FCC Test Report

Product Name ： Wireless-AC450 USB Adapter

Model No. ： USB-AC50

FCC ID. ： MSQ-USBAC50

Applicant ： ASUSTeK COMPUTER INC.

Address ： 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Date of Receipt ： 2013/10/08

Issued Date ： 2013/12/23

Report No. ： 13A0185R-RFUSP42V01

Report Version ： V1.0

Test Report Certification

Issued Date : 2013/12/23
Report No. : 13A0185R-RFUSP42V01

Product Name	:	Wireless-AC450 USB Adapter
Applicant	:	ASUSTeK COMPUTER INC.
Address	:	4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan
Manufacturer	:	ASUSTeK COMPUTER INC.
Model No.	:	USB-AC50
FCC ID.	:	MSQ-USBAC50
EUT Test Voltage	:	DC 5V(Power by PC)
Trade Name	:	ASUS
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2012 ANSI C63.4: 2009
Test Result	:	Complied

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By : Fonbo Fang
(Fonbo Fang / Engineering Adm. Assistant)

Reviewed By : Bruno Tsai
(Bruno Tsai / Assistant Engineer)

Approved By : Roy Wang
(Roy Wang / Director)

Laboratory Information

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	**:**	**TAF, Accreditation Number: 1313** **NCC, Certificate No : NCC-RCB-07**
USA	**:**	**FCC, Registration Number: 365520**
Canada	**:**	**IC, Submission No: 150981**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory:
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

LinKou Testing Laboratory:
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

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1. General Information

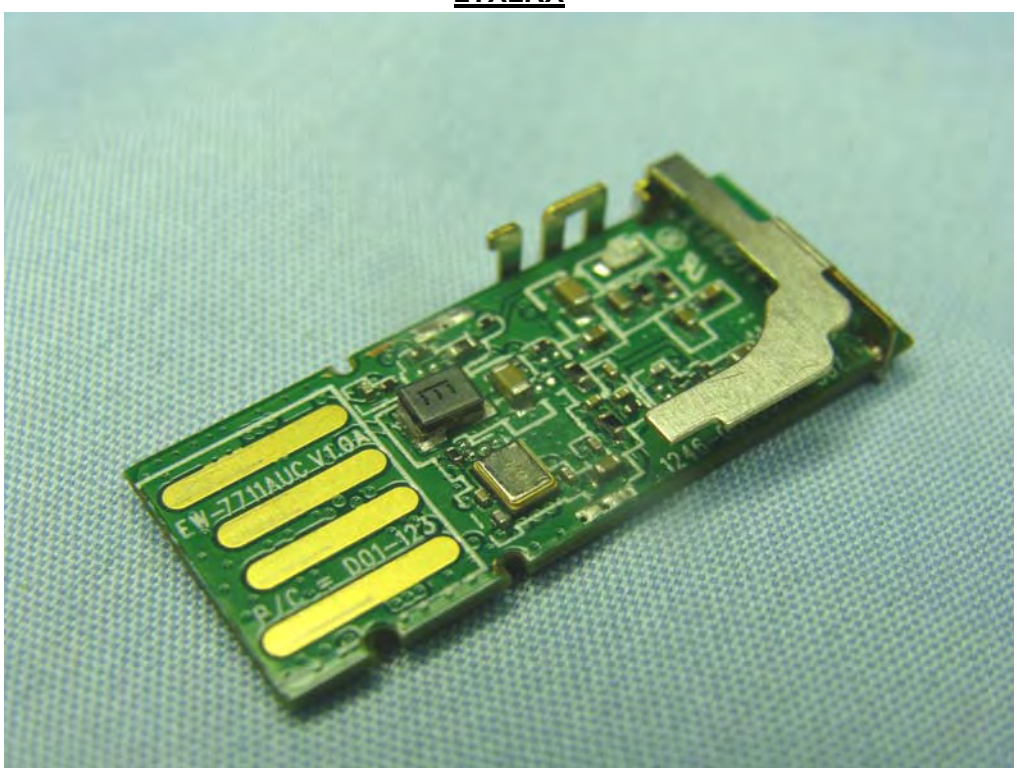
1.1. EUT Description

Product Name	Wireless-AC450 USB Adapter	
Product Type	WLAN(1TX,1RX)	
Trade Name	ASUS	
Model No.	USB-AC50	
Frequency Range/ Channel Number	IEEE 802.11a/ IEEE 802.11n (20MHz)_5.8GHz/ IEEE 802.11ac (20MHz)	5745~5825MHz / 5 Channels
	IEEE 802.11n (40MHz)_5.8GHz/ IEEE 802.11ac (40MHz)	5755~5795MHz / 2 Channels
	IEEE 802.11ac (80MHz)	5775~5775MHz / 1 Channel
Type of Modulation	IEEE 802.11a/n/ac	Orthogonal Frequency Division Multiplexing
Data Speed	IEEE 802.11a	6, 9, 18, 24, 36, 48,54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 7 and bandwidth defined in 802.11n
	IEEE 802.11ac	Support a subset of the combination of GI, MCS 0~MCS 9 and bandwidth defined in 802.11ac
Antenna Gain	4.56dBi	
Antenna Type	PIFA Antenna	

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX			RX		
Mode/ Channel Bandwidth	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz
IEEE802.11a	✓			✓		
IEEE802.11n	✓	✓		✓	✓	
IEEE802.11ac	✓	✓	✓	✓	✓	✓

1TX1RX



IEEE 802.11n

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0
Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 1 – MCS parameters for TX Antenna number = 1

Symbol	Explanation
R	Code rate
N_{BPSC}	Number of coded bits per single carrier
N_{CBPS}	Number of coded bits per symbol
N_{DBPS}	Number of data bits per symbol
GI	guard interval

Draft IEEE 802.11ac Data Rate

Spatial Streams (Note1)	MCS Index	Modulation type	Coding rate	Data Rate(Mb/s)							
				20 MHz		40 MHz		80 MHz		160 MHz	
				Guard Interval		Guard Interval		Guard Interval		Guard Interval	
				800ns	400ns	800ns	400ns	800ns	400ns	800ns	400ns
1	0	BPSK	1/2	6.5	7.2	13.5	15	29.3	32.5	58.5	65
	1	QPSK	1/2	13	14.4	27	30	58.5	65	117	130
	2	QPSK	3/4	19.5	21.7	40.5	45	87.8	97.5	175.5	195
	3	16-QAM	1/2	26	28.9	54	60	117	130	234	260
	4	16-QAM	3/4	39	43.3	81	90	175.5	195	351	390
	5	64-QAM	2/3	52	57.8	108	120	234	260	468	520
	6	64-QAM	3/4	58.5	65	121.5	135	263.3	292.5	526.5	585
	7	64-QAM	5/6	65	72.2	135	150	292.5	325	585	650
	8	256-QAM	3/4	78	86.7	162	180	351	390	702	780
	9	256-QAM	5/6	N/A	N/A	180	200	390	433.3	780	866.7

IEEE 802.11a & IEEE 802.11n (20MHz) & IEEE 802.11ac (20MHz) - 5.8GHz

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz						

IEEE 802.11n (40MHz) & IEEE 802.11ac (40MHz) - 5.8GHz

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

IEEE 802.11ac (80MHz) - 5.8GHz

Working Frequency of Each Channel	
Channel	Frequency
155	5775 MHz

Note:

1. This device are the Wireless-AC450 USB Adapter, including 5GHz (1x1) a/n/ac transmitting and receiving function.
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
3. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 13A0185R-RFUSP37V02 under Declaration of Conformity.

1.3. Test Mode

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Transmit

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	11ac(80MHz)	155	0	Complies
Peak Power Output	a	149/157/165	0	Complies
	11n/ac(20MHz)	149/157/165	0	Complies
	11n/ac(40MHz)	151/159	0	Complies
	11ac(80MHz)	155	0	Complies
Radiated Emission	a	149/157/165	0	Complies
	11n/ac(20MHz)	149/157/165	0	Complies
	11n/ac(40MHz)	151/159	0	Complies
	11ac(80MHz)	155	0	Complies
RF antenna conducted test	a	149/ 165	0	Complies
	11n/ac(20MHz)	149/165	0	Complies
	11n/ac(40MHz)	151/159	0	Complies
	11ac(80MHz)	155	0	Complies
Radiated Emission Band Edge	a	149/165	0	Complies
	11n/ac(20MHz)	149/165	0	Complies
	11n/ac(40MHz)	151/159	0	Complies
	11ac(80MHz)	155	0	Complies
Occupied Bandwidth	a	149/ 157/ 165	0	Complies
	11n/ac(20MHz)	149/157/165	0	Complies
	11n/ac(40MHz)	151/159	0	Complies
	11ac(80MHz)	155	0	Complies
Power Density	a	149/ 157/ 165	0	Complies
	11n/ac(20MHz)	149/157/165	0	Complies
	11n/ac(40MHz)	151/159	0	Complies
	11ac(80MHz)	155	0	Complies

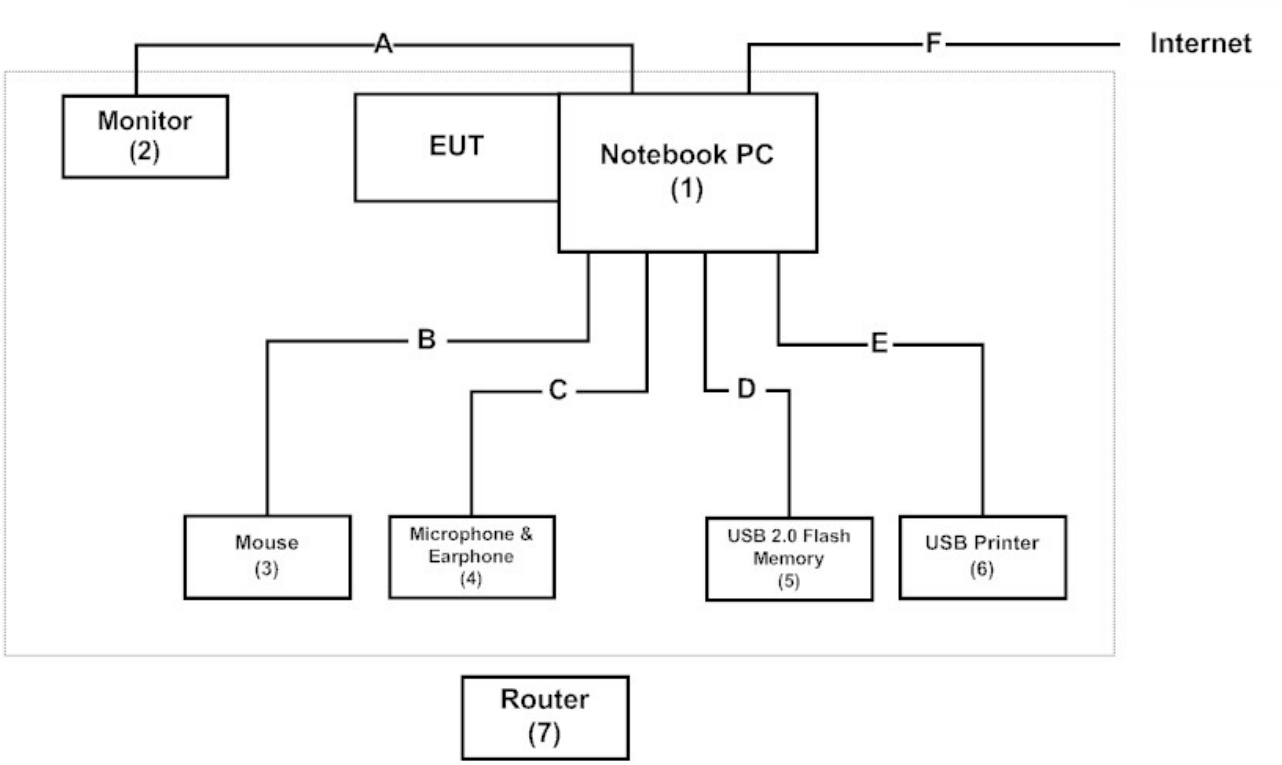
1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	DELL	PP26L	66TLZ1S	DoC	Non-Shielded, 1.8m
2	Monitor	DELL	U2410f	082WXD-72872-16R-0V7L	DoC	Non-Shielded, 1.8m
3	Mouse	Logitech	M-SBF83	HCA52200185	DoC	--
4	Microphone & Earphone	Fujiei	SBZ-38	N/A	DoC	--
5	USB 2.0 Flash Memory	Apacer	AH223	N/A	DoC	--
6	USB Printer	HP	Deskjet5652	N/A	DoC	--
7	Router	Asus	RT-N10	N/A	DoC	--

1.5. Configuration of tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	VGA Cable	Shielded, 1.6m
B	Mouse Cable	Shielded, 1.8m
C	Microphone & Earphone Cable	Non-Shielded, 1.2m
D	USB 2.0 Flash Memory Cable	Shielded, 1m
E	USB Cable	Shielded, 1m
F	LAN Cable	Non-Shielded, 10m

1.6. EUT Exercise Software

1	Test system is in accord with EUT user manual (refer to 1.5 configuration of tested system)
2	Turn on the power of all equipment.
3	Execute the“MT76xxU QA V2.0.5.0” on the EUT.
4	Configure the test mode, the test channel, and the data rate.
5	Press “Start TX” to start the continuous transmitting.
6	Verify that the EUT works properly.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Band Edge	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Power Density	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000

2. Conducted Emission

2.1. Test Equipment

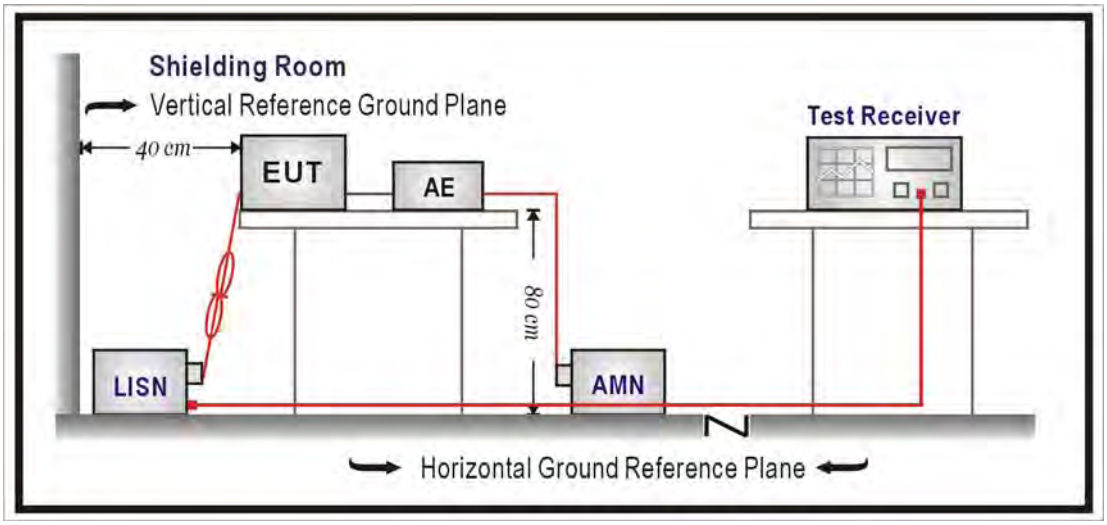
The following test equipments are used during the test:

Conducted Emission / SR2

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2014/01/24
LISN	R&S	ENV216	100092	2014/08/08
Test Receiver	R&S	ESCS 30	825442/014	2014/07/30

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)
Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

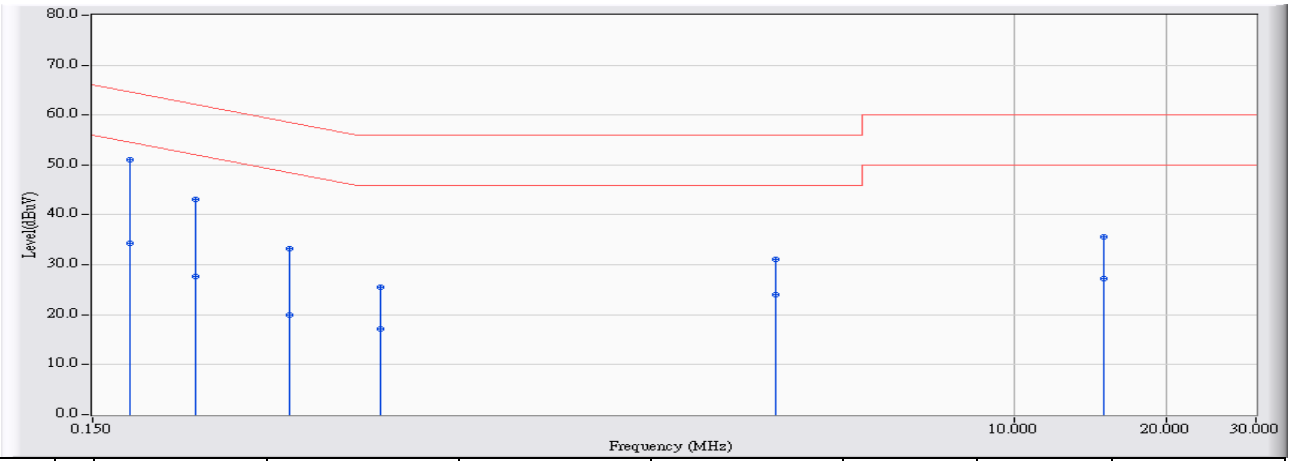
According to FCC Part 15 Subpart C Paragraph 15.207: 2012

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR2	**Time : 2013/09/14 - 19:50**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line1	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

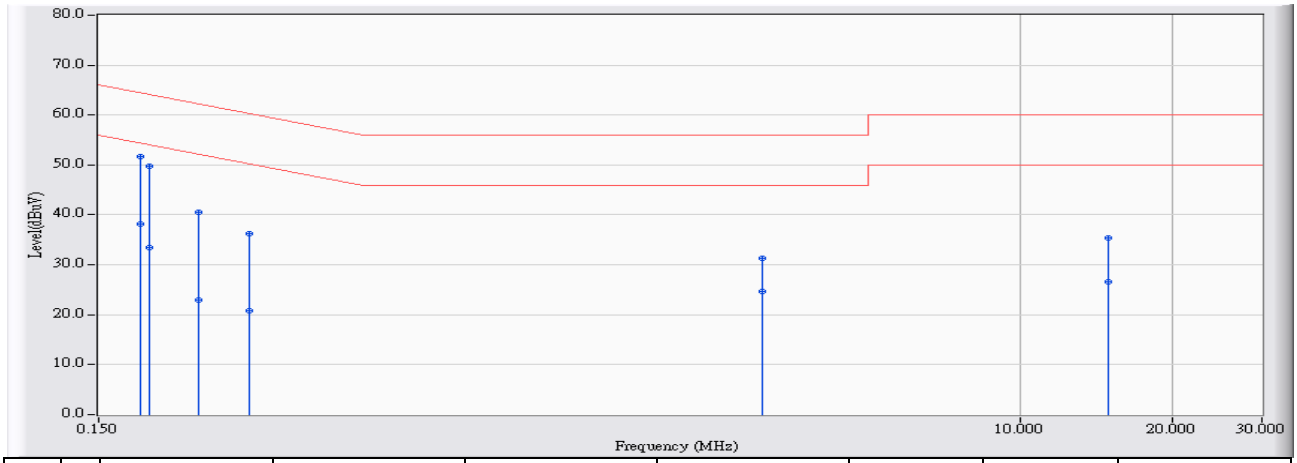


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.177	9.640	41.300	50.940	-13.669	64.609	QUASIPEAK
2		0.177	9.640	24.630	34.270	-20.339	54.609	AVERAGE
3		0.240	9.655	33.530	43.185	-18.916	62.102	QUASIPEAK
4		0.240	9.655	18.070	27.725	-24.376	52.102	AVERAGE
5		0.369	9.692	23.610	33.302	-25.227	58.529	QUASIPEAK
6		0.369	9.692	10.200	19.892	-28.637	48.529	AVERAGE
7		0.556	9.733	15.830	25.563	-30.437	56.000	QUASIPEAK
8		0.556	9.733	7.470	17.203	-28.797	46.000	AVERAGE
9		3.365	9.902	21.280	31.182	-24.818	56.000	QUASIPEAK
10		3.365	9.902	14.170	24.072	-21.928	46.000	AVERAGE
11		14.990	10.240	25.300	35.540	-24.460	60.000	QUASIPEAK
12		14.990	10.240	17.040	27.280	-22.720	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : SR2	**Time : 2013/09/14 - 19:55**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line2	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.181	9.629	42.160	51.789	-12.640	64.428	QUASIPEAK
2		0.181	9.629	28.490	38.119	-16.310	54.428	AVERAGE
3		0.189	9.631	40.100	49.731	-14.347	64.078	QUASIPEAK
4		0.189	9.631	23.920	33.551	-20.527	54.078	AVERAGE
5		0.236	9.642	30.950	40.593	-21.645	62.238	QUASIPEAK
6		0.236	9.642	13.360	23.003	-29.235	52.238	AVERAGE
7		0.298	9.657	26.640	36.297	-23.989	60.286	QUASIPEAK
8		0.298	9.657	11.150	20.807	-29.479	50.286	AVERAGE
9		3.072	9.877	21.390	31.266	-24.734	56.000	QUASIPEAK
10		3.072	9.877	14.770	24.646	-21.354	46.000	AVERAGE
11		14.912	10.287	25.120	35.407	-24.593	60.000	QUASIPEAK
12		14.912	10.287	16.410	26.697	-23.303	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

3. Peak Power Output

3.1. Test Equipment

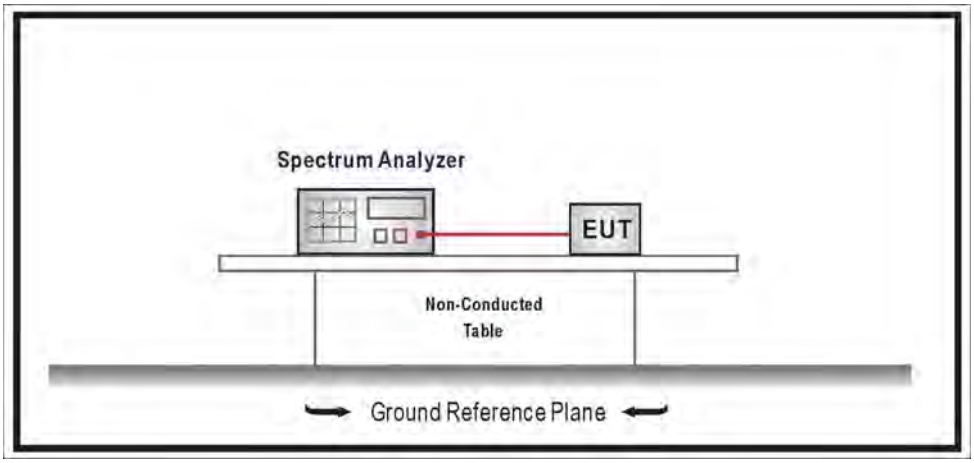
The following test equipments are used during the test:

Peak Power / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074, Section 5.2.1.2 Measurement Procedure PK2 for compliance to FCC 47CFR 15.247 requirements.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

3.6. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB.

3.7. Test Result

Product	Wireless-AC450 USB Adapter		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

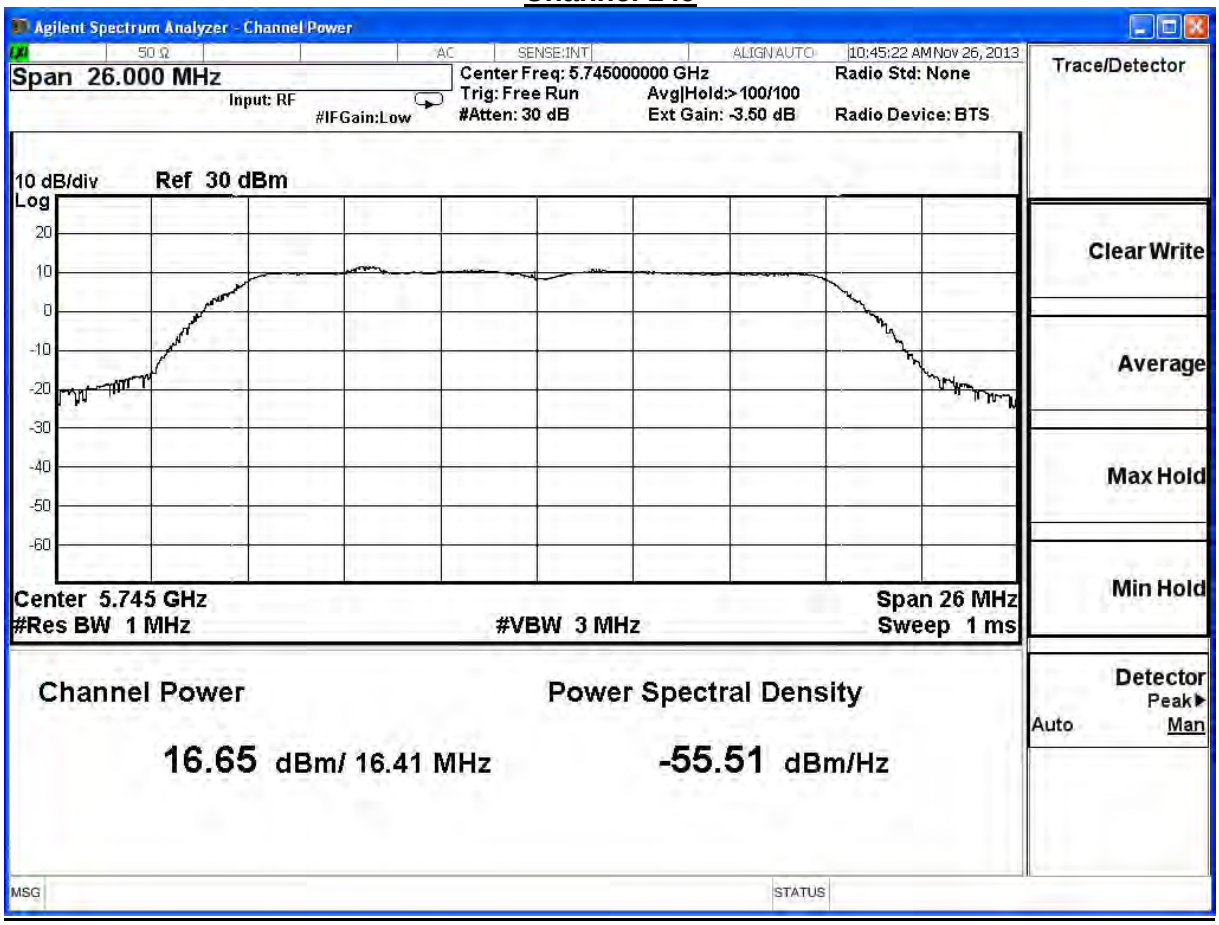
IEEE 802.11a, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	16.65	≦30	Pass
157	5785	17.02	≦30	Pass
165	5825	16.31	≦30	Pass

The worst emission of data rate is 6Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
149	5745	16.65	--	--	--	--	--	--	1 Watt=30dBm
157	5785	17.02	16.90	16.80	16.58	16.46	16.22	16.08	1 Watt=30dBm
165	5825	16.31	--	--	--	--	--	--	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

Channel 149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Span 26.000 MHz
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Center Freq: 5.745000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.745 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
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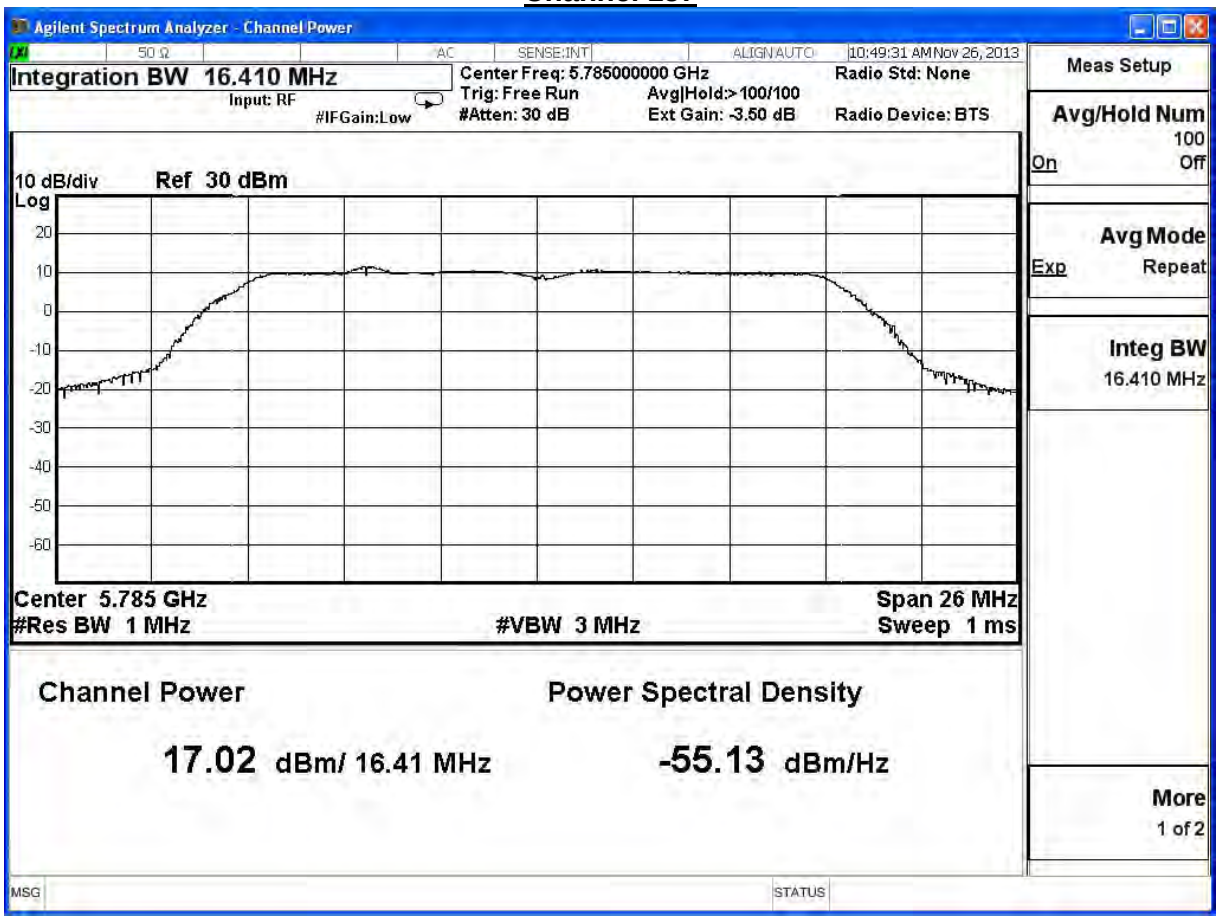
MSG
STATUS

Channel 157


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
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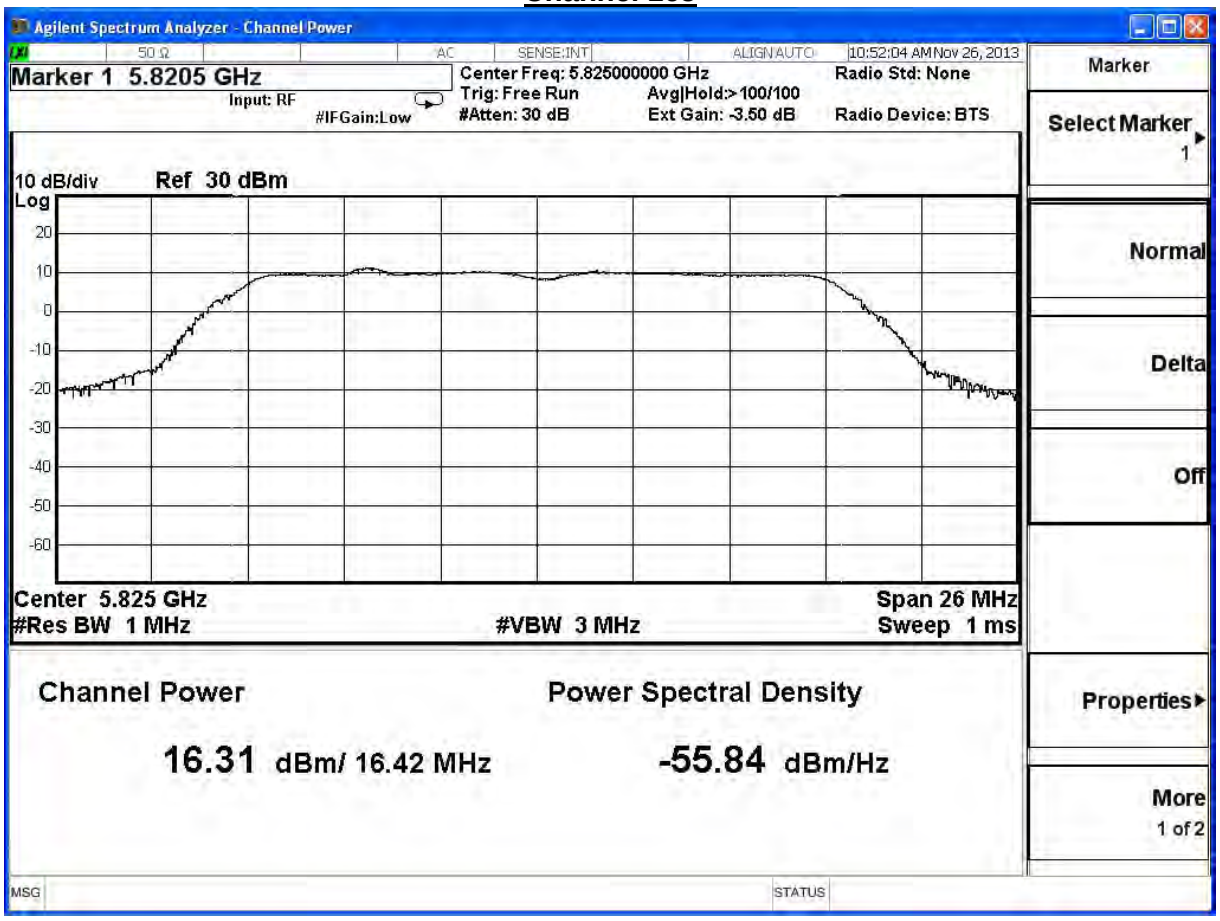
Integration BW 16.410 MHz
Input: RF
#IFGain:Low
Center Freq: 5.785000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Meas Setup
Avg/Hold Num
100
On
Off
Avg Mode
Exp
Repeat
Integ BW
16.410 MHz
More
1 of 2
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.785 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
17.02 dBm/ 16.41 MHz
Power Spectral Density
-55.13 dBm/Hz
MSG
STATUS

Channel 165


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
10:52:04 AM Nov 26, 2013
Marker 1 5.8205 GHz
Input: RF
#IFGain:Low
Center Freq: 5.825000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Marker
Select Marker
1
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Normal
Delta
Off
Center 5.825 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
16.31 dBm/ 16.42 MHz
Power Spectral Density
-55.84 dBm/Hz
Properties
More
1 of 2
MSG
STATUS

Product	Wireless-AC450 USB Adapter		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

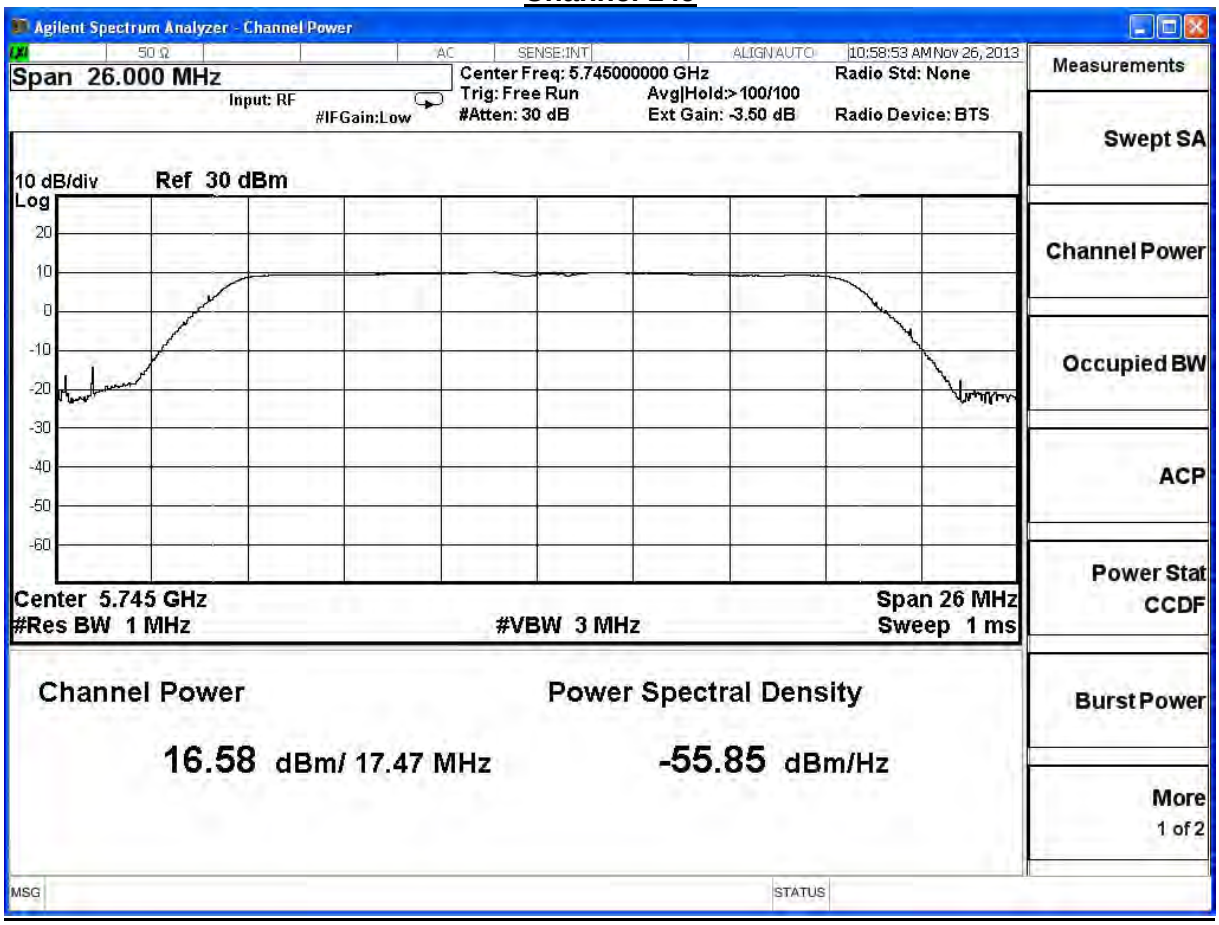
IEEE 802.11n(20MHz), ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	16.58	≦30	Pass
157	5785	16.99	≦30	Pass
165	5825	16.31	≦30	Pass

The worst emission of data rate is 6.5Mbps.

