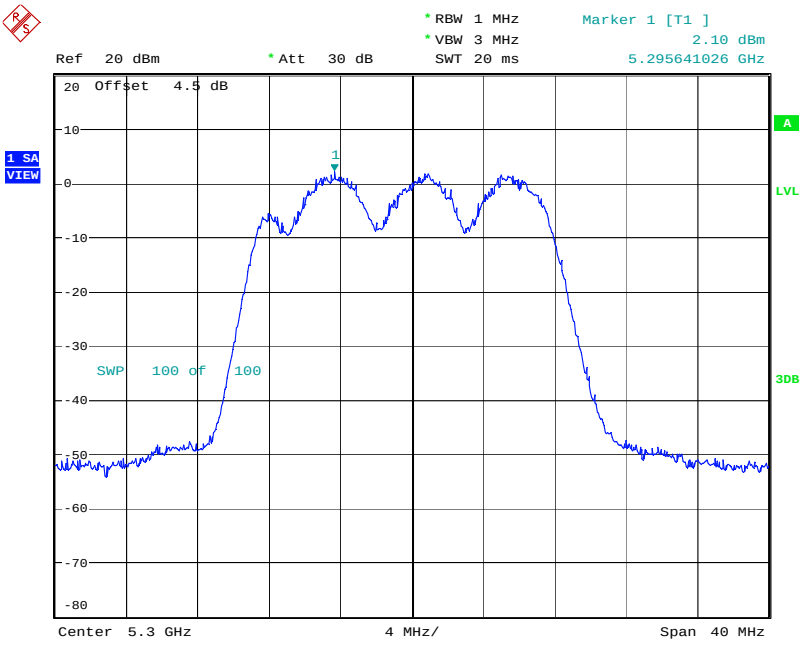
Date: 14.SEP.2008 10:34:47

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



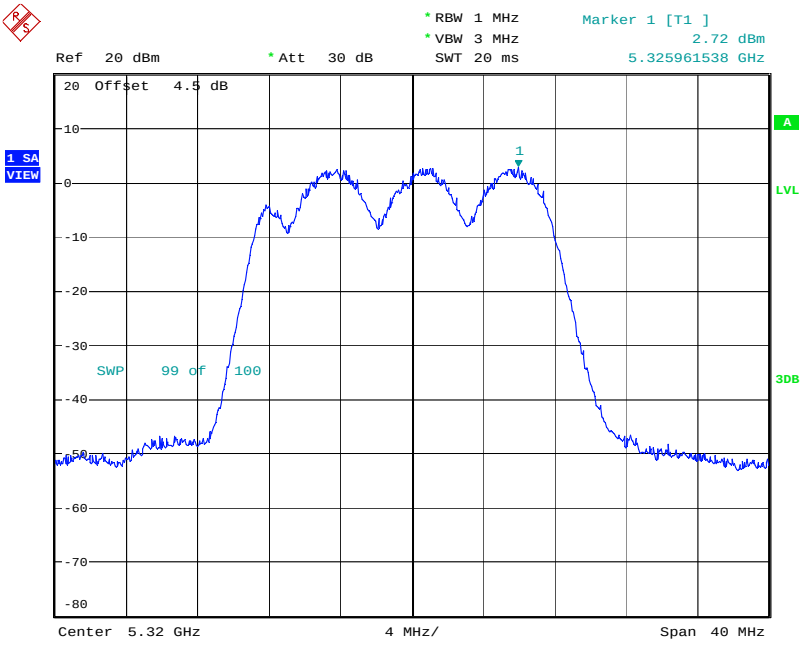
Date: 14.SEP.2008 10:36:41

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



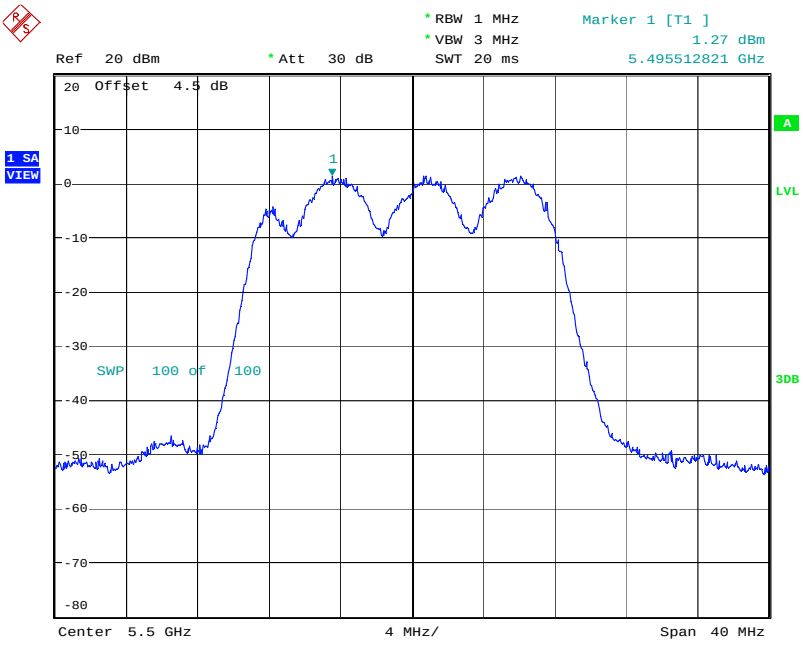
Date: 14.SEP.2008 10:37:45

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



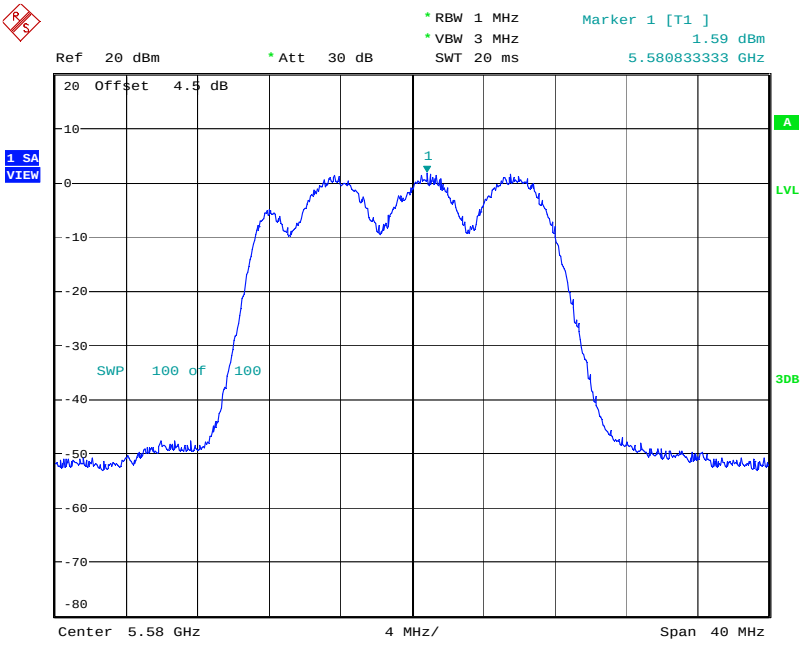
Date: 14.SEP.2008 10:38:49

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



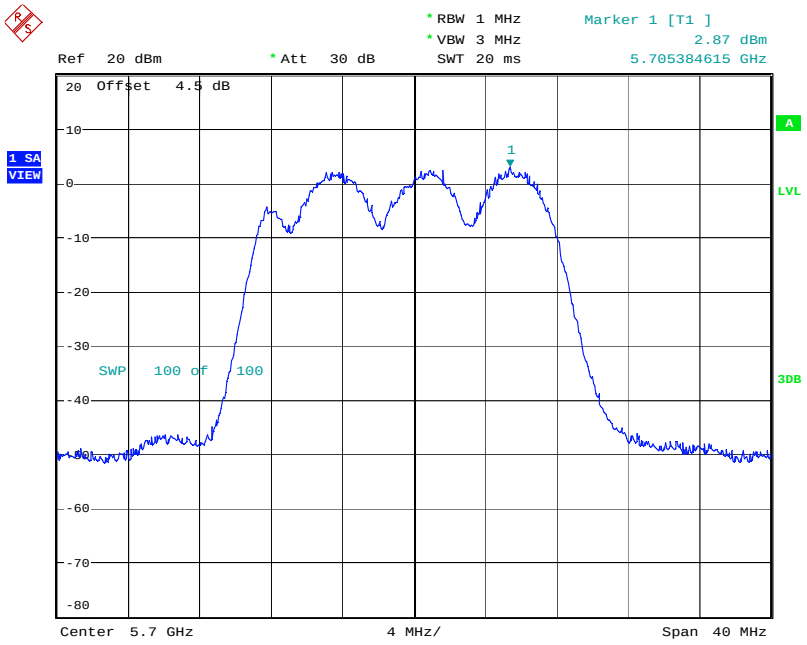
Date: 14.SEP.2008 10:41:05

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



Date: 14.SEP.2008 10:44:01

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



4.5. Peak Excursion Measurement

4.5.1. 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.

4.5.2. Measuring Instruments and Setting

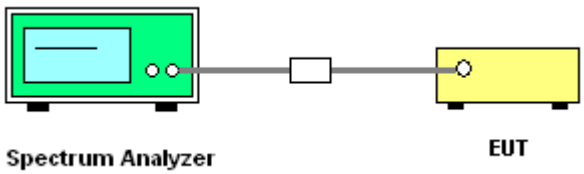
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1000 kHz (Peak Trace) / 1000 kHz (Average Trace)
VB	3000 kHz (Peak Trace) / 300 kHz (Average Trace)
Detector	Peak (Peak Trace) / Sample (Average Trace)
Trace	Max Hold
Sweep Time	60s

4.5.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set the spectrum analyzer span to view the entire emissions bandwidth. The largest difference between the following two traces (Peak Trace and Average Trace) must be ≤ 13 dB for all frequencies across the emissions bandwidth. Submit a plot.
3. Peak Trace: Set RBW = 1 MHz, VBW ≥ 3 MHz with peak detector and max-hold settings.
4. Average Trace: Method #3—video averaging with max hold--and sum power across the band. Set span to encompass the entire emissions bandwidth (EBW) of the signal. Set sweep trigger to “free run”. Set RBW = 1 MHz. Set VBW ≥ 1/T (Draft n VBW = 300kHz ≥ 1/4μs). Use sample detector mode if bin width (i.e., span/number of points in spectrum) < 0.5 RBW. Otherwise use peak detector mode. Set max hold. Allow max hold to run for 60 seconds.
5. Measuring multiple antennas, the connector is required to link with Power Meter through a combiner.

