

# Test Report

Industry Canada RSS-Gen Issue 4/RSS-210 Issue 8  
FCC Part15 Subpart E

Product Name : IP-STB  
Model No. : 3500X  
FCC ID : TC2-R1008  
IC : 5959A-R1008

Applicant : Roku Inc.

Address : 12980 Saratoga Ave, Suite D Saratoga, CA 95070

Date of Receipt : Jul. 23, 2014  
Test Date : Dec. 20, 2014~ Dec. 24, 2014  
Issued Date : Jan. 20, 2015  
Report No. : 1470479R-RF-US-P09V01  
Report Version : V1.1



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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# Test Report Certification

Issued Date : Jan. 20, 2015

Report No. : 1470479R-RF-US-P09V01



Product Name : IP-STB

Applicant : Roku Inc.

Address : 12980 Saratoga Ave, Suite D Saratoga, CA 95070

Manufacturer : Ambit Mircosystems (Shanghai) LTD.

Address : 1925, Nanle Road, Songjiang Export Processing Zone,  
Shanghai, China 201613

Model No. : 3500X

FCC ID : TC2-R1008

IC : 5959A-R1008

EUT Voltage : 100-240Vac +/-10%

Brand Name : Roku

Applicable Standard : FCC CFR Title 47 Part 15 Subpart E: 2014  
ANSI C63.4: 2009; KDB 789033  
Industry Canada RSS-Gen Issue 4/RSS-210 Issue 8

Test Result : Complied

Performed Location : Suzhou EMC Laboratory  
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FCC Registration Number: 800392; IC Lab Code: 4075B

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## Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety 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, EN 45001 and specified testing scope:

<b>Taiwan R.O.C.</b>	<b>:</b>	<b>BSMI, NCC, TAF</b>
<b>Germany</b>	<b>:</b>	<b>TUV Rheinland</b>
<b>Norway</b>	<b>:</b>	<b>Nemko, DNV</b>
<b>USA</b>	<b>:</b>	<b>FCC</b>
<b>Japan</b>	<b>:</b>	<b>VCCI</b>
<b>China</b>	<b>:</b>	<b>CNAS</b>

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:

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**History of This Test Report**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1470479R-RF-US-P09V01	V1.0	Initial Issued Report	Dec. 24, 2014
1470479R-RF-US-P09V01	V1.1	Add the power measurement	Jan. 20, 2015

1. General Information

1.1. EUT Description

Product Name	IP-STB
Brand Name	Roku
Model No.	3500X
EUT Voltage	100-240Vac +/-10%
Frequency Range	<p><b>For 2.4GHz Band</b>                      802.11b/g/n(20MHz): 2412~2462MHz                      802.11n(40MHz): 2422~2452MHz</p> <p><b>For 5.0GHz Band</b>                      802.11a/n(20MHz):                      5180~5240MHz, 5745~5825MHz                      802.11n(40MHz):                      5190~5230MHz,, 5755~5795MHz</p>
Channel Number	<p>For 2.4GHz Band                      802.11b/g/n(20MHz): 11 802.11n(40MHz): 7</p> <p>For 5.0GHz Band                      802.11a /n(20MHz) /ac(20MHz): 9 802.11n(40MHz): 4</p>
Type of Modulation	802.11b: DSSS 802.11a/g/n: OFDM
Data Rate	802.11a/g: 6/9/12/18/24/36/48/54 Mbps 802.11b: 1/2/5.5/11 Mbps 802.11n: up to 300 Mbps
Channel Control	Auto
Antenna Delivery	2*Tx + 2*Rx
Antenna Type	Printed Antenna
Peak Antenna Gain	2dBi for 2.4GHz and 5GHz

This report is an updated report based on 1410471R. Comparison of the original sample, the EUT only changed flash memory. Manufacturer has declared that the flash memory is the only difference. The RF characterize keeps identical, and the RSE & Bandedge parts were re-assessed.

We found for spurious emission, the deviation is less than 3dB comparing with the original test data.