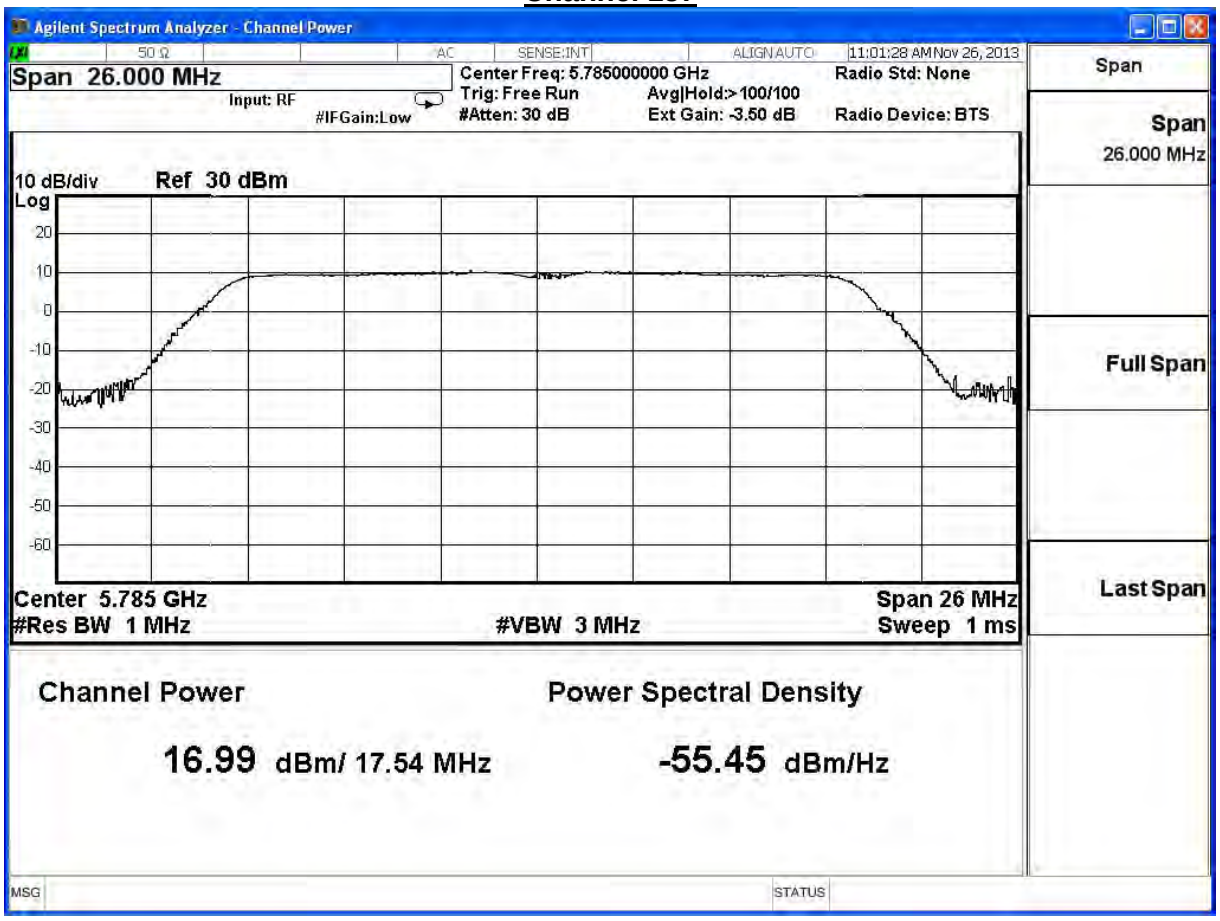
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
149	5745	16.58	--	--	--	--	--	--	--	1 Watt=30dBm
157	5785	16.99	16.77	16.67	16.57	16.33	16.21	16.06	15.94	1 Watt=30dBm
165	5825	16.31	--	--	--	--	--	--	--	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

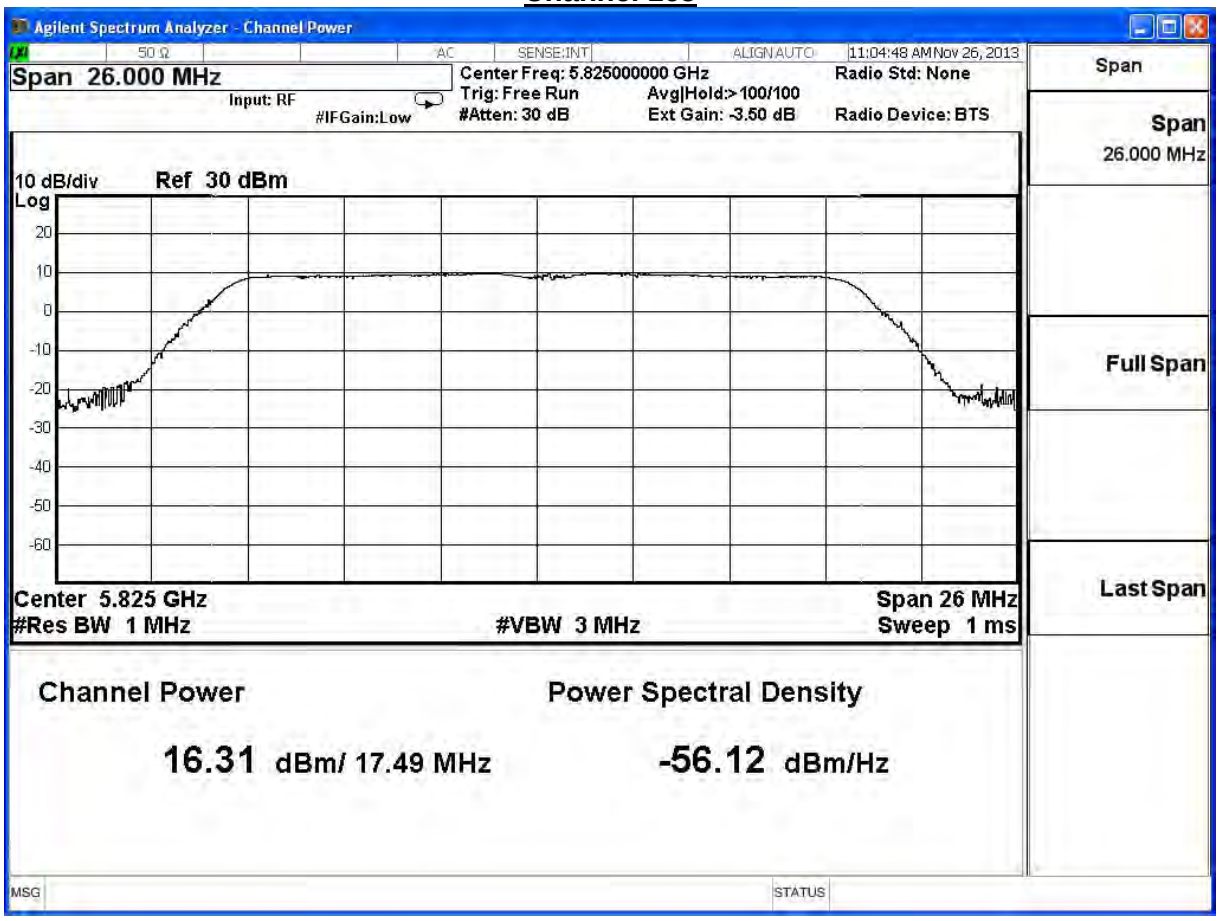
Channel 149


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
10:58:53 AM Nov 26, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.745000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.745 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
16.58 dBm/ 17.47 MHz
Power Spectral Density
-55.85 dBm/Hz
Measurements
Swept SA
Channel Power
Occupied BW
ACP
Power Stat CCDF
Burst Power
More
1 of 2
MSG
STATUS

Channel 157


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:01:28 AM Nov 26, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.785000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.785 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
16.99 dBm/ 17.54 MHz
Power Spectral Density
-55.45 dBm/Hz
MSG
STATUS
Span
Span
26.000 MHz
Full Span
Last Span

Channel 165


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:04:48 AM Nov 26, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.825000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.825 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
16.31 dBm/ 17.49 MHz
Power Spectral Density
-56.12 dBm/Hz
MSG
STATUS
Span
Span
26.000 MHz
Full Span
Last Span

Product	Wireless-AC450 USB Adapter		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

IEEE 802.11n(40MHz), ANT 0

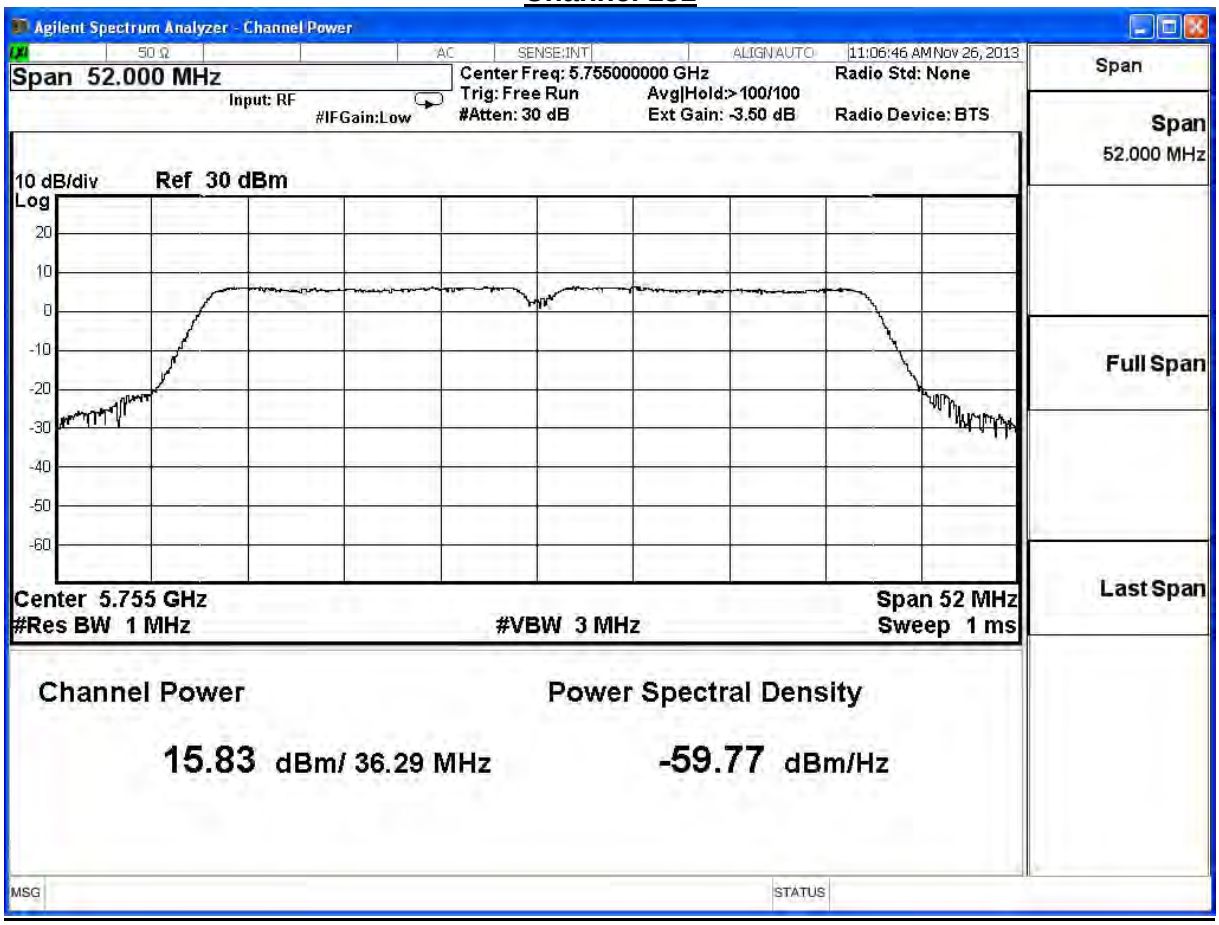
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	15.83	≦30	Pass
159	5795	15.82	≦30	Pass

The worst emission of data rate is 13.5 Mbps.

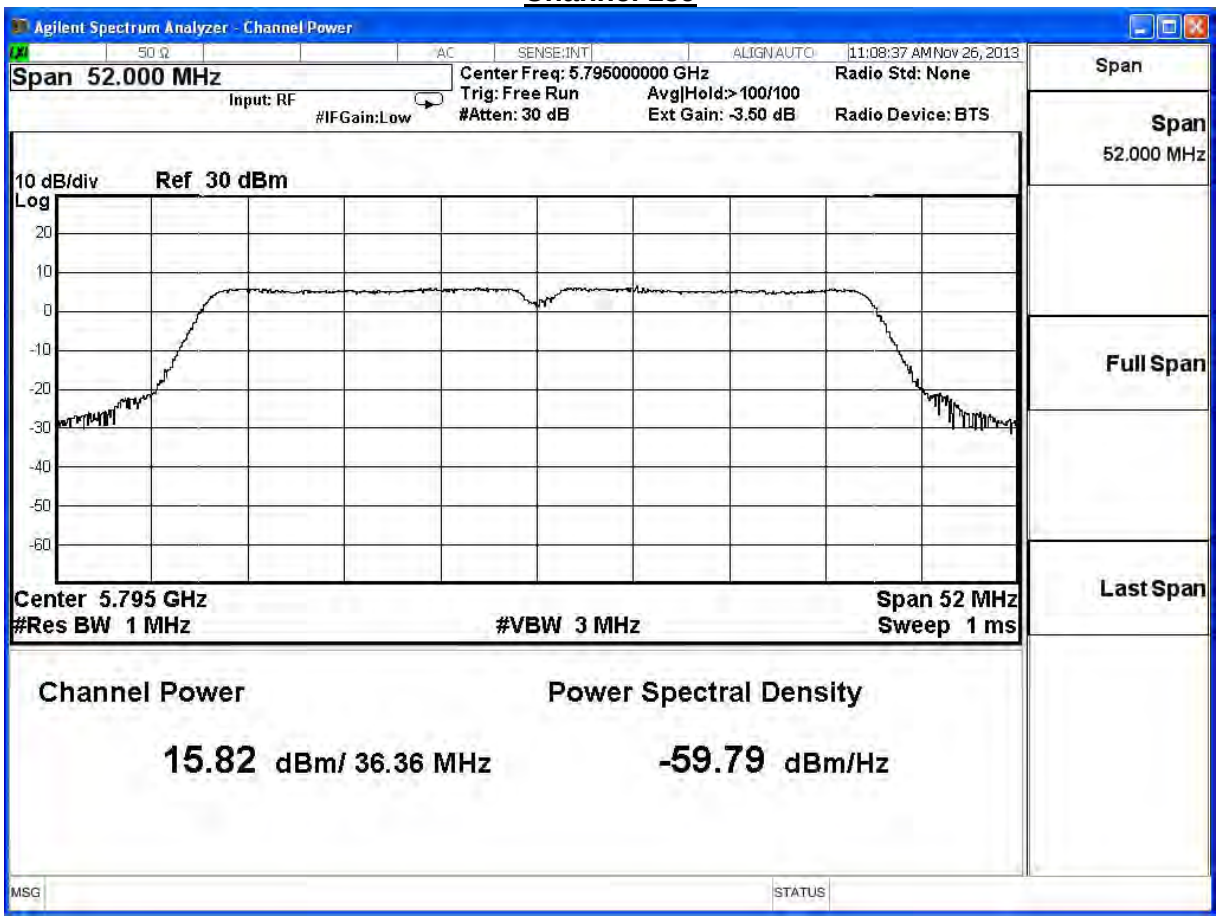
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121	135	
151	5755	15.83	--	--	--	--	--	--	--	1 Watt=30dBm
159	5795	15.82	15.72	15.52	15.32	15.22	15.10	14.98	14.74	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

Channel 151


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:06:46 AM Nov 26, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.755000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.755 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Channel Power
15.83 dBm/ 36.29 MHz
Power Spectral Density
-59.77 dBm/Hz
MSG
STATUS
Span
Span
52.000 MHz
Full Span
Last Span

Channel 159


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:08:37 AM Nov 26, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.795000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.795 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Channel Power
15.82 dBm/ 36.36 MHz
Power Spectral Density
-59.79 dBm/Hz
MSG
STATUS
Span
Span
52.000 MHz
Full Span
Last Span

Product	Wireless-AC450 USB Adapter		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

IEEE 802.11ac (80MHz), ANT 0

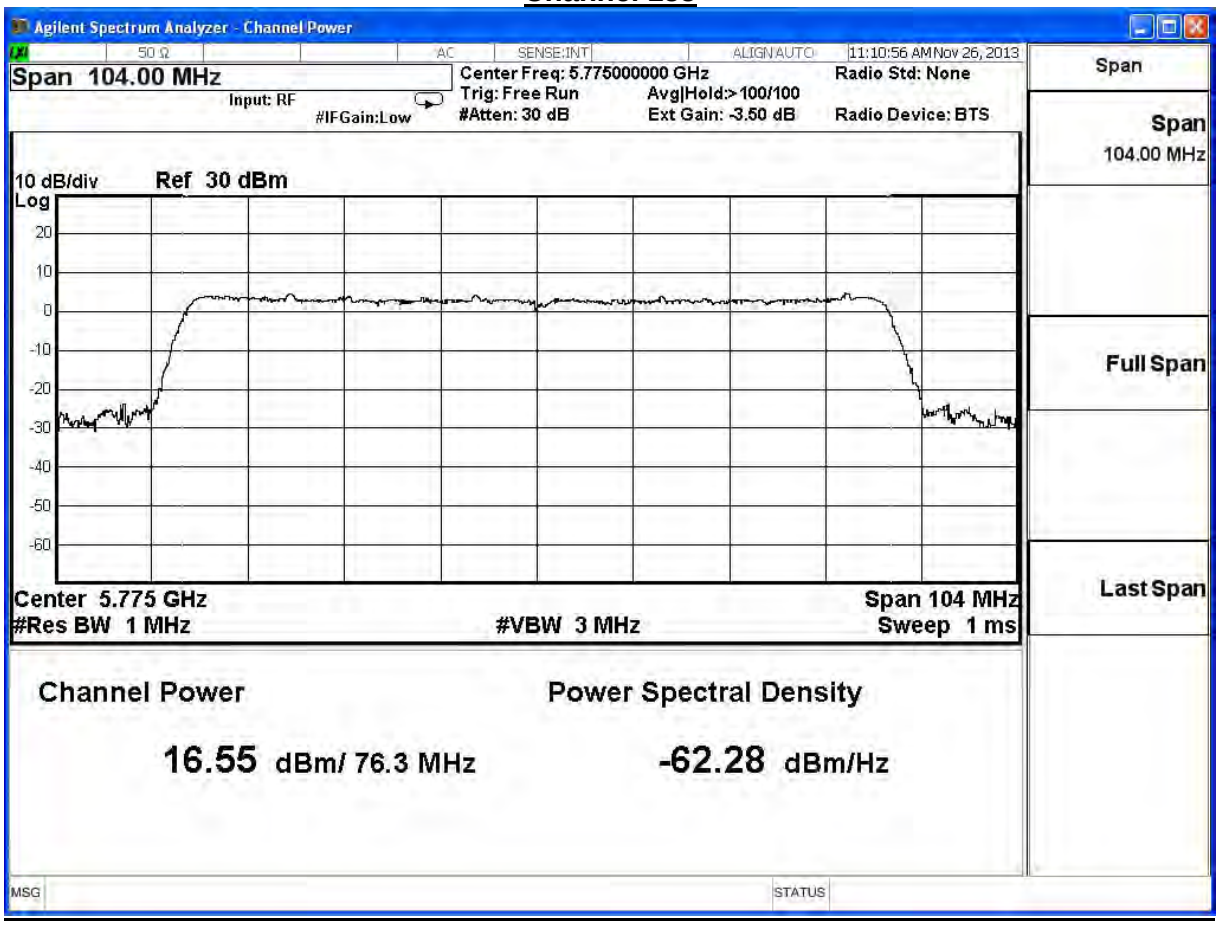
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
155	5775	16.55	≦30	Pass

The worst emission of data rate is 29.3 Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	8	9
Channel No	Frequency (MHz)	Data Rate									
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	390
155	5775	16.55	16.35	16.25	16.15	16.05	15.85	15.61	15.37	15.13	15.01

Note: Measure Level =Reading value + cable loss

Channel 155


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:10:56 AM Nov 26, 2013
Span 104.00 MHz
Input: RF
#IFGain:Low
Center Freq: 5.775000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.775 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 104 MHz
Sweep 1 ms
Channel Power
16.55 dBm/ 76.3 MHz
Power Spectral Density
-62.28 dBm/Hz
MSG
STATUS
Span
Span
104.00 MHz
Full Span
Last Span

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

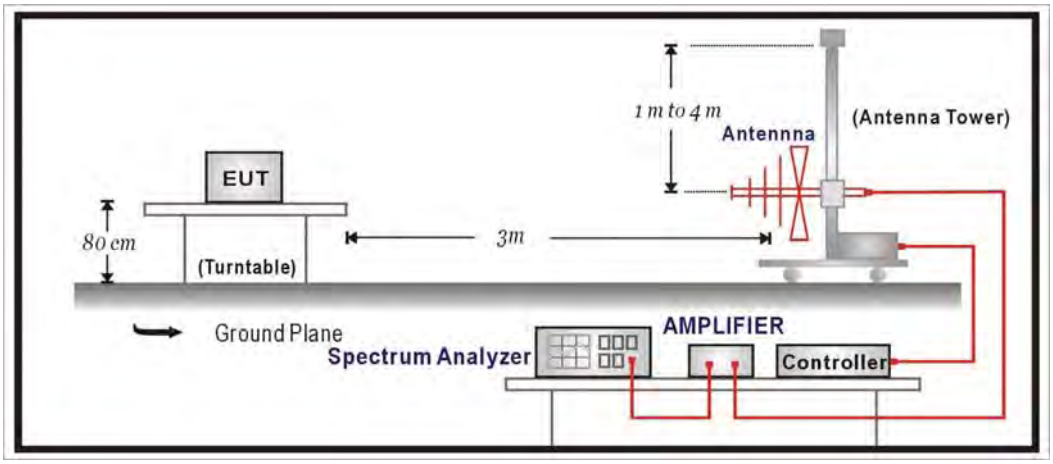
Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895(CB1)	2014/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Pre-Amplifier	MITEQ	AMF-4D-005180-24-10P	888003	2014/06/09
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2014/02/19
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

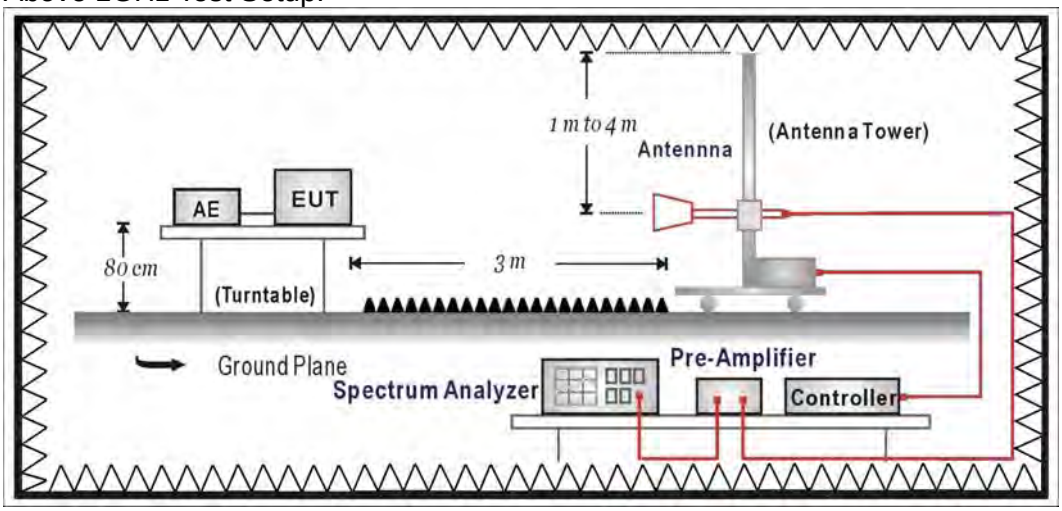
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency MHz	uV/m	dBuV/m	Measurement Distance(meter)
0.009-0.490	2400/F(KHz)	67.60	300
0.490-1.705	2400/F(KHz)	87.60	30
1.705-30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.
On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

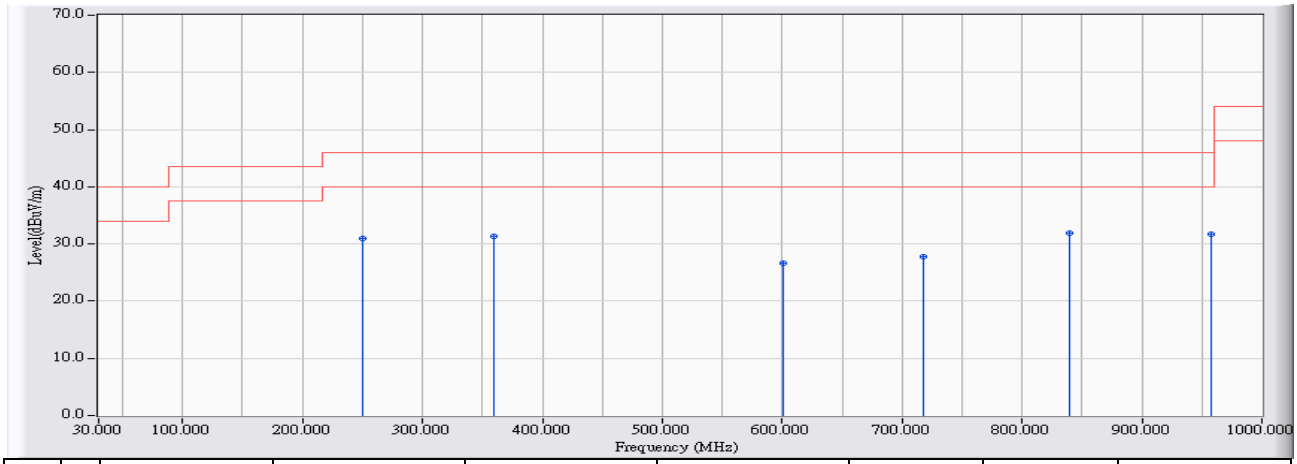
4.6. Uncertainty

The measurement uncertainty
30MHz～1GHz as ±3.43dB
1GHz～26.5Ghz as ±3.65dB

4.7. Test Result

30MHz-1GHz Spurious

Site : CB1	**Time : 2013/10/09 - 15:45**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5785MHz**

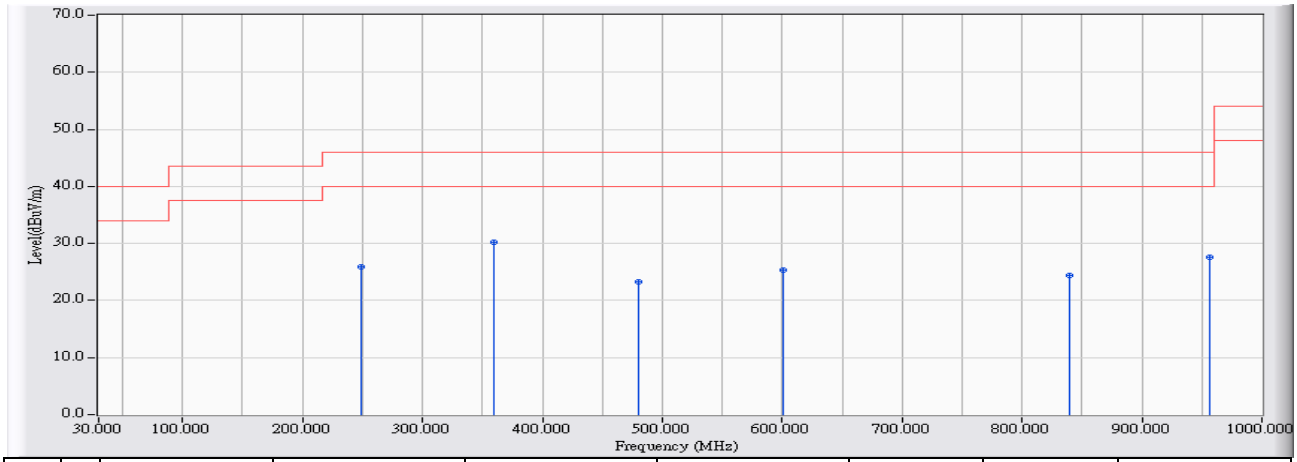


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-20.648	51.571	30.923	-15.077	46.000	QUASIPEAK
2		359.800	-18.475	49.785	31.310	-14.690	46.000	QUASIPEAK
3		600.360	-14.857	41.465	26.608	-19.392	46.000	QUASIPEAK
4		717.730	-14.195	42.052	27.858	-18.142	46.000	QUASIPEAK
5	*	839.950	-12.961	44.816	31.855	-14.145	46.000	QUASIPEAK
6		958.290	-12.135	43.933	31.798	-14.202	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : CB1	**Time : 2013/10/09 - 15:47**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5785MHz**

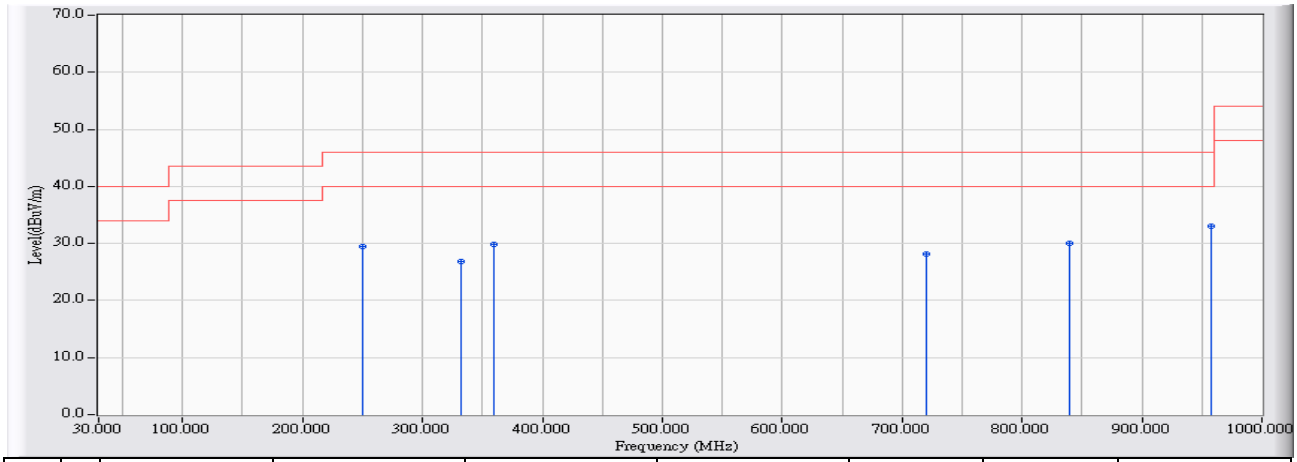


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		249.220	-20.719	46.532	25.814	-20.186	46.000	QUASIPEAK
2	*	359.800	-18.475	48.696	30.221	-15.779	46.000	QUASIPEAK
3		480.080	-16.004	39.240	23.237	-22.763	46.000	QUASIPEAK
4		600.360	-14.857	40.214	25.357	-20.643	46.000	QUASIPEAK
5		839.950	-12.961	37.343	24.382	-21.618	46.000	QUASIPEAK
6		956.350	-12.152	39.693	27.541	-18.459	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : CB1	**Time : 2013/10/09 - 15:50**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5785MHz**

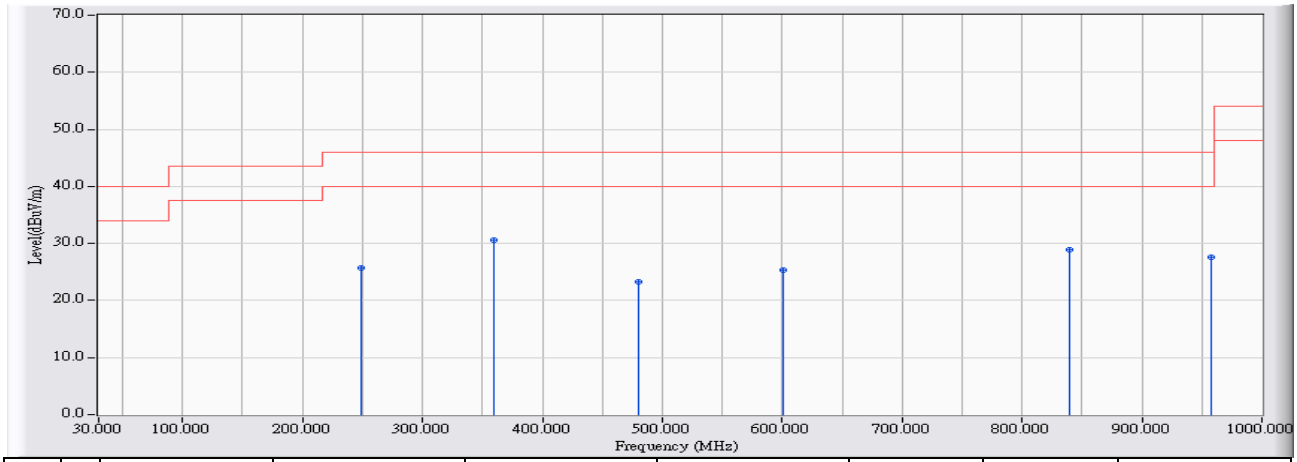


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-20.648	50.166	29.518	-16.482	46.000	QUASIPEAK
2		332.640	-19.247	46.066	26.819	-19.181	46.000	QUASIPEAK
3		359.800	-18.475	48.368	29.893	-16.107	46.000	QUASIPEAK
4		719.670	-14.170	42.362	28.192	-17.808	46.000	QUASIPEAK
5		839.950	-12.961	42.931	29.970	-16.030	46.000	QUASIPEAK
6	*	957.320	-12.144	45.235	33.091	-12.909	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : CB1	**Time : 2013/10/09 - 16:00**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5785MHz**

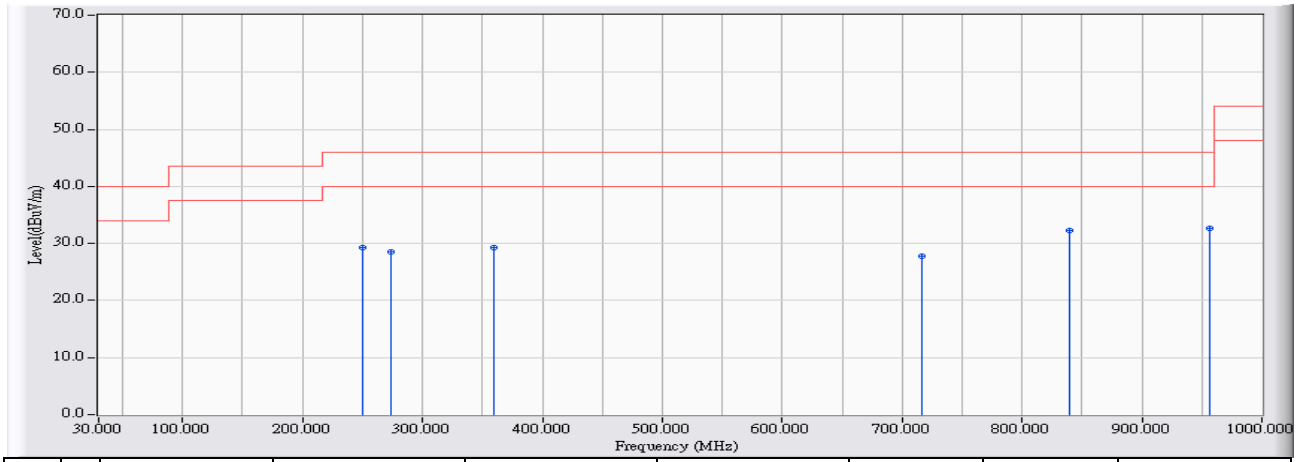


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		249.220	-20.719	46.436	25.718	-20.282	46.000	QUASIPEAK
2	*	359.800	-18.475	49.023	30.548	-15.452	46.000	QUASIPEAK
3		480.080	-16.004	39.187	23.184	-22.816	46.000	QUASIPEAK
4		600.360	-14.857	40.191	25.334	-20.666	46.000	QUASIPEAK
5		839.950	-12.961	41.841	28.880	-17.120	46.000	QUASIPEAK
6		957.320	-12.144	39.642	27.498	-18.502	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : CB1	**Time : 2013/10/09 - 16:05**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

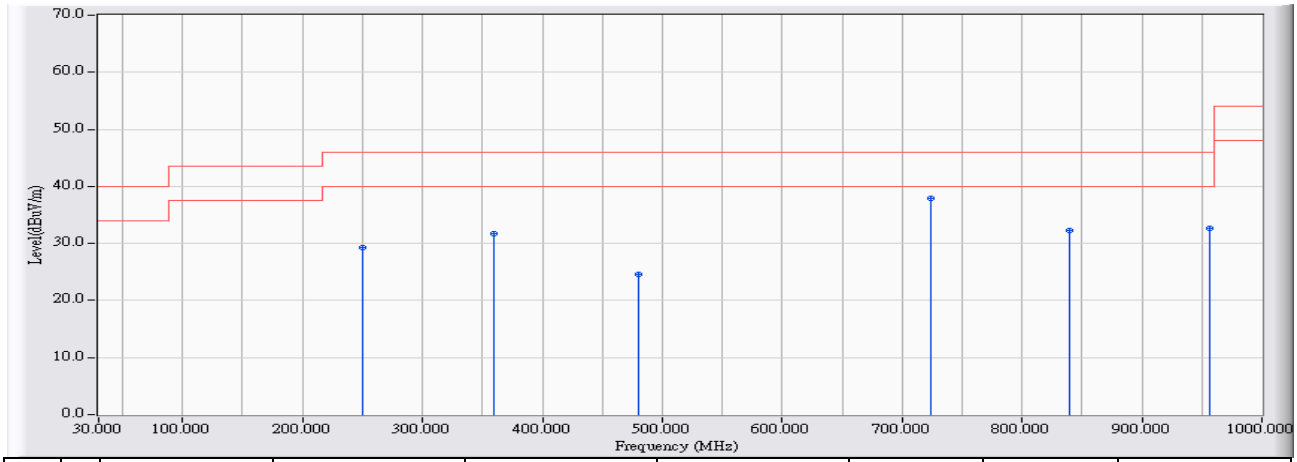


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-20.648	49.950	29.302	-16.698	46.000	QUASIPEAK
2		273.470	-20.426	48.885	28.458	-17.542	46.000	QUASIPEAK
3		359.800	-18.475	47.814	29.339	-16.661	46.000	QUASIPEAK
4		716.760	-14.206	42.007	27.801	-18.199	46.000	QUASIPEAK
5		839.950	-12.961	45.299	32.338	-13.662	46.000	QUASIPEAK
6	*	956.350	-12.152	44.826	32.674	-13.326	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : CB1	**Time : 2013/10/09 - 16:06**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

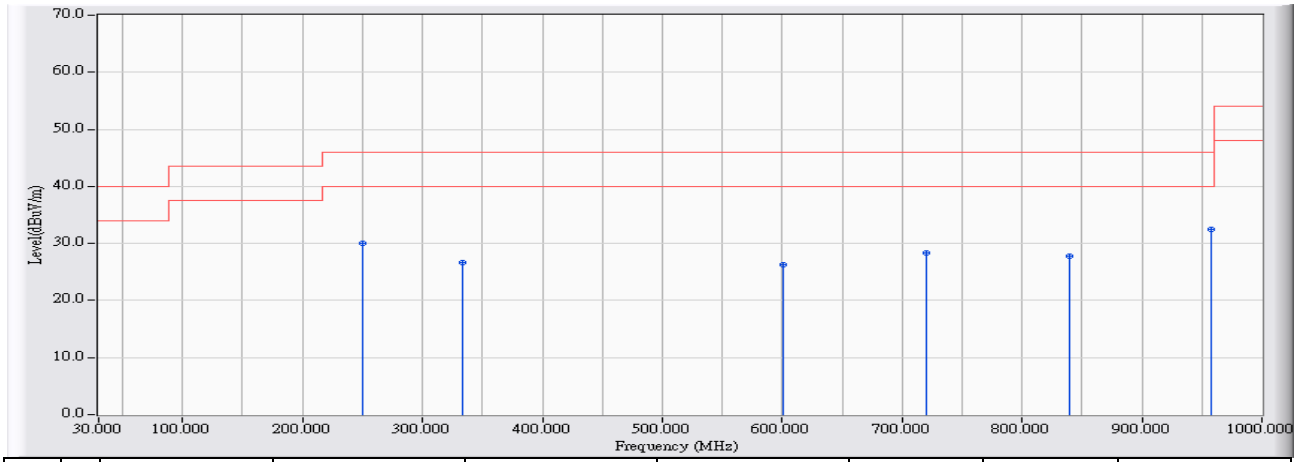


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-20.648	49.950	29.302	-16.698	46.000	QUASIPEAK
2		359.800	-18.475	50.270	31.795	-14.205	46.000	QUASIPEAK
3		480.080	-16.004	40.598	24.595	-21.405	46.000	QUASIPEAK
4	*	723.550	-14.121	52.054	37.933	-8.067	46.000	QUASIPEAK
5		839.950	-12.961	45.299	32.338	-13.662	46.000	QUASIPEAK
6		956.350	-12.152	44.826	32.674	-13.326	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : CB1	**Time : 2013/10/09 - 16:16**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

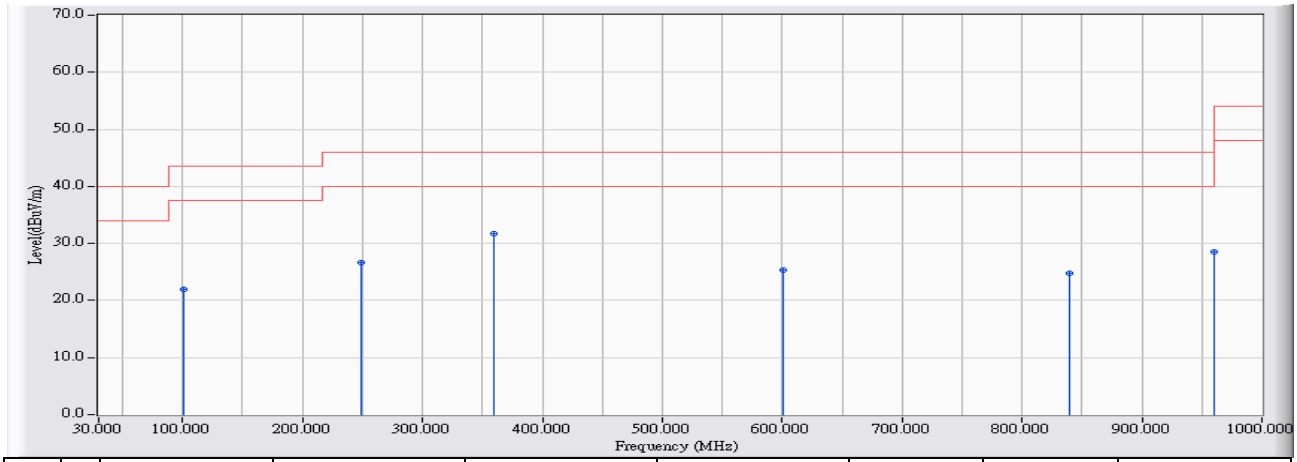


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-20.648	50.716	30.068	-15.932	46.000	QUASIPEAK
2		333.610	-19.219	45.897	26.677	-19.323	46.000	QUASIPEAK
3		600.360	-14.857	41.072	26.215	-19.785	46.000	QUASIPEAK
4		719.670	-14.170	42.592	28.422	-17.578	46.000	QUASIPEAK
5		839.950	-12.961	40.734	27.773	-18.227	46.000	QUASIPEAK
6	*	957.320	-12.144	44.597	32.453	-13.547	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Site : CB1	**Time : 2013/10/09 - 16:19**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**