4.5.4. Test Setup Layout



4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Test Result of Peak Excursion

Temperature	26°C	Humidity	62%
Test Engineer	Sam Chen	Configurations	Draft n

Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
36	5180 MHz	4.91	13	Complies
40	5200 MHz	3.99	13	Complies
48	5240 MHz	4.54	13	Complies
52	5260 MHz	4.45	13	Complies
60	5300 MHz	4.54	13	Complies
64	5320 MHz	3.99	13	Complies
100	5500 MHz	4.64	13	Complies
116	5580 MHz	4.44	13	Complies
140	5700 MHz	4.15	13	Complies

Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3

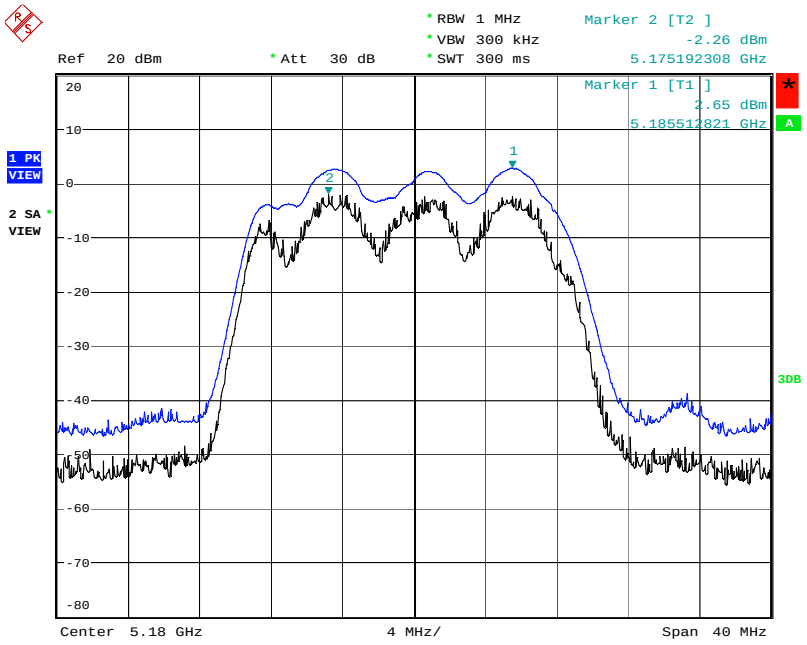
Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
38	5190 MHz	5.18	13	Complies
46	5230 MHz	4.43	13	Complies
54	5270 MHz	3.71	13	Complies
62	5310 MHz	4.38	13	Complies
102	5510 MHz	4.09	13	Complies
110	5550 MHz	4.27	13	Complies
134	5670 MHz	3.86	13	Complies

Temperature	26°C	Humidity	62%
Test Engineer	Sam Chen	Configurations	802.11a

Configuration IEEE 802.11a Ant. 1 + Ant. 3

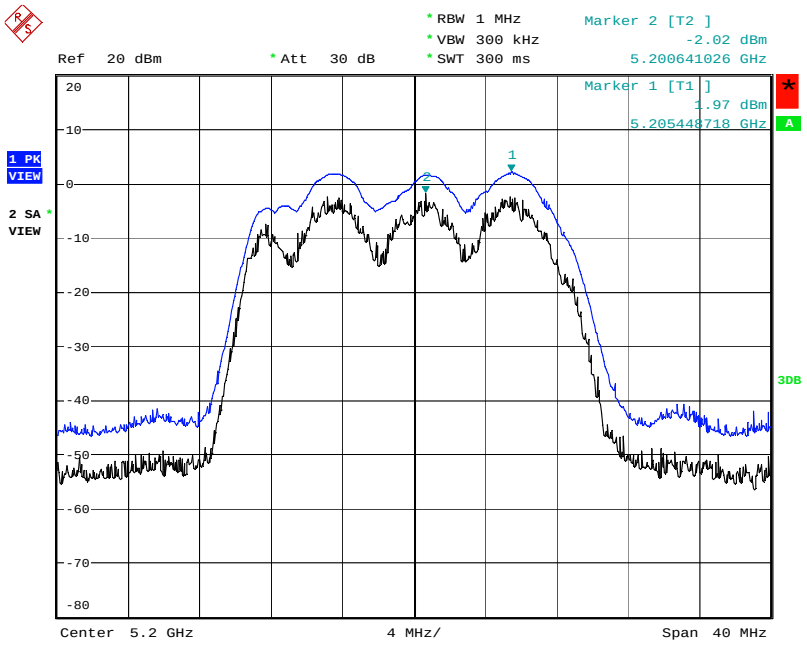
Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
36	5180 MHz	4.00	13	Complies
40	5200 MHz	3.93	13	Complies
48	5240 MHz	4.54	13	Complies
52	5260 MHz	3.94	13	Complies
60	5300 MHz	4.31	13	Complies
64	5320 MHz	4.18	13	Complies
100	5500 MHz	3.78	13	Complies
116	5580 MHz	4.53	13	Complies
140	5700 MHz	3.60	13	Complies