**For 2.4GHz Band**

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

**For 5.0GHz Band**

802.11a/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	N/A	N/A	N/A	N/A	N/A	N/A

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz	159	5795 MHz

Power Parameter Value of the test software

Test Mode	Test Channel	Ant 0	Ant 1	Ant 0+1
802.11a	5180	64	64	x
	5200	68	68	x
	5240	66	66	x
802.11n(20MHz)	5180	48	48	48
	5200	52	52	52
	5240	48	48	48
802.11n(40MHz)	5190	48	48	48
	5230	48	48	48

Duty Cycle

Test Mode	Duty Cycle
802.11a	96%
802.11n(20MHz)	95%
802.11n(40MHz)	96%



**1.2. Mode of Operation**

Quietek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmit by 802.11 a
Mode 2: Transmit by 802.11n(20MHz)
Mode 3 Transmit by 802.11n(40MHz)

Note:

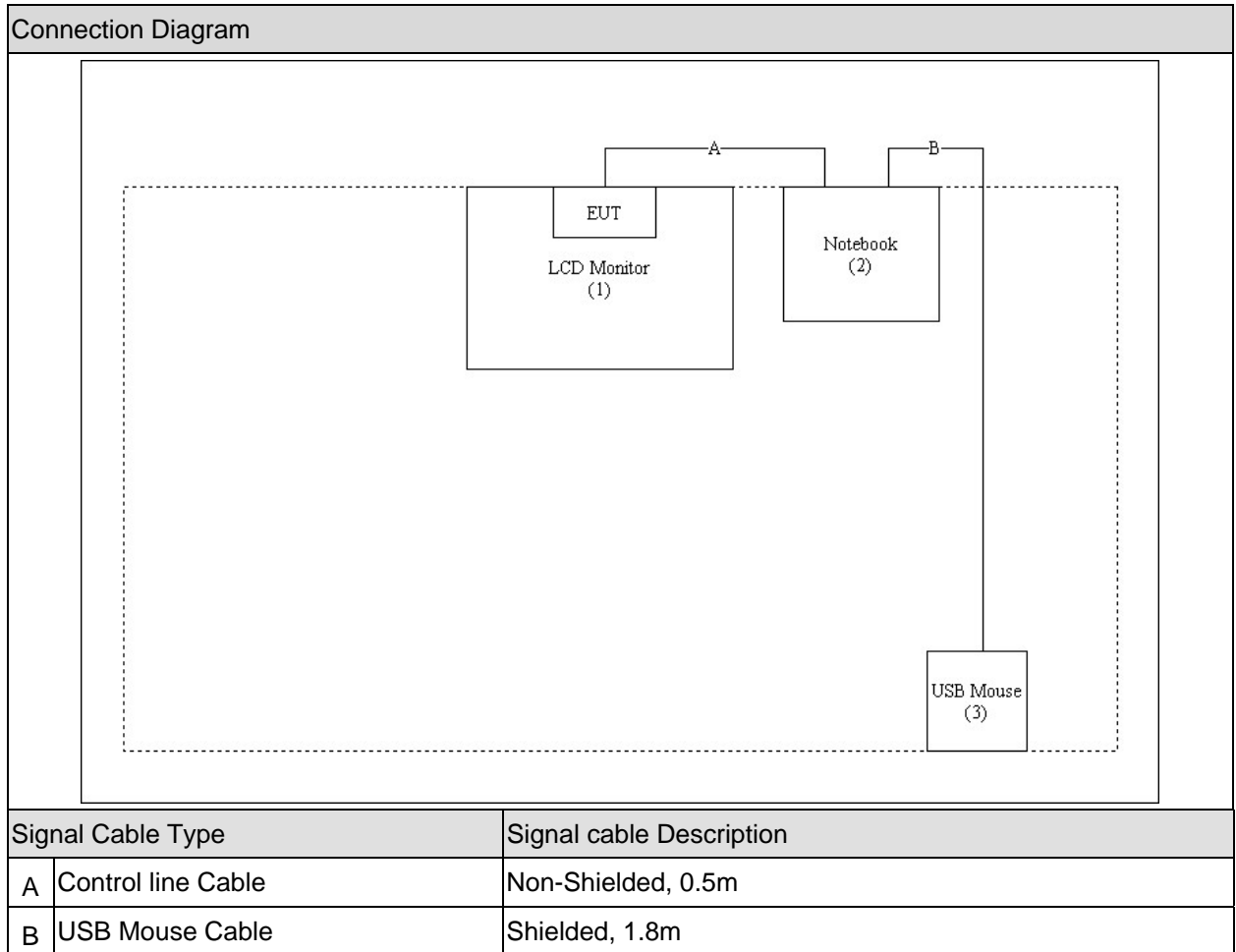
1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

**1.3. 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.	Power Cord
1 LCD Monitor	DELL	U2410f	N/A	Non-Shielded, 1.8m
2 Notebook	Think Pad	R400	R8-MTNE5	Power by adapter
3 USB Mouse	DELL	M-UVDEL1	LNAS2162651	Power by Notebook

1.4. Configuration of Tested System



**1.5. EUT Exercise Software**

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Input the play instruction to EUT using "hyperterm" and set the test mode and channel, then press OK to start continue Transmit or receive.