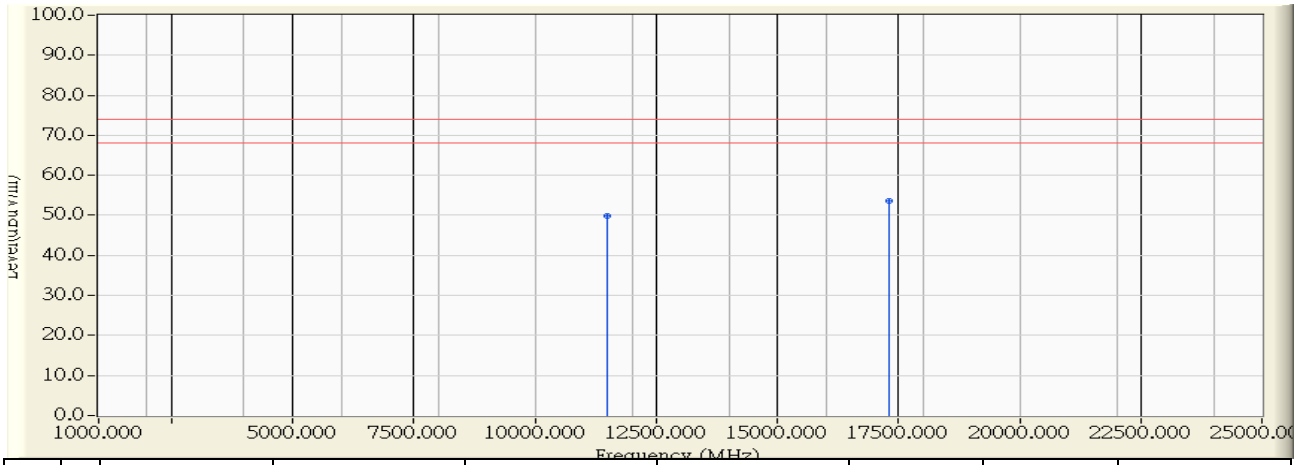
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		100.810	-23.486	45.495	22.009	-21.491	43.500	QUASIPEAK
2		249.220	-20.719	47.406	26.688	-19.312	46.000	QUASIPEAK
3	*	359.800	-18.475	50.189	31.714	-14.286	46.000	QUASIPEAK
4		600.360	-14.857	40.204	25.347	-20.653	46.000	QUASIPEAK
5		839.950	-12.961	37.757	24.796	-21.204	46.000	QUASIPEAK
6		960.230	-12.117	40.581	28.463	-25.537	54.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measure Level = Reading Level + Correct Factor。

Above 1GHz Spurious

Site : CB1	**Time : 2013/09/12 - 18:58**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5745MHz**

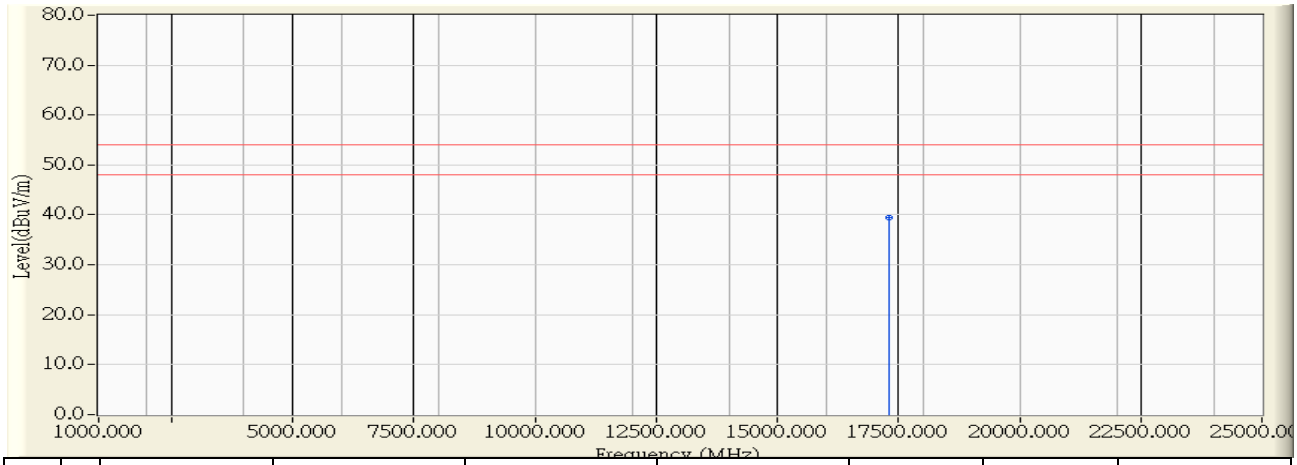


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11488.000	11.534	38.235	49.769	-24.231	74.000	PEAK
2	*	17323.000	15.827	37.686	53.513	-20.487	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 18:59**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5745MHz**

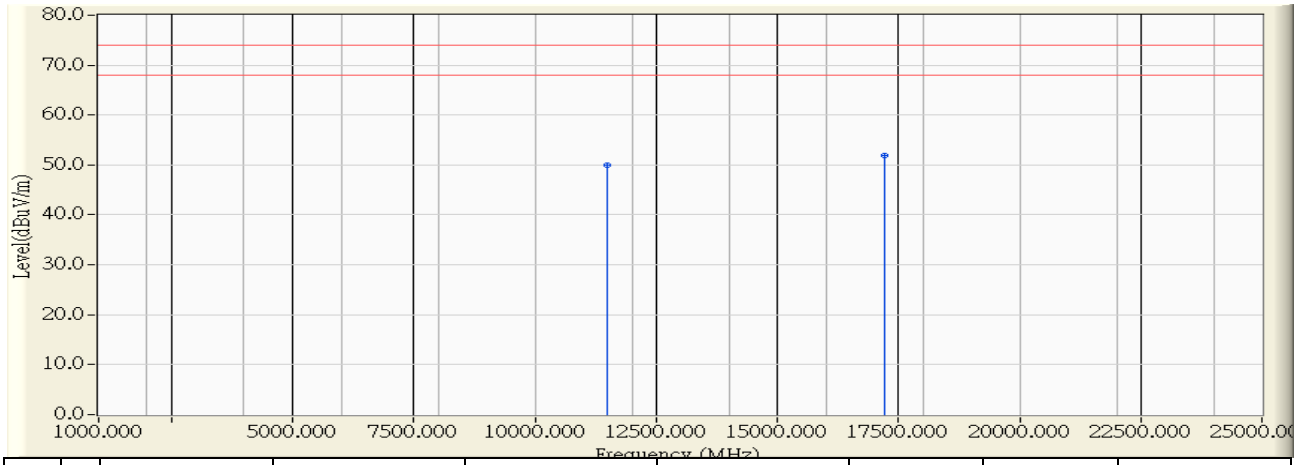


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17323.000	15.827	23.578	39.405	-14.595	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:00**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5745MHz**

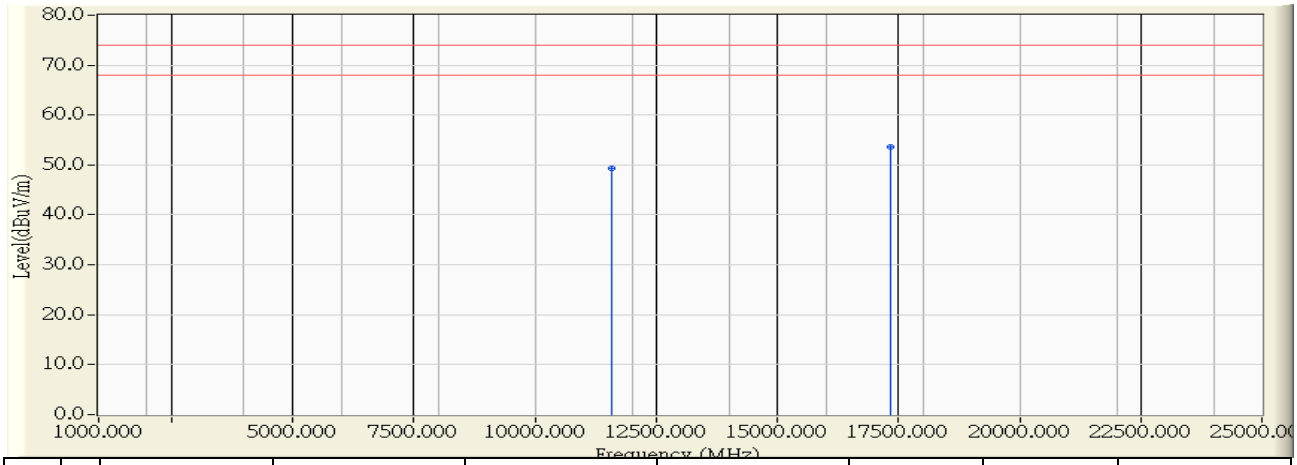


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11491.000	11.533	38.540	50.073	-23.927	74.000	PEAK
2	*	17230.000	15.399	36.550	51.949	-22.051	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:02**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5785MHz**

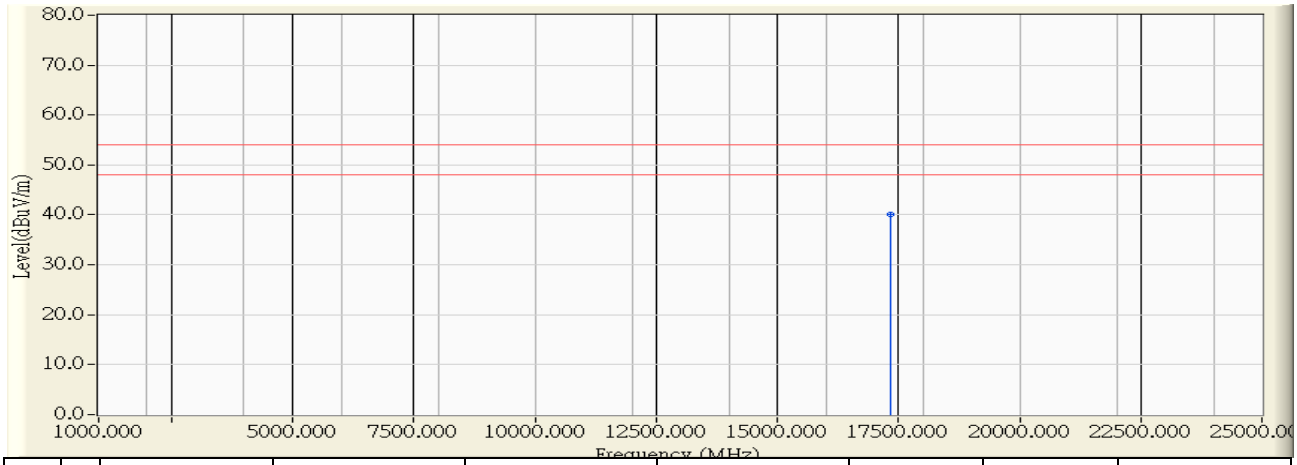


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11570.000	11.477	37.840	49.317	-24.683	74.000	PEAK
2	*	17348.000	15.942	37.711	53.653	-20.347	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:03**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5785MHz**

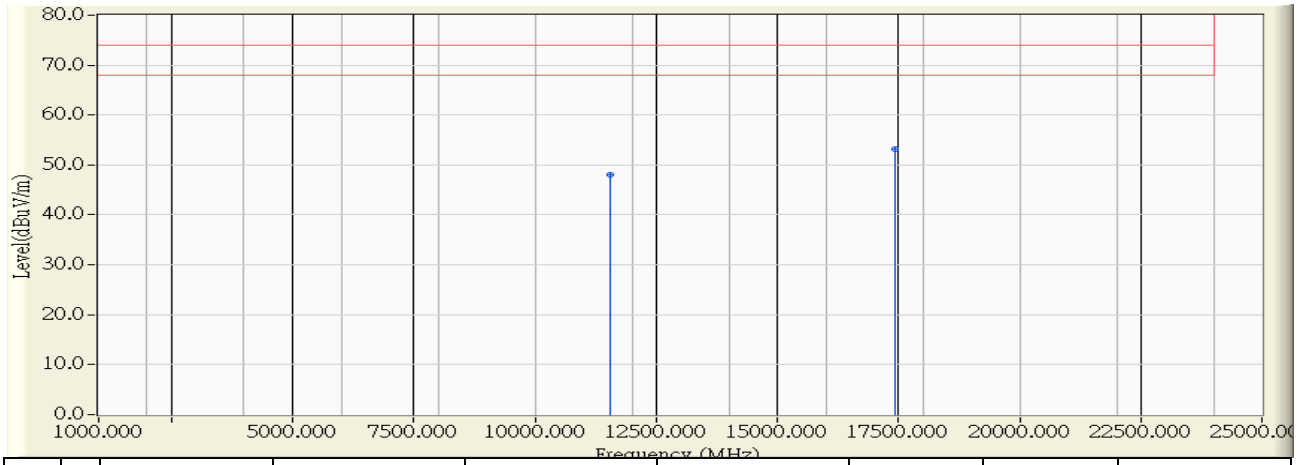


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17324.000	15.832	24.329	40.161	-13.839	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:07**
Limit : FCC_SpartC_15.249_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5785MHz**

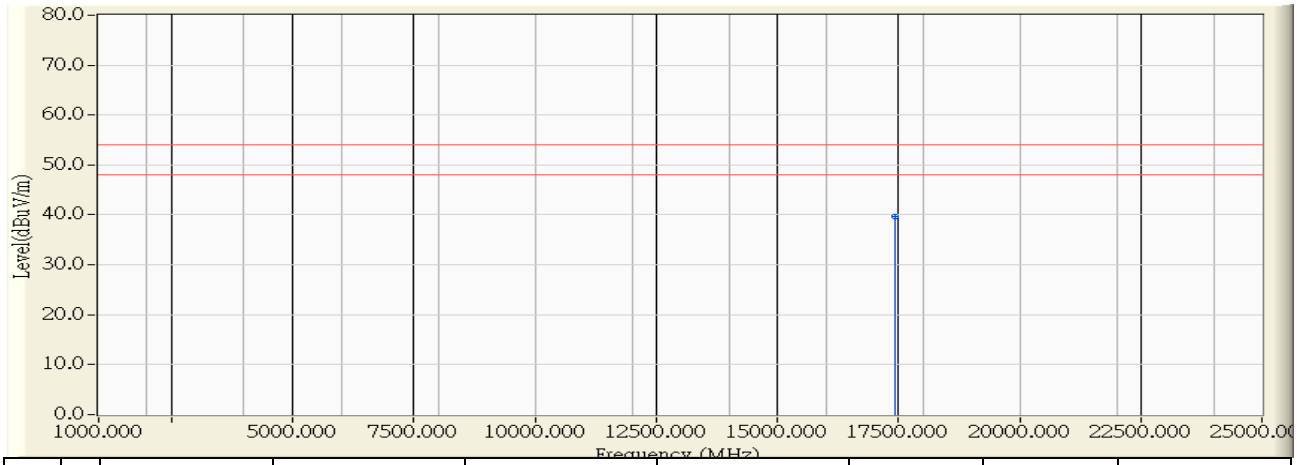


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11547.000	11.495	36.600	48.095	-25.875	73.970	PEAK
2	*	17437.000	16.351	36.909	53.260	-20.710	73.970	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:08**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5785MHz**

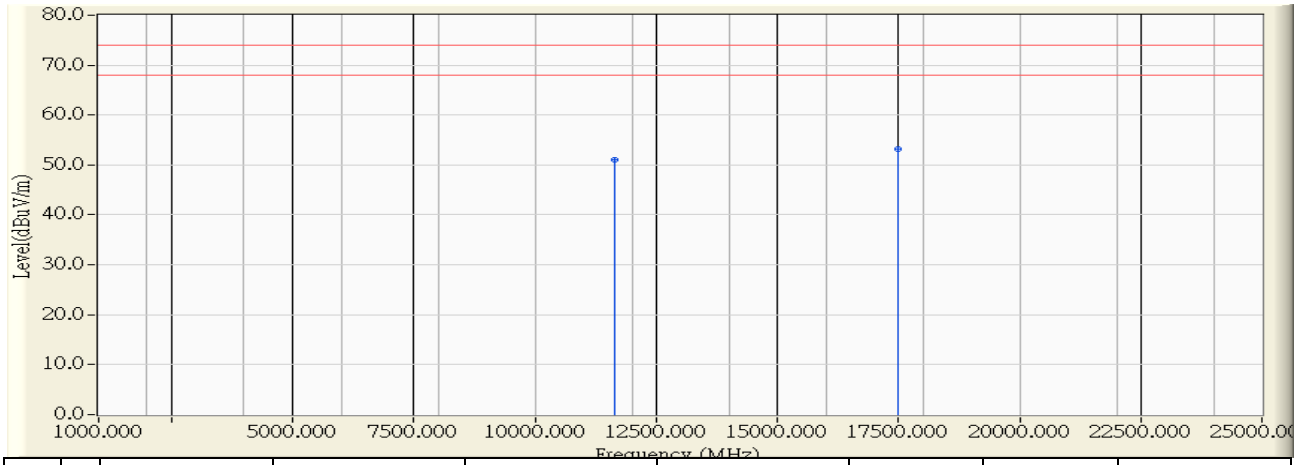


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17437.000	16.351	23.228	39.579	-14.421	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:10**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5825MHz**

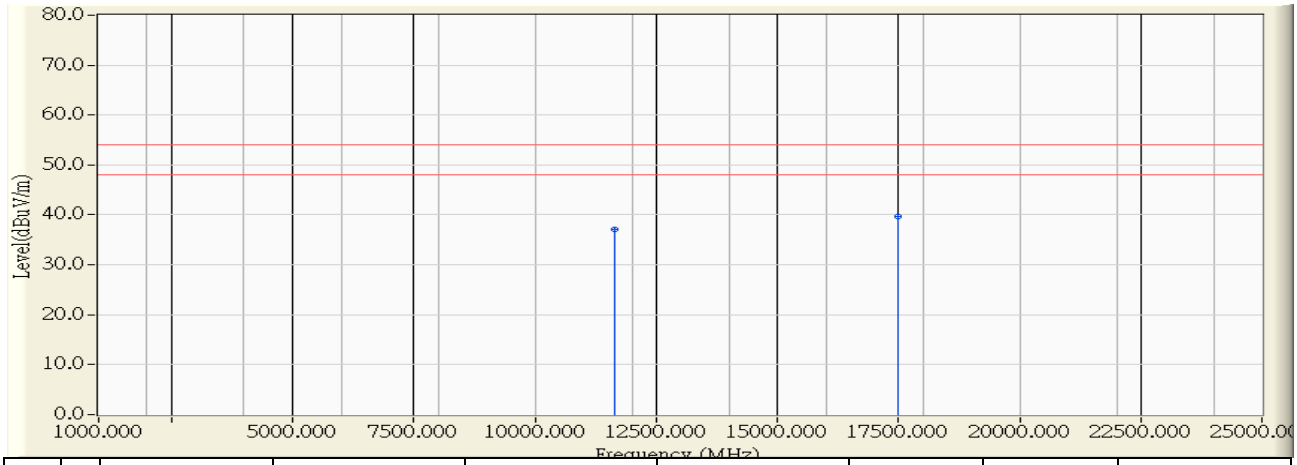


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11647.000	11.418	39.674	51.091	-22.909	74.000	PEAK
2	*	17485.000	16.572	36.694	53.266	-20.734	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:11**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5825MHz**

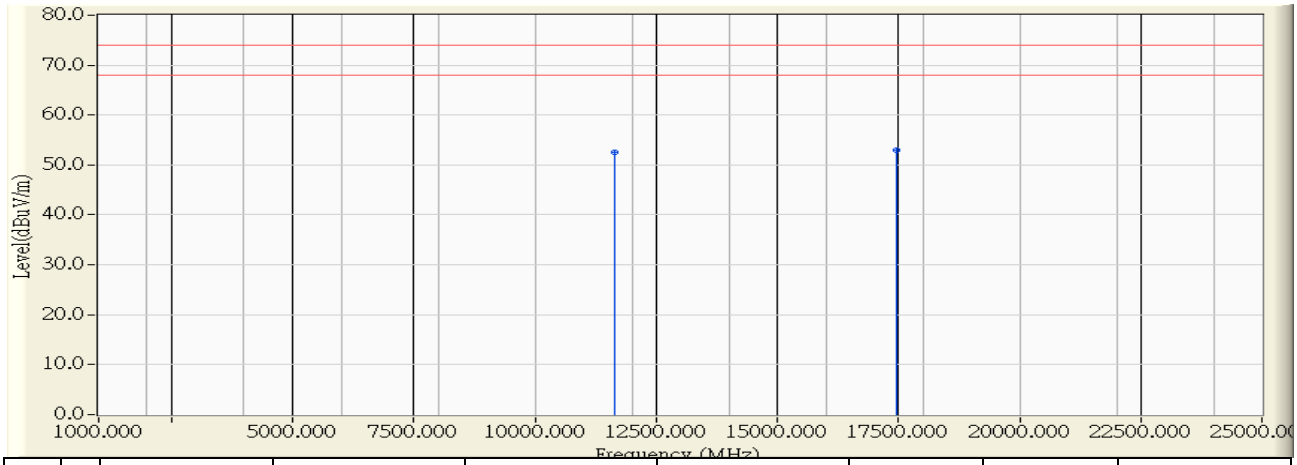


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11650.000	11.415	25.740	37.155	-16.845	54.000	AVERAGE
2	*	17483.000	16.563	23.170	39.733	-14.267	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:12**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5825MHz**

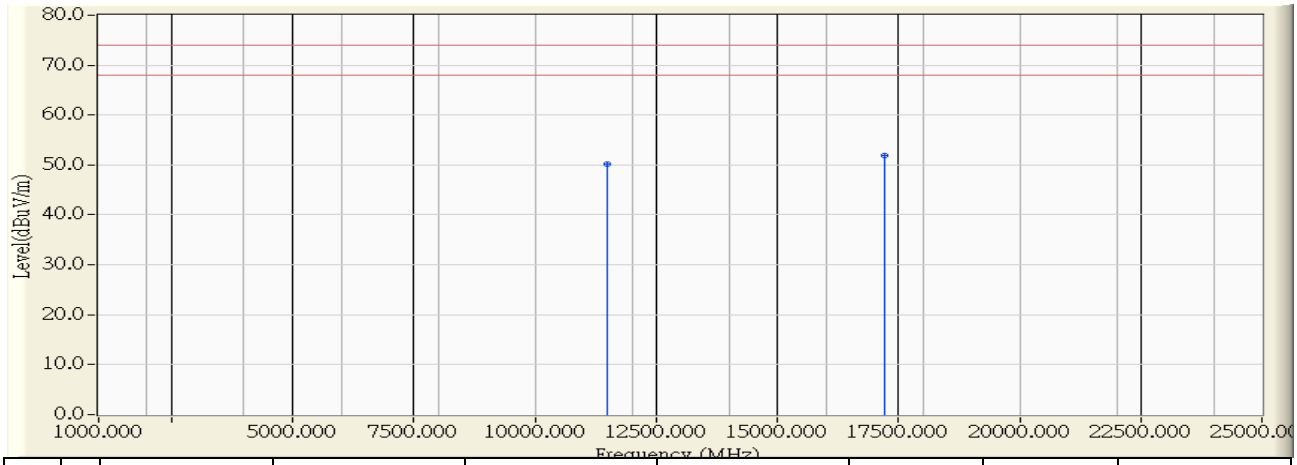


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11647.000	11.418	41.080	52.497	-21.503	74.000	PEAK
2	*	17465.000	16.480	36.437	52.917	-21.083	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:14**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5745MHz**

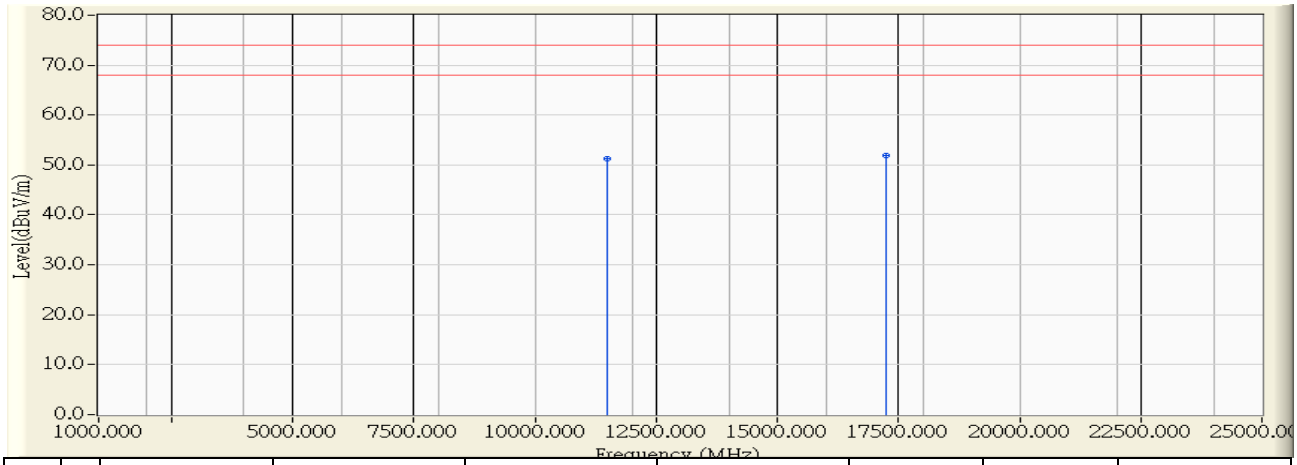


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11493.000	45.635	38.728	50.260	-23.740	74.000	PEAK
2	*	17230.000	48.099	36.570	51.969	-22.031	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:16**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5745MHz**

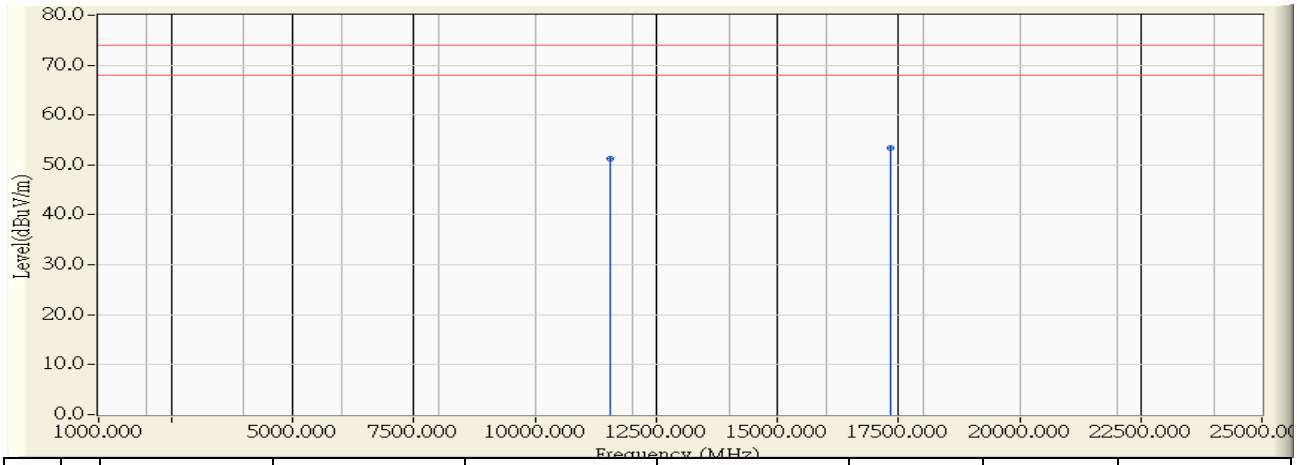


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11488.000	11.534	39.809	51.343	-22.657	74.000	PEAK
2	*	17235.000	15.422	36.466	51.888	-22.112	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:18**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5785MHz**

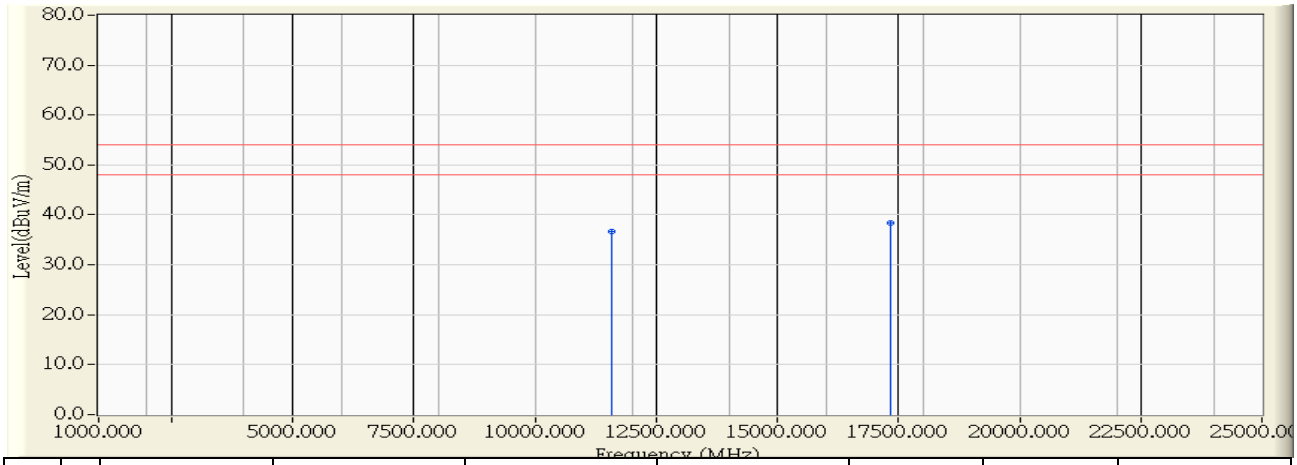


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11568.000	11.478	41.740	53.218	-22.782	74.000	PEAK
2	*	17351.000	15.955	37.501	53.457	-20.543	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:19**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5785MHz**

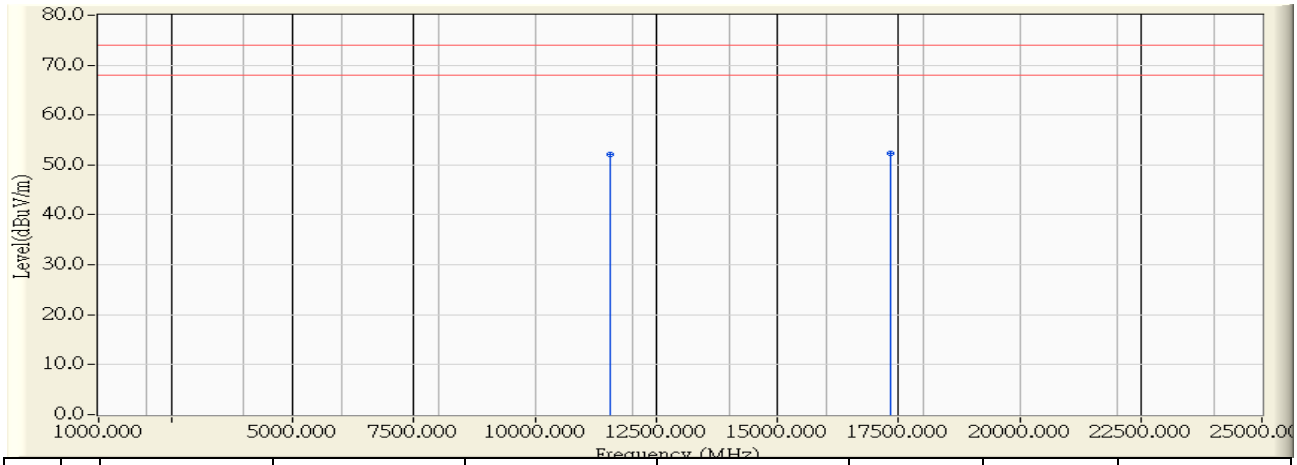


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11570.000	11.477	25.269	36.746	-17.254	54.000	AVERAGE
2	*	17347.000	15.937	22.550	38.487	-15.513	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:20**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5785MHz**

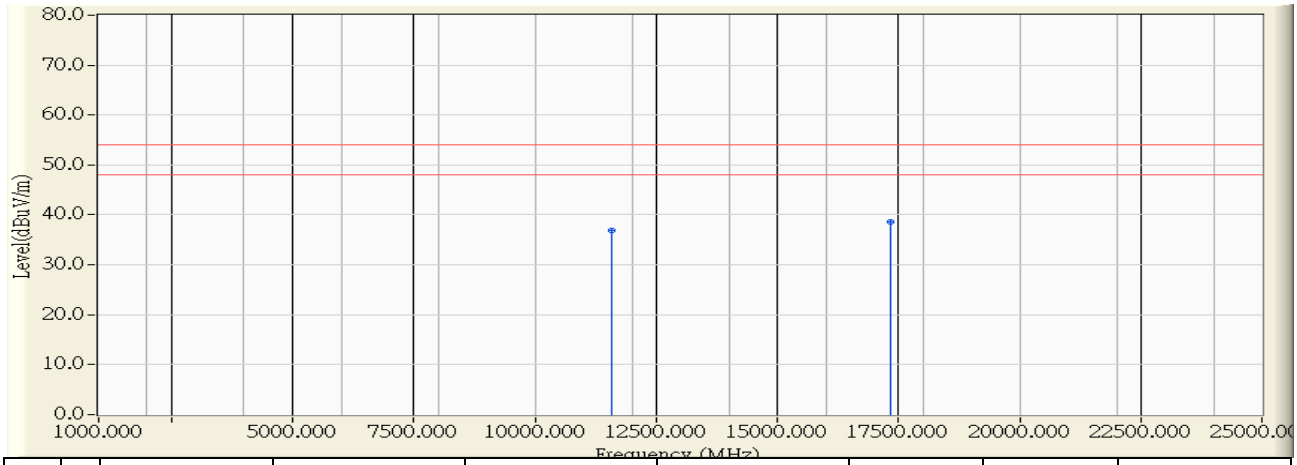


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11568.000	11.478	41.660	53.138	-20.862	74.000	PEAK
2	*	17348.000	15.942	37.490	53.432	-20.568	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:21**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5785MHz**

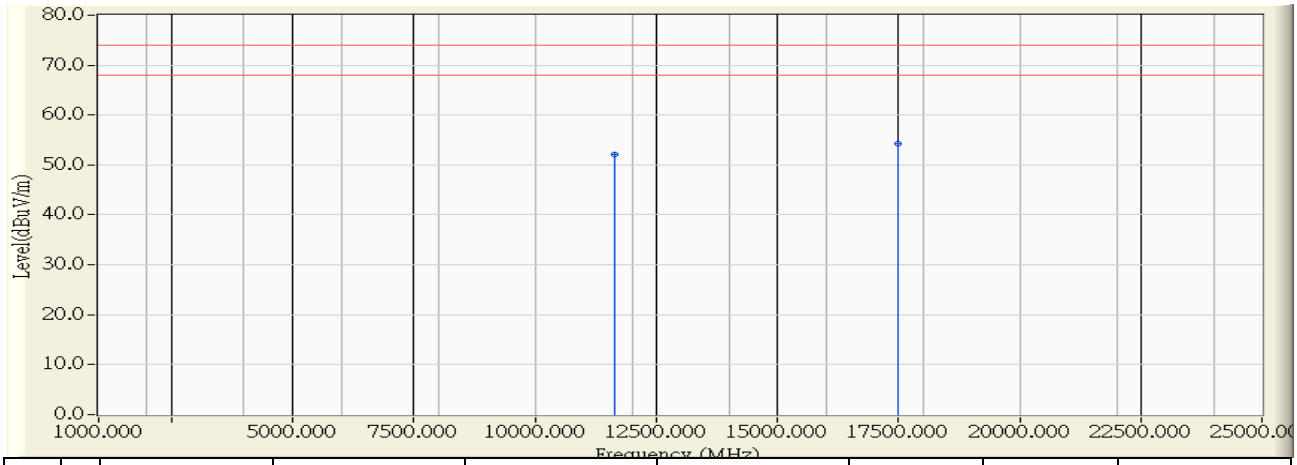


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11570.000	11.477	25.440	36.917	-17.083	54.000	AVERAGE
2	*	17346.000	15.932	22.735	38.668	-15.332	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:22**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

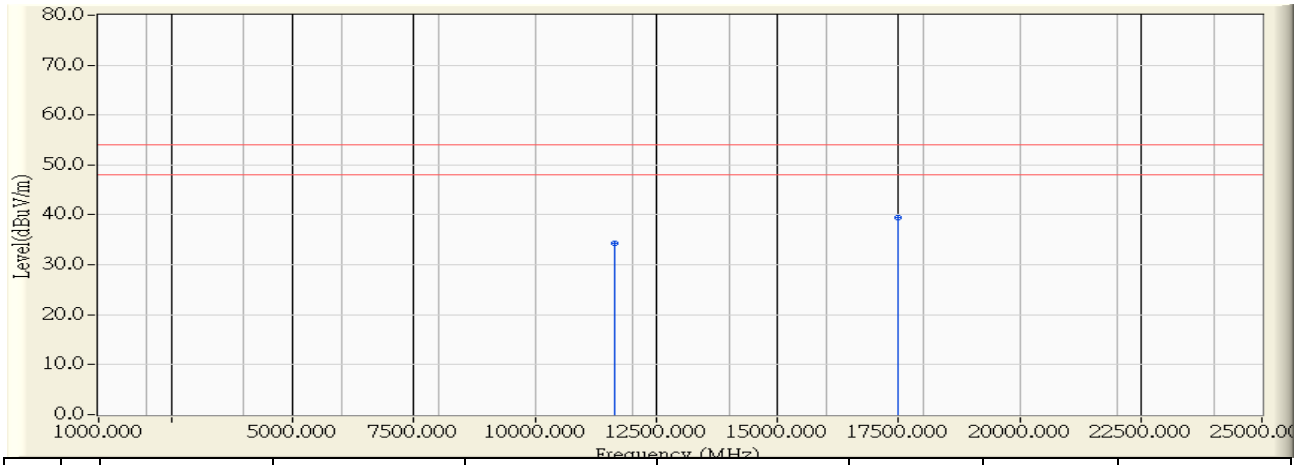


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11648.000	11.416	40.664	52.080	-21.920	74.000	PEAK
2	*	17485.000	16.572	37.687	54.259	-19.741	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:23**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

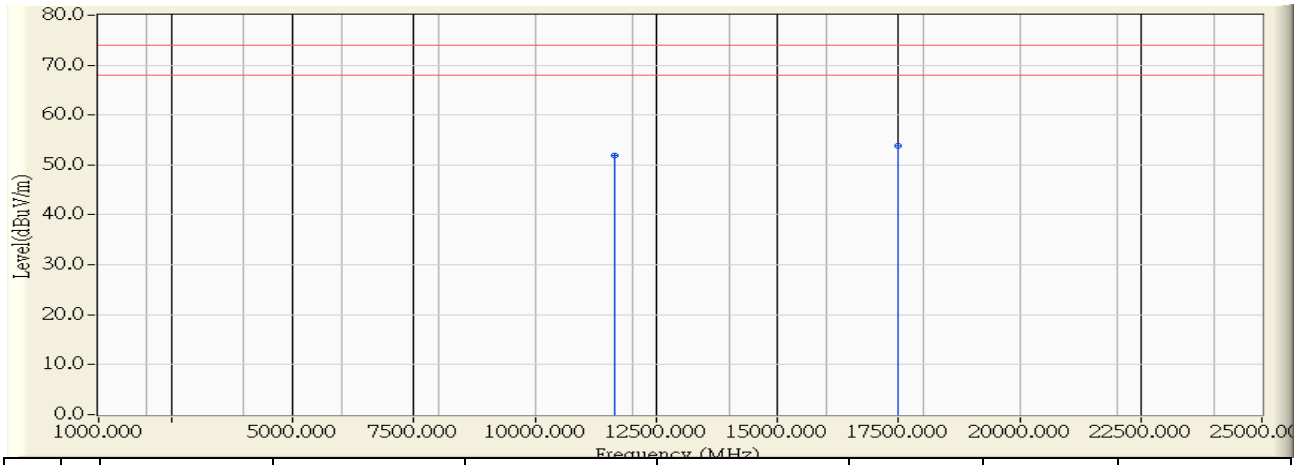


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11650.000	11.415	22.870	34.285	-19.715	54.000	AVERAGE
2	*	17482.000	16.558	22.840	39.398	-14.602	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:23**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