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5180 MHz



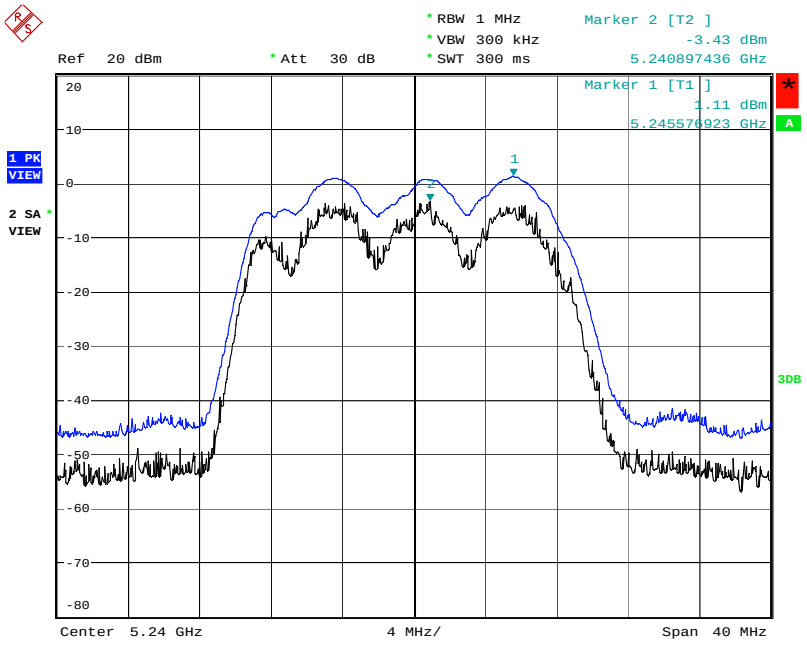
Date: 14.SEP.2008 10:56:47

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5200 MHz



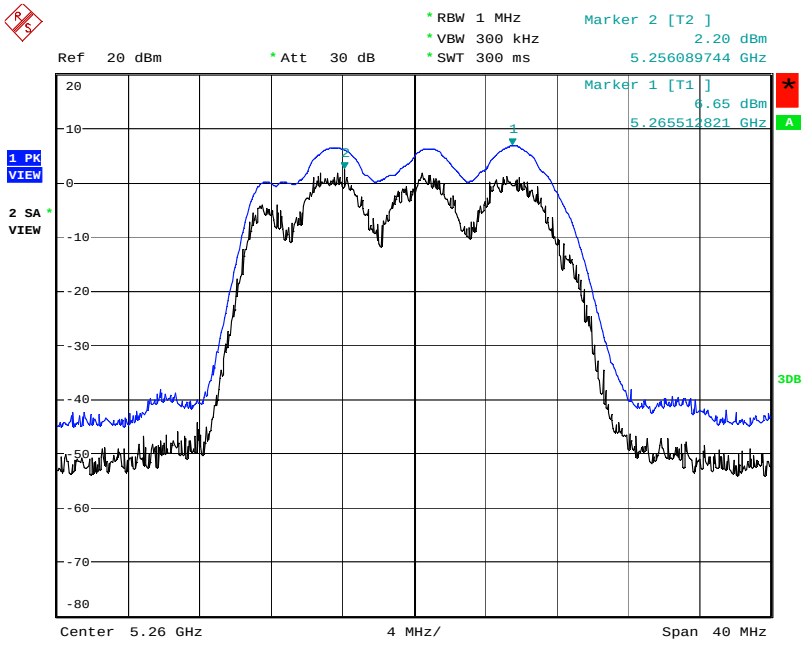
Date: 14.SEP.2008 10:57:47

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5240 MHz



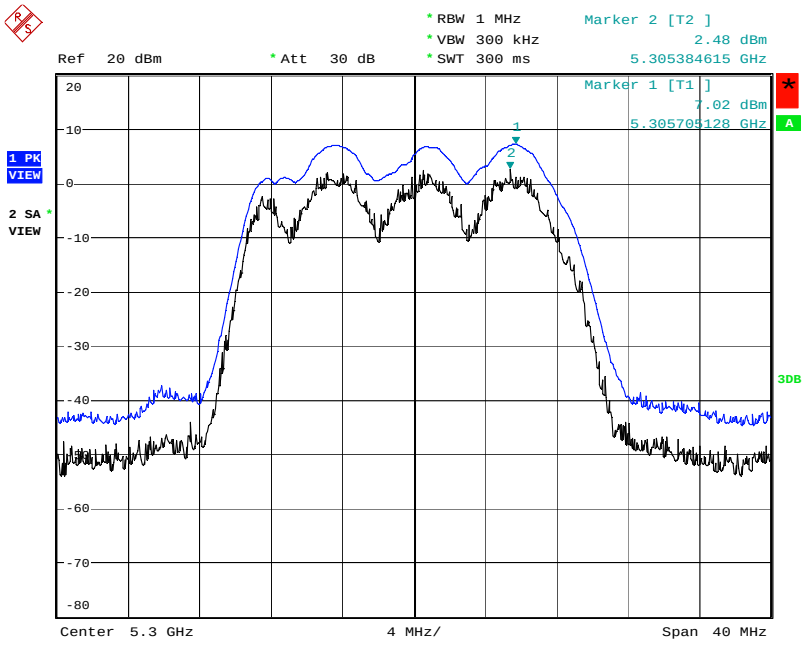
Date: 14.SEP.2008 10:58:42

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5260 MHz



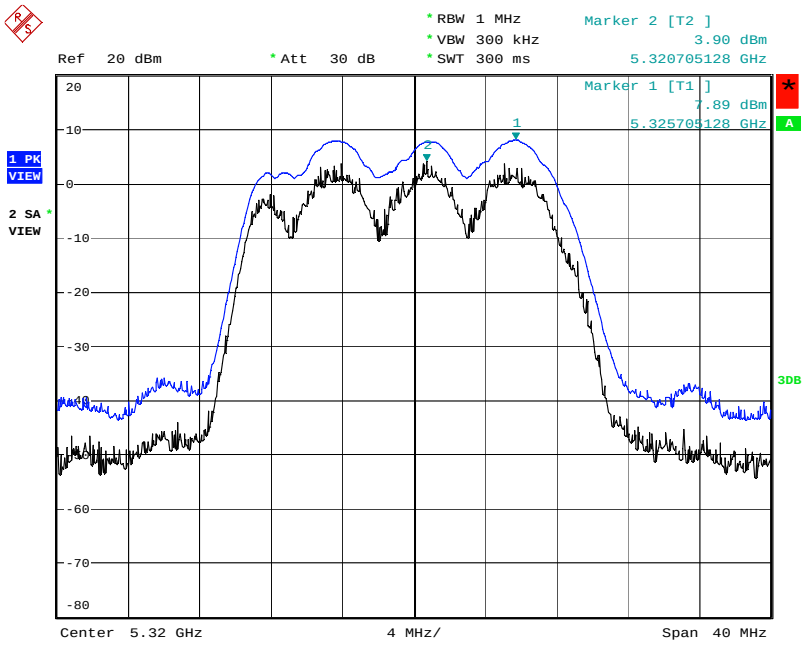
Date: 14.SEP.2008 10:59:43

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5300 MHz



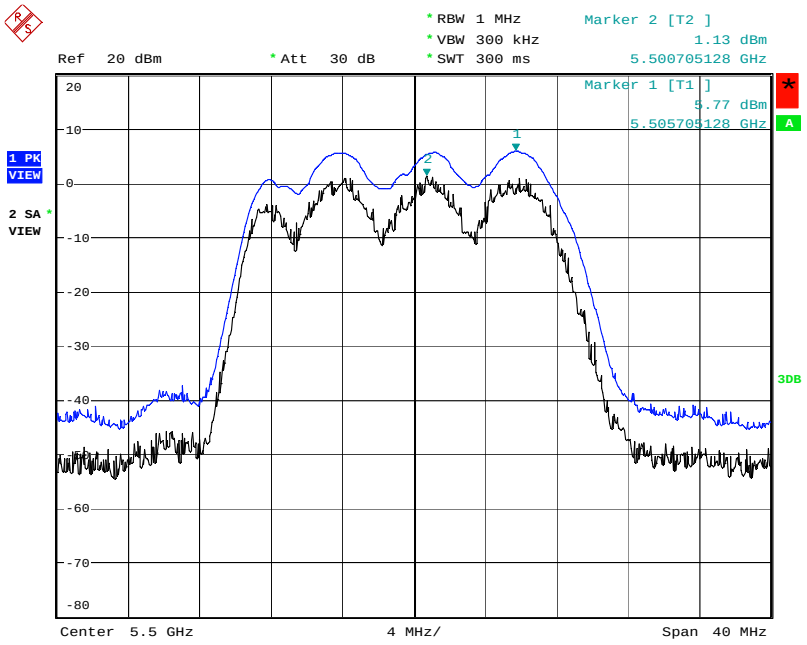
Date: 14.SEP.2008 11:00:39

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5320 MHz



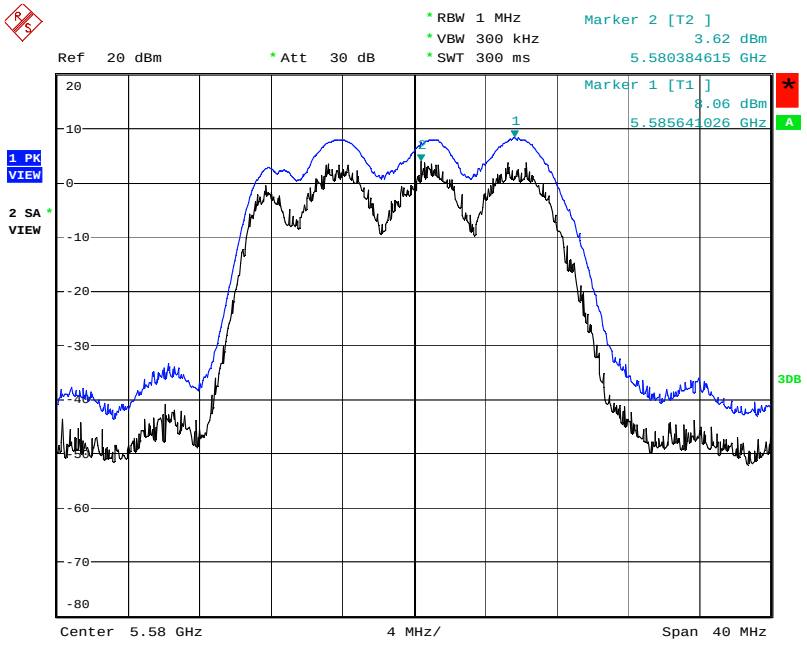
Date: 14.SEP.2008 11:02:39

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5500 MHz



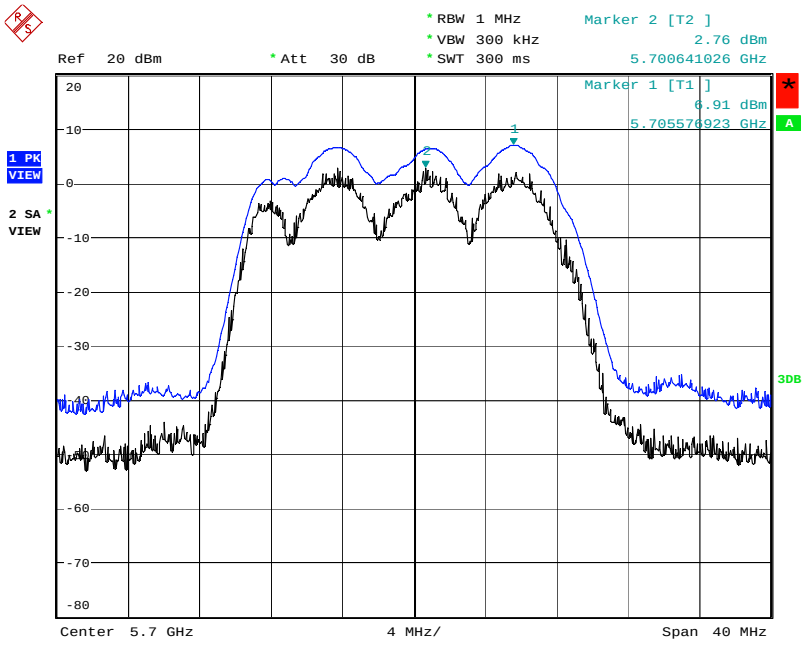
Date: 14.SEP.2008 11:04:33

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5580 MHz



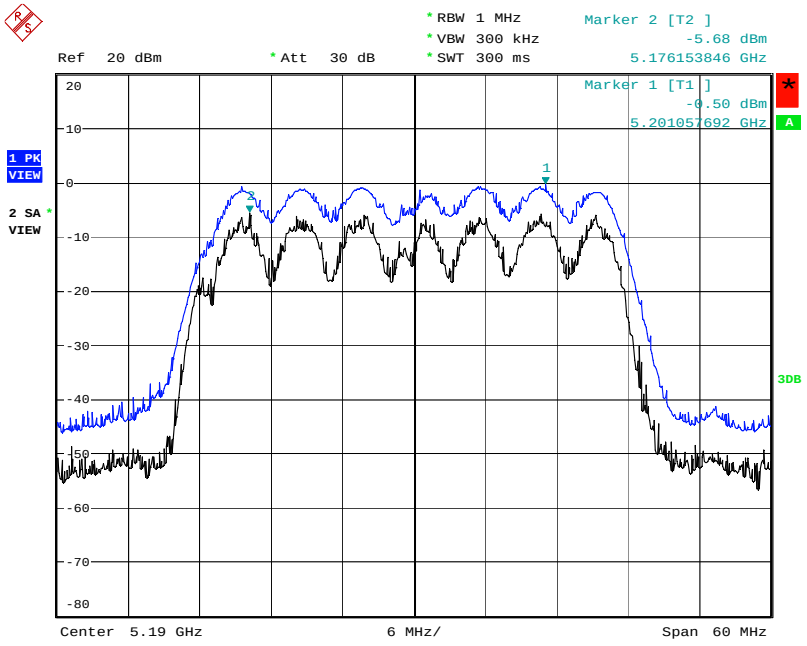
Date: 14.SEP.2008 11:05:48

Peak Excursion Plot on Configuration Draft n MCS0 20MHz Ant. 1 + Ant. 3 / 5700 MHz



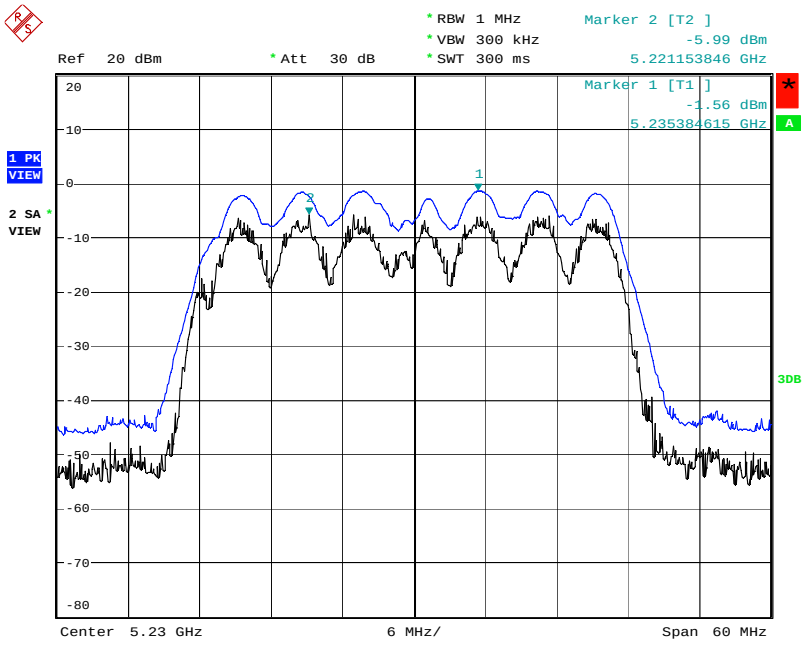
Date: 14.SEP.2008 11:07:03

Peak Excursion Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5190 MHz



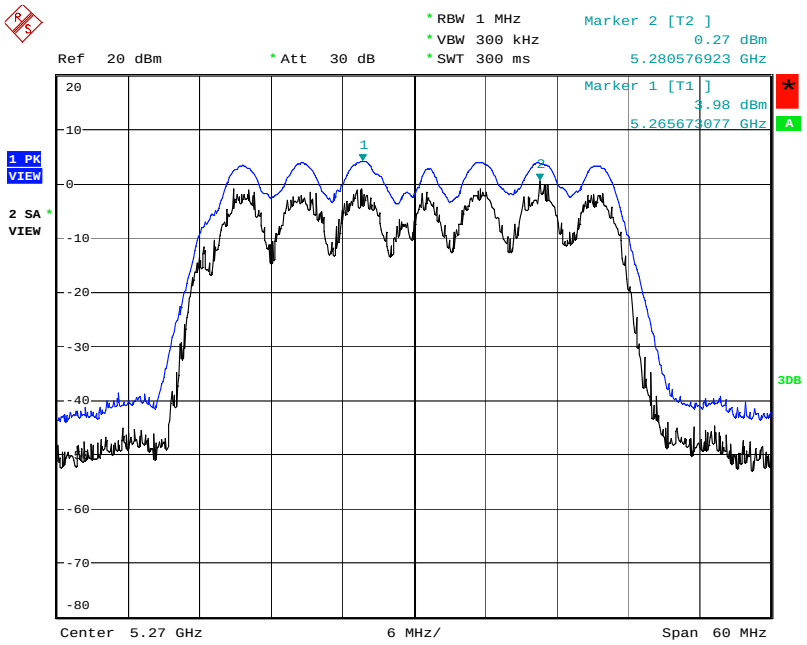
Date: 14.SEP.2008 11:17:05

Peak Excursion Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5230 MHz



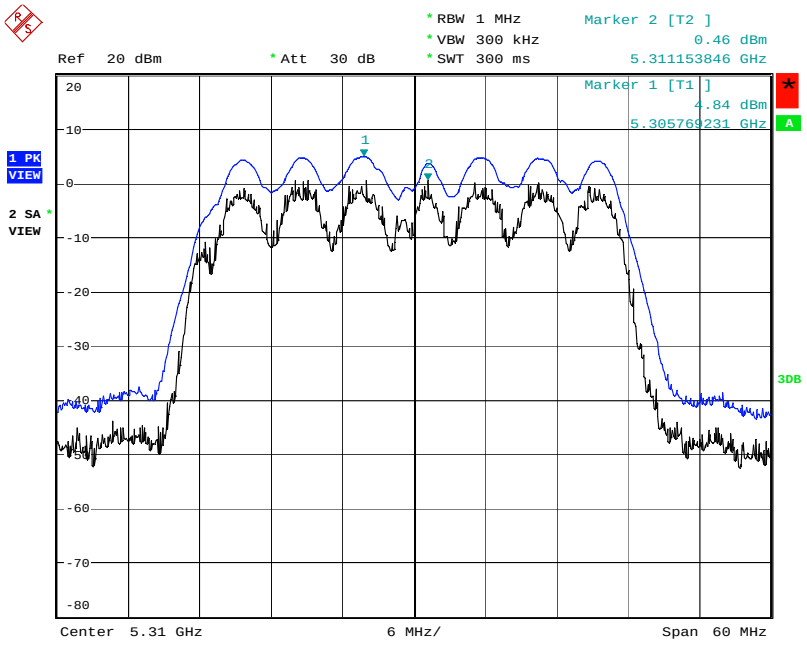
Date: 14.SEP.2008 11:16:06

Peak Excursion Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5270 MHz



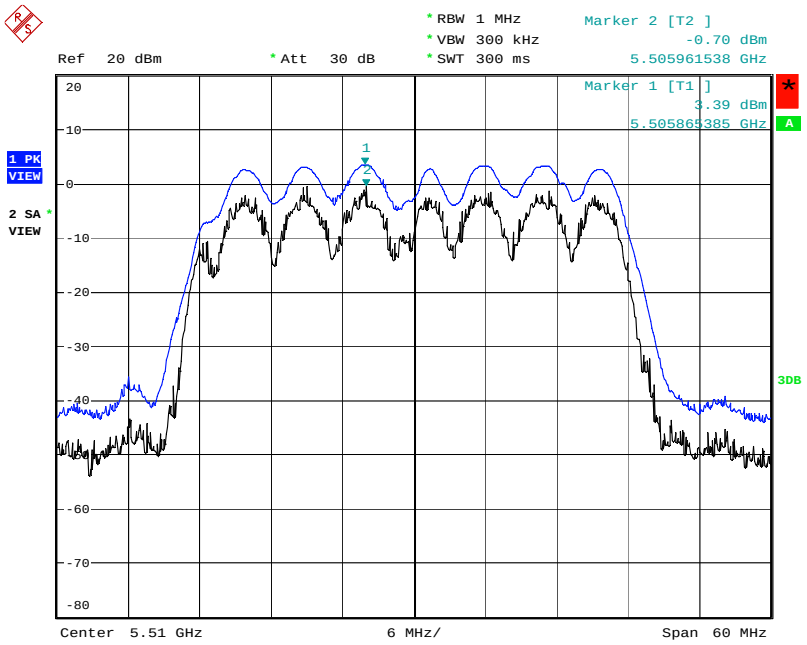
Date: 14.SEP.2008 11:14:51

Peak Excursion Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5310 MHz



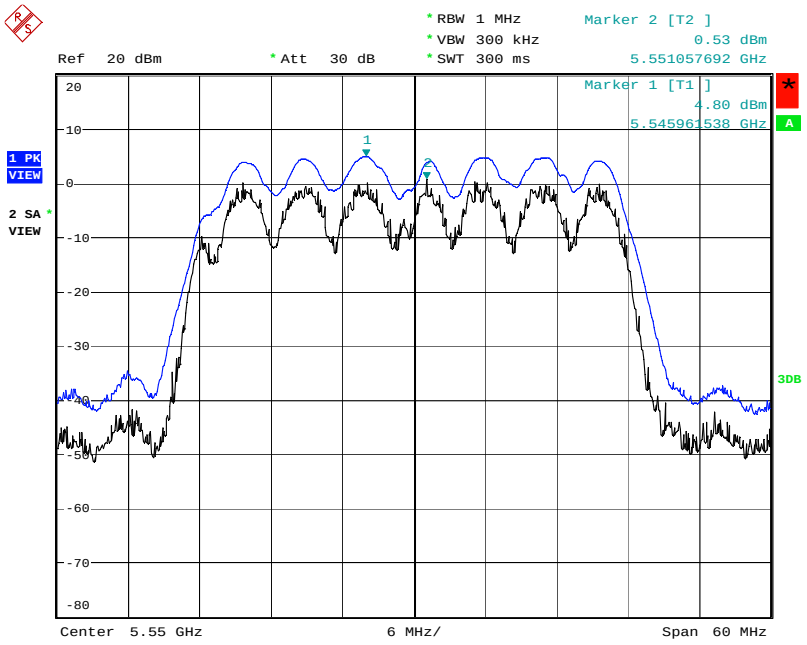
Date: 14.SEP.2008 11:13:59

Peak Excursion Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5510 MHz



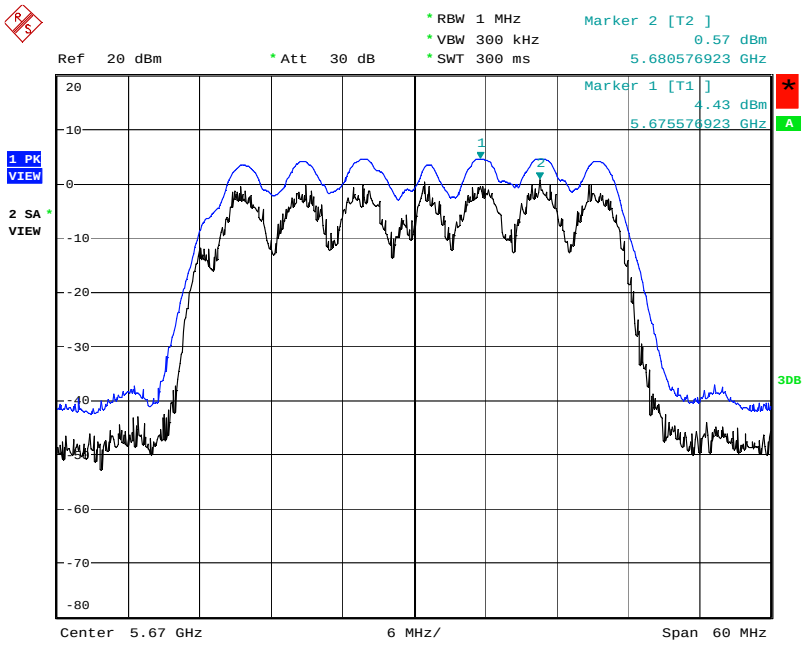
Date: 14.SEP.2008 11:12:42

Peak Excursion Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5550 MHz



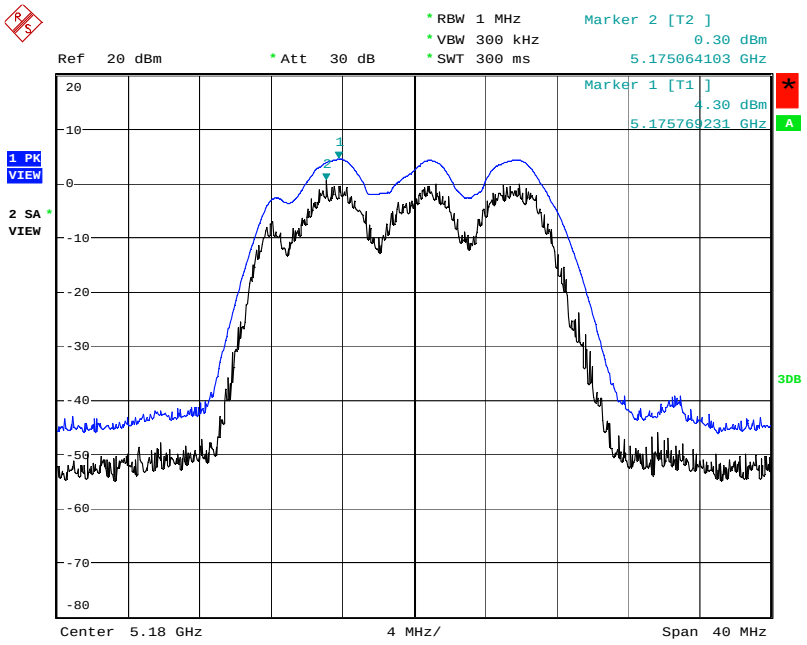
Date: 14.SEP.2008 11:10:21

Peak Excursion Plot on Configuration Draft n MCS0 40MHz Ant. 1 + Ant. 3 / 5670 MHz