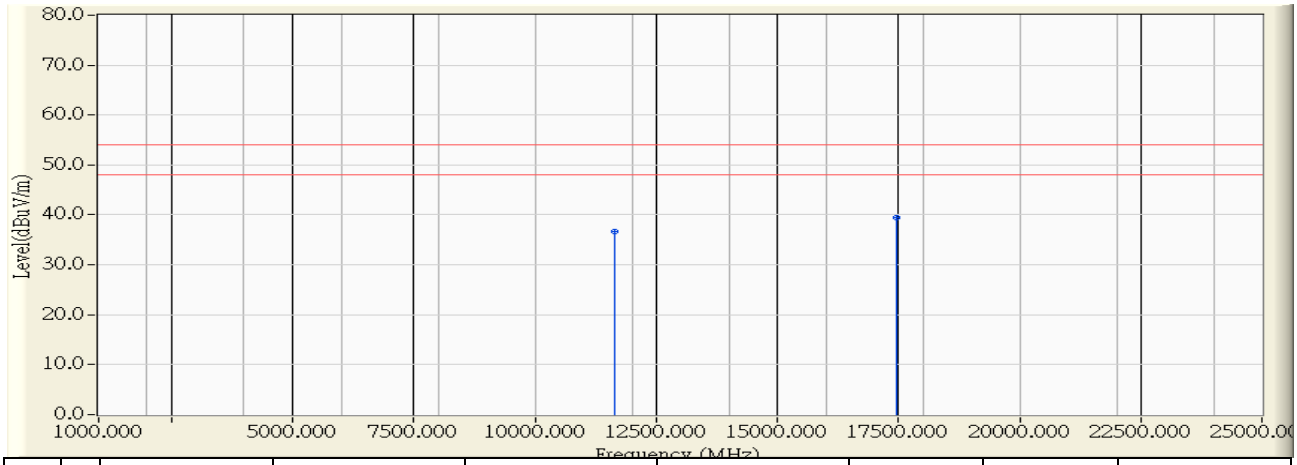


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11646.000	11.418	40.420	51.838	-22.162	74.000	PEAK
2	*	17482.000	16.558	37.250	53.808	-20.192	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:24**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

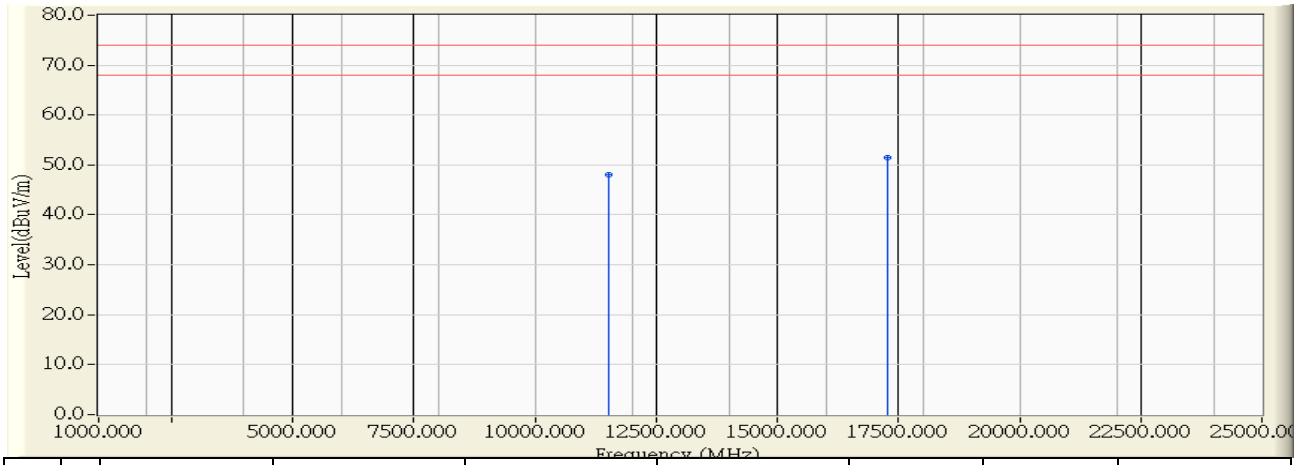


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11650.000	11.415	25.340	36.755	-17.245	54.000	AVERAGE
2	*	17464.000	16.475	22.890	39.365	-14.635	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:25**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5755MHz**

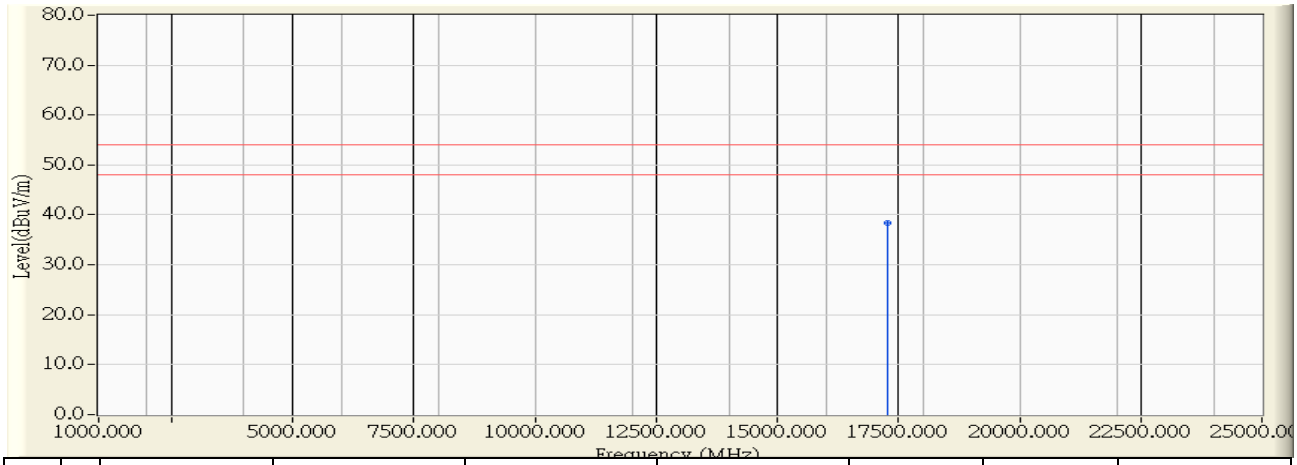


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11508.000	11.525	36.527	48.052	-25.948	74.000	PEAK
2	*	17264.000	15.556	35.920	51.476	-22.524	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:25**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5755MHz**

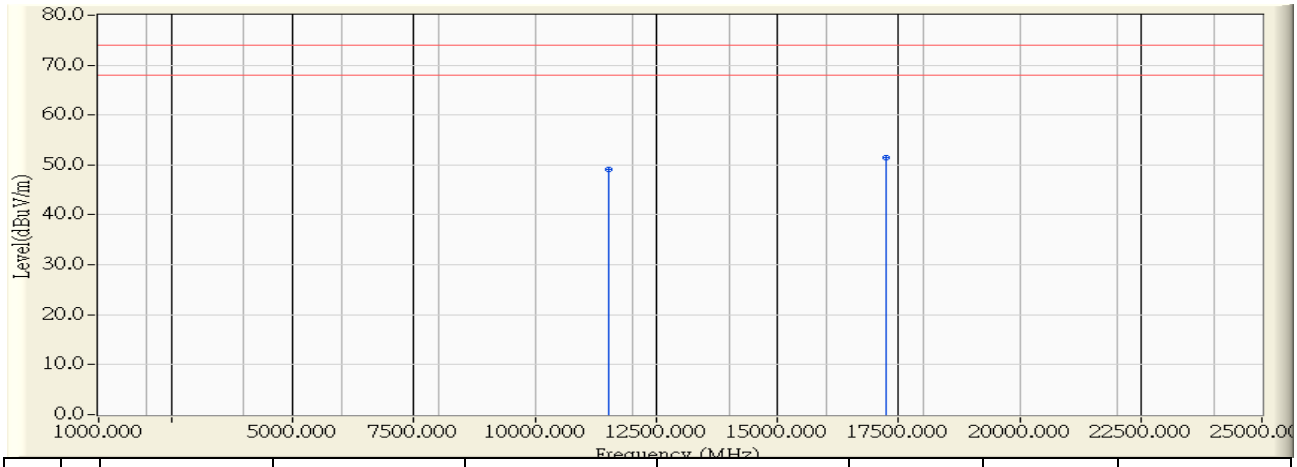


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17264.000	15.556	22.872	38.428	-15.572	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:26**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5755MHz**

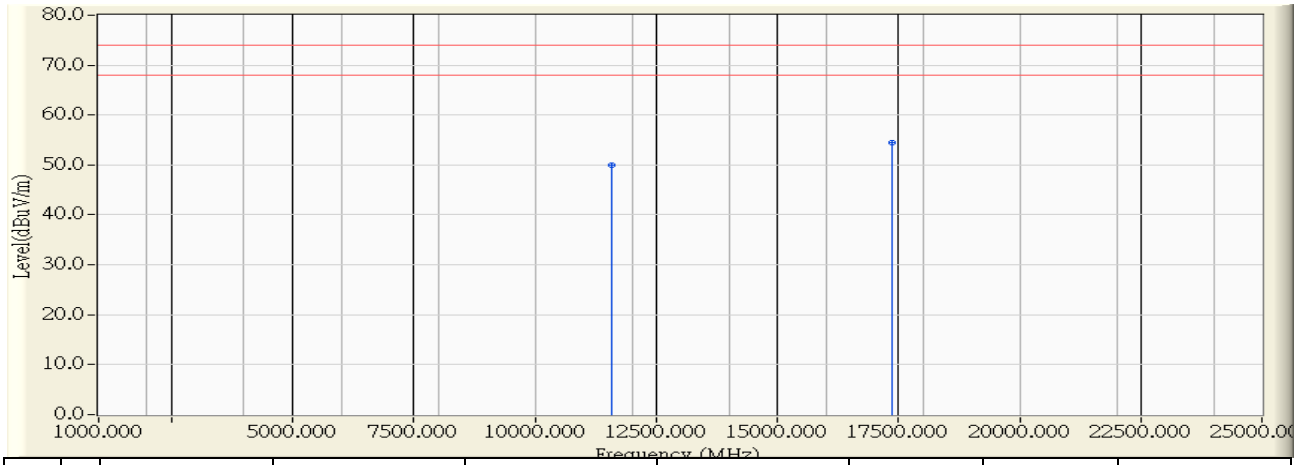


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11513.000	11.521	37.650	49.171	-24.829	74.000	PEAK
2	*	17259.000	15.533	35.980	51.513	-22.487	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:29**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

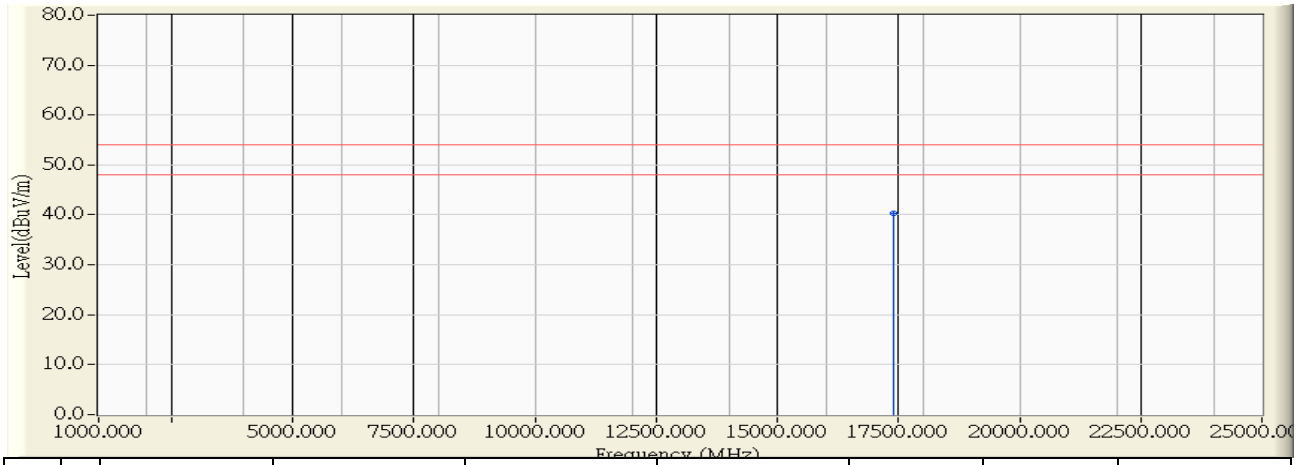


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11590.000	11.461	38.410	49.871	-24.129	74.000	PEAK
2	*	17357.000	15.983	38.510	54.493	-19.507	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:29**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

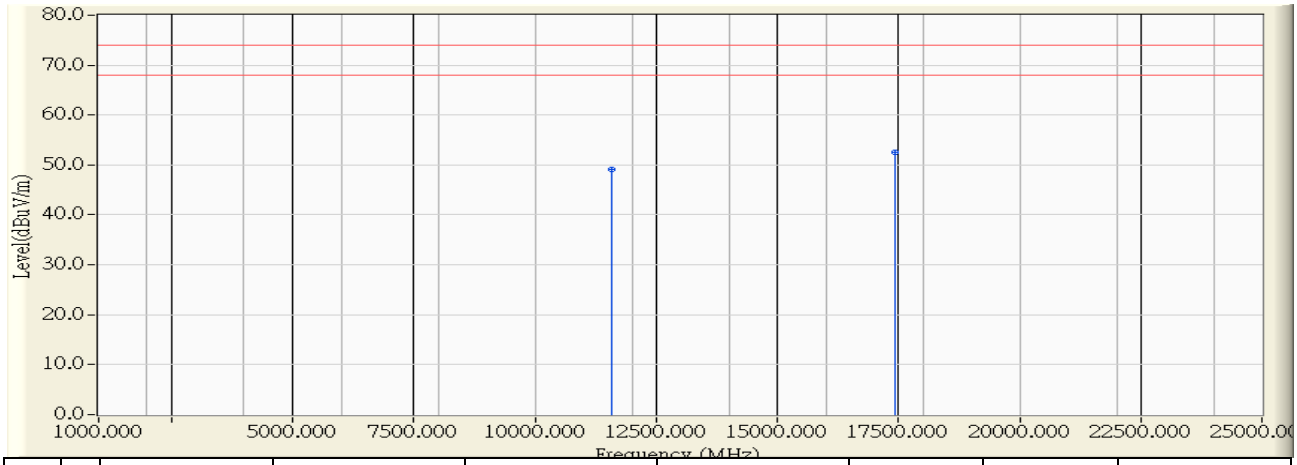


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17386.000	16.116	24.190	40.307	-13.693	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:30**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

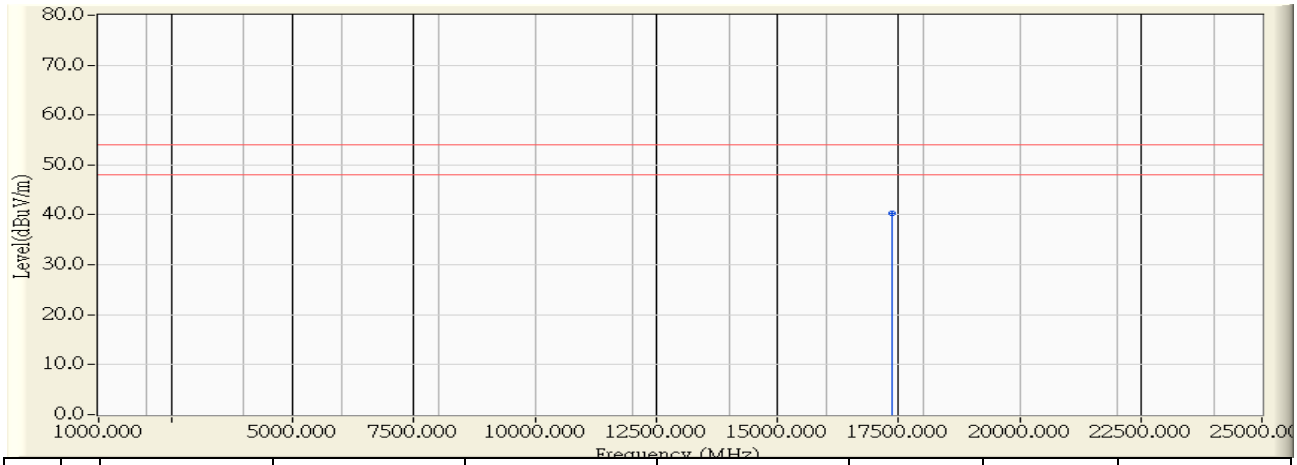


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11595.000	11.457	37.560	49.017	-24.983	74.000	PEAK
2	*	17416.000	16.254	36.330	52.585	-21.415	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:30**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

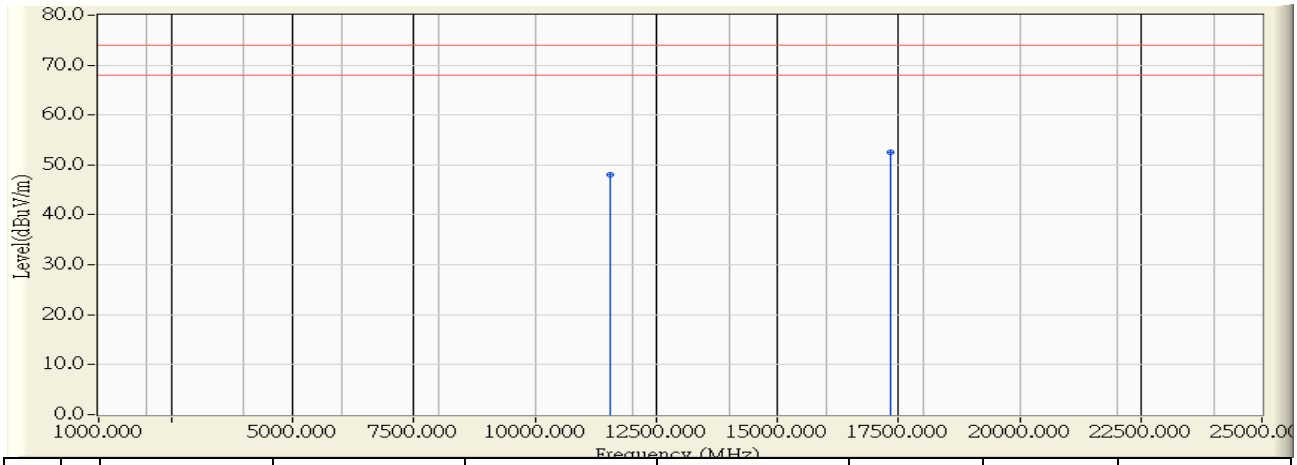


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17381.000	16.093	24.300	40.394	-13.606	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:31**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

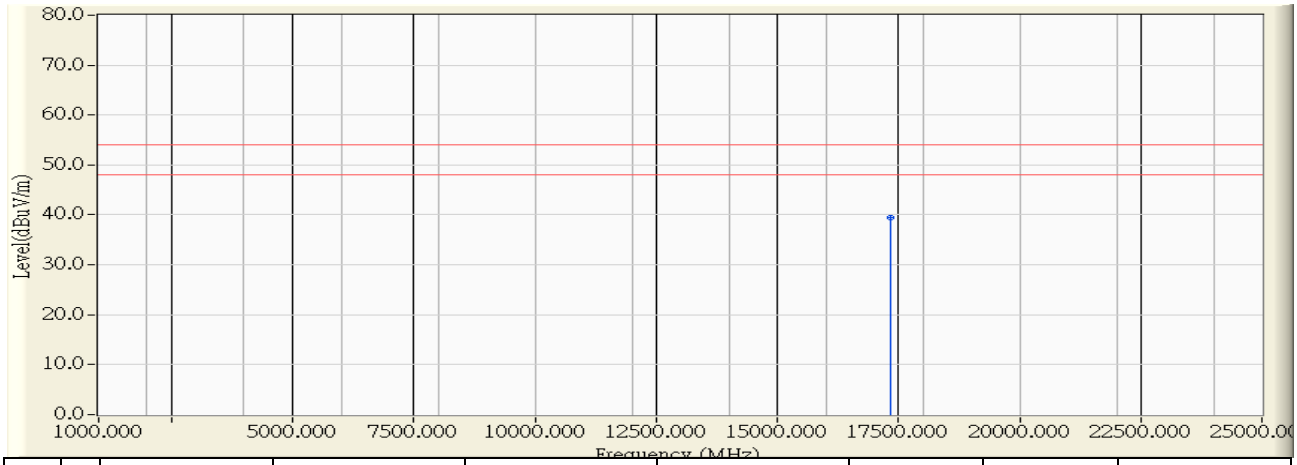


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11566.000	11.480	36.488	47.968	-26.032	74.000	PEAK
2	*	17324.000	15.832	36.689	52.521	-21.479	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:32**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

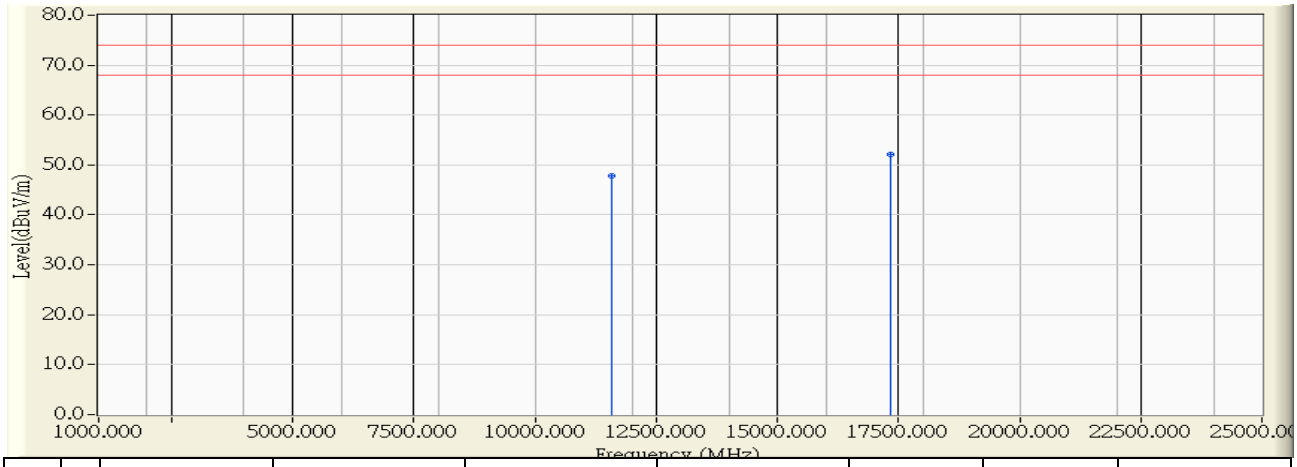


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17326.000	15.841	23.670	39.511	-14.489	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:33**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

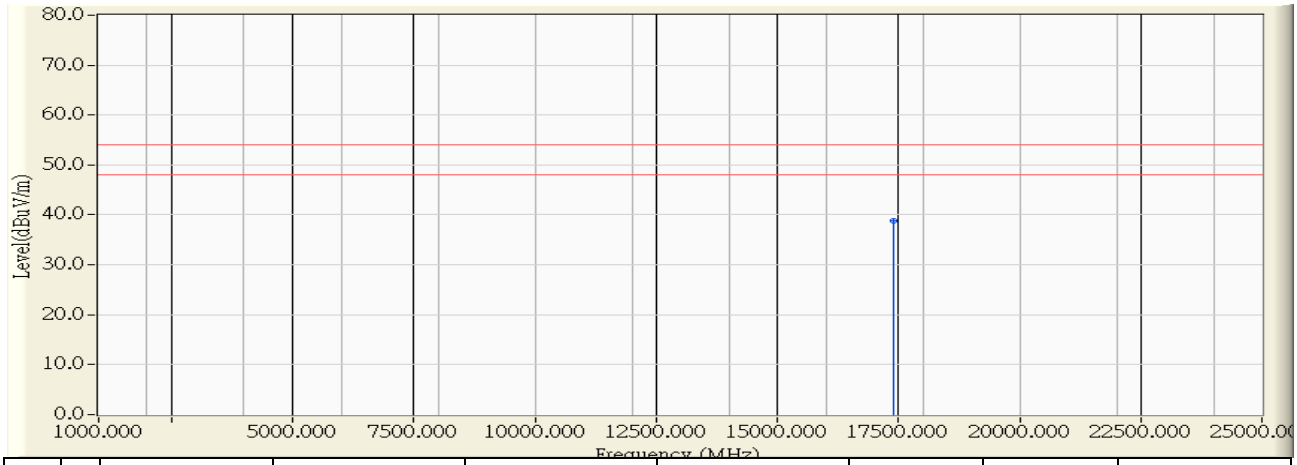


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		11579.000	11.470	36.410	47.880	-26.120	74.000	PEAK
2	*	17344.000	15.924	36.240	52.163	-21.837	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/09/12 - 19:33**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	17390.000	16.135	22.620	38.755	-15.245	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

5. RF antenna conducted test

5.1. Test Equipment

The following test equipments are used during the test:

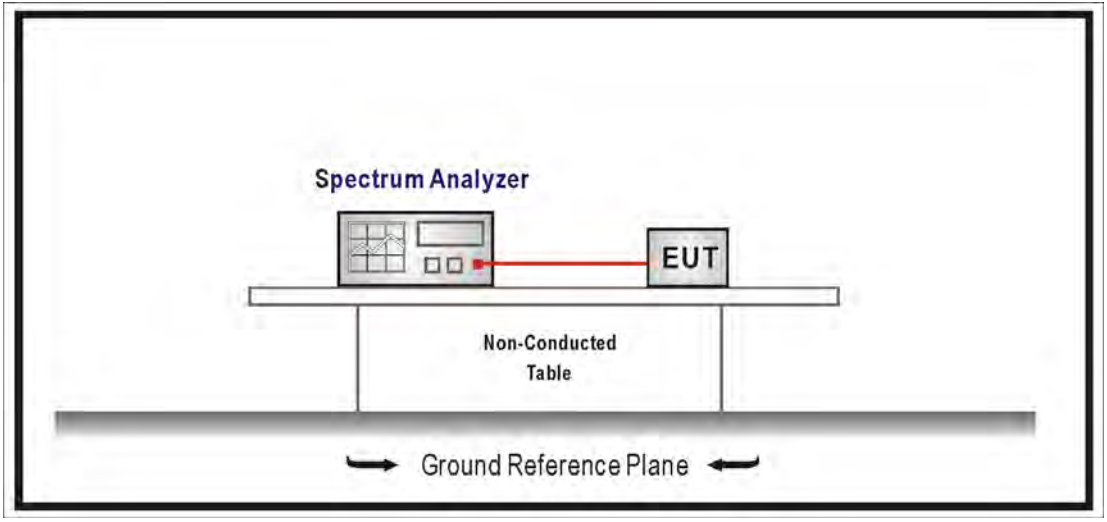
RF antenna conducted test / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

RF Antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

5.6. Uncertainty

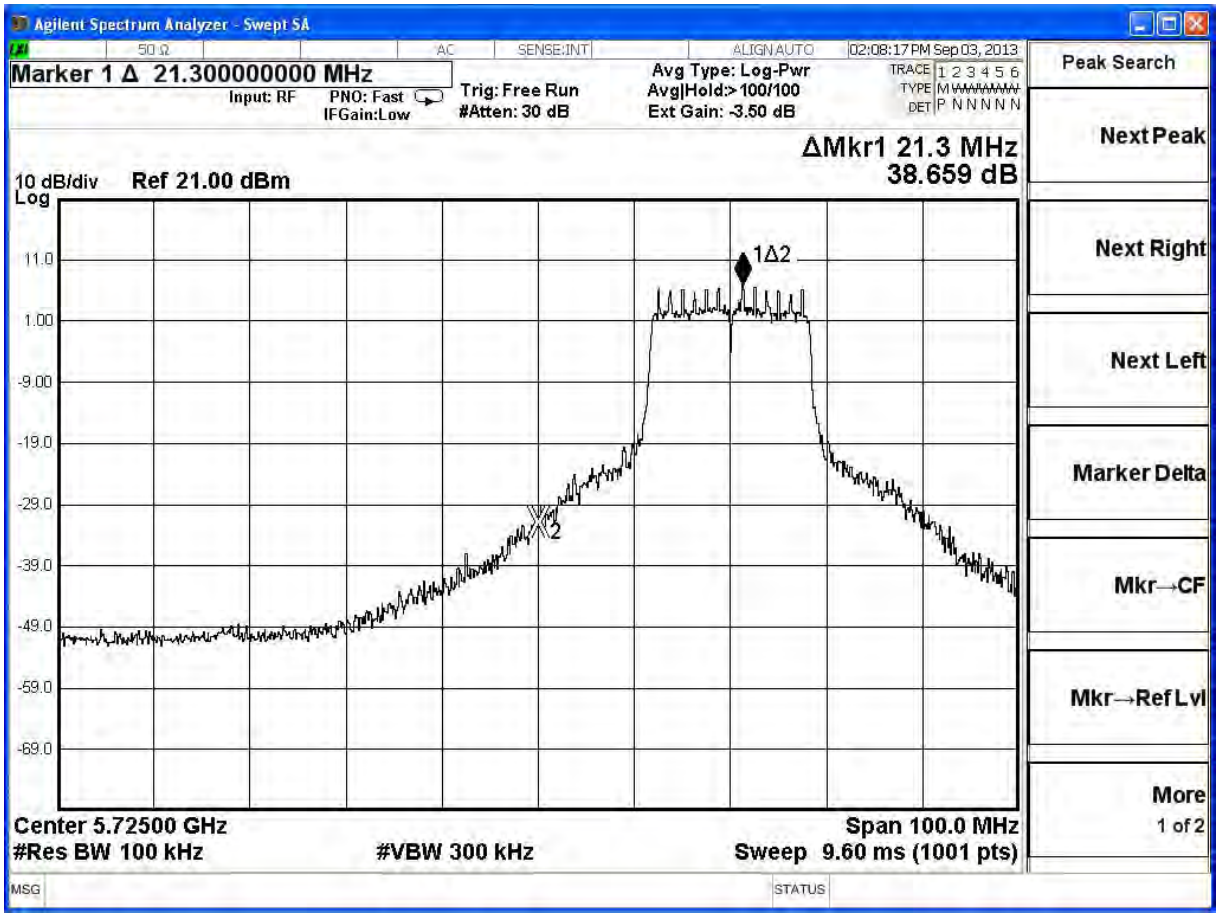
Conducted is defined as ± 1.27dB

5.7. Test Result

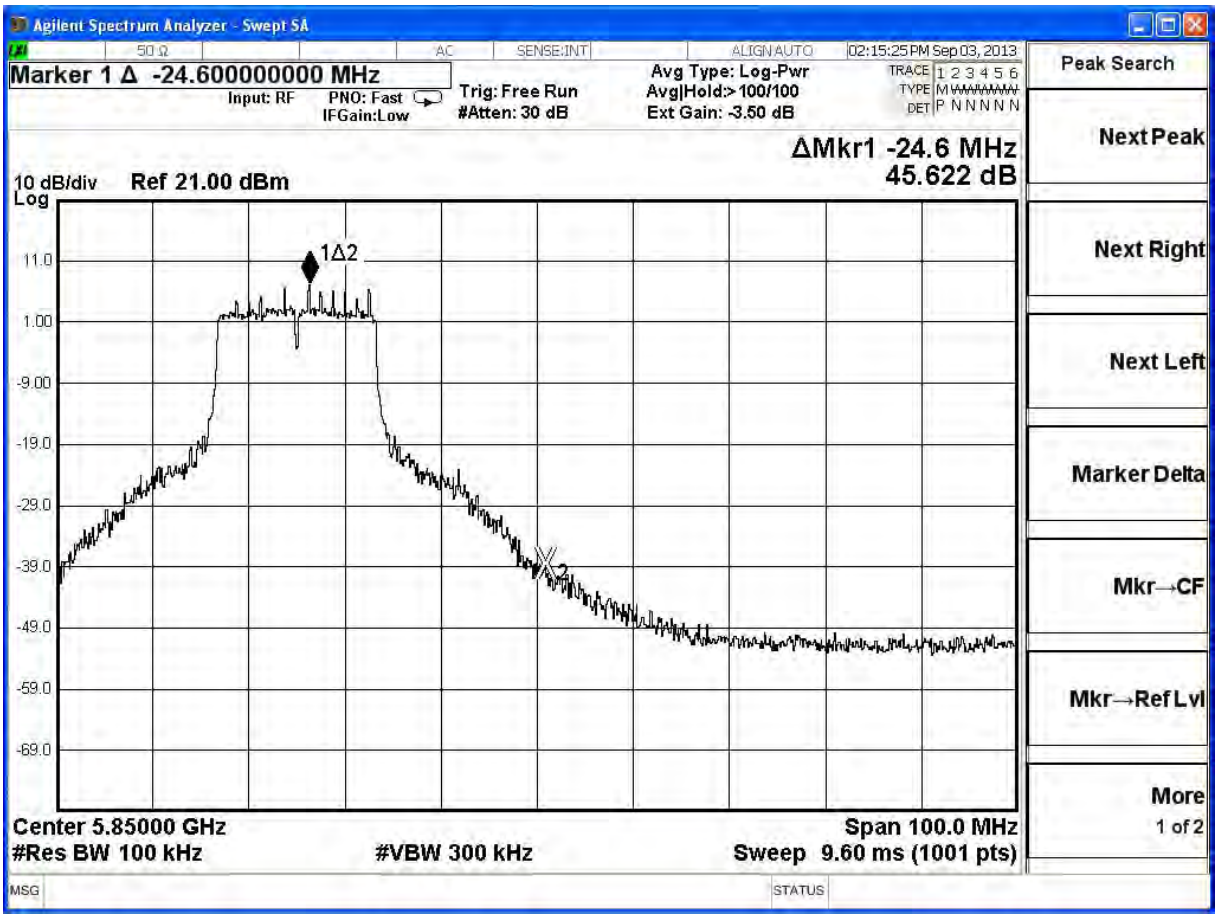
Product	Wireless-AC450 USB Adapter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/03	Test Site	SR7

IEEE 802.11a, ANT 0, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
149	5745	38.66	≧20	Pass
165	5825	45.62	≧20	Pass

Channel 149 (5745MHz)



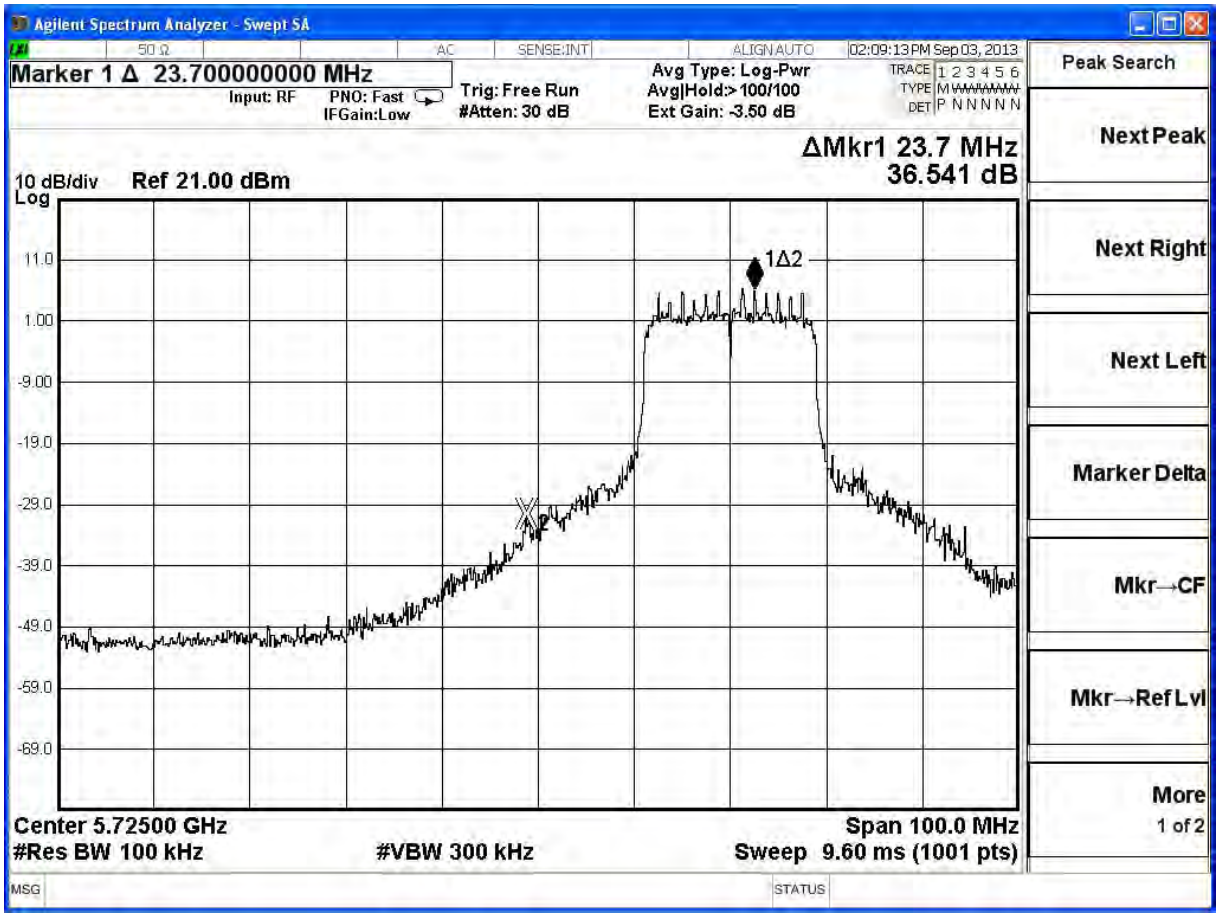
Channel 165 (5825MHz)



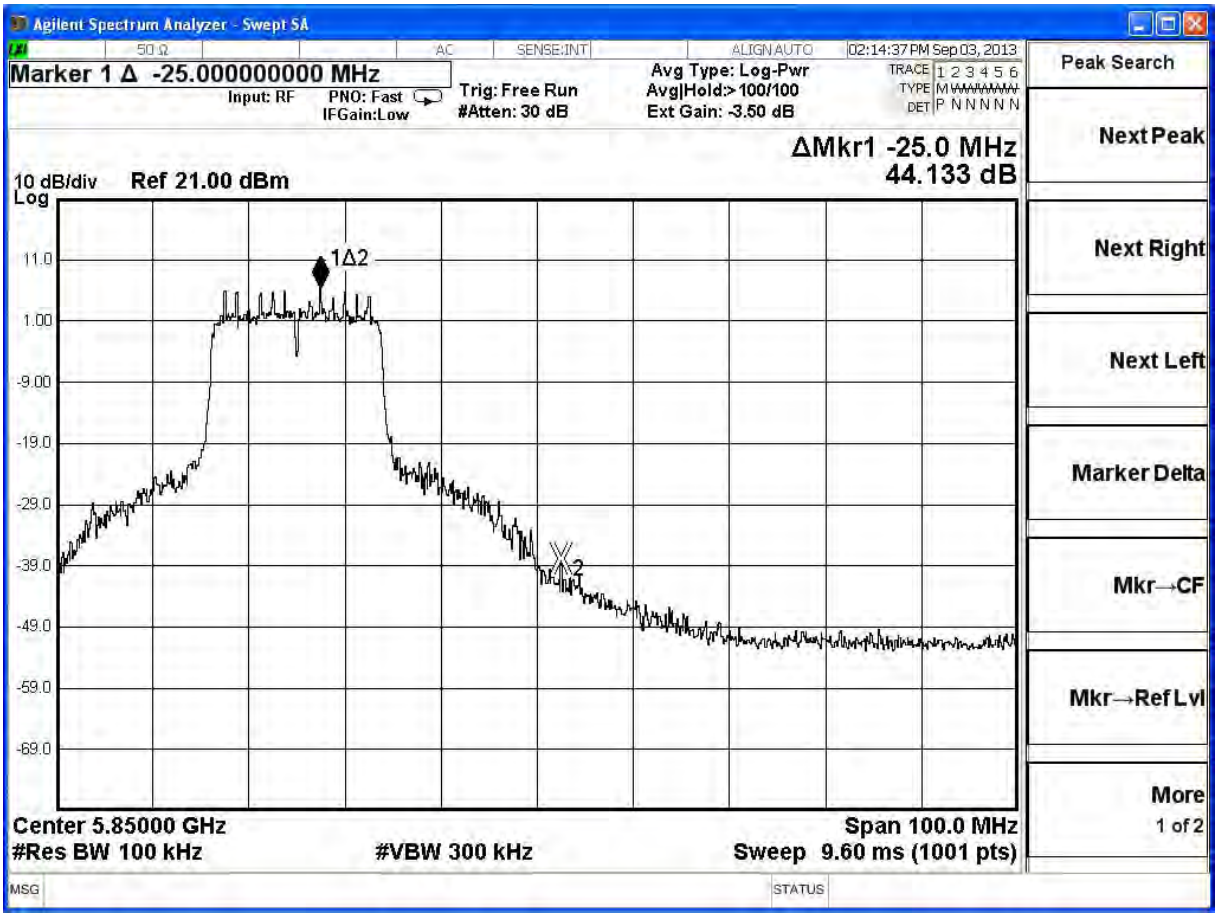
Product	Wireless-AC450 USB Adapter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/04	Test Site	SR7

IEEE 802.11n(20MHz), ANT 0, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
149	5745	36.54	≧20	Pass
165	5825	44.13	≧20	Pass

Channel 149 (5745MHz)