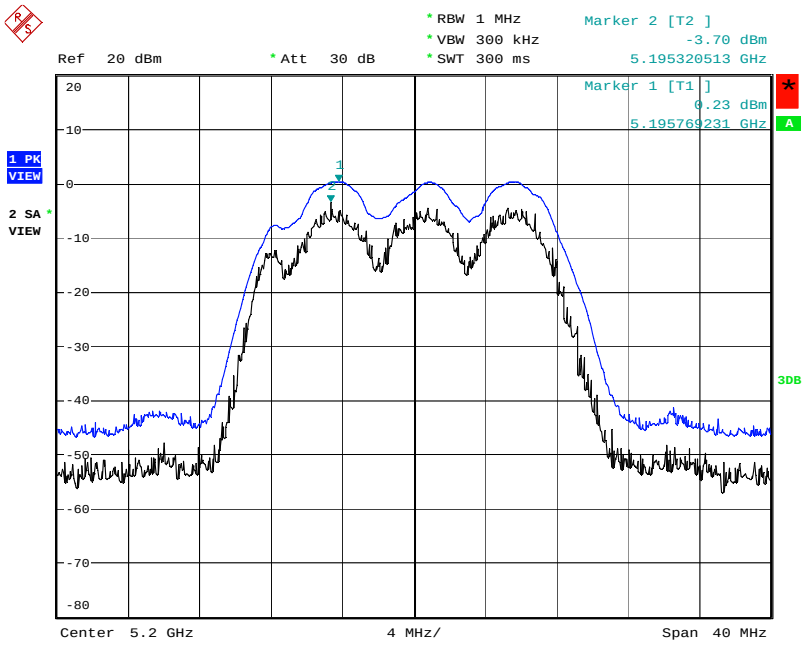
Date: 14.SEP.2008 11:08:30

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5180 MHz



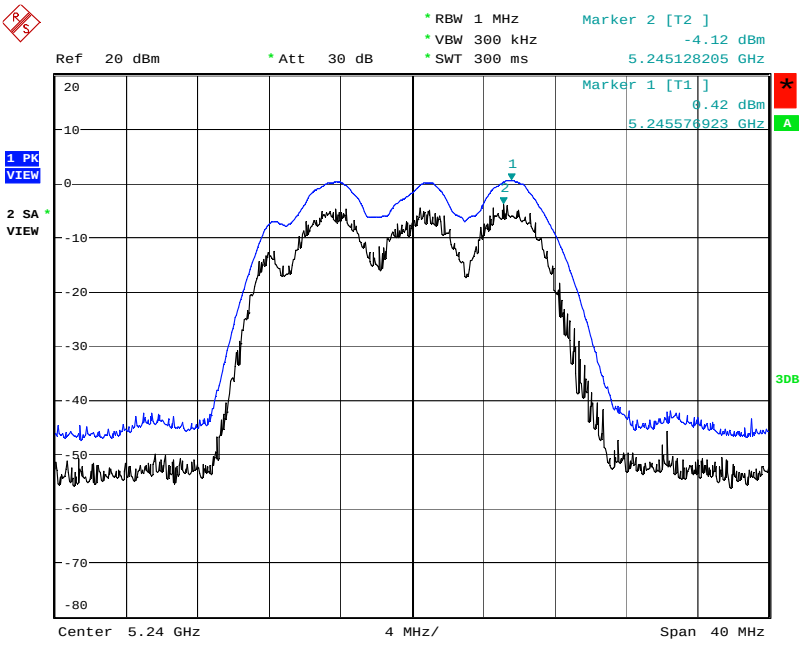
Date: 14.SEP.2008 10:27:56

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5200 MHz



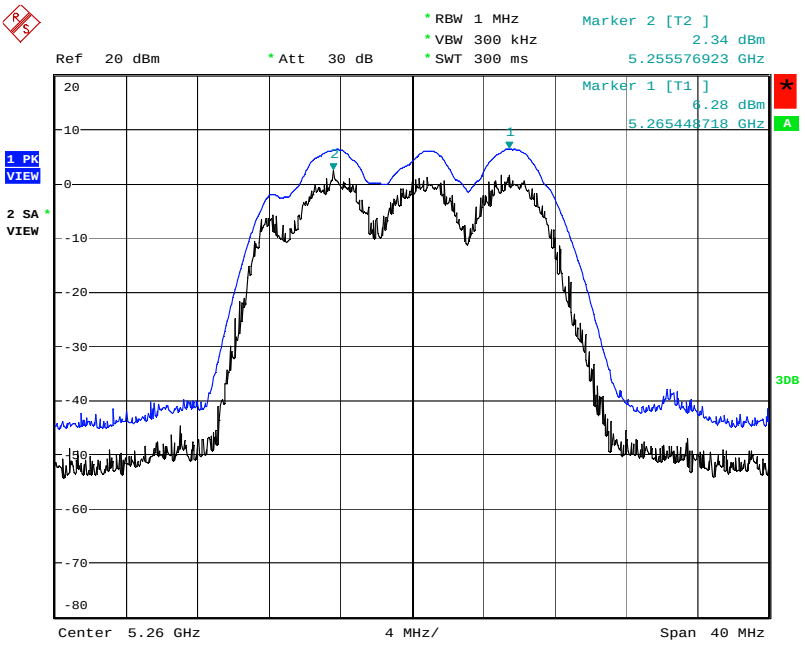
Date: 14.SEP.2008 10:33:08

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5240 MHz



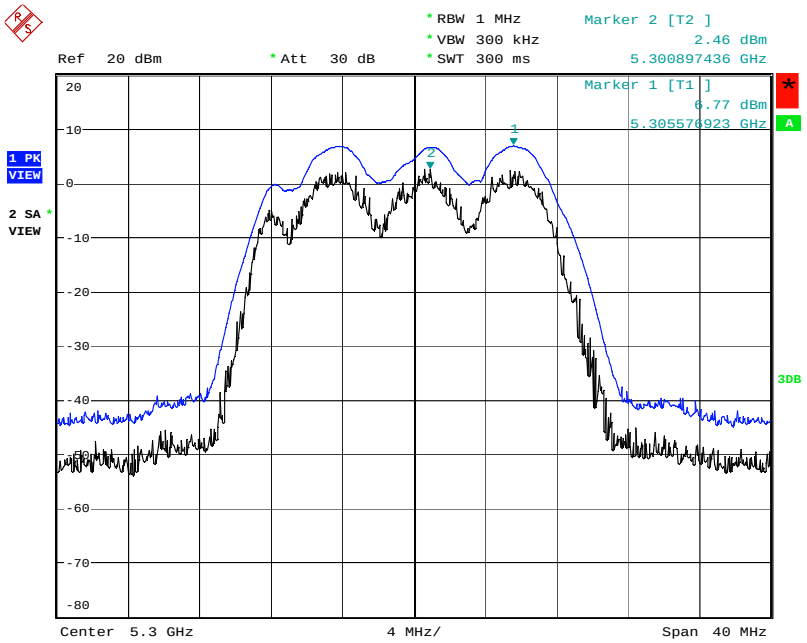
Date: 14.SEP.2008 10:34:59

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5260 MHz



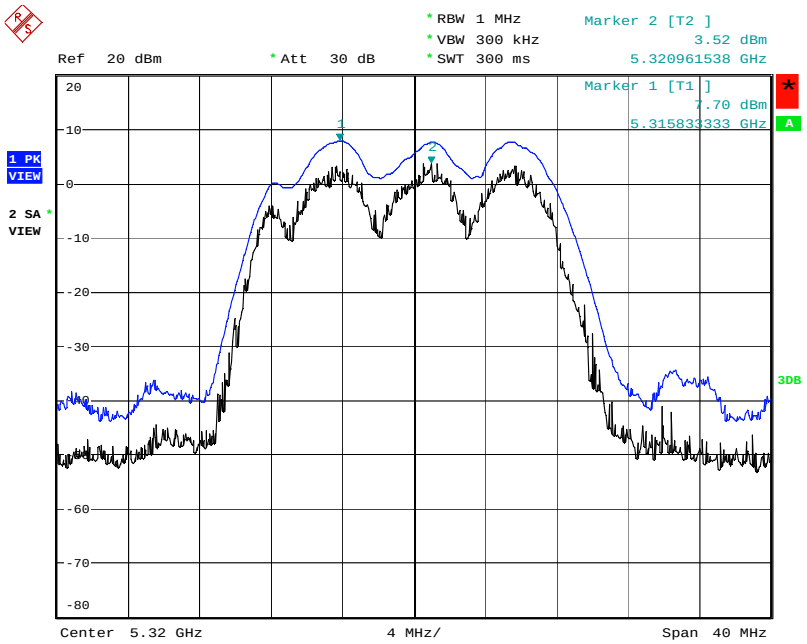
Date: 14.SEP.2008 10:36:53

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5300 MHz



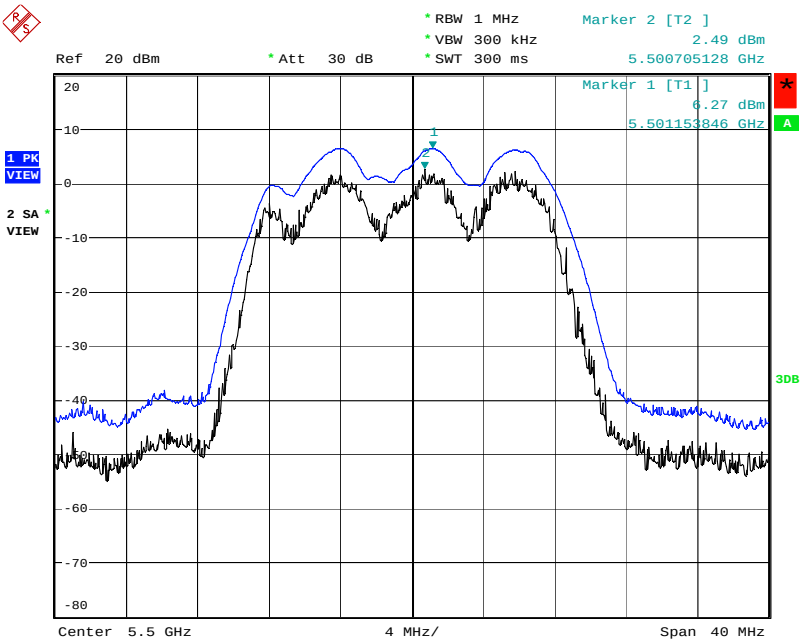
Date: 14.SEP.2008 10:37:57

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5320 MHz



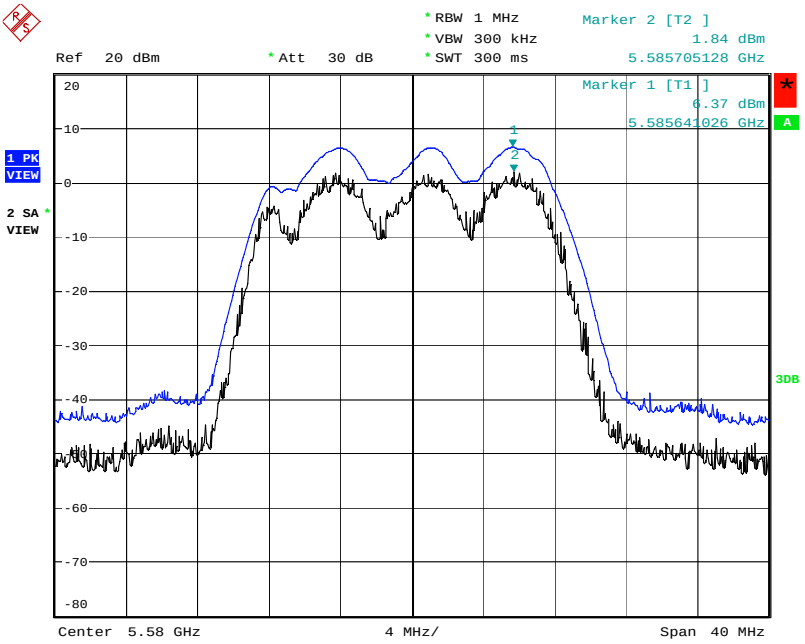
Date: 14.SEP.2008 10:39:02

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5500 MHz



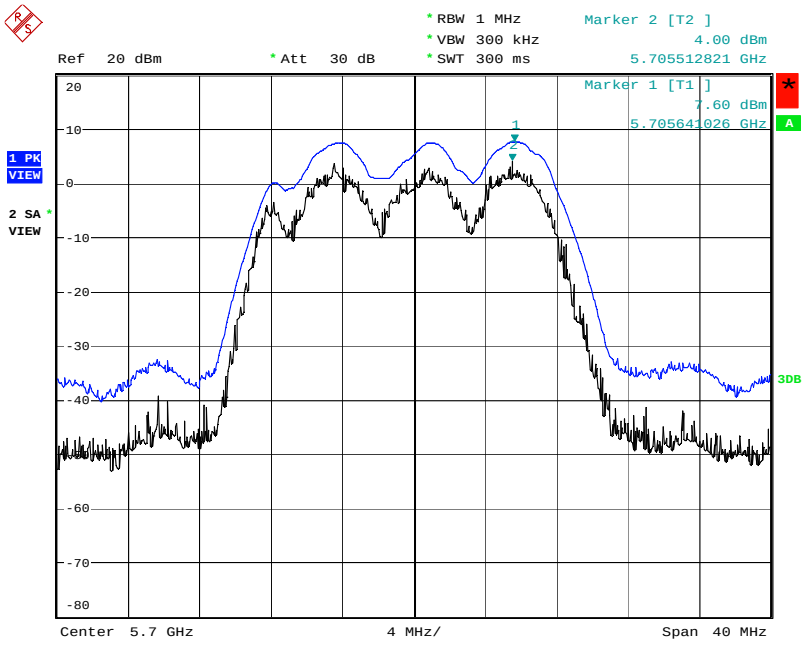
Date: 14.SEP.2008 10:41:18

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5580 MHz



Date: 14.SEP.2008 10:44:14

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5700 MHz



Date: 14.SEP.2008 10:45:38

4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz (78.3dBuV/m at 3m); for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). In addition, 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 (micorvolts/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

4.6.2. 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
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1000KHz / 1000KHz for peak