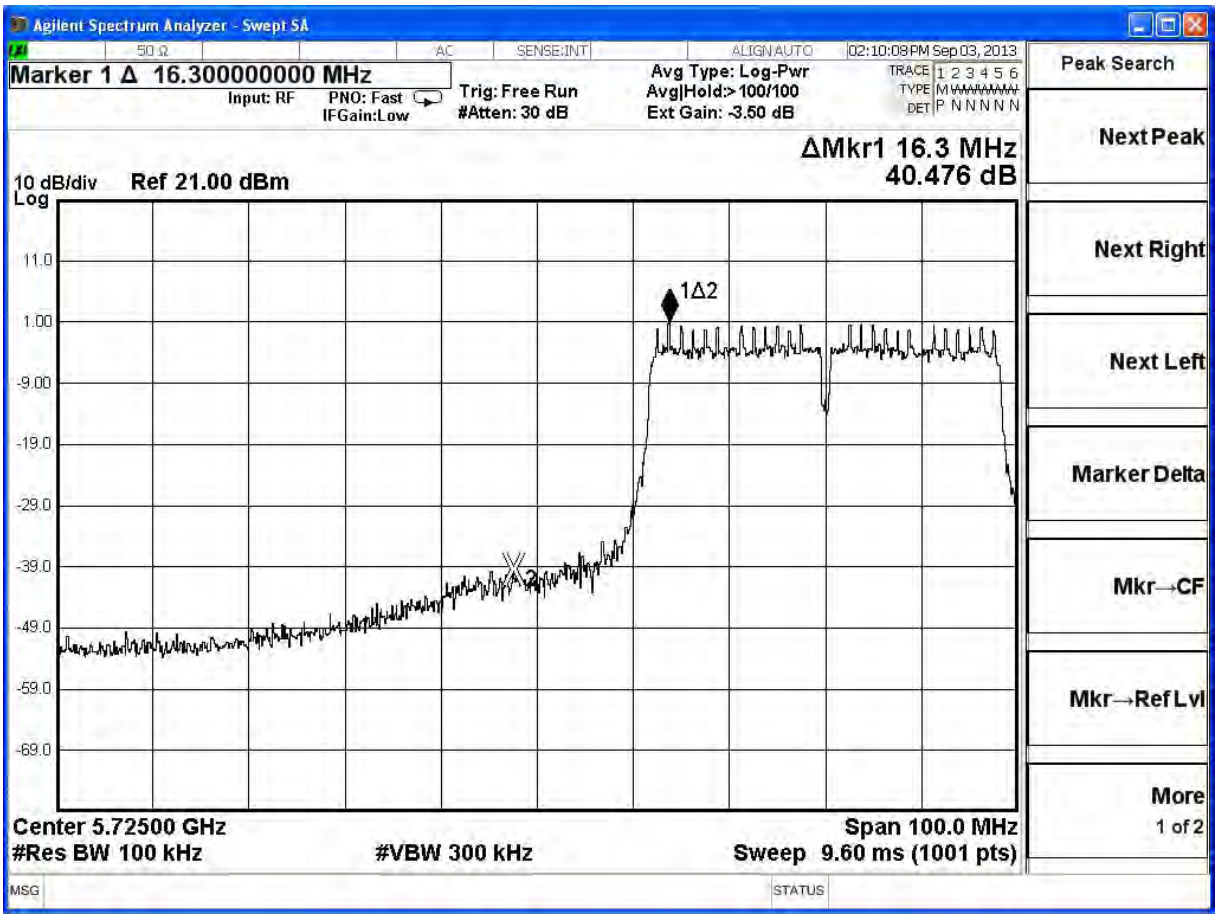
Channel 165 (5825MHz)



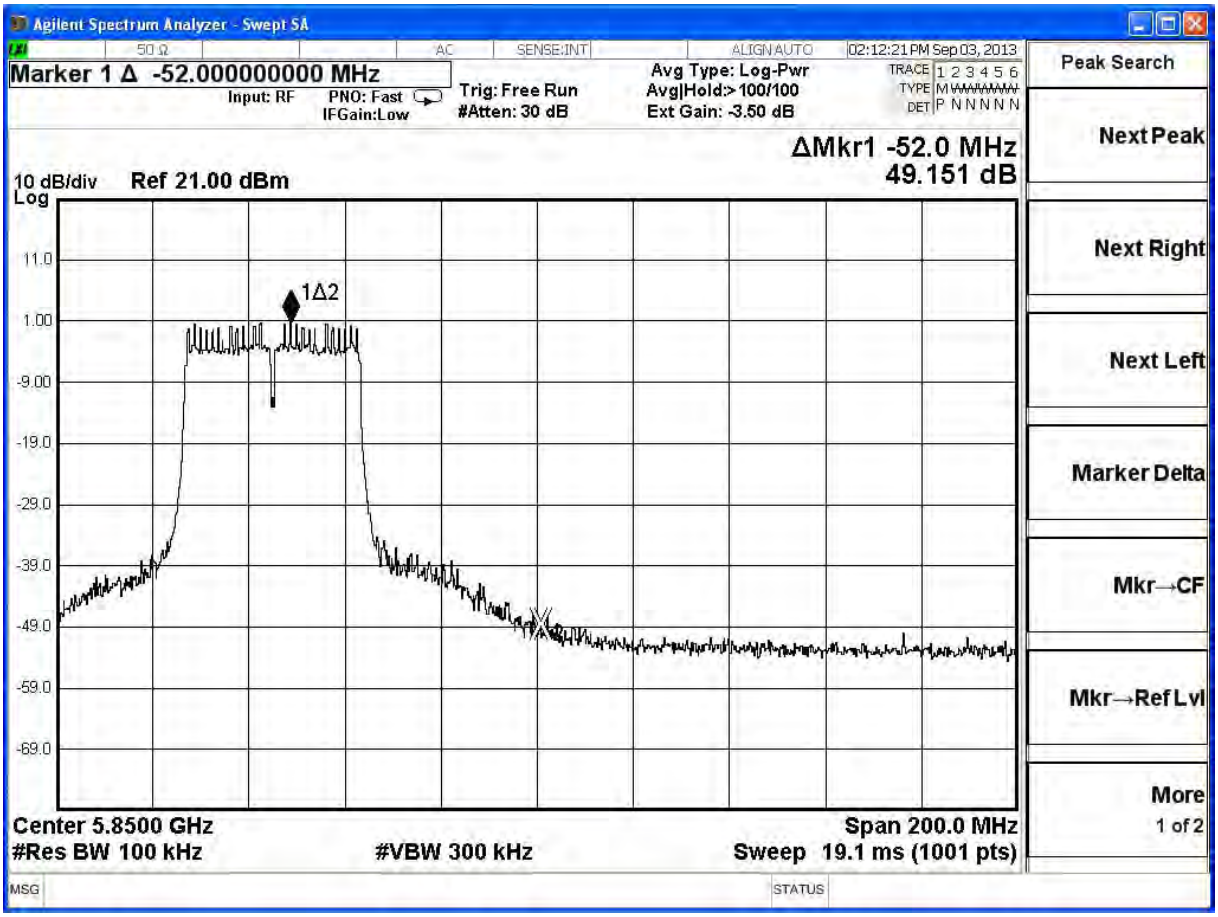
Product	Wireless-AC450 USB Adapter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/03	Test Site	SR7

IEEE 802.11n (40MHz), ANT 0, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
151	5755	40.48	≧20	Pass
159	5795	49.15	≧20	Pass

Channel 151 (5755MHz)



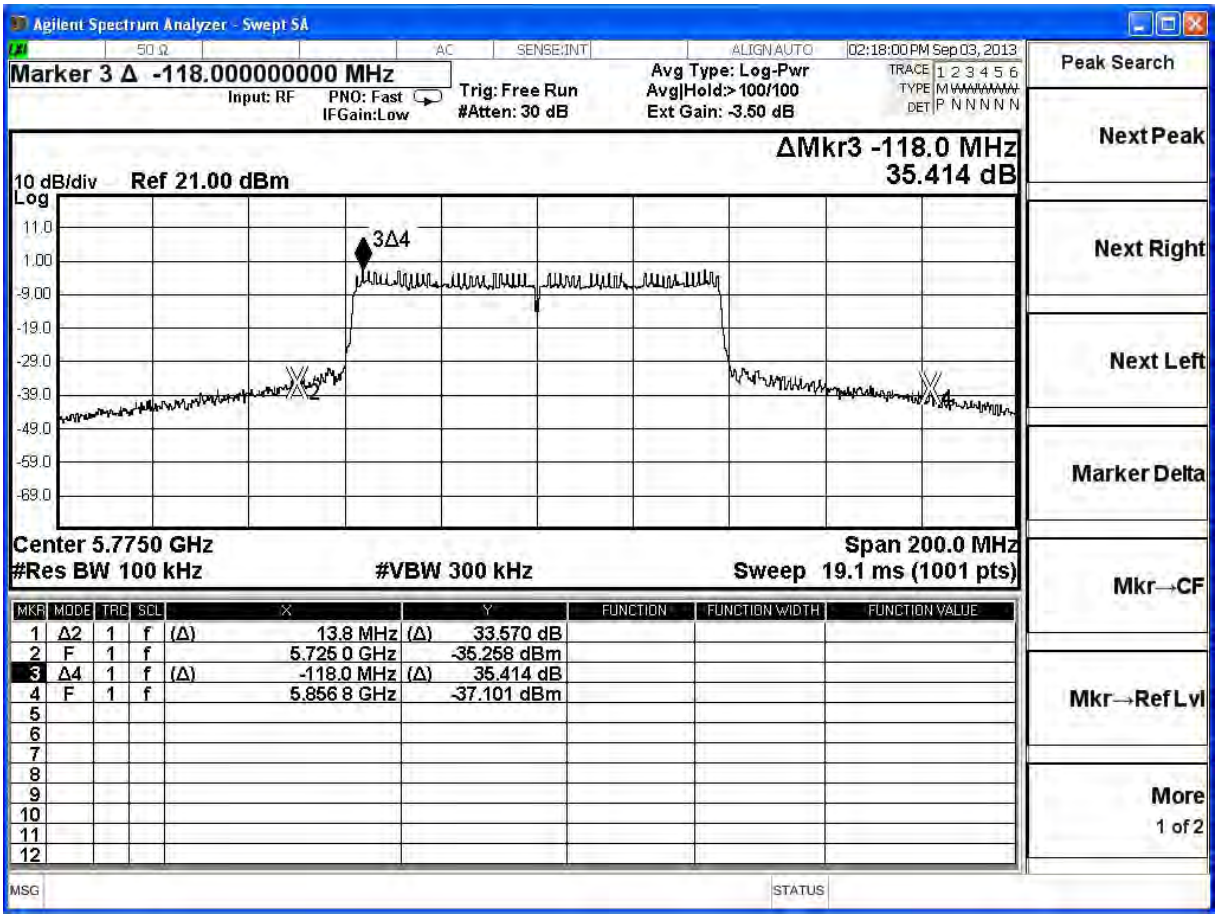
Channel 159 (5795MHz)



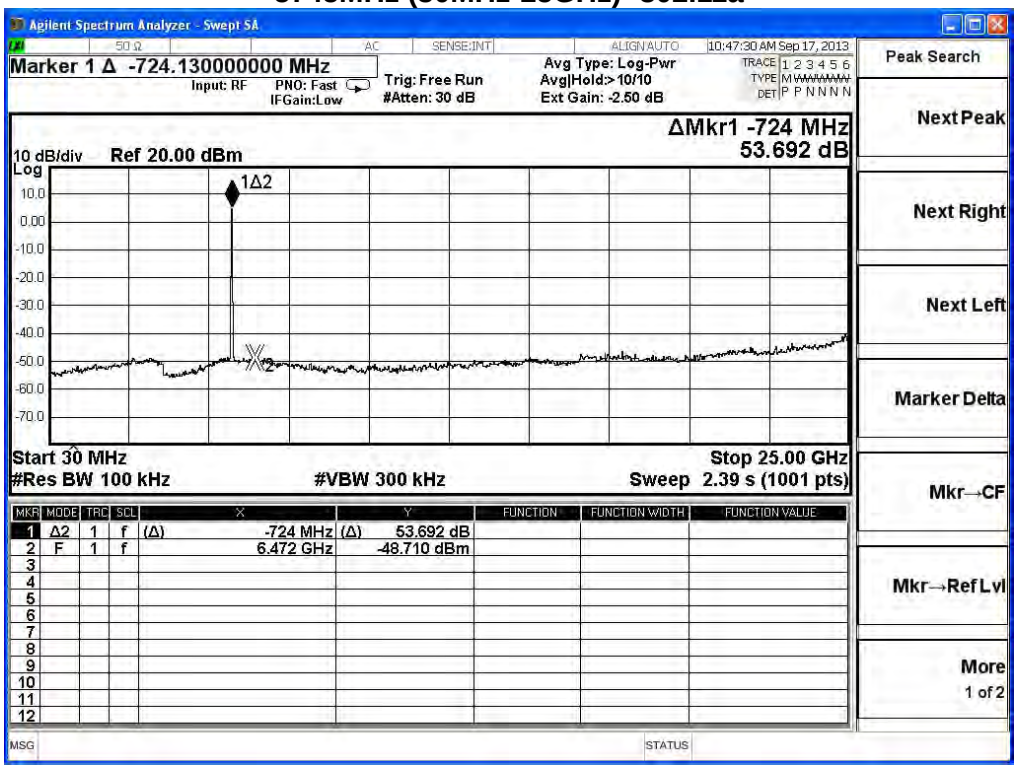
Product	Wireless-AC450 USB Adapter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/03	Test Site	SR7

IEEE 802.11ac (80MHz), ANT 0, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
155	5775	35.41	≧20	Pass

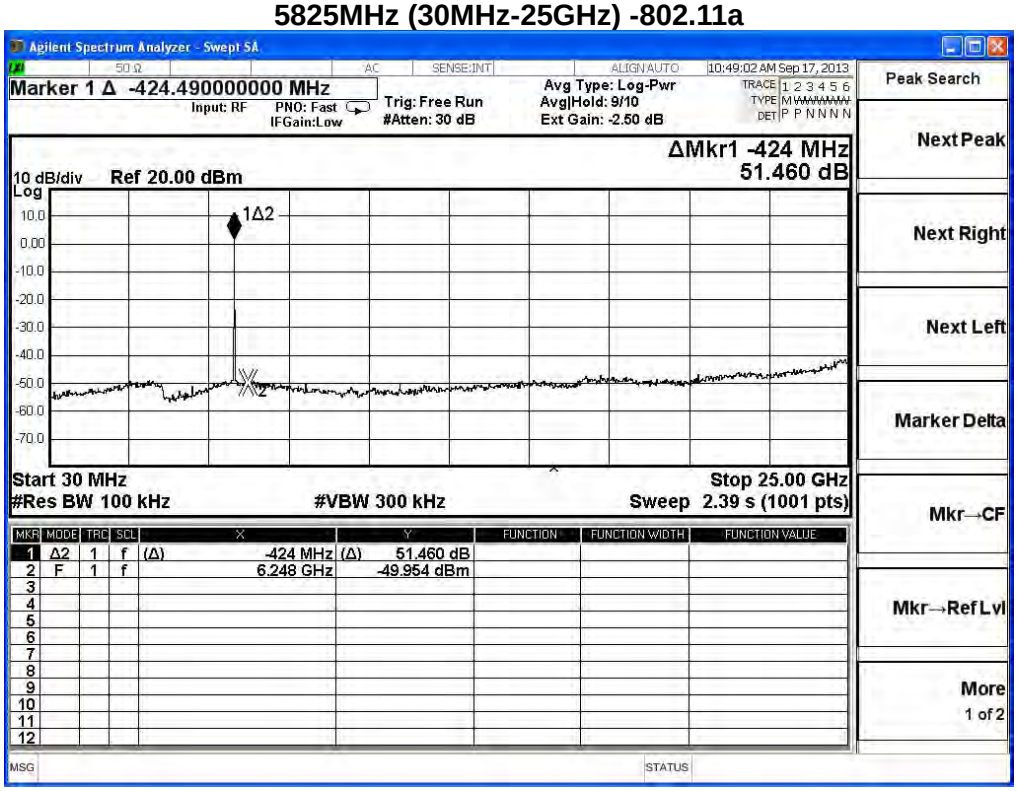
Channel 155 (5775MHz)



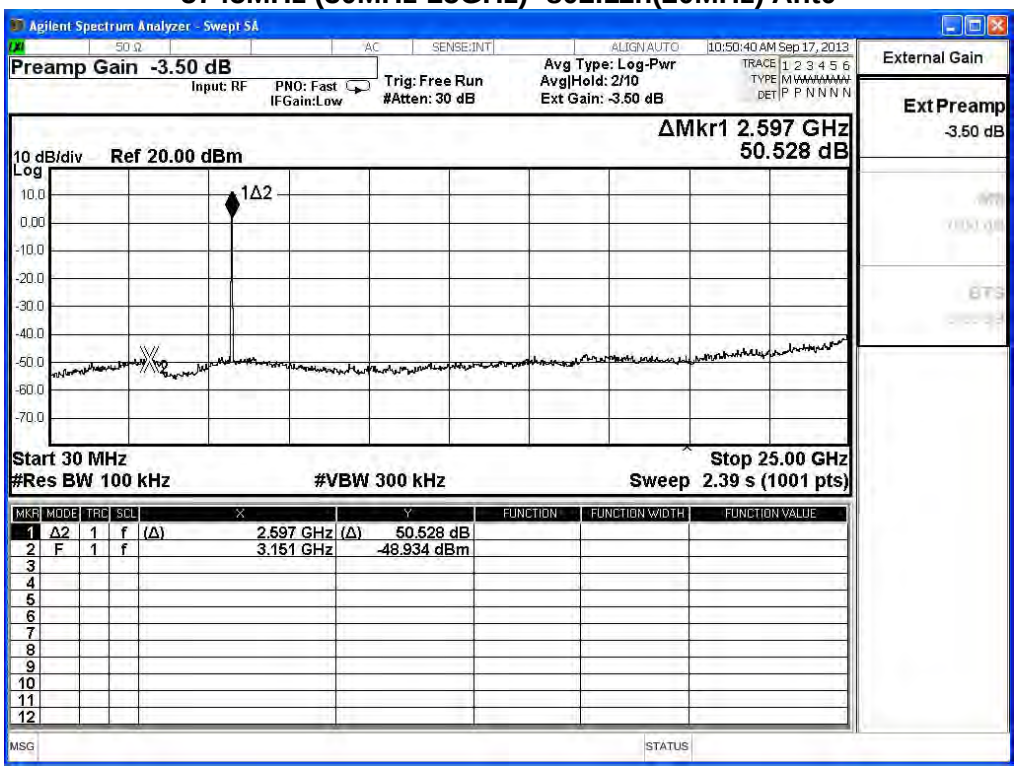
5745MHz (30MHz-25GHz)- 802.11a



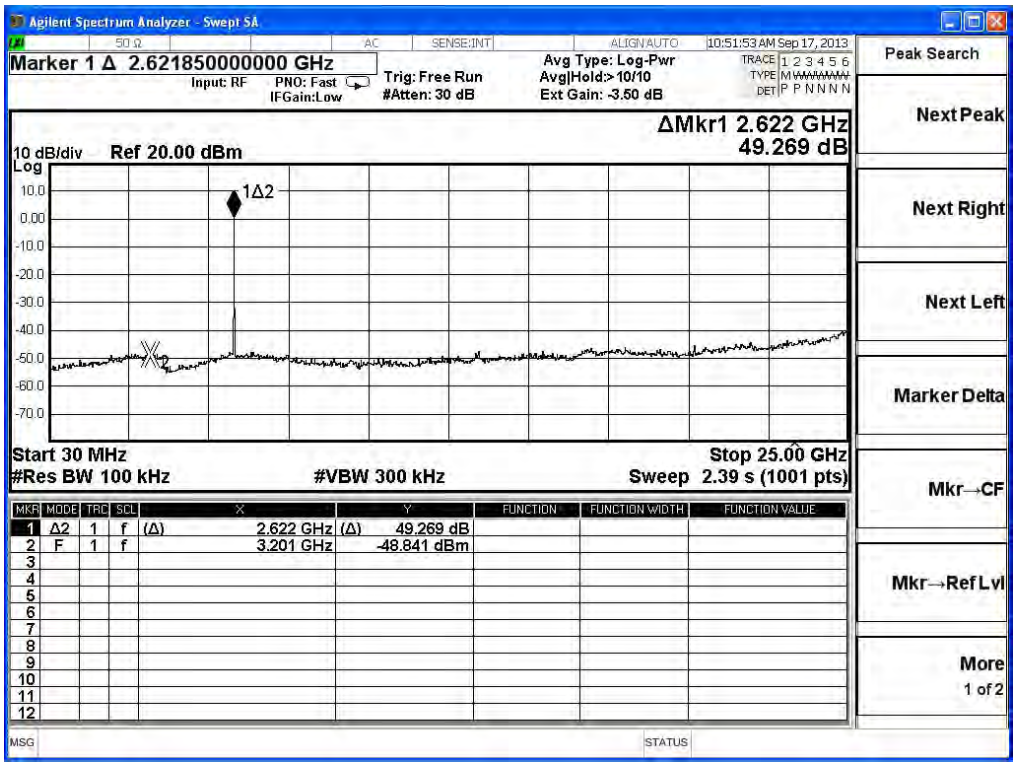
5825MHz (30MHz-25GHz) -802.11a



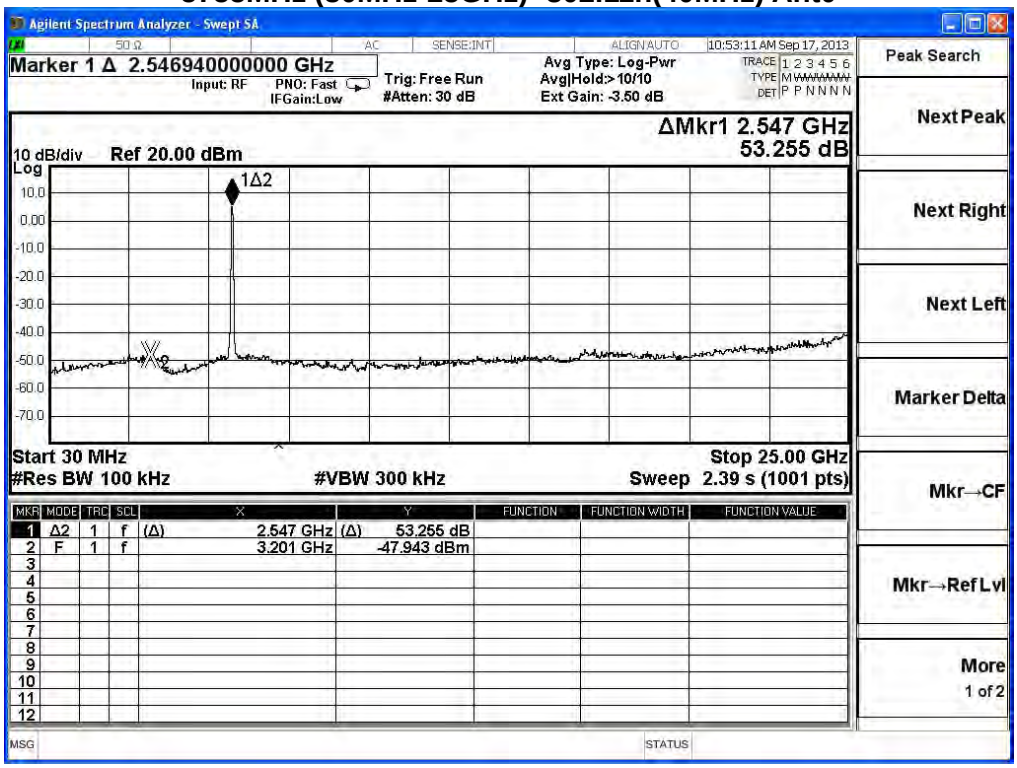
5745MHz (30MHz-25GHz)- 802.11n(20MHz) Ant0



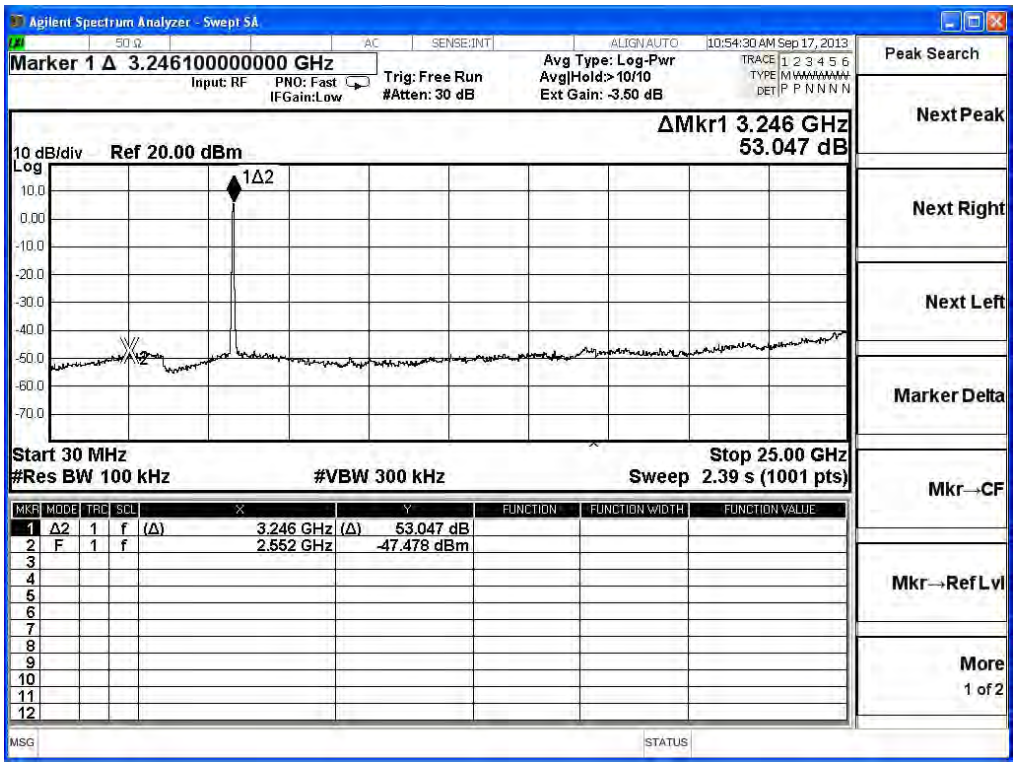
5825MHz (30MHz-25GHz) -802.11n(20MHz) Ant0



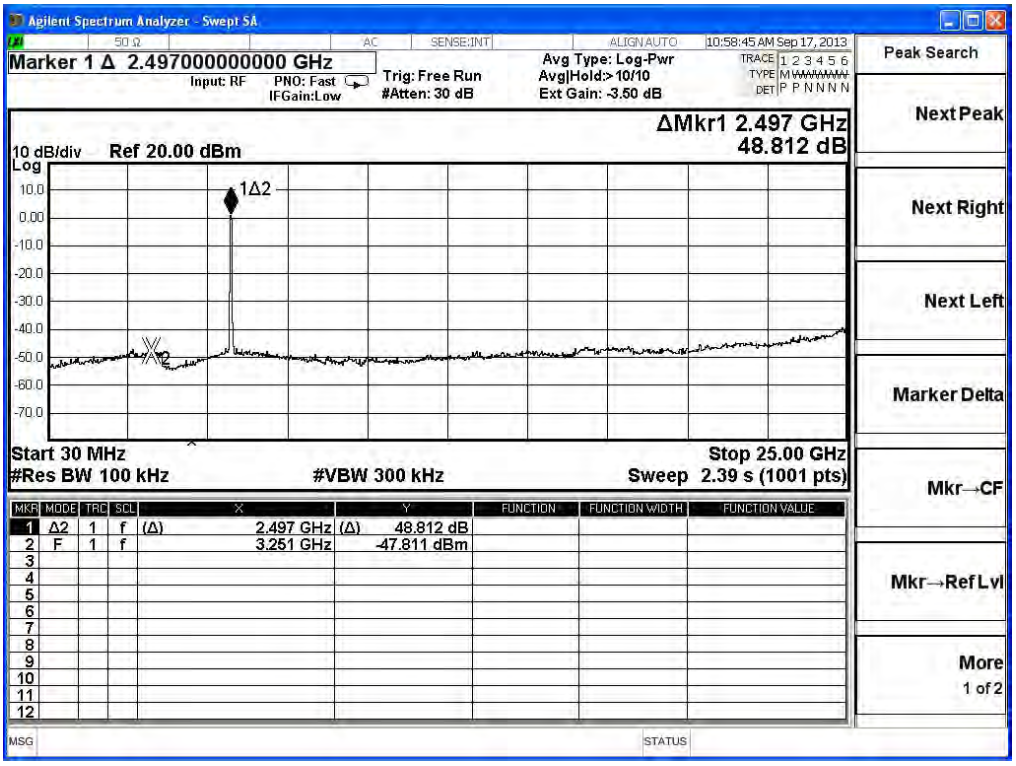
5755MHz (30MHz-25GHz)- 802.11n(40MHz) Ant0



5795MHz (30MHz-25GHz) -802.11n(40MHz) Ant0



5775MHz (30MHz-25GHz) -802.11ac (80MHz) Ant0



6. Radiated Emission Band Edge

6.1. Test Equipment

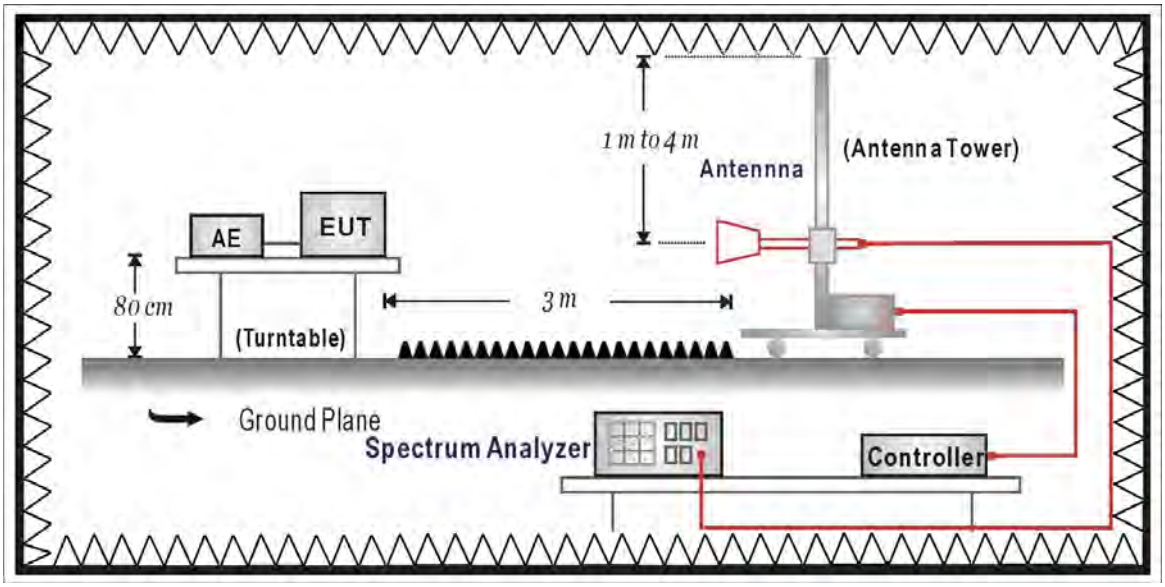
The following test equipments are used during the test:

Radiated Emission Band Edge / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.
The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

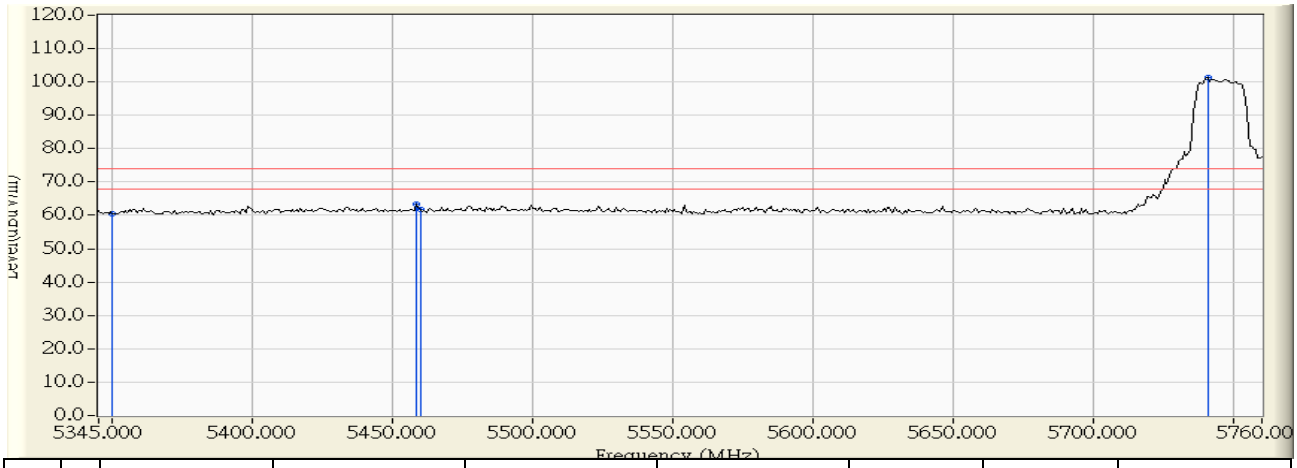
6.6. Uncertainty

The measurement uncertainty
± 3.9 dB above 1GHz

6.7. Test Result

Radiated is defined as

Site : CB1	**Time : 2013/09/04 - 21:29**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5745MHz**

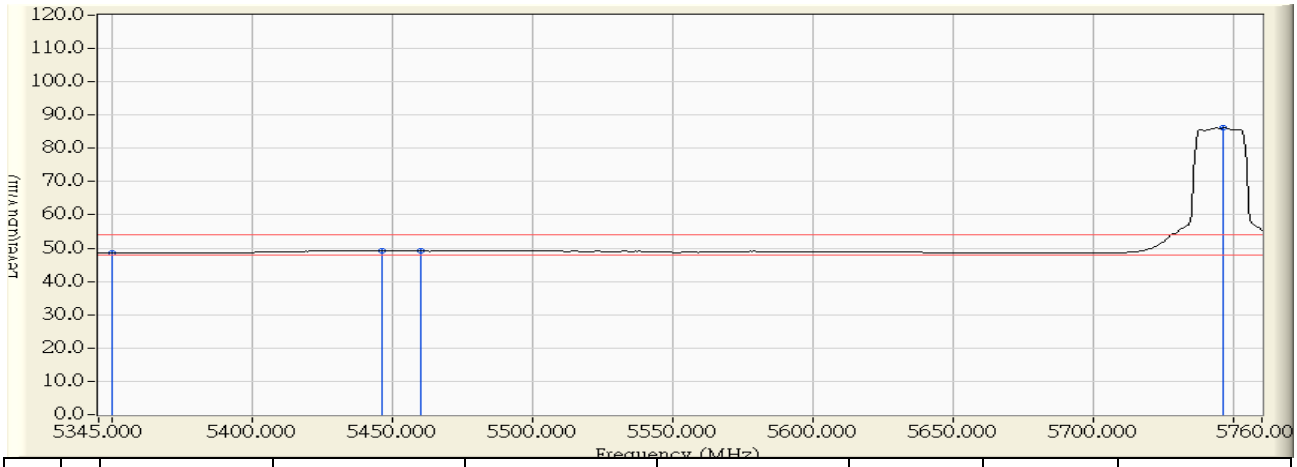


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	58.057	60.583	-13.417	74.000	PEAK
2		5458.433	3.366	59.911	63.278	-10.722	74.000	PEAK
3		5460.000	3.379	58.295	61.674	-12.326	74.000	PEAK
4	*	5740.633	2.760	98.508	101.268	27.268	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/04 - 21:31**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5745MHz**

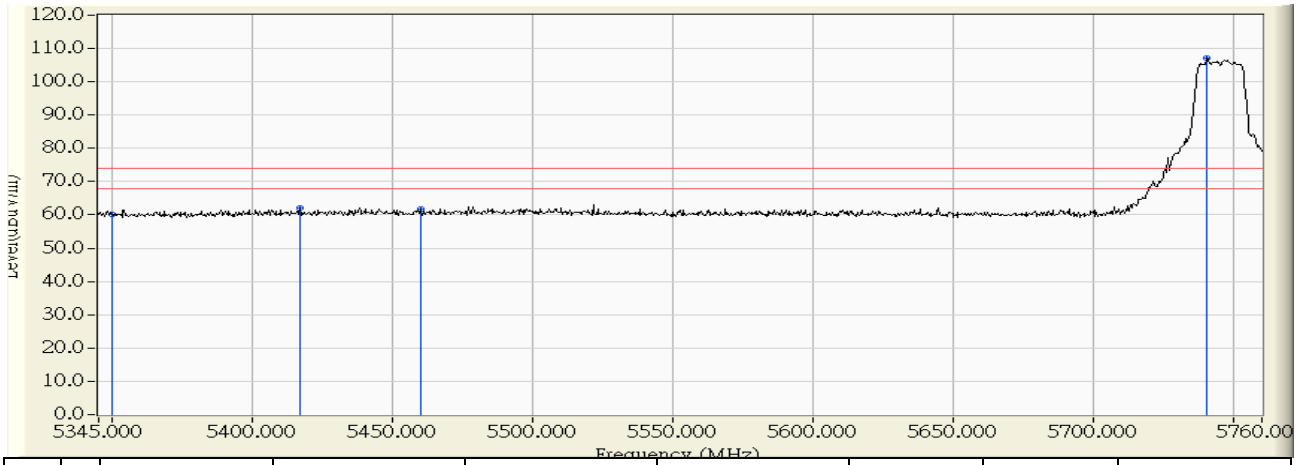


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.944	48.470	-5.530	54.000	AVERAGE
2		5445.983	3.271	45.890	49.161	-4.839	54.000	AVERAGE
3		5460.000	3.379	45.736	49.115	-4.885	54.000	AVERAGE
4	*	5746.167	2.739	83.395	86.134	32.134	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:08**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5745MHz**

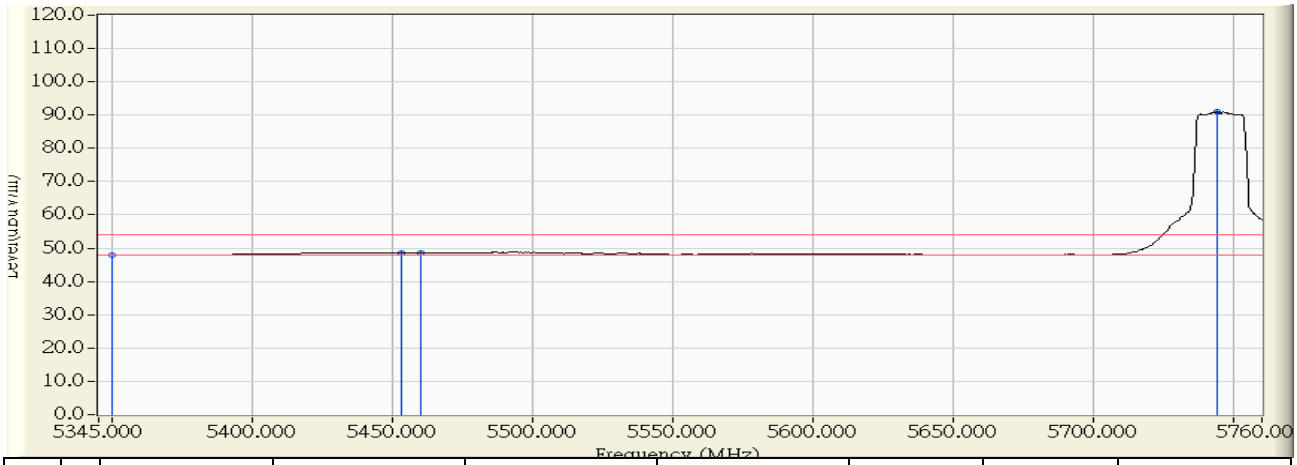


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	57.521	60.047	-13.953	74.000	PEAK
2		5416.795	3.044	59.199	62.243	-11.757	74.000	PEAK
3		5460.000	3.379	58.328	61.707	-12.293	74.000	PEAK
4	*	5740.495	2.761	104.477	107.238	33.238	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:12**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5745MHz**