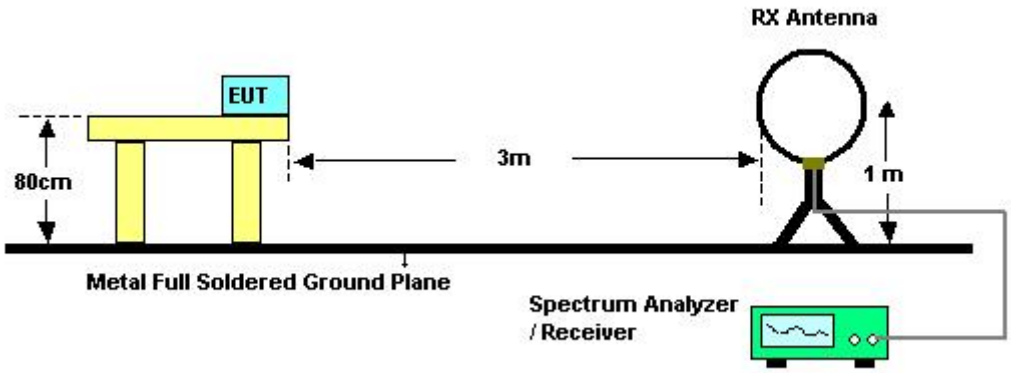
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.6.3. Test Procedures

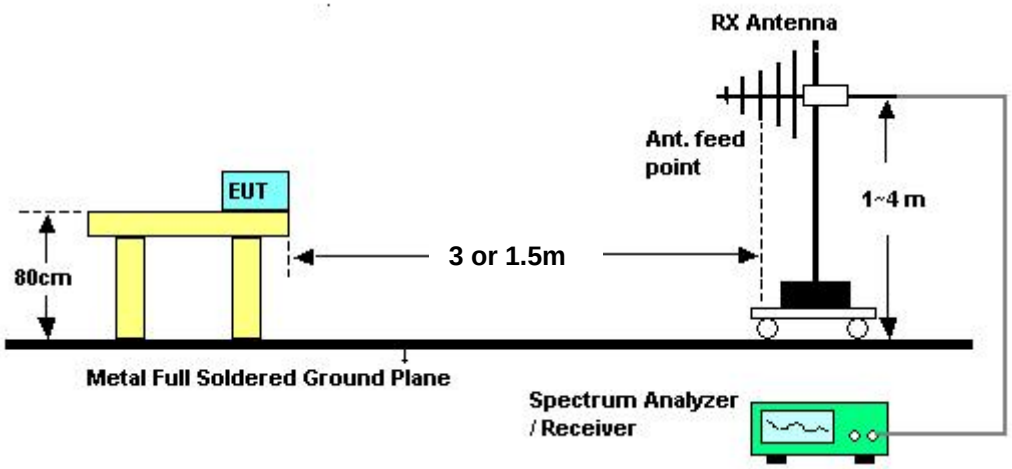
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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 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.

4.6.4. Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1.5m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1.5m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	24.3°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Normal Link

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

Note:

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

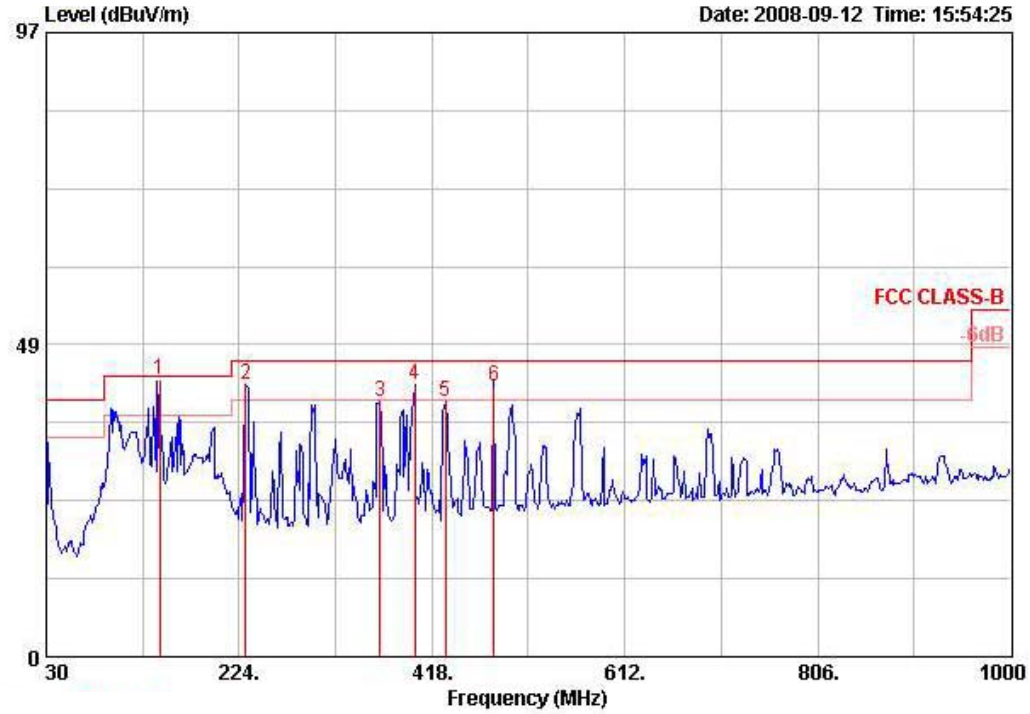
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

4.6.8. Results of Radiated Emissions (30MHz~1GHz)

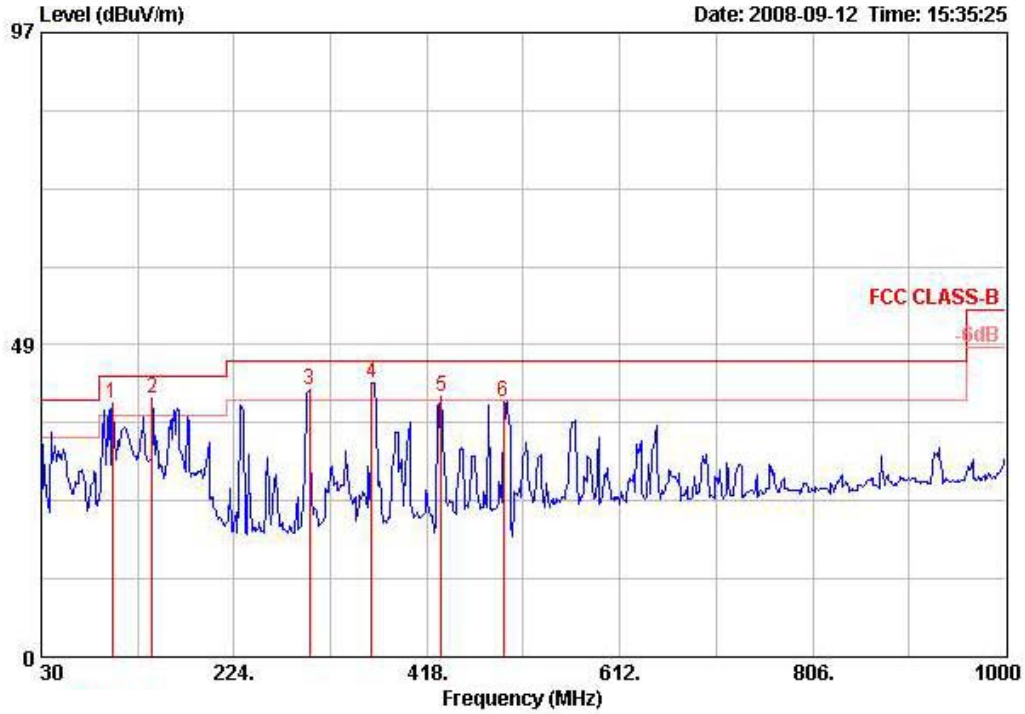
Temperature	24.3°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Normal Link

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	144.000	43.16	-0.34	43.50	57.00	12.12	1.42	27.38	QP	195	182	HORIZONTAL
2 !	230.790	42.32	-3.68	46.00	56.20	11.34	1.82	27.04	Peak	100	0	HORIZONTAL
3	365.620	39.52	-6.48	46.00	49.51	15.14	2.23	27.36	Peak	100	0	HORIZONTAL
4 !	400.540	42.29	-3.71	46.00	51.51	16.08	2.31	27.61	Peak	100	0	HORIZONTAL
5	431.580	39.70	-6.30	46.00	48.41	16.56	2.49	27.76	Peak	100	0	HORIZONTAL
6 !	480.000	42.07	-3.93	46.00	50.10	17.31	2.66	28.00	QP	100	160	HORIZONTAL

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 !	101.780	39.40	-4.10	43.50	54.66	11.14	1.20	27.59	Peak	400	0	VERTICAL
2 @	141.550	40.13	-3.37	43.50	53.86	12.26	1.41	27.39	Peak	400	0	VERTICAL
3 !	299.660	41.44	-4.56	46.00	52.89	13.36	2.10	26.90	Peak	400	0	VERTICAL
4 !	362.710	42.48	-3.52	46.00	52.53	15.06	2.23	27.34	Peak	400	0	VERTICAL
5 !	432.550	40.46	-5.54	46.00	49.15	16.57	2.50	27.76	Peak	400	0	VERTICAL
6	494.630	39.75	-6.25	46.00	47.59	17.54	2.69	28.07	Peak	400	0	VERTICAL

Note:

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

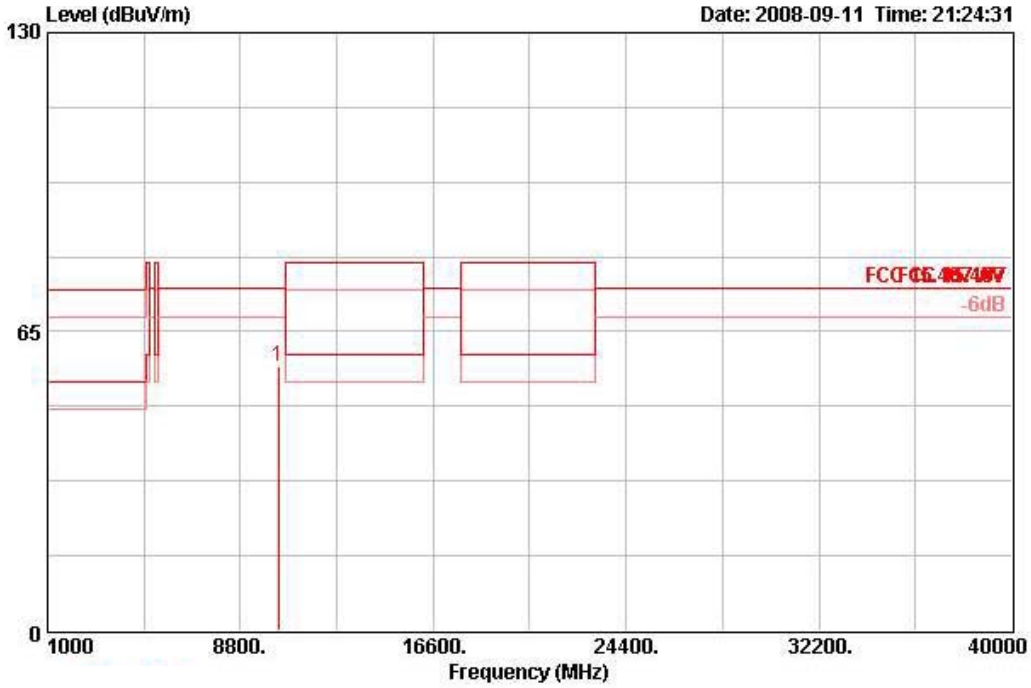
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