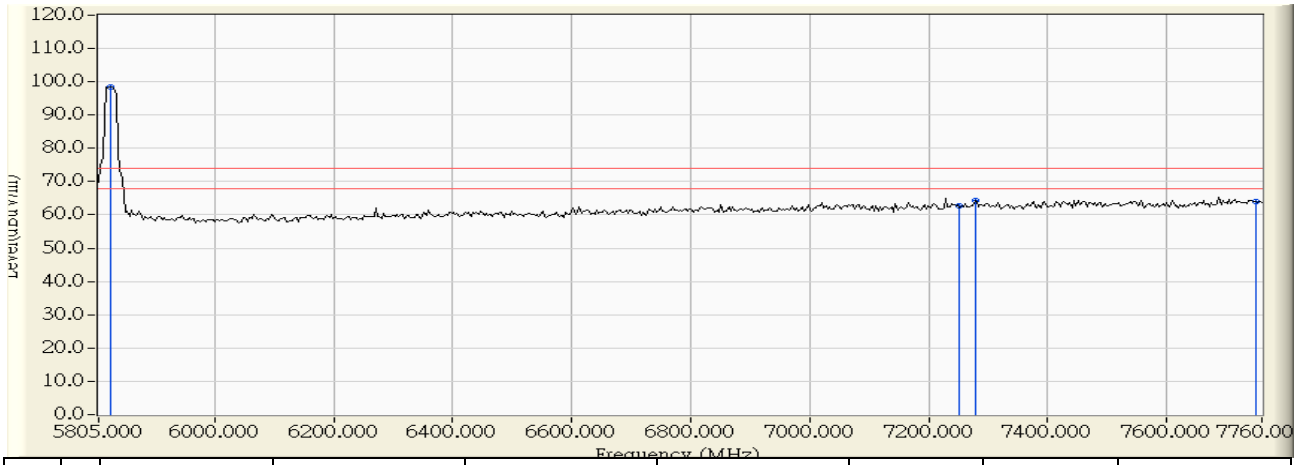


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.401	47.927	-6.073	54.000	AVERAGE
2		5452.900	3.323	45.203	48.527	-5.473	54.000	AVERAGE
3		5460.000	3.379	45.133	48.512	-5.488	54.000	AVERAGE
4	*	5744.230	2.746	88.179	90.926	36.926	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/04 - 21:34**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5825MHz**

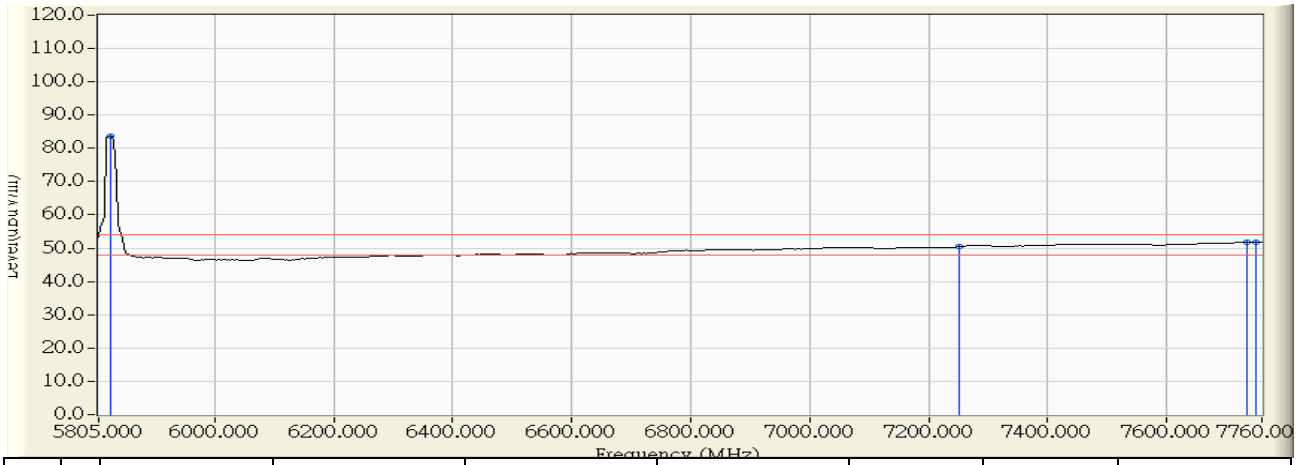


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5824.550	2.437	96.141	98.578	24.578	74.000	PEAK
2		7250.000	5.476	57.152	62.628	-11.372	74.000	PEAK
3		7277.767	5.536	58.744	64.280	-9.720	74.000	PEAK
4		7750.000	6.446	57.426	63.872	-10.128	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/04 - 21:44**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5825MHz**

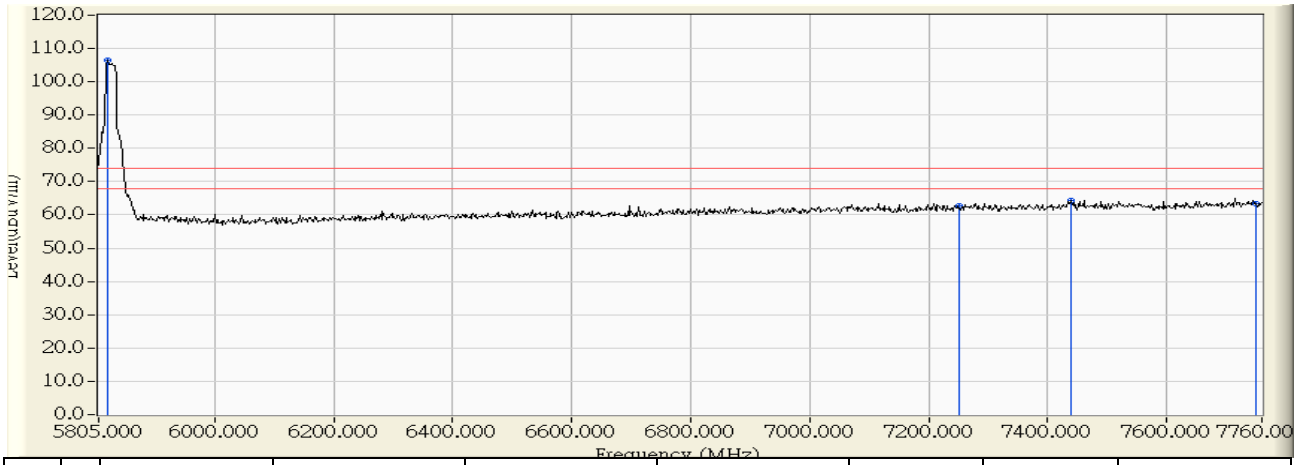


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5824.550	2.437	81.088	83.525	29.525	54.000	AVERAGE
2		7250.000	5.476	44.904	50.380	-3.620	54.000	AVERAGE
3		7733.933	6.419	45.398	51.817	-2.183	54.000	AVERAGE
4		7750.000	6.446	45.341	51.787	-2.213	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:13**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5825MHz**

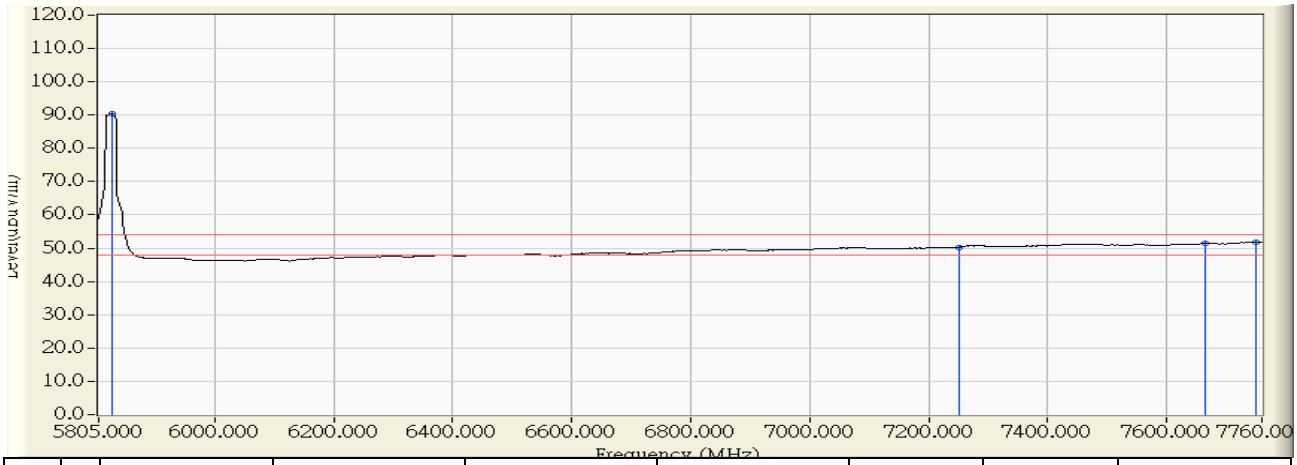


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5820.640	2.452	104.045	106.497	32.497	74.000	PEAK
2		7250.000	5.476	57.119	62.595	-11.405	74.000	PEAK
3		7439.380	5.885	58.494	64.379	-9.621	74.000	PEAK
4		7750.000	6.446	56.899	63.345	-10.655	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:24**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11a_5825MHz**

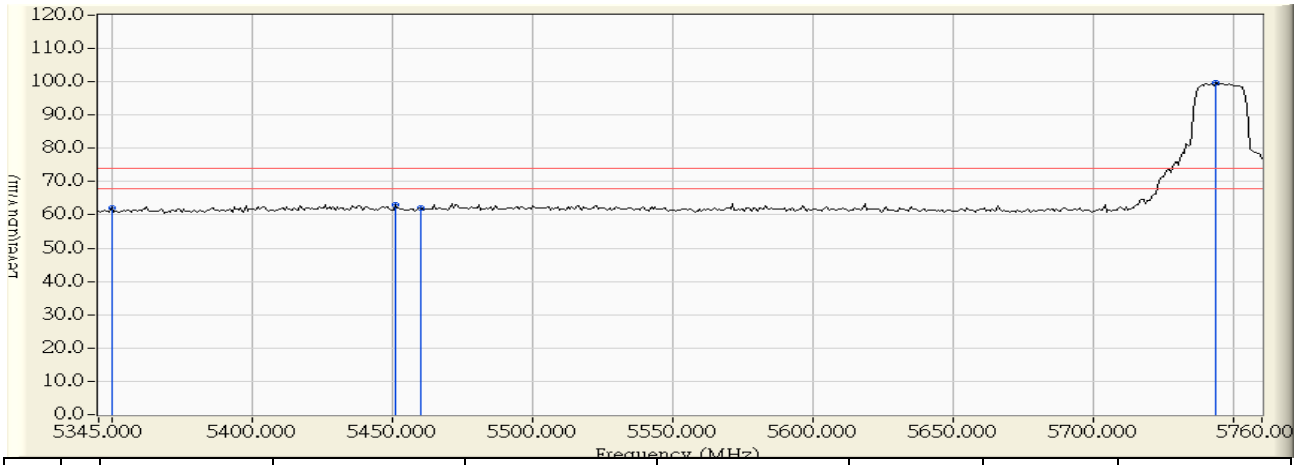


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5826.505	2.429	87.910	90.339	36.339	54.000	AVERAGE
2		7250.000	5.476	44.838	50.314	-3.686	54.000	AVERAGE
3		7664.205	6.299	45.089	51.388	-2.612	54.000	AVERAGE
4		7750.000	6.446	45.221	51.667	-2.333	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/04 - 21:51**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5745MHz**

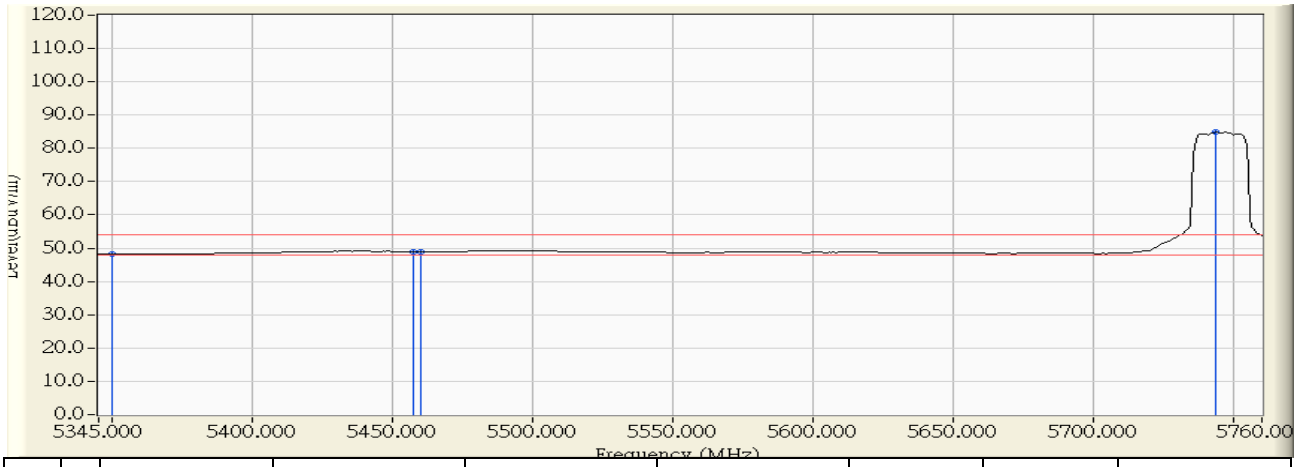


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	59.521	62.047	-11.953	74.000	PEAK
2		5450.825	3.308	59.698	63.006	-10.994	74.000	PEAK
3		5460.000	3.379	58.556	61.935	-12.065	74.000	PEAK
4	*	5743.400	2.749	97.010	99.760	25.760	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/04 - 21:52**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5745MHz**

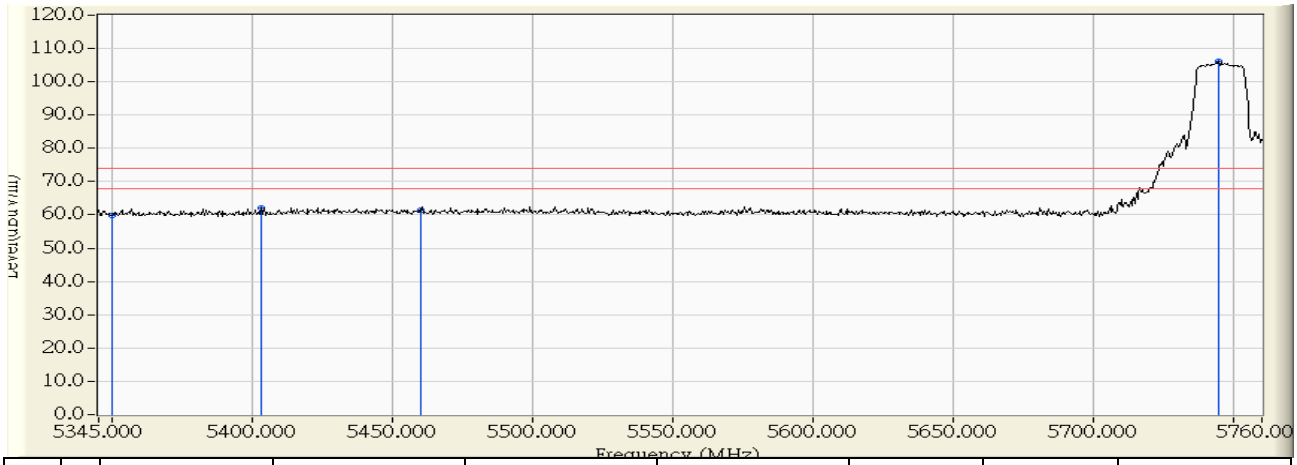


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.812	48.338	-5.662	54.000	AVERAGE
2		5457.050	3.357	45.621	48.977	-5.023	54.000	AVERAGE
3		5460.000	3.379	45.619	48.998	-5.002	54.000	AVERAGE
4	*	5743.400	2.749	82.088	84.838	30.838	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:25**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5745MHz**

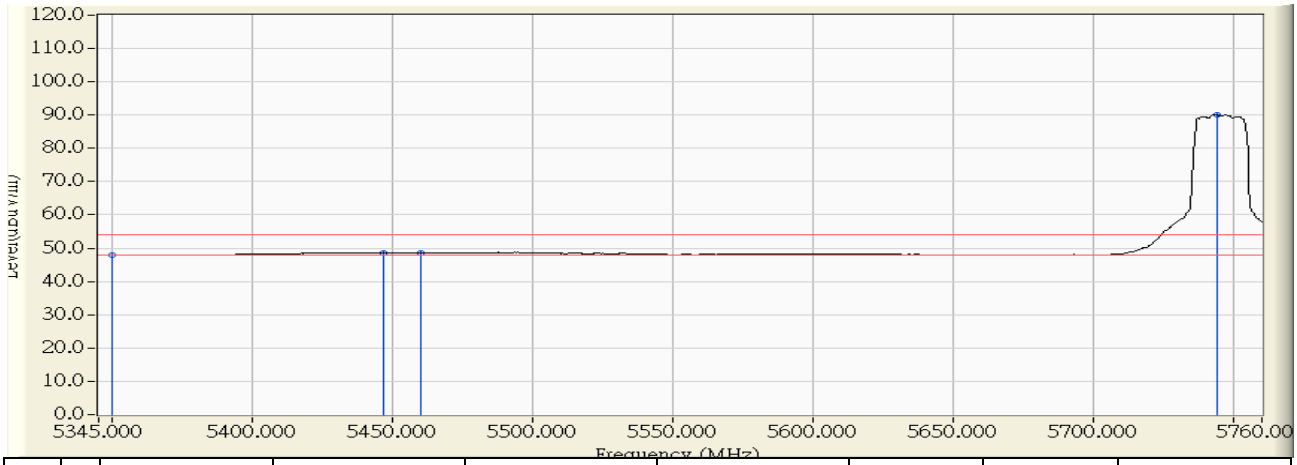


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	57.390	59.916	-14.084	74.000	PEAK
2		5403.100	2.938	59.062	62.000	-12.000	74.000	PEAK
3		5460.000	3.379	57.984	61.363	-12.637	74.000	PEAK
4	*	5744.645	2.745	103.261	106.006	32.006	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:28**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5745MHz**

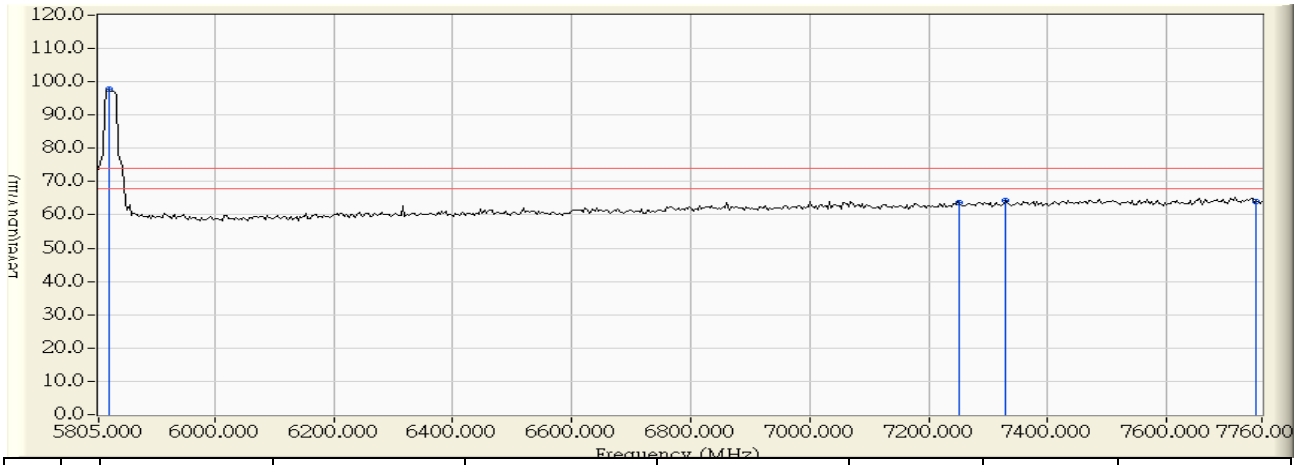


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.362	47.888	-6.112	54.000	AVERAGE
2		5446.675	3.276	45.295	48.571	-5.429	54.000	AVERAGE
3		5460.000	3.379	45.134	48.513	-5.487	54.000	AVERAGE
4	*	5743.815	2.748	87.321	90.069	36.069	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/04 - 21:54**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

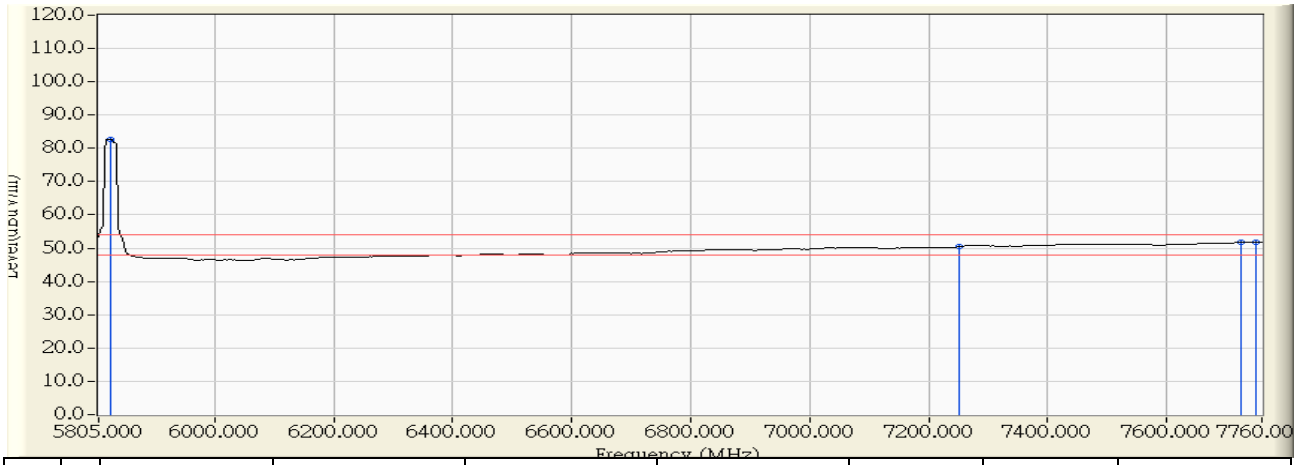


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5821.292	2.450	95.199	97.648	23.648	74.000	PEAK
2		7250.000	5.476	58.258	63.734	-10.266	74.000	PEAK
3		7329.900	5.649	58.628	64.276	-9.724	74.000	PEAK
4		7750.000	6.446	57.725	64.171	-9.829	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/04 - 22:08**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

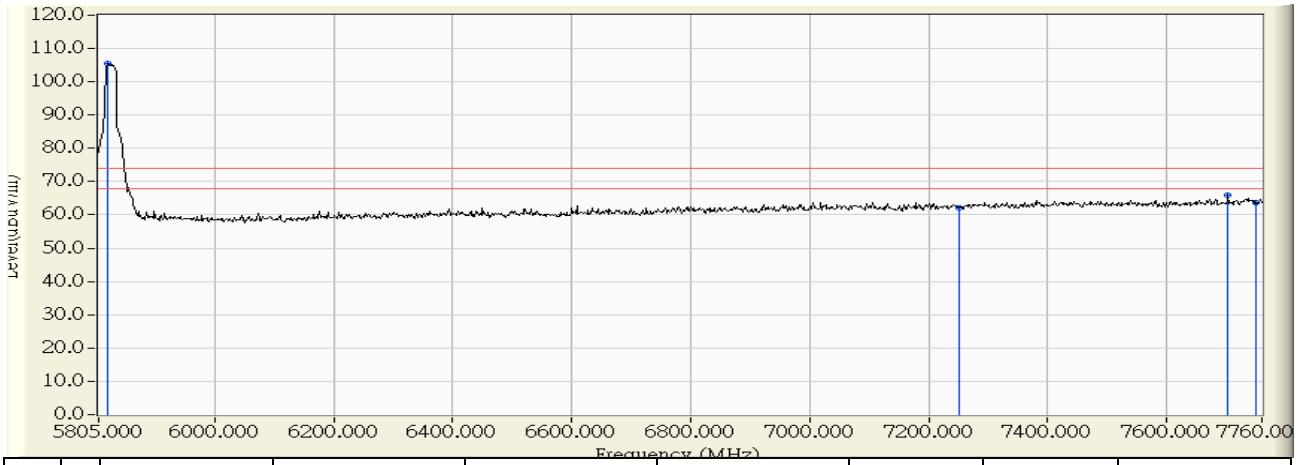


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5824.550	2.437	80.256	82.693	28.693	54.000	AVERAGE
2		7250.000	5.476	44.912	50.388	-3.612	54.000	AVERAGE
3		7724.158	6.402	45.331	51.733	-2.267	54.000	AVERAGE
4		7750.000	6.446	45.352	51.798	-2.202	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:30**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

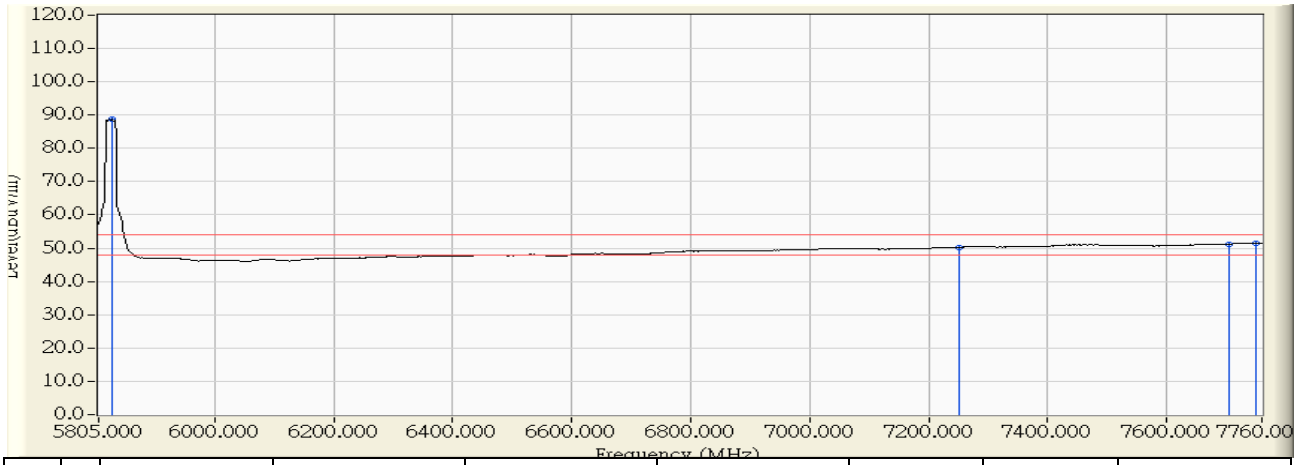


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5820.640	2.452	102.927	105.379	31.379	74.000	PEAK
2		7250.000	5.476	56.732	62.208	-11.792	74.000	PEAK
3		7703.305	6.366	59.516	65.882	-8.118	74.000	PEAK
4		7750.000	6.446	57.311	63.757	-10.243	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:42**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(20M)_5825MHz**

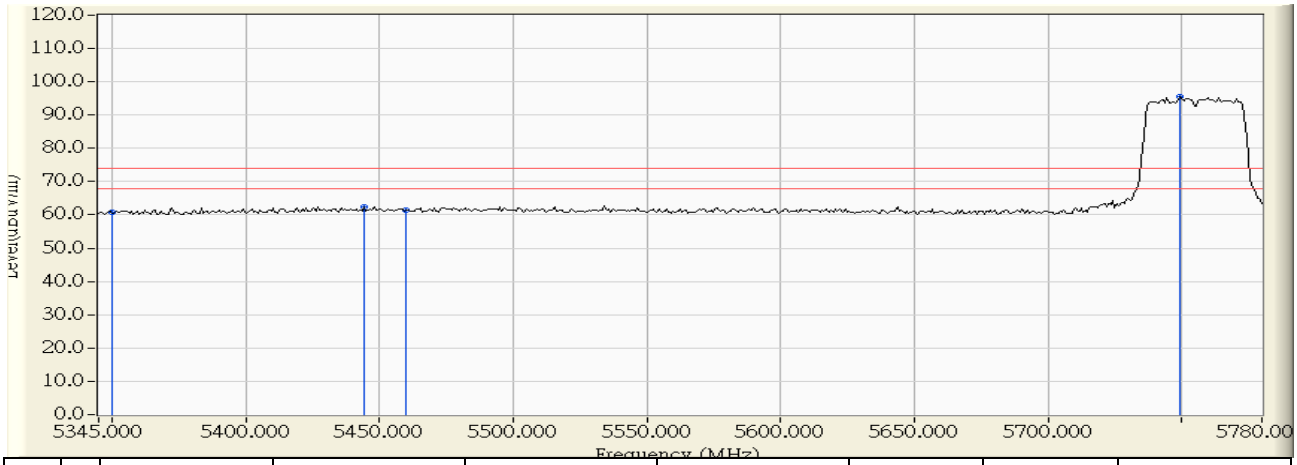


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5826.505	2.429	86.399	88.828	34.828	54.000	AVERAGE
2		7250.000	5.476	44.707	50.183	-3.817	54.000	AVERAGE
3		7705.260	6.369	44.901	51.270	-2.730	54.000	AVERAGE
4		7750.000	6.446	45.066	51.512	-2.488	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/05 - 08:45**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5755MHz**

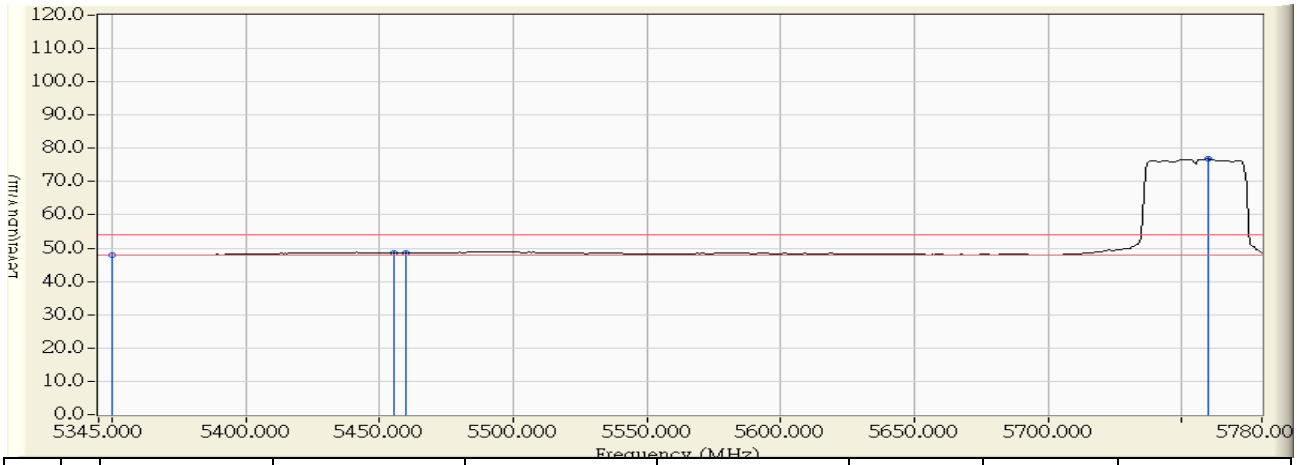


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	58.126	60.652	-13.348	74.000	PEAK
2		5444.325	3.258	59.009	62.267	-11.733	74.000	PEAK
3		5460.000	3.379	57.989	61.368	-12.632	74.000	PEAK
4	*	5749.550	2.726	92.668	95.394	21.394	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/05 - 08:47**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5755MHz**

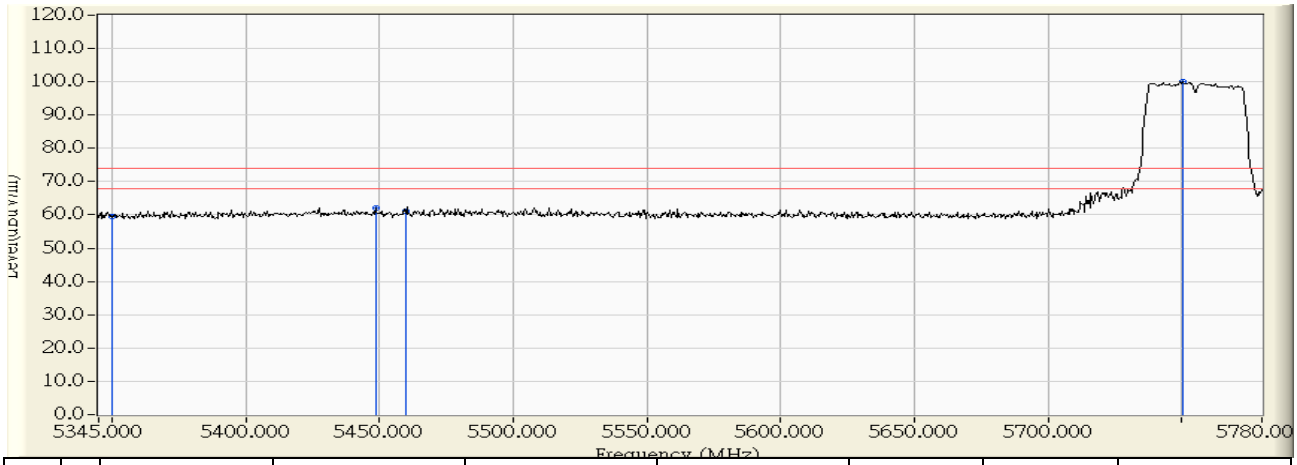


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.433	47.959	-6.041	54.000	AVERAGE
2		5455.200	3.342	45.287	48.629	-5.371	54.000	AVERAGE
3		5460.000	3.379	45.241	48.620	-5.380	54.000	AVERAGE
4	*	5759.700	2.687	74.044	76.731	22.731	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:45**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5755MHz**

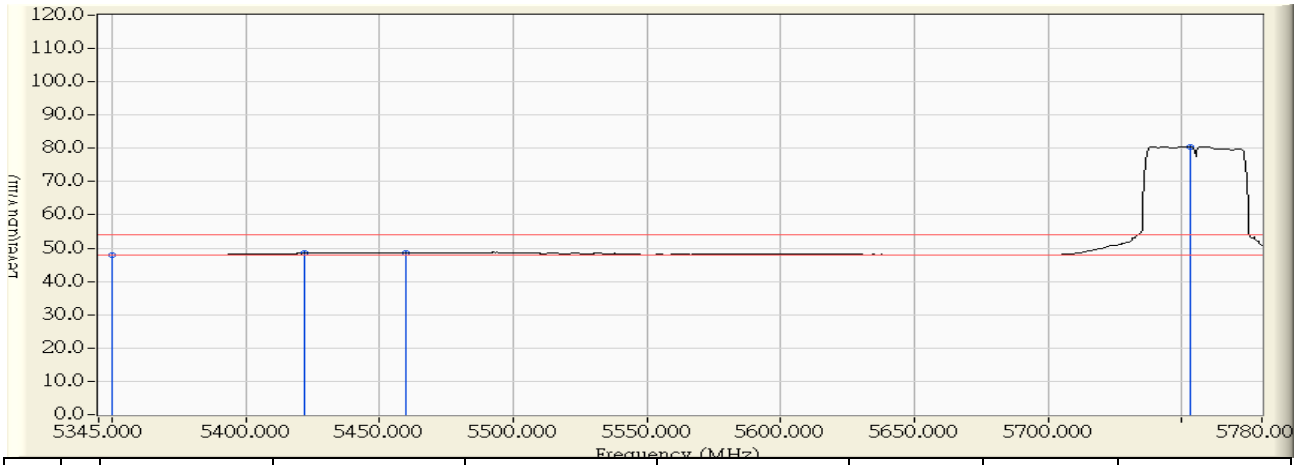


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	56.845	59.371	-14.629	74.000	PEAK
2		5448.530	3.290	58.692	61.982	-12.018	74.000	PEAK
3		5460.000	3.379	57.852	61.231	-12.769	74.000	PEAK
4	*	5750.420	2.722	97.408	100.131	26.131	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:48**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5755MHz**

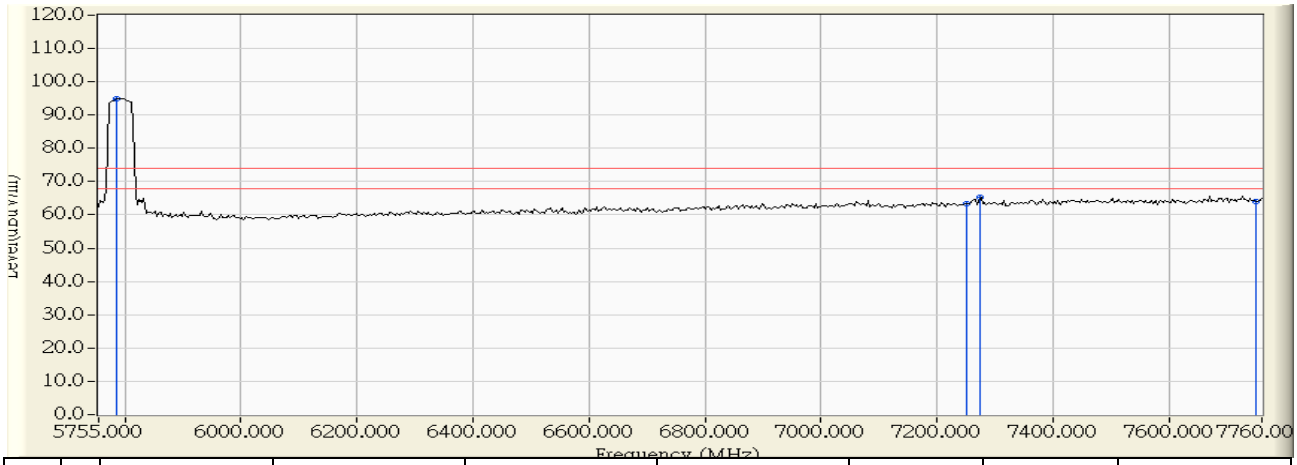


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.371	47.897	-6.103	54.000	AVERAGE
2		5421.995	3.085	45.381	48.466	-5.534	54.000	AVERAGE
3		5460.000	3.379	45.112	48.491	-5.509	54.000	AVERAGE
4	*	5753.030	2.713	77.864	80.577	26.577	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/05 - 08:50**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

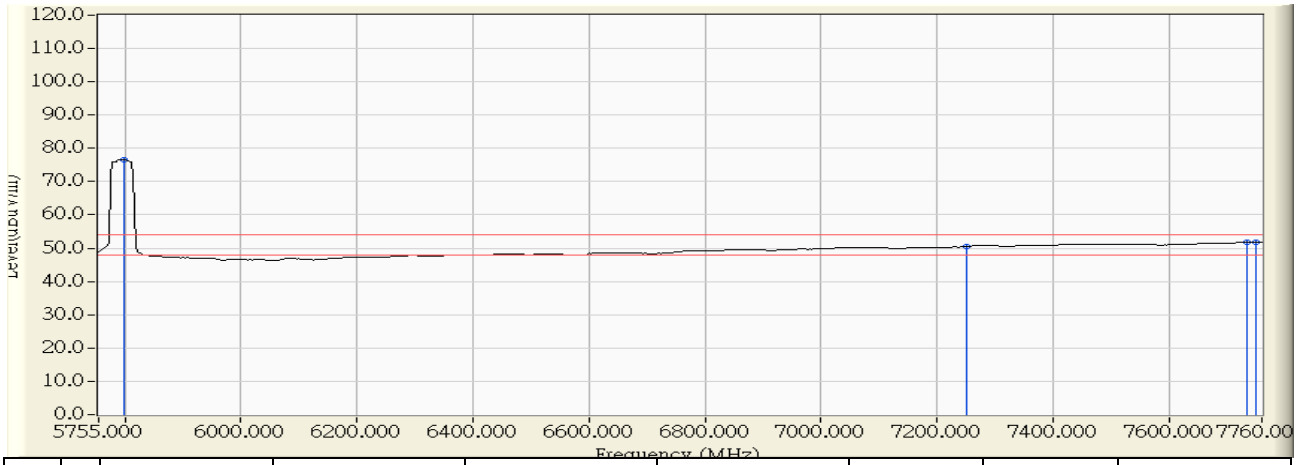


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5785.075	2.589	92.327	94.916	20.916	74.000	PEAK
2		7250.000	5.476	57.862	63.338	-10.662	74.000	PEAK
3		7275.458	5.531	59.782	65.313	-8.687	74.000	PEAK
4		7750.000	6.446	57.668	64.114	-9.886	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/05 - 09:05**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

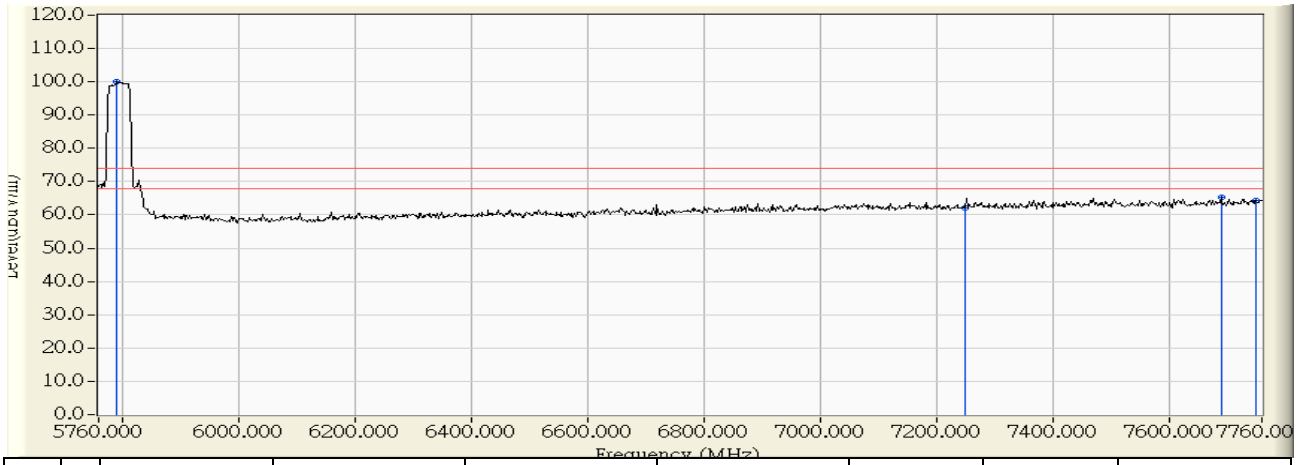


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5798.442	2.537	74.110	76.648	22.648	54.000	AVERAGE
2		7250.000	5.476	44.942	50.418	-3.582	54.000	AVERAGE
3		7733.267	6.418	45.349	51.767	-2.233	54.000	AVERAGE
4		7750.000	6.446	45.324	51.770	-2.230	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:49**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