4.6.9. Results for Radiated Emissions (1GHz~40GHz)

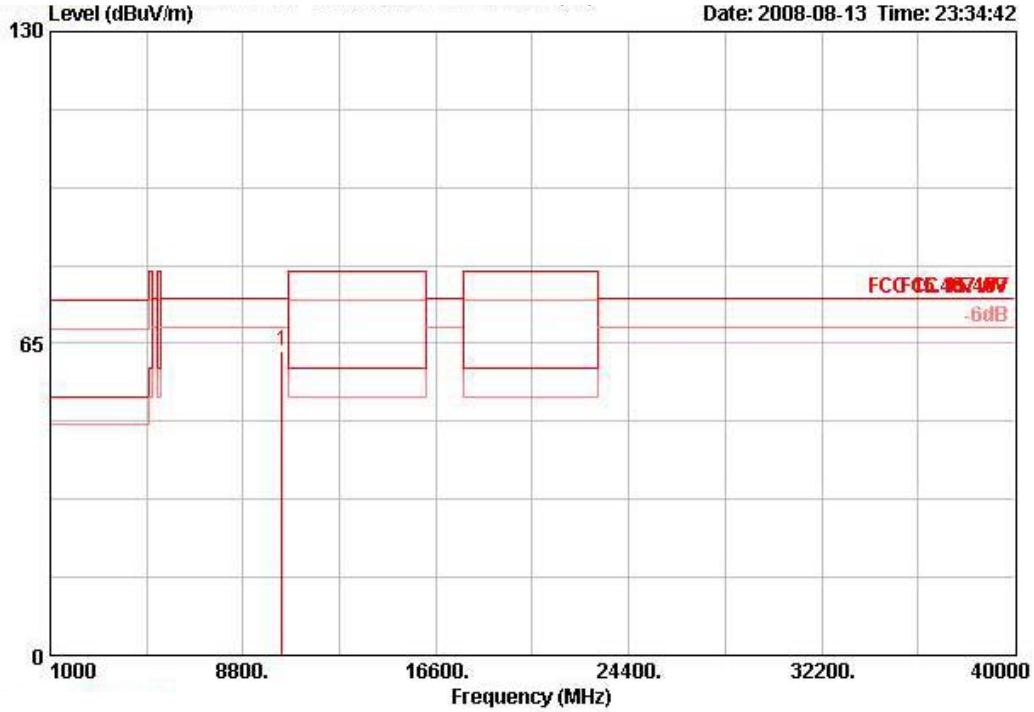
Temperature	24.3°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 36

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10353.900	57.30	-17.00	74.30	47.70	38.37	6.34	35.12	PEAK	121	82	HORIZONTAL

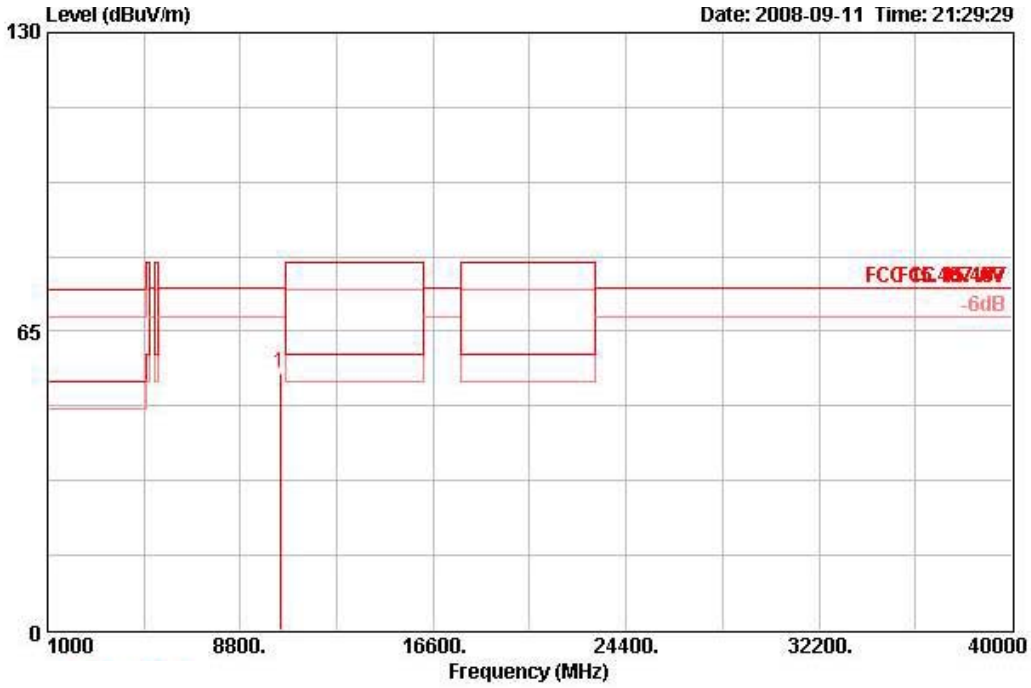
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10360.000	63.32	-10.98	74.30	54.96	38.49	5.23	35.36	PEAK	111	290	VERTICAL

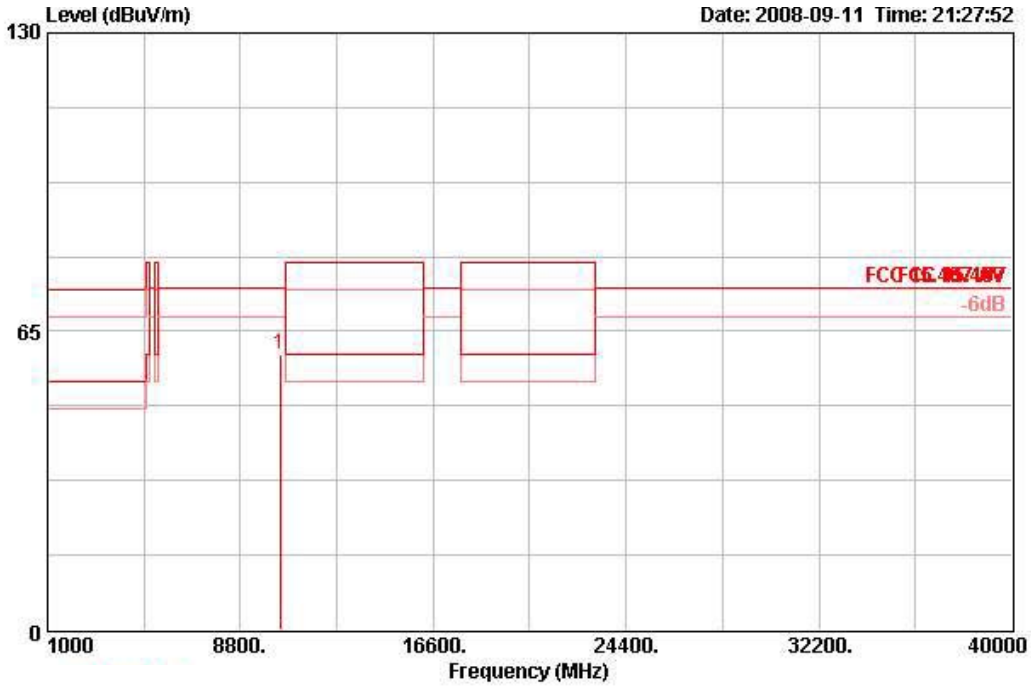
Temperature	24.3°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 40

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10403.400	55.83	-18.47	74.30	46.11	38.38	6.39	35.05	PEAK	125	99	HORIZONTAL

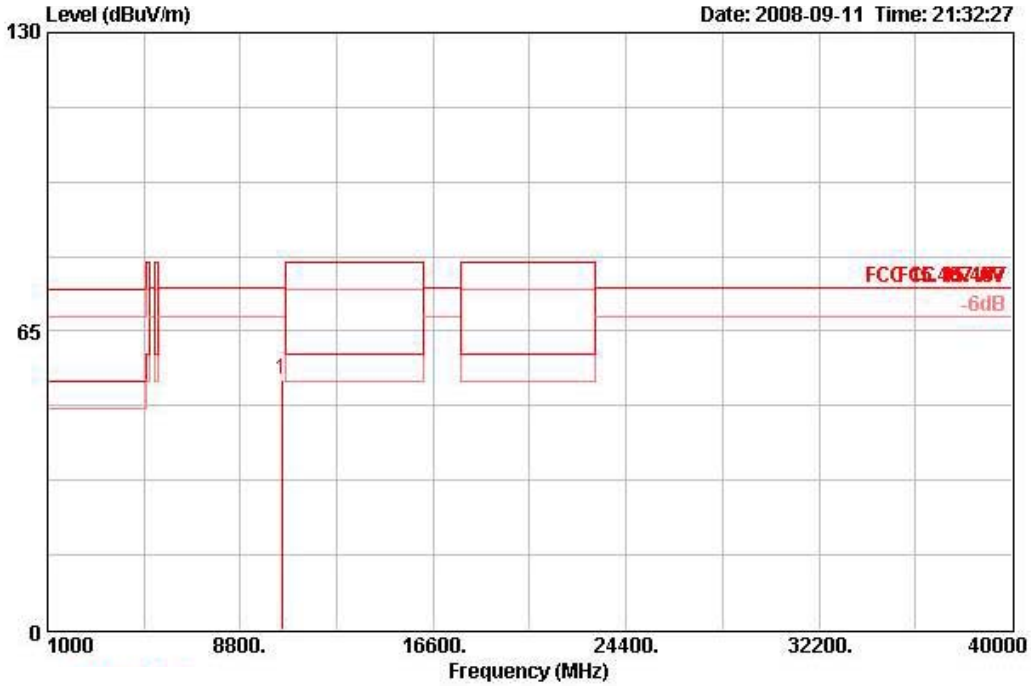
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10399.200	60.05	-14.25	74.30	50.33	38.38	6.39	35.05	PEAK	138	92	VERTICAL

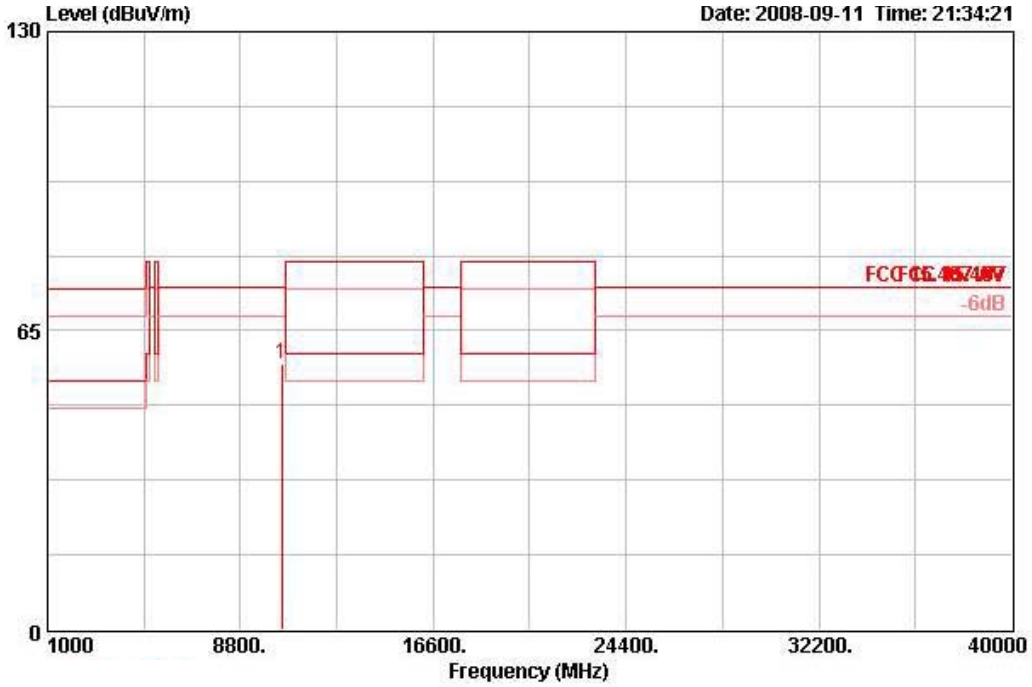
Temperature	24.3°C	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 48

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10483.500	54.31	-19.99	74.30	44.42	38.39	6.46	34.96	PEAK	139	83	HORIZONTAL

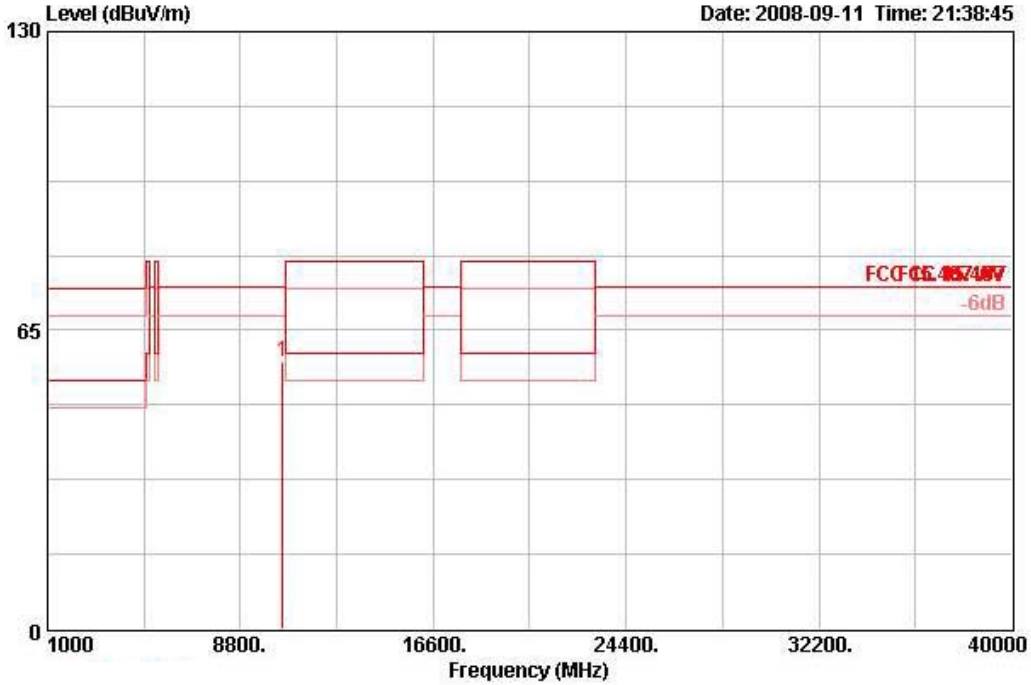
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10477.600	57.59	-16.71	74.30	47.70	38.40	6.46	34.96	PEAK	139	90	VERTICAL

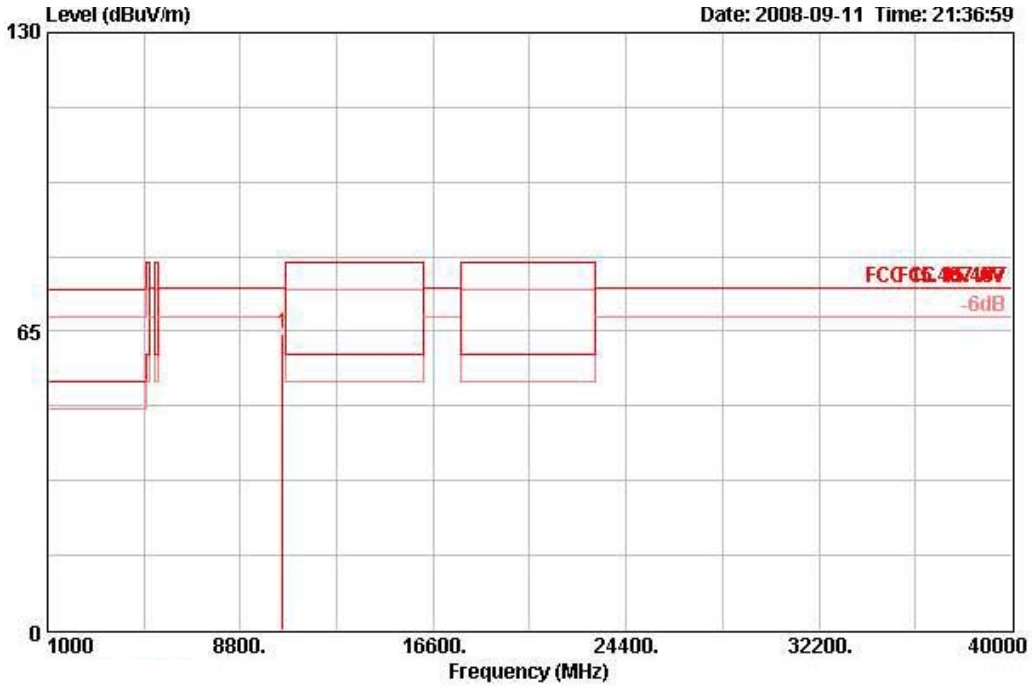
Temperature	24.3℃	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 52

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10514.300	58.15	-16.15	74.30	48.21	38.40	6.48	34.93	PEAK	127	93	HORIZONTAL

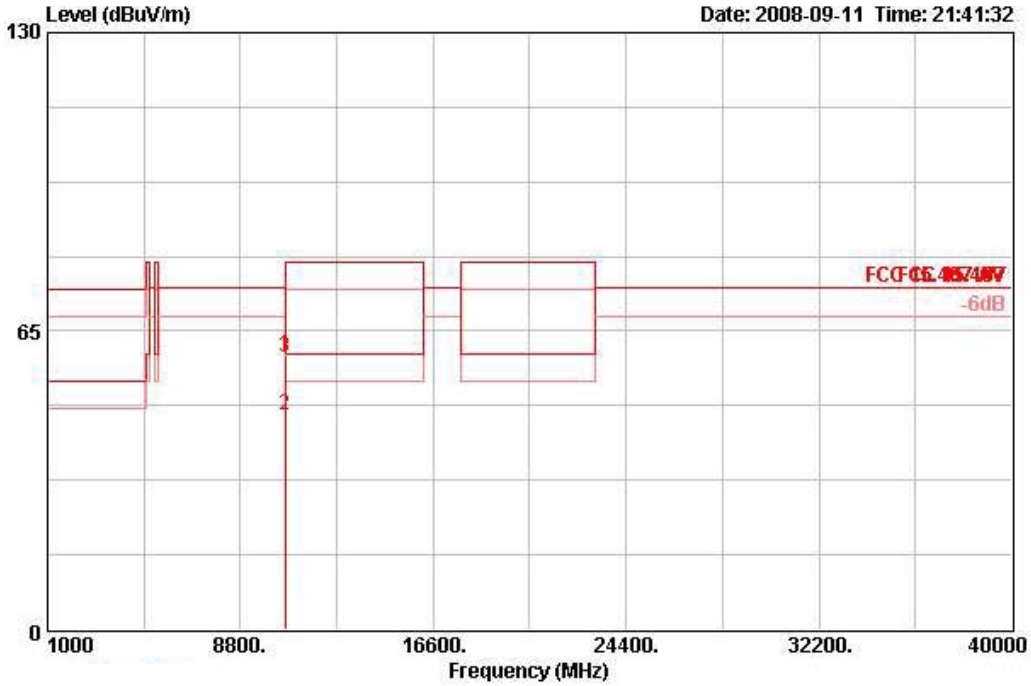
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10518.000	64.39	-9.91	74.30	54.44	38.39	6.48	34.93	PEAK	139	90	VERTICAL

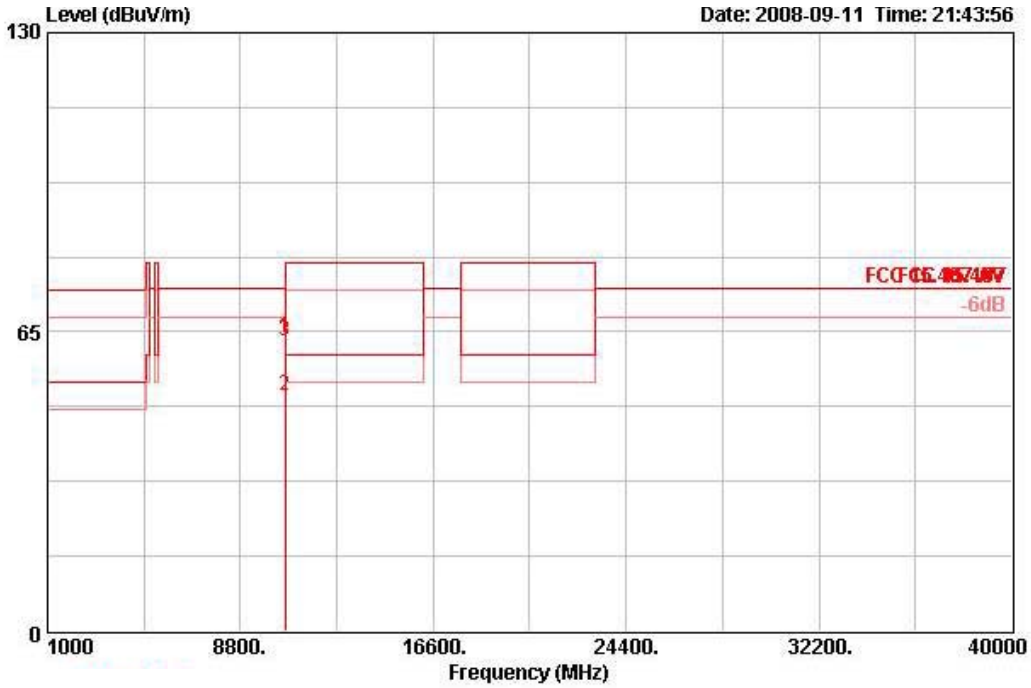
Temperature	24.3℃	Humidity	56%
Test Engineer	Jacky Ho	Configurations	Draft n MCS0 20MHz Ch 60

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10598.000	59.46	-14.84	74.30	49.47	38.38	6.51	34.90	PEAK	124	95	HORIZONTAL
2	10603.000	46.75	-13.25	60.00	36.75	38.38	6.52	34.89	AVERAGE	124	95	HORIZONTAL
3	10603.400	59.26	-20.74	80.00	49.26	38.38	6.52	34.89	PEAK	124	95	HORIZONTAL

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10598.300	63.54	-10.76	74.30	53.55	38.38	6.51	34.90	PEAK	140	90	VERTICAL
2	10603.600	51.05	-8.95	60.00	41.04	38.38	6.52	34.89	AVERAGE	140	90	VERTICAL
3	10608.600	63.04	-16.96	80.00	53.03	38.38	6.52	34.89	PEAK	140	90	VERTICAL