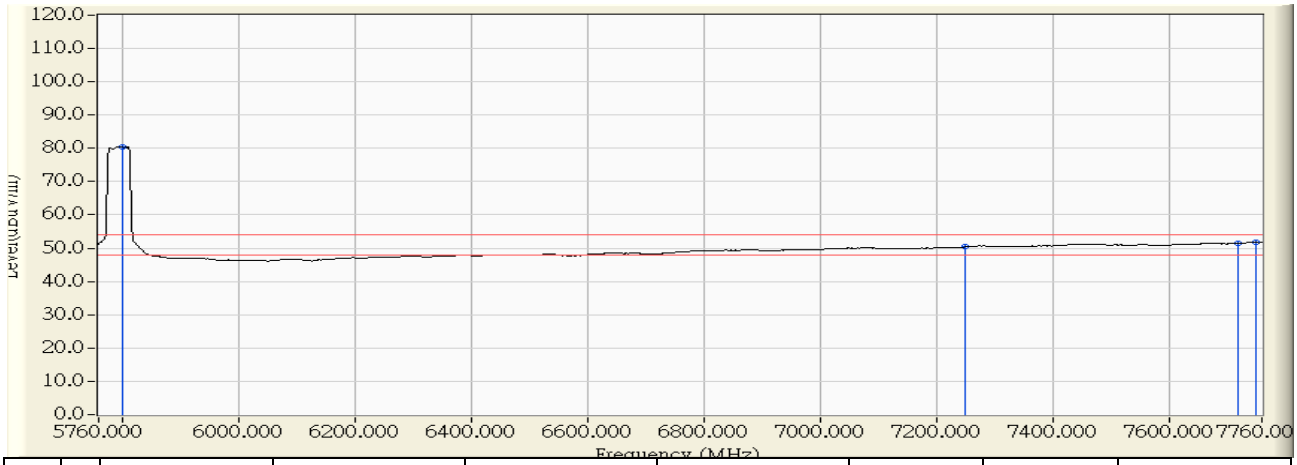


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5790.000	2.570	97.338	99.908	25.908	74.000	PEAK
2		7250.000	5.476	56.705	62.181	-11.819	74.000	PEAK
3		7690.000	6.343	59.034	65.377	-8.623	74.000	PEAK
4		7750.000	6.446	57.823	64.269	-9.731	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Site : CB1	**Time : 2013/09/06 - 16:01**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11n(40M)_5795MHz**

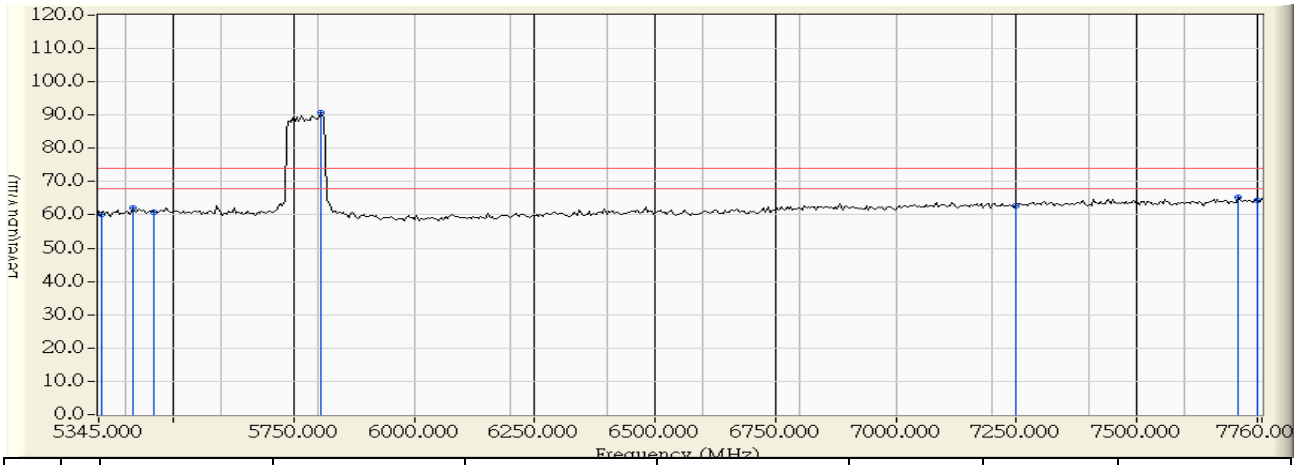


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5800.000	2.532	78.050	80.582	26.582	54.000	AVERAGE
2		7250.000	5.476	44.877	50.353	-3.647	54.000	AVERAGE
3		7718.000	6.392	45.163	51.554	-2.446	54.000	AVERAGE
4		7750.000	6.446	45.202	51.648	-2.352	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 14:05**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

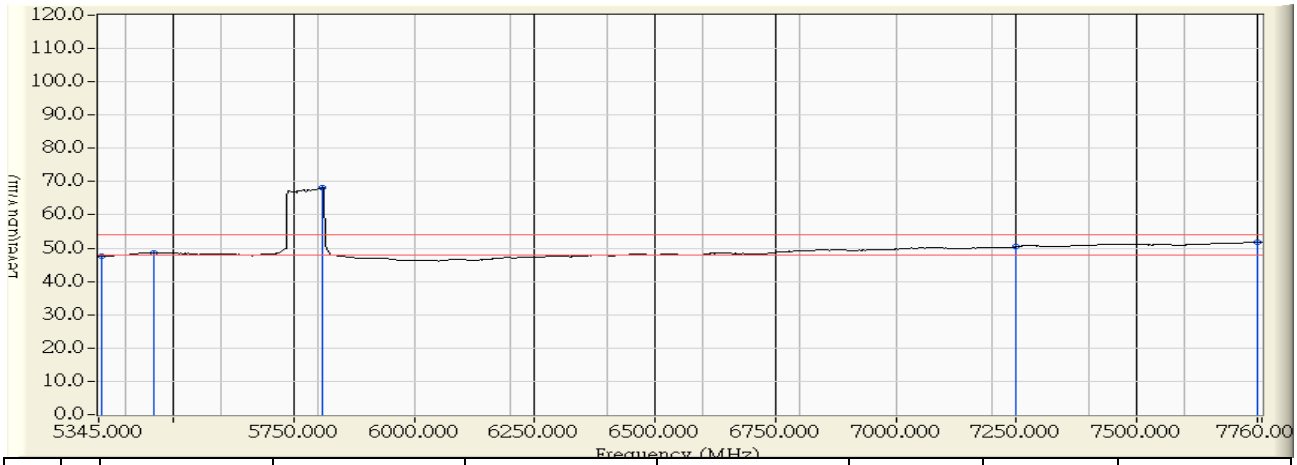


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	57.579	60.105	-13.895	74.000	PEAK
2		5417.450	3.050	59.129	62.178	-11.822	74.000	PEAK
3		5460.000	3.379	57.502	60.881	-13.119	74.000	PEAK
4	*	5807.875	2.502	88.381	90.882	16.882	74.000	PEAK
5		7250.000	5.476	57.373	62.849	-11.151	74.000	PEAK
6		7711.700	6.380	59.000	65.381	-8.619	74.000	PEAK
7		7750.000	6.446	57.858	64.304	-9.696	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 14:23**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

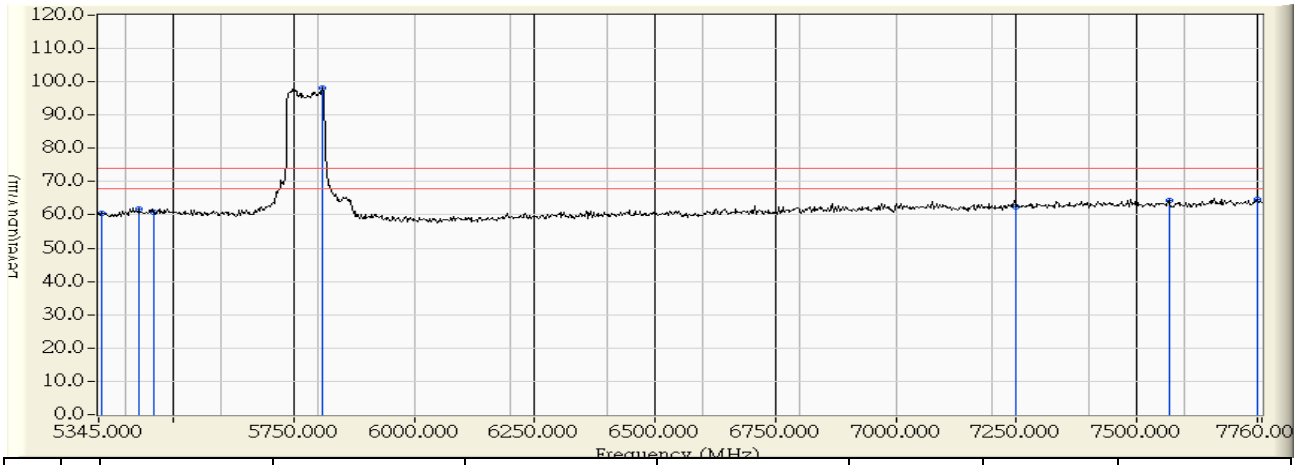


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.221	47.747	-6.253	54.000	AVERAGE
2		5460.000	3.379	45.075	48.454	-5.546	54.000	AVERAGE
3	*	5808.680	2.498	65.644	68.142	14.142	54.000	AVERAGE
4		7250.000	5.476	44.899	50.375	-3.625	54.000	AVERAGE
5		7750.000	6.446	45.283	51.729	-2.271	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 14:36**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**

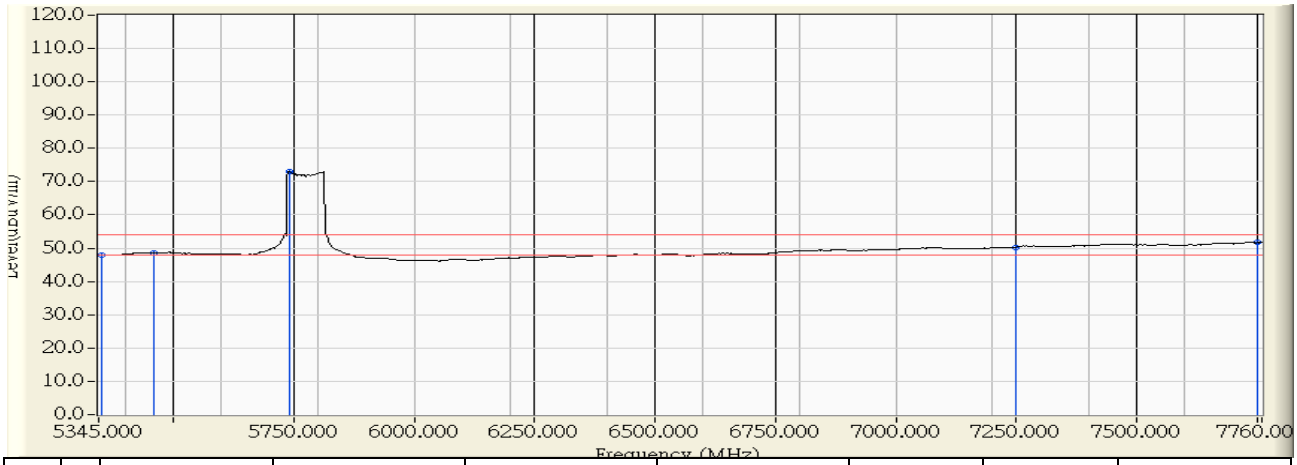


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	57.890	60.416	-13.584	74.000	PEAK
2		5427.110	3.125	58.747	61.871	-12.129	74.000	PEAK
3		5460.000	3.379	57.407	60.786	-13.214	74.000	PEAK
4	*	5808.680	2.498	95.599	98.097	24.097	74.000	PEAK
5		7250.000	5.476	57.006	62.482	-11.518	74.000	PEAK
6		7566.800	6.131	58.337	64.468	-9.532	74.000	PEAK
7		7750.000	6.446	58.173	64.619	-9.381	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/09/06 - 15:05**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC5V(Power by PC)**
EUT : Wireless-AC450 USB Adapter	**Note : 802.11ac(80M)_5775MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5350.000	2.526	45.362	47.888	-6.112	54.000	AVERAGE
2		5460.000	3.379	45.159	48.538	-5.462	54.000	AVERAGE
3	*	5741.060	2.759	70.254	73.013	19.013	54.000	AVERAGE
4		7250.000	5.476	44.857	50.333	-3.667	54.000	AVERAGE
5		7750.000	6.446	45.204	51.650	-2.350	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measure Level = Reading Level + Correct Factor。
6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Occupied Bandwidth

7.1. Test Equipment

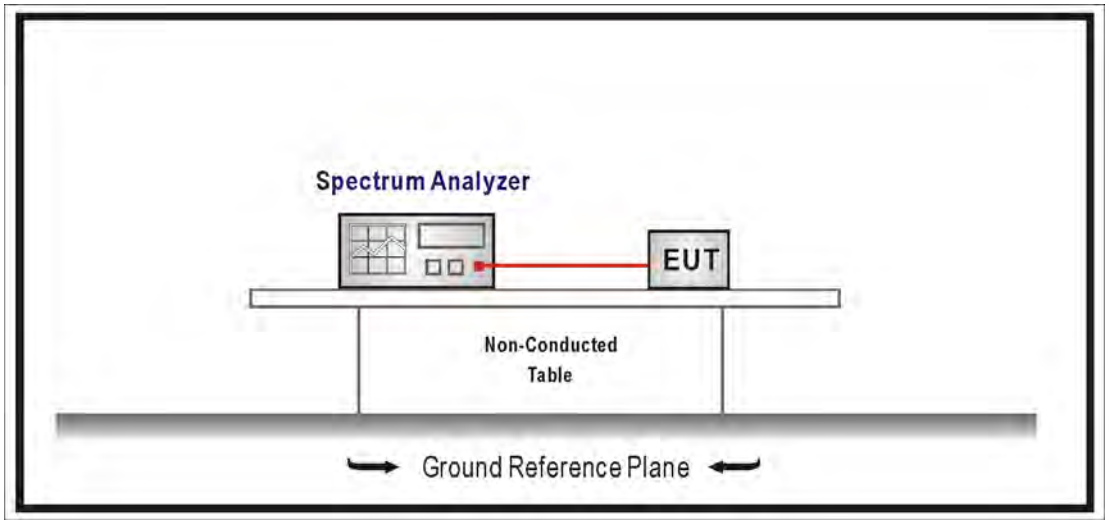
The following test equipments are used during the test:

Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



7.3. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 1% of EBW, Span greater than RBW.

7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

7.6. Uncertainty

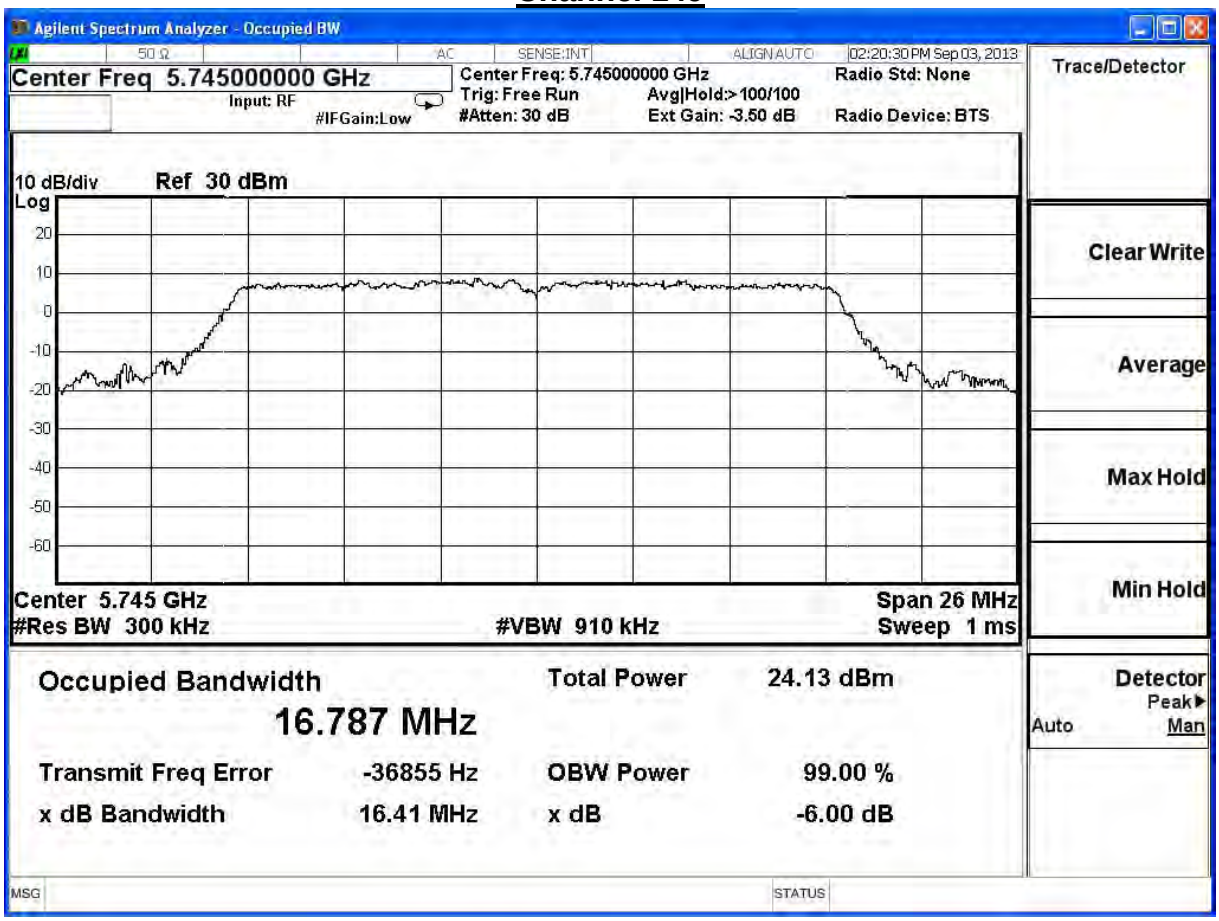
The measurement uncertainty is defined as ±150Hz

7.7. Test Result

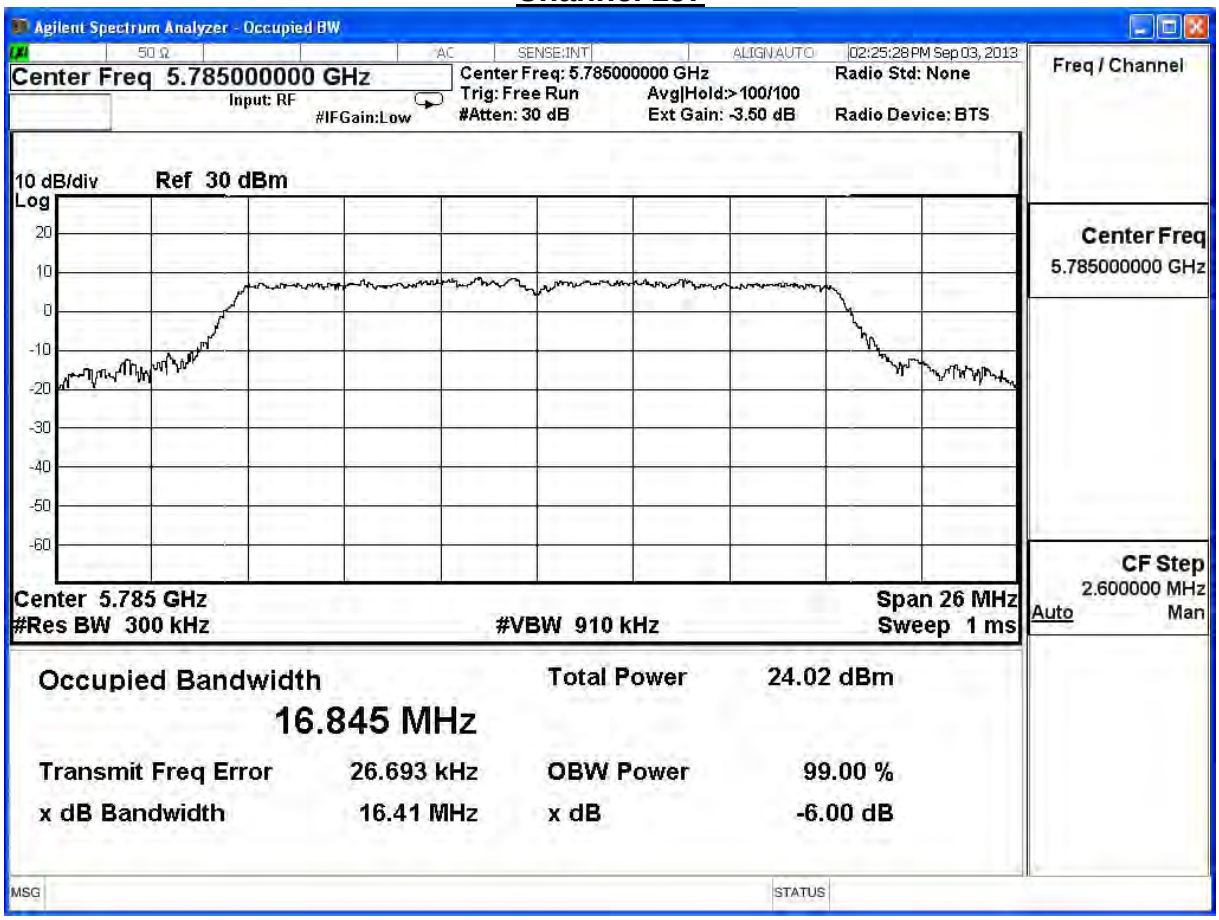
Product	Wireless-AC450 USB Adapter		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/03	Test Site	SR7

IEEE 802.11a, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Required Limit (MHz)	Result
149	5745	16.41	≧0.5	Pass
157	5785	16.41	≧0.5	Pass
165	5825	16.42	≧0.5	Pass

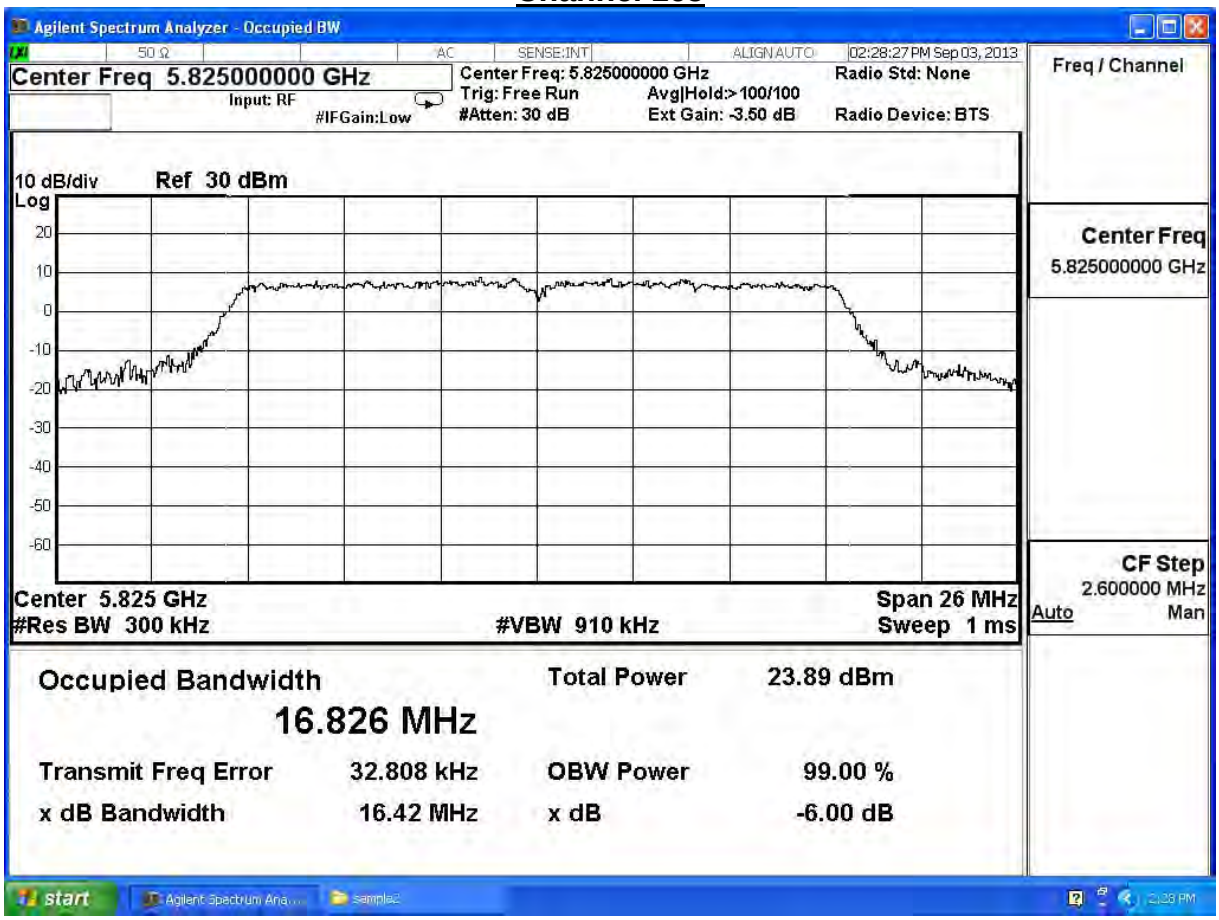
Channel 149



Channel 157


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
02:25:28 PM Sep 03, 2013
Center Freq 5.785000000 GHz
Input: RF
#IFGain:Low
Center Freq: 5.785000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center Freq
5.785000000 GHz
Center 5.785 GHz
#Res BW 300 kHz
#VBW 910 kHz
Span 26 MHz
Sweep 1 ms
CF Step
2.600000 MHz
Auto
Man
Occupied Bandwidth
16.845 MHz
Total Power
24.02 dBm
Transmit Freq Error
26.693 kHz
OBW Power
99.00 %
x dB Bandwidth
16.41 MHz
x dB
-6.00 dB
MSG
STATUS

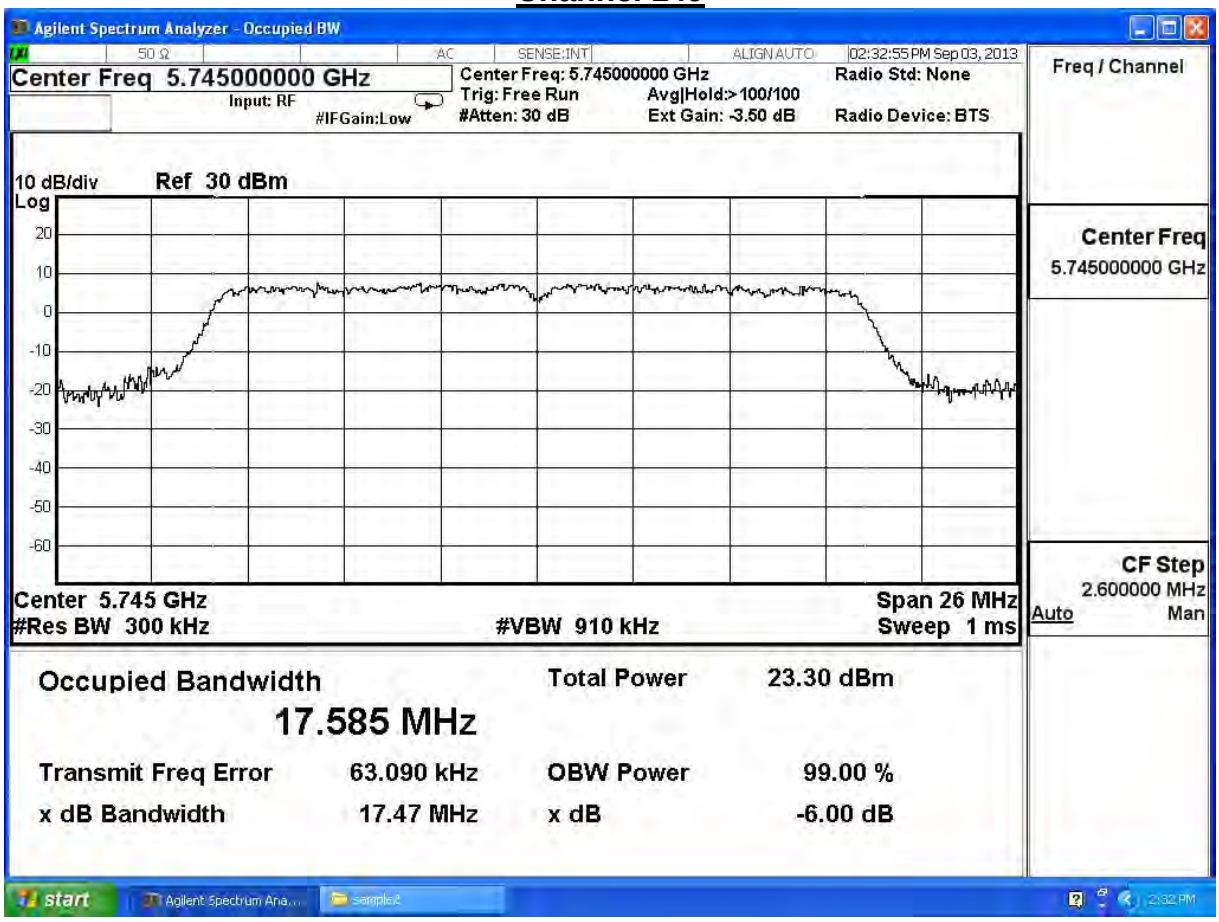
Channel 165


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
02:28:27 PM Sep 03, 2013
Center Freq 5.825000000 GHz
Input: RF
#IFGain:Low
Center Freq: 5.825000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center Freq
5.825000000 GHz
Center 5.825 GHz
#Res BW 300 kHz
#VBW 910 kHz
Span 26 MHz
Sweep 1 ms
CF Step
2.600000 MHz
Auto
Man
Occupied Bandwidth
16.826 MHz
Total Power
23.89 dBm
Transmit Freq Error
32.808 kHz
OBW Power
99.00 %
x dB Bandwidth
16.42 MHz
x dB
-6.00 dB
start
Agilent Spectrum Ana...
samples

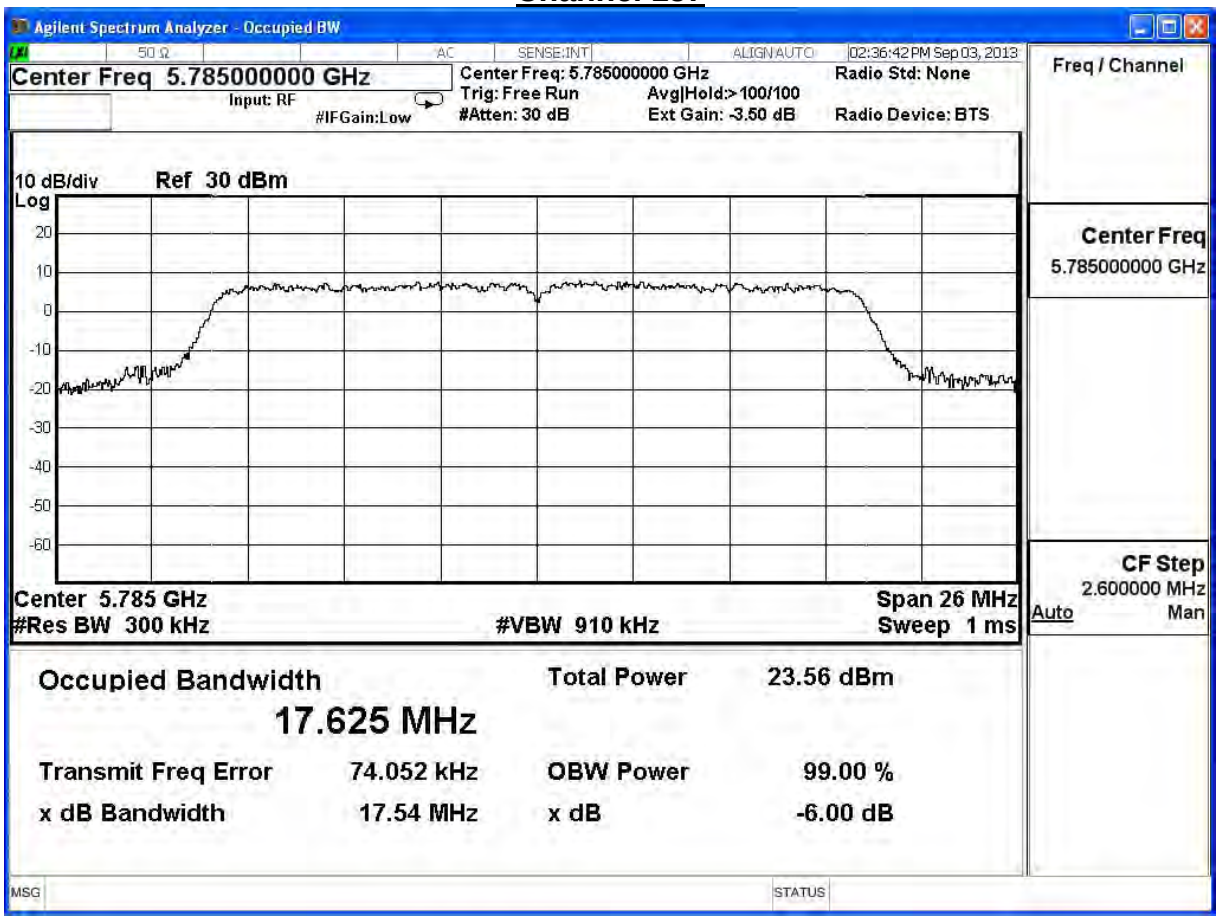
Product	Wireless-AC450 USB Adapter		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/03	Test Site	SR7

IEEE 802.11n (20MHz), ANT 0				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Required Limit (MHz)	Result
149	5745	17.47	≧0.5	Pass
157	5785	17.54	≧0.5	Pass
165	5825	17.49	≧0.5	Pass

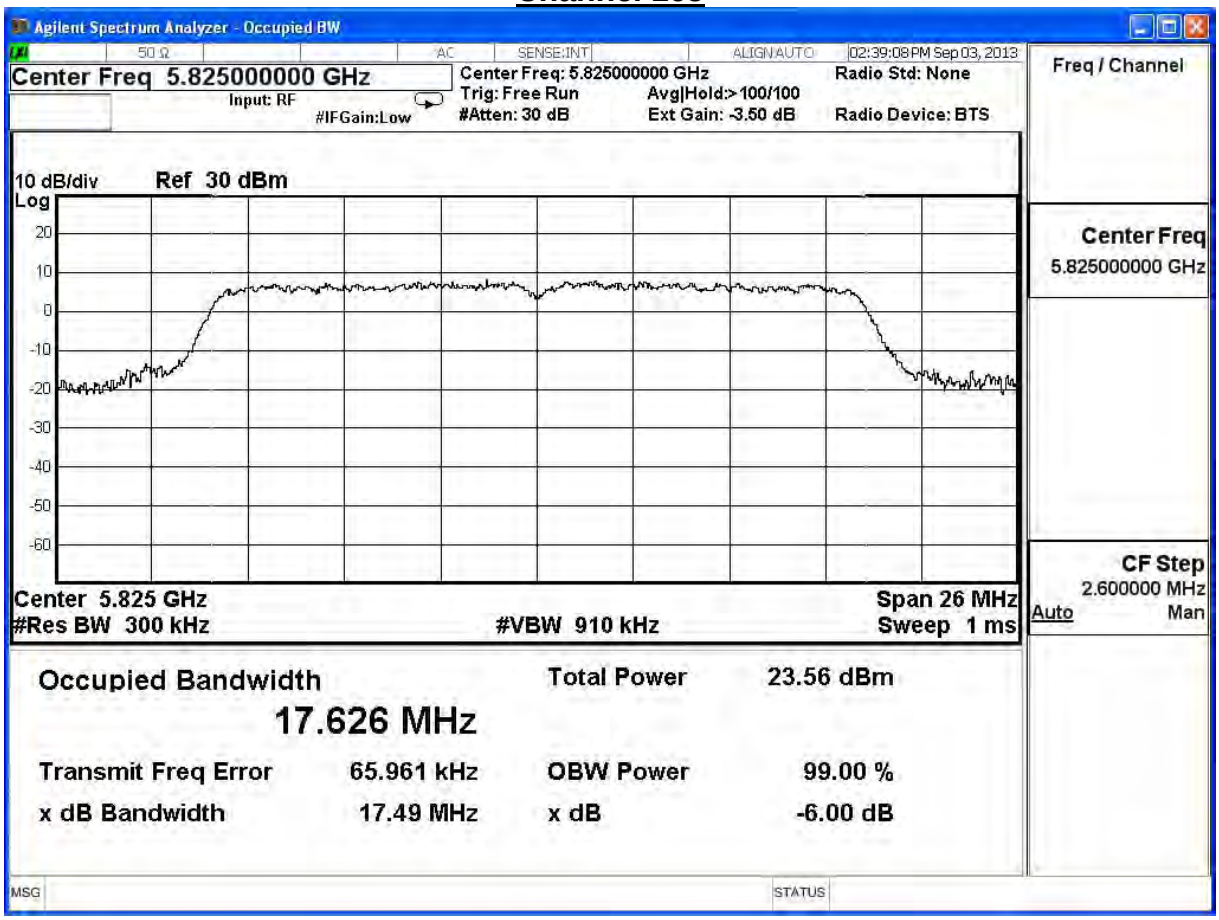
Channel 149



Channel 157


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
02:36:42 PM Sep 03, 2013
Center Freq 5.785000000 GHz
Input: RF
#IFGain:Low
Center Freq: 5.785000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center Freq
5.785000000 GHz
Center 5.785 GHz
#Res BW 300 kHz
#VBW 910 kHz
Span 26 MHz
Sweep 1 ms
CF Step
2.600000 MHz
Auto
Man
Occupied Bandwidth
17.625 MHz
Total Power
23.56 dBm
Transmit Freq Error
74.052 kHz
OBW Power
99.00 %
x dB Bandwidth
17.54 MHz
x dB
-6.00 dB
MSG
STATUS

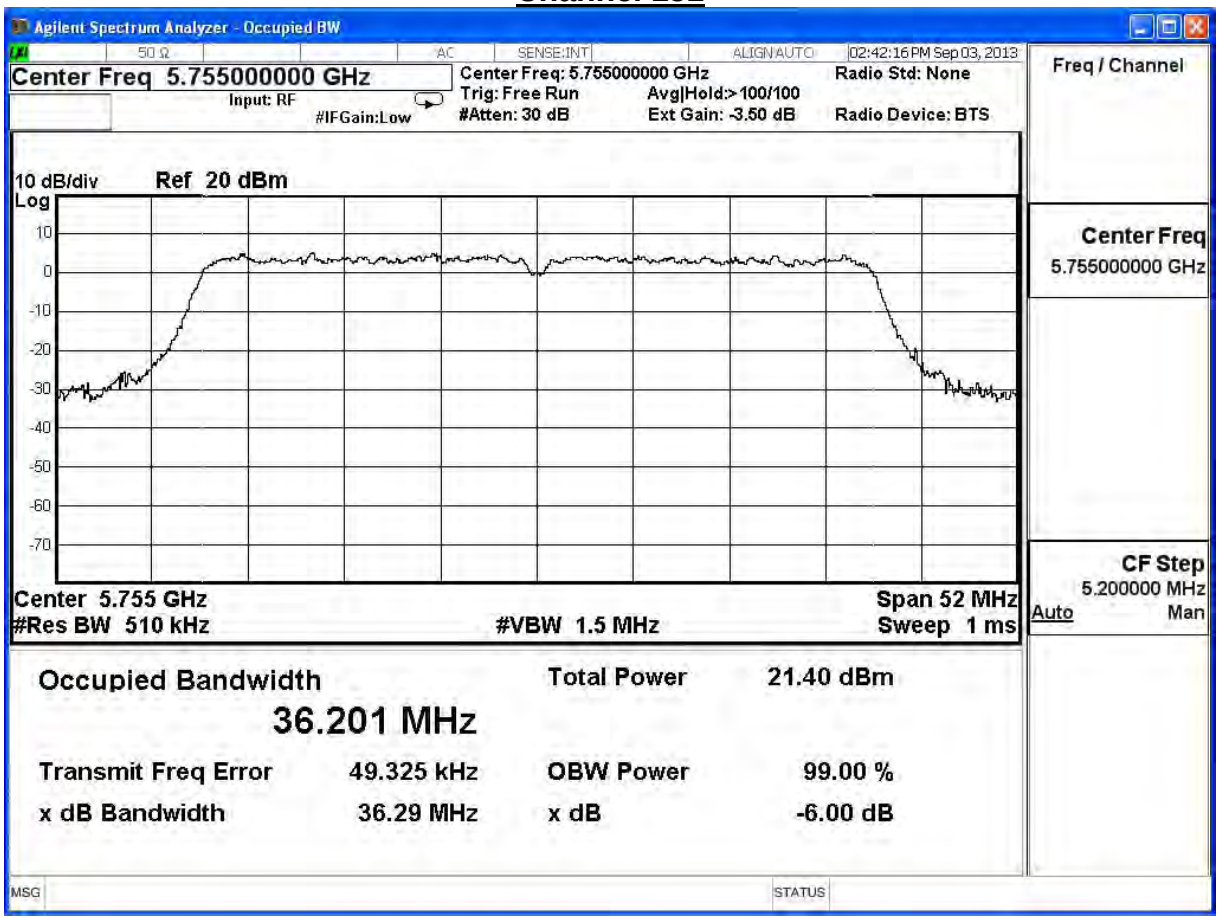
Channel 165


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
02:39:08 PM Sep 03, 2013
Center Freq 5.825000000 GHz
Input: RF
#IFGain:Low
Center Freq: 5.825000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center Freq
5.825000000 GHz
Center 5.825 GHz
#Res BW 300 kHz
#VBW 910 kHz
Span 26 MHz
Sweep 1 ms
CF Step
2.600000 MHz
Auto
Man
Occupied Bandwidth
17.626 MHz
Total Power
23.56 dBm
Transmit Freq Error
65.961 kHz
OBW Power
99.00 %
x dB Bandwidth
17.49 MHz
x dB
-6.00 dB
MSG
STATUS

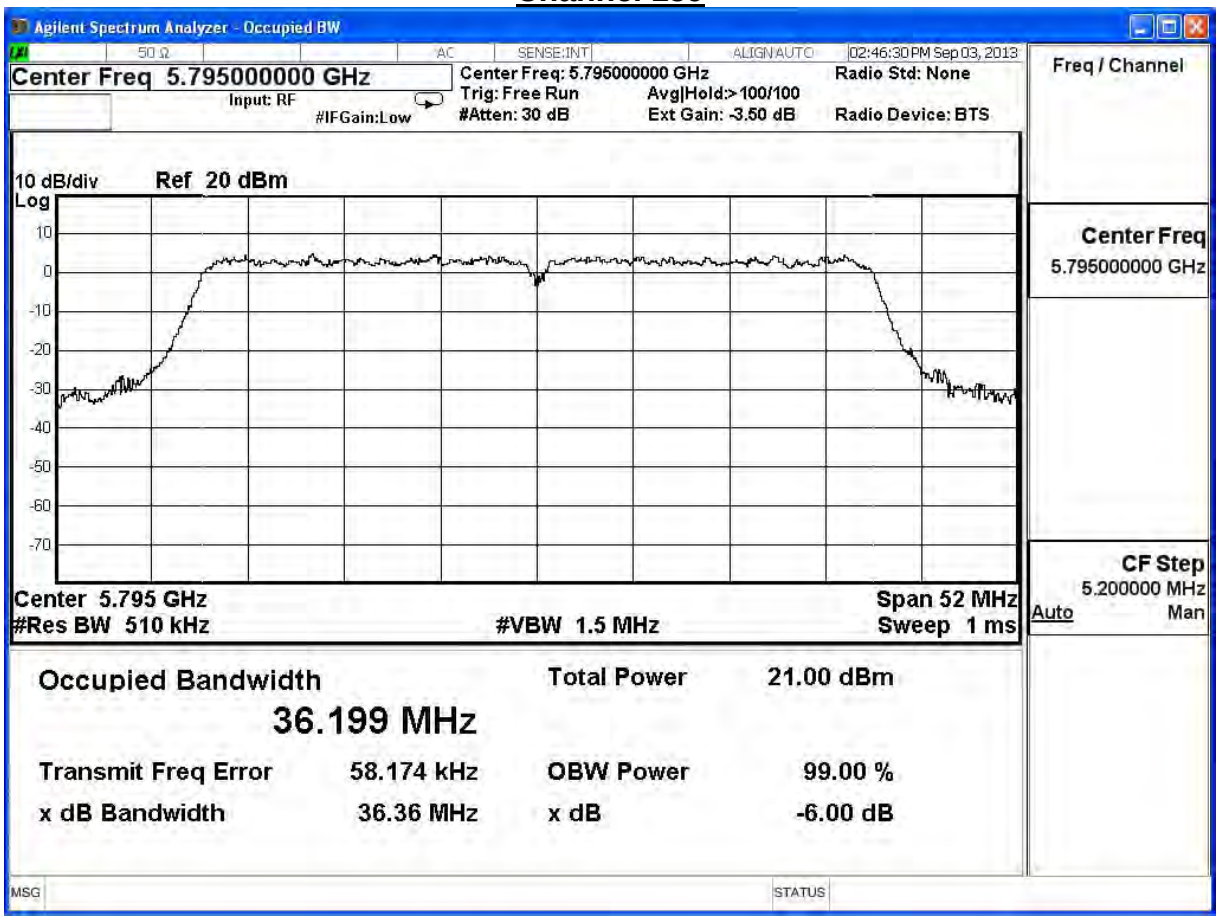
Product	Wireless-AC450 USB Adapter		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/03	Test Site	SR7

IEEE 802.11n (40MHz), ANT 0				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Required Limit (MHz)	Result
151	5755	36.29	≧0.5	Pass
159	5795	36.36	≧0.5	Pass

Channel 151



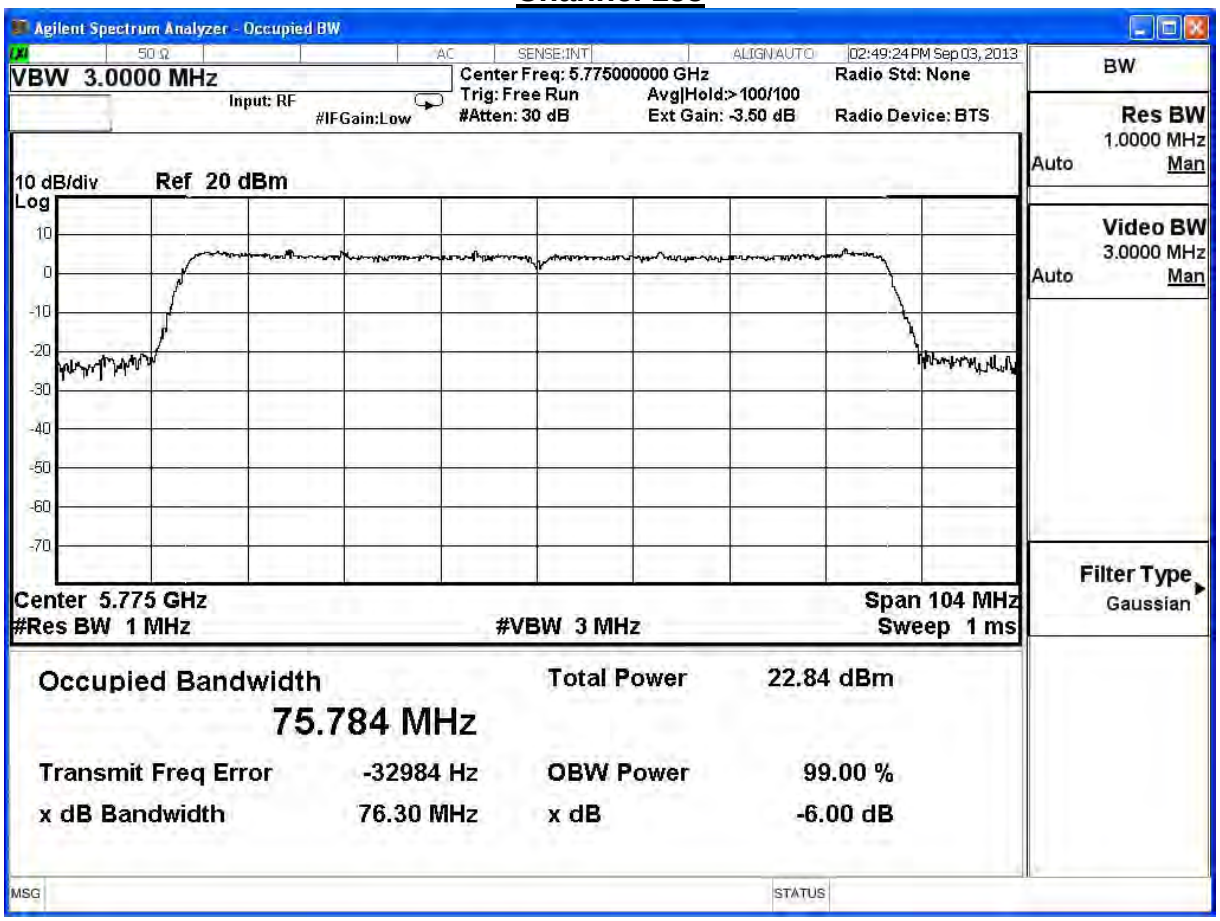
Channel 159


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
02:46:30 PM Sep 03, 2013
Center Freq 5.795000000 GHz
Input: RF
#IFGain:Low
Center Freq: 5.795000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -3.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
5.795000000 GHz
Center 5.795 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 52 MHz
Sweep 1 ms
CF Step
5.200000 MHz
Auto
Man
Occupied Bandwidth
36.199 MHz
Total Power
21.00 dBm
Transmit Freq Error
58.174 kHz
OBW Power
99.00 %
x dB Bandwidth
36.36 MHz
x dB
-6.00 dB
MSG
STATUS

Product	Wireless-AC450 USB Adapter		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2013/09/03	Test Site	SR7

IEEE 802.11ac (80MHz), ANT 0				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Required Limit (MHz)	Result
155	5775	76.30	≧0.5	Pass

Channel 155



8. Power Density

8.1. Test Equipment

The following test equipment is used during the test:

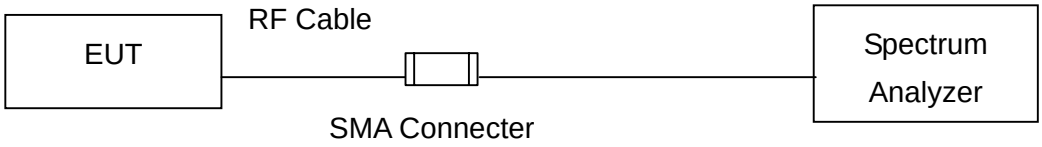
Power Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup

IEEE 802.11 b / g / a / n (20M) MODE



8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.4. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW= 100 kHz, Set VBW= 300 kHz, Sweep time=Auto, Set detector=Peak detector

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

8.6. Uncertainty

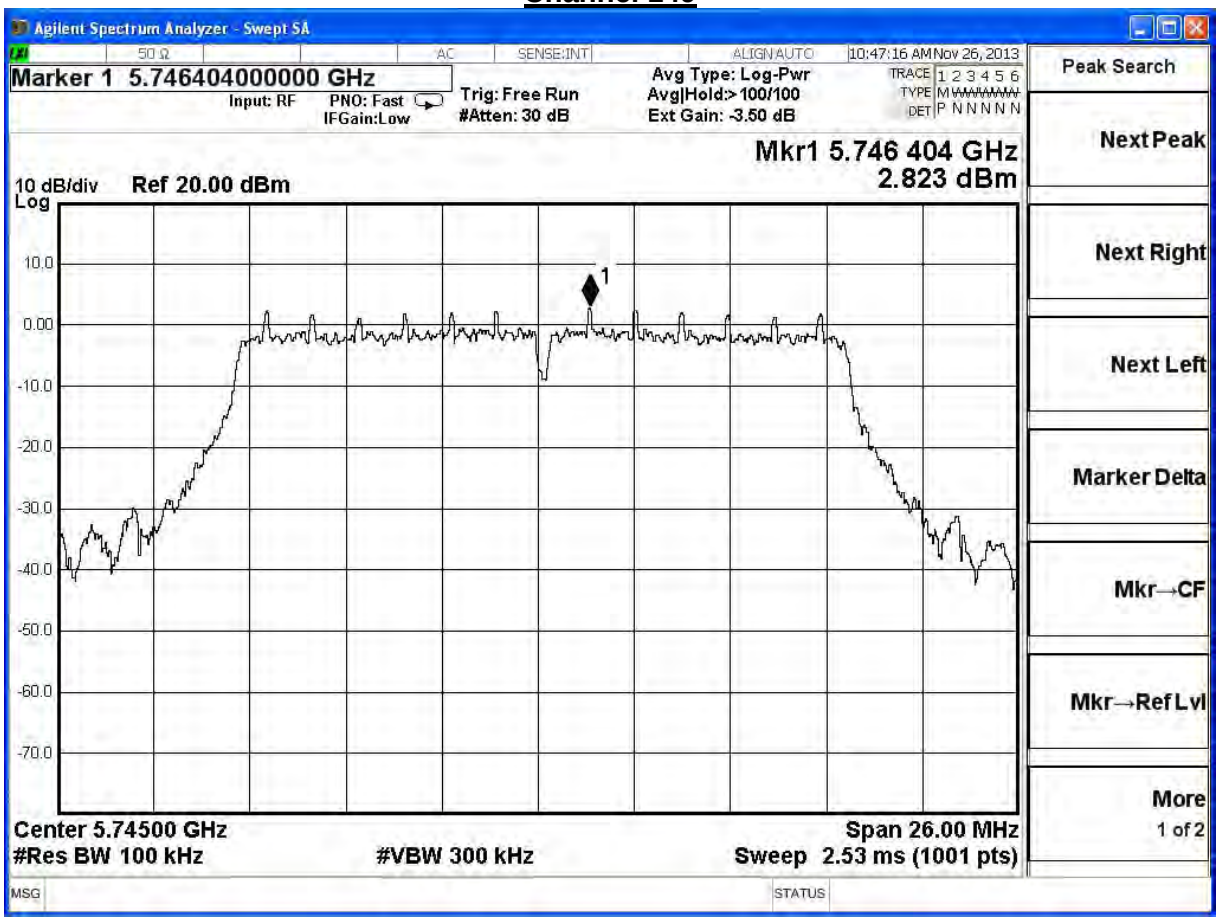
The measurement uncertainty is defined as ±1.27dB.

8.7. Test Result

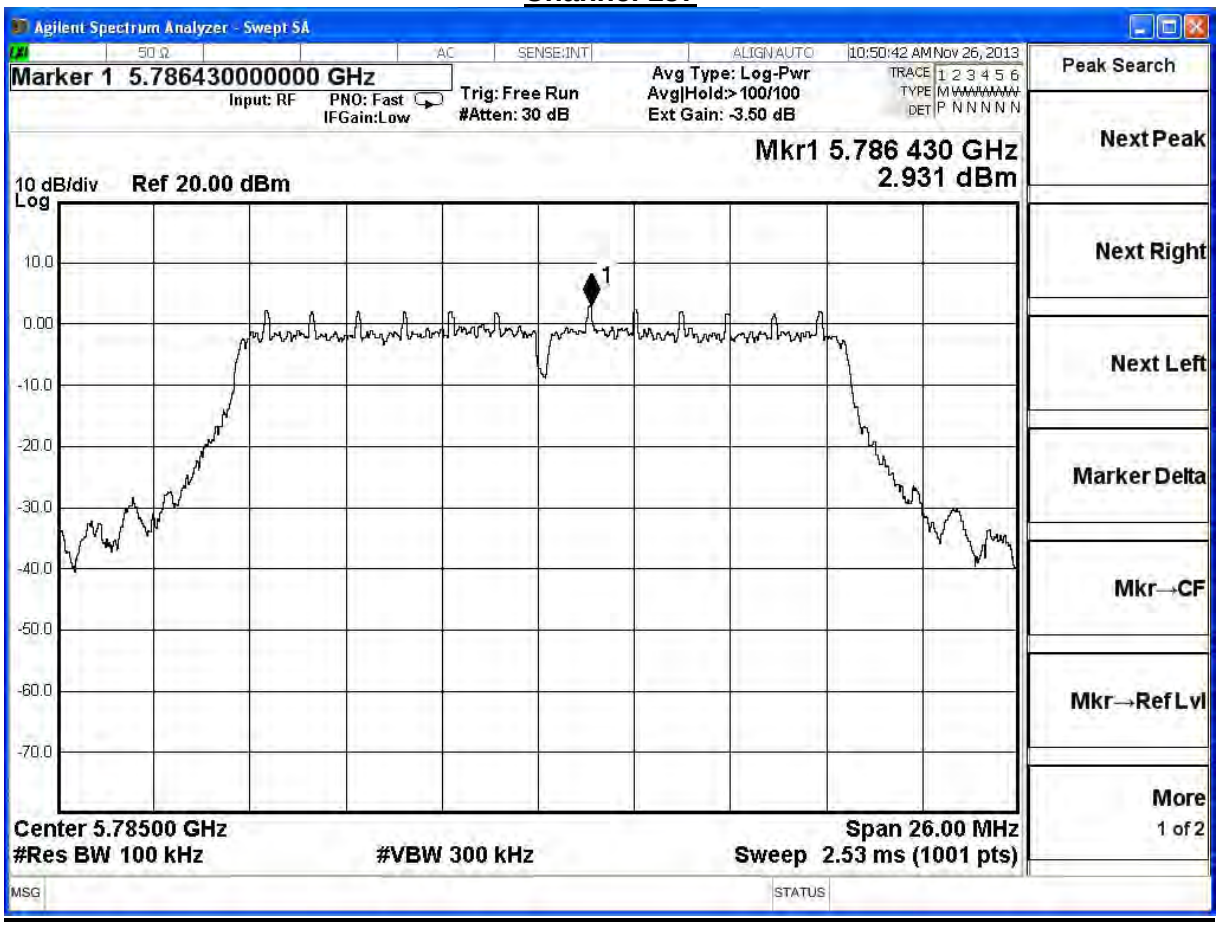
Product	Wireless-AC450 USB Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

IEEE802.11a, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	2.82	≦8	Pass
157	5785	2.93	≦8	Pass
165	5825	2.54	≦8	Pass

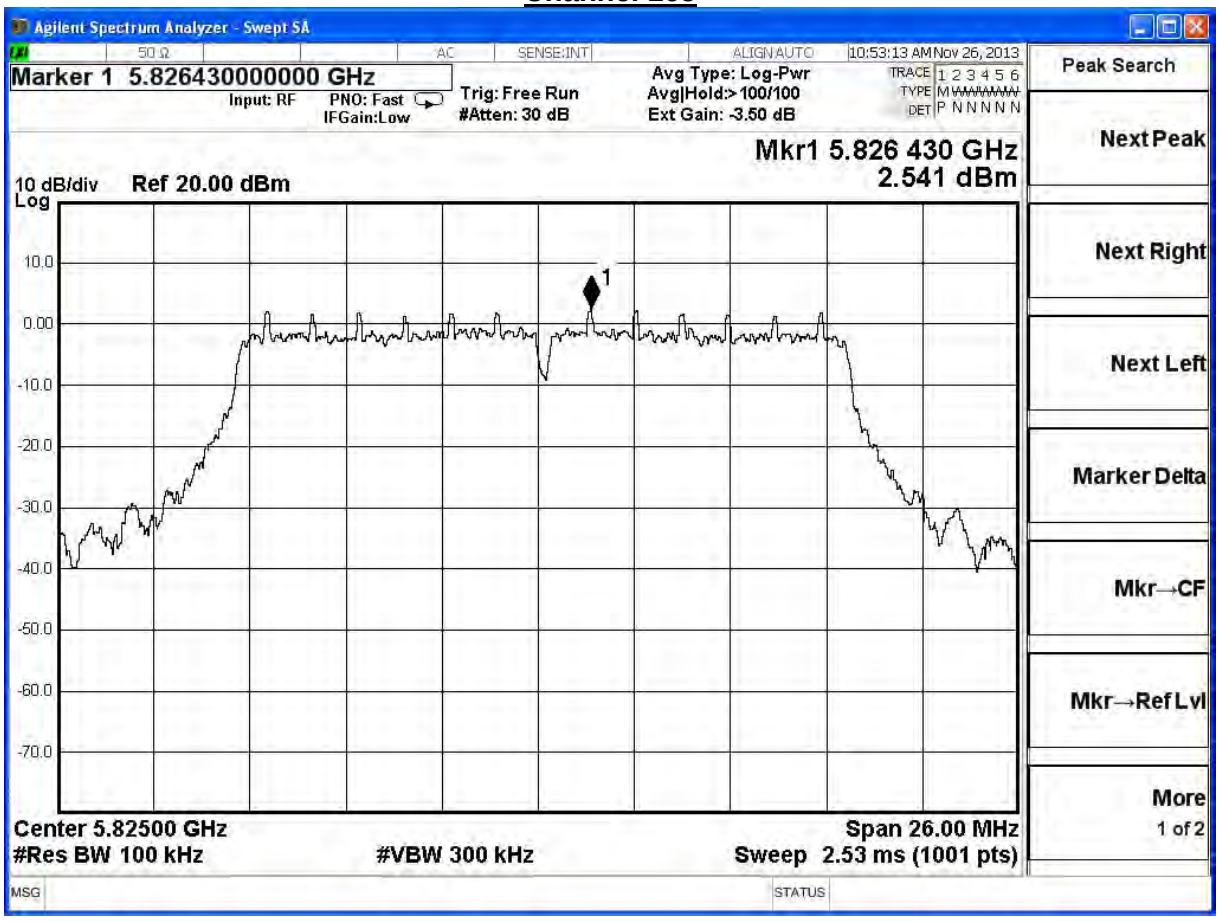
Channel 149



Channel 157


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
10:50:42 AM Nov 26, 2013
Marker 1 5.786430000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -3.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.786 430 GHz
2.931 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.78500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
MSG
STATUS
Peak Search
Next Peak
Next Right
Next Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

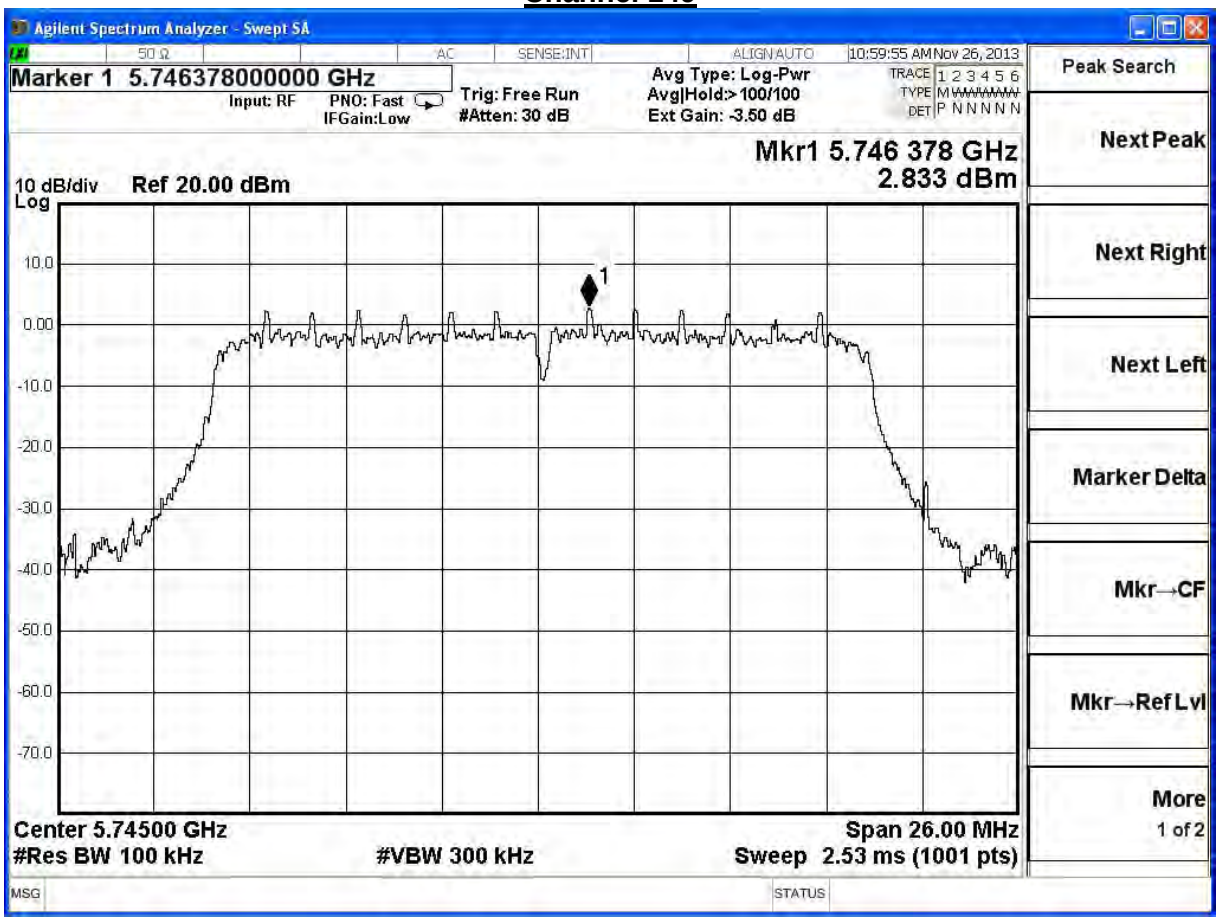
Channel 165


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
10:53:13 AM Nov 26, 2013
Marker 1 5.826430000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -3.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.826 430 GHz
2.541 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.82500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
MSG
STATUS
Peak Search
Next Peak
Next Right
Next Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

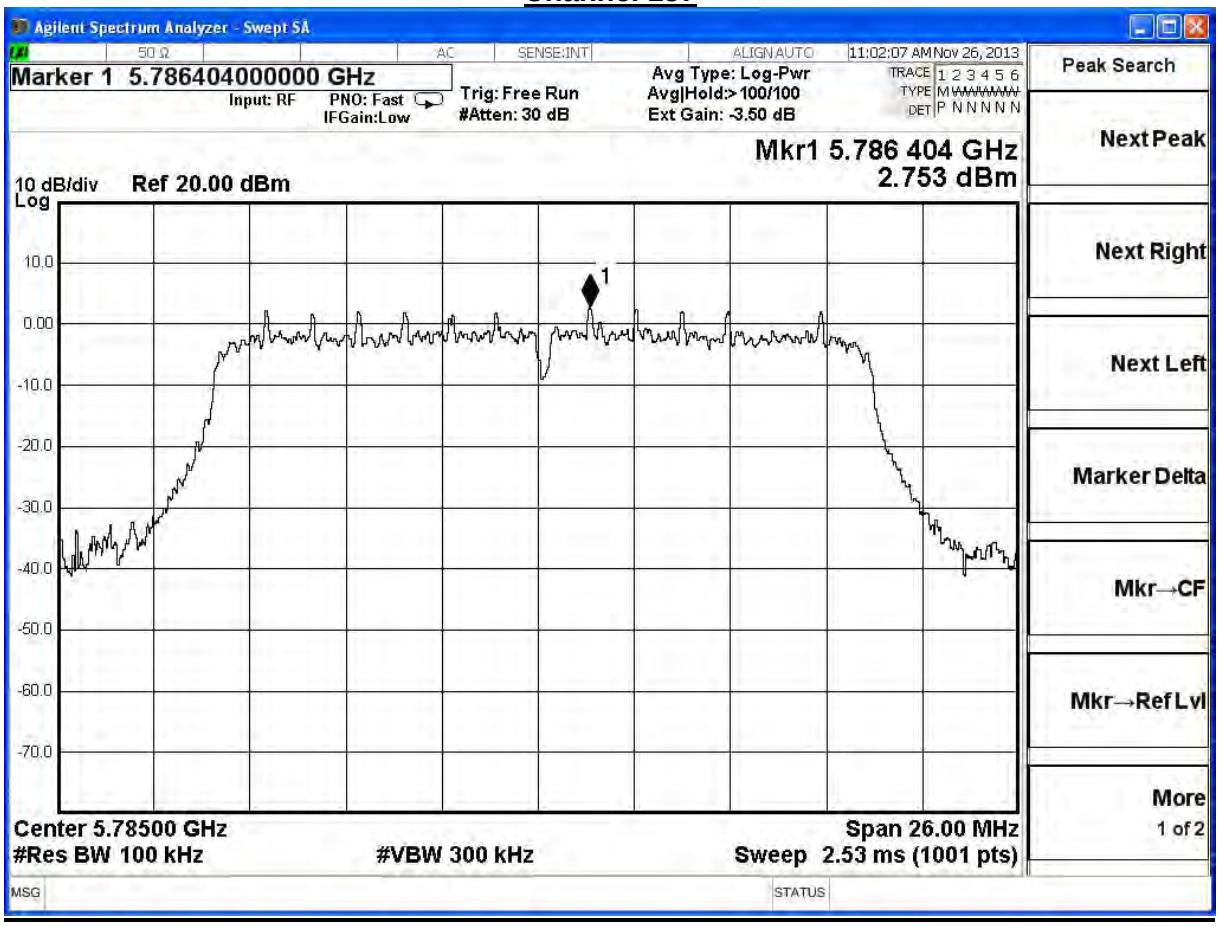
Product	Wireless-AC450 USB Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

IEEE802.11n_20MHz, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	2.83	≦8	Pass
157	5785	2.75	≦8	Pass
165	5825	2.03	≦8	Pass

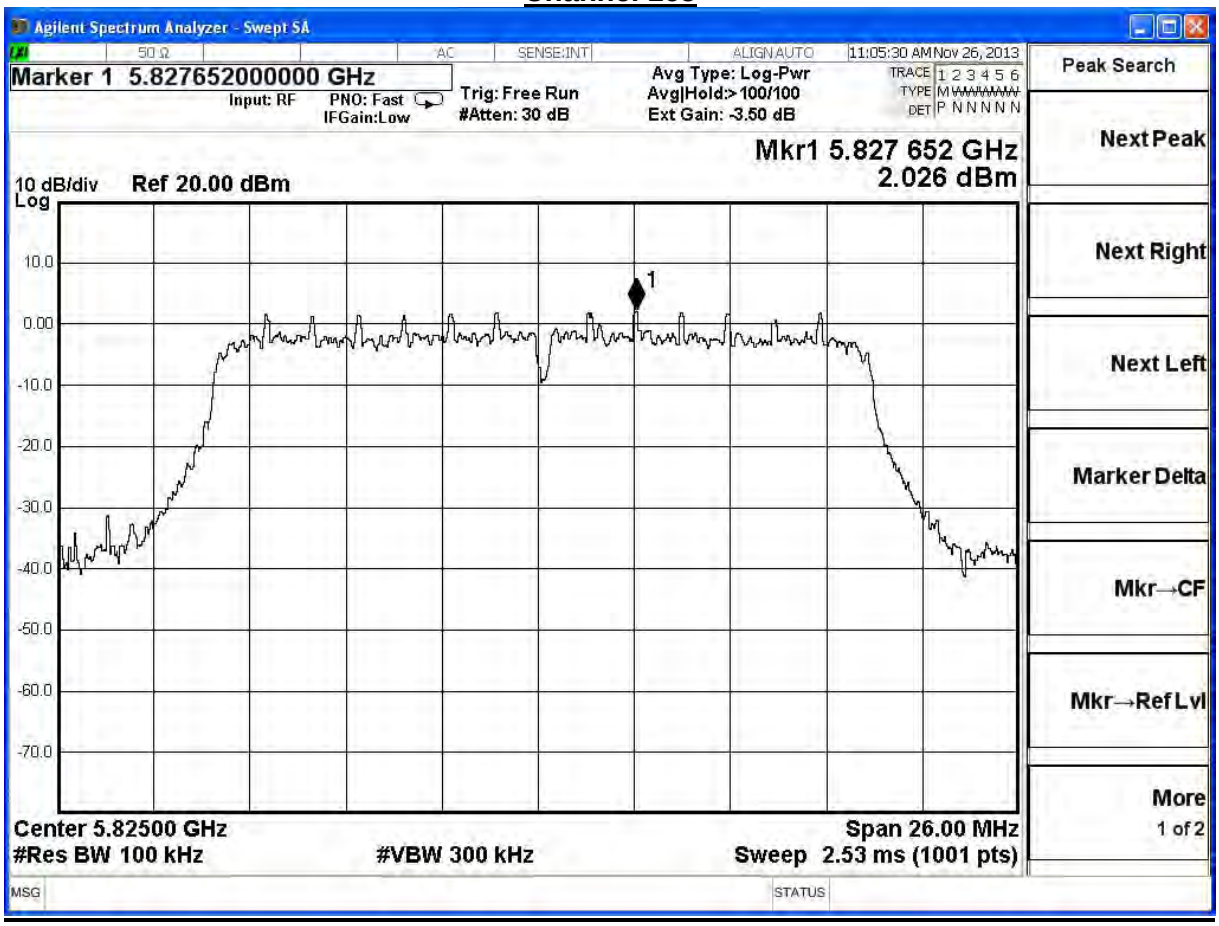
Channel 149



Channel 157


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:02:07 AM Nov 26, 2013
Marker 1 5.786404000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -3.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.786 404 GHz
2.753 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.78500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
MSG
STATUS
Peak Search
Next Peak
Next Right
Next Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

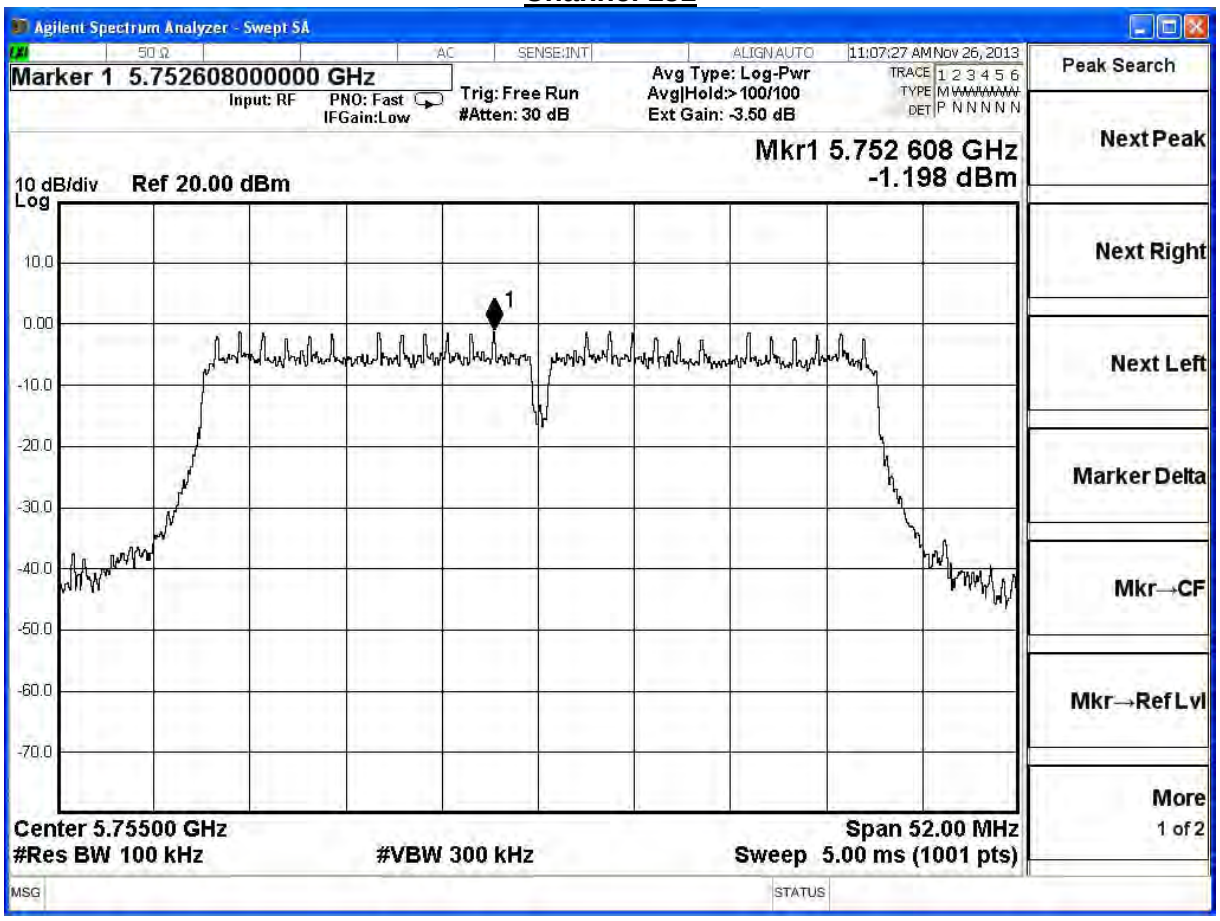
Channel 165


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:05:30 AM Nov 26, 2013
Marker 1 5.827652000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -3.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.827 652 GHz
2.026 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 5.82500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 26.00 MHz
Sweep 2.53 ms (1001 pts)
MSG
STATUS
Peak Search
Next Peak
Next Right
Next Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

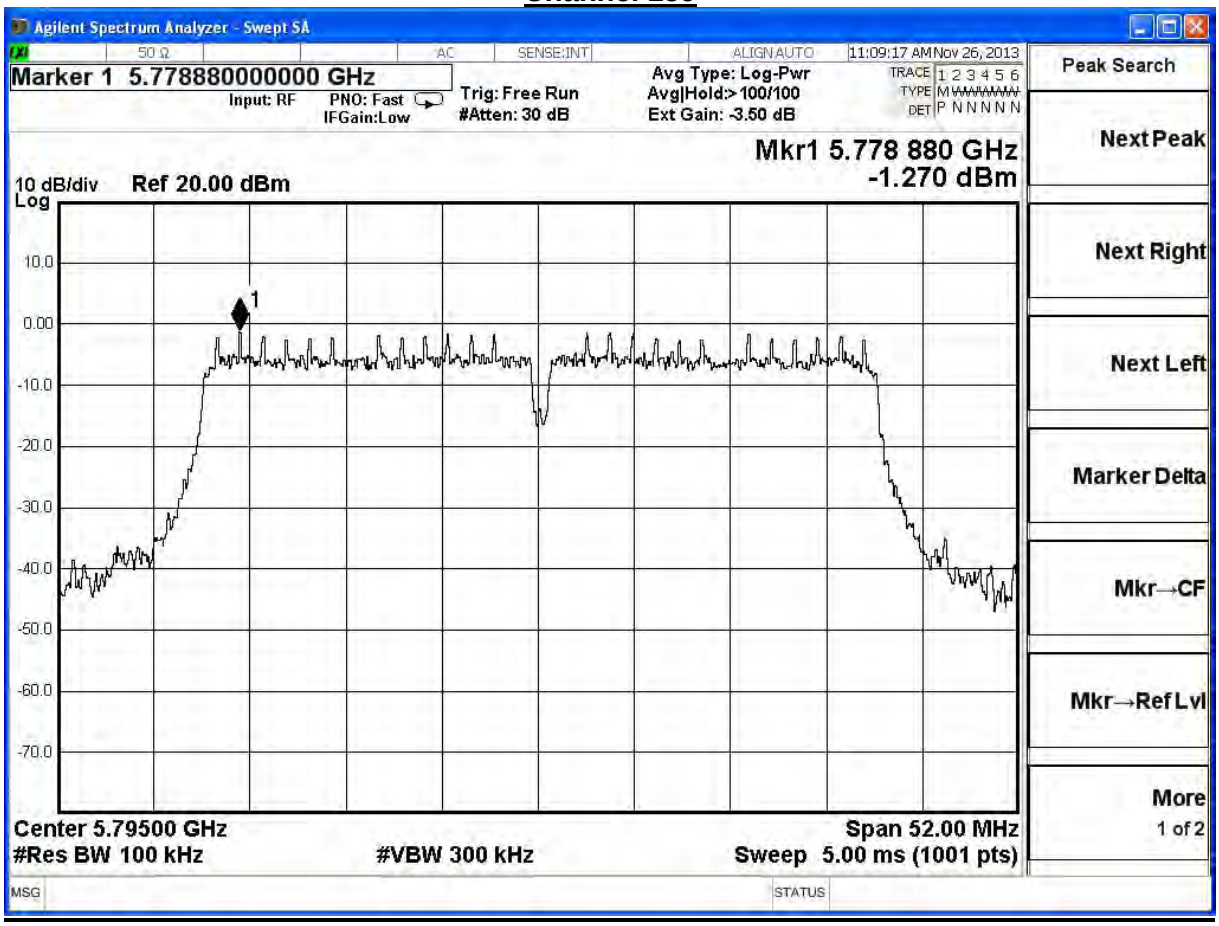
Product	Wireless-AC450 USB Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

IEEE802.11n_40MHz, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	-1.18	≦8	Pass
159	5795	-1.27	≦8	Pass

Channel 151



Channel 159


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:09:17 AM Nov 26, 2013
Marker 1 5.778880000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -3.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 5.778 880 GHz
-1.270 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.79500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 52.00 MHz
Sweep 5.00 ms (1001 pts)
MSG
STATUS
Peak Search
Next Peak
Next Right
Next Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

Product	Wireless-AC450 USB Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/11/26	Test Site	SR7

IEEE802.11ac_80MHz, ANT 0				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
155	5775	-3.03	≦8	Pass

Channel 155