**2. Technical Test**

**2.1. Summary of Test Result**

- No deviations from the test standards
- Deviations from the test standards as below description:

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.207	No	N/A
Radiated Emission	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.209	Yes	No
Operation Frequency Range of 20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart E: 2014 15.215(c)	No	N/A
26dB Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.407(a)	No	N/A
Power Output	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.407(a)	No	N/A
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.407(a)	No	N/A
Peak Excursion	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.407(a)(6)	No	N/A
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.205, 15.407(b)	Yes	No
Frequency Stability	FCC CFR Title 47 Part 15 Subpart E: 2014 Section 15.407(g)	No	N/A

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	RSS-Gen Issue 4 November 2014 Table 2	No	N/A
Radiated Emission	RSS-210 Issue 8 December 2010 Section 2.7 Table 2 and Table 3	Yes	No
99% Occupied Bandwidth	RSS-Gen Issue 4 November 2014 Section 4.6.1 and 4.6.2	No	N/A
Power Output	RSS-210 Issue 8 December 2010 A9.2	Yes	No
Peak Power Spectral Density	RSS-210 Issue 8 December 2010 A9.2/A9.5	No	N/A
Radiated Emission Band Edge	RSS-210 Issue 8 December 2010 A9.3	Yes	No
Frequency Stability	RSS-210 Issue 8 December 2010 A9.5(5)	No	N/A

**2.2. Test Environment**

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

### 3. Power Output

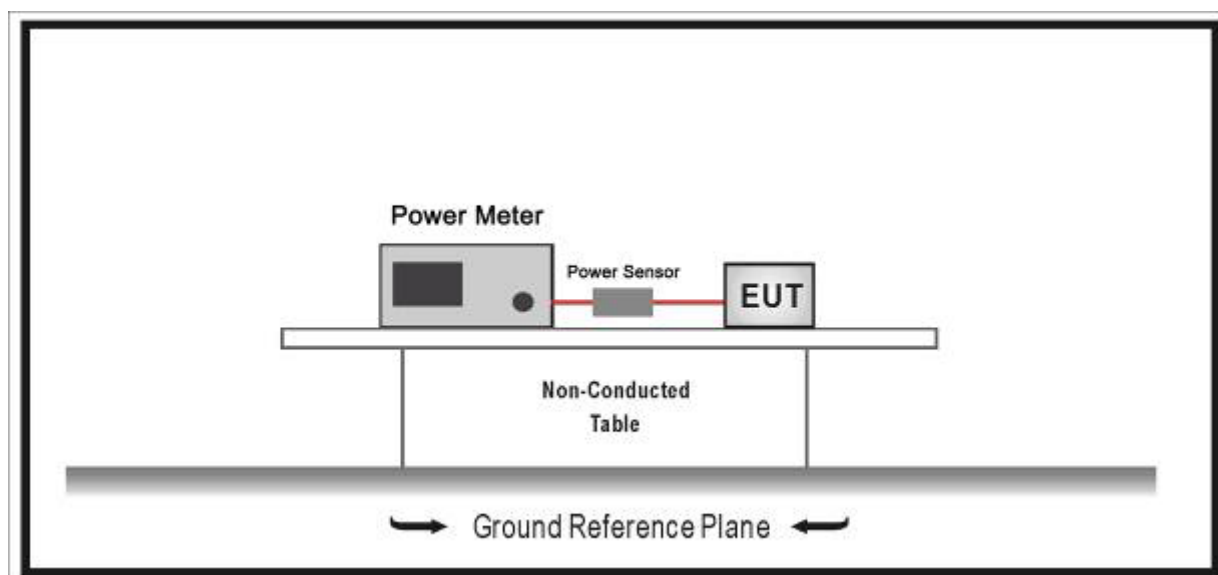
#### 3.1. Test Equipment

Power Output / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2014.11.01
Power Sensor	Anritsu	MA2411B	0846014	2014.11.01
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2014.05.07

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

#### 3.2. Test Setup



#### 3.3. Limit

- For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or  $4 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- For the band 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. If transmitting antenna of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6



dBi.

- For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10log B, where B is the 26 dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antenna with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power for each 1 dB of antenna gain in excess of 23 dBi would be required.

### 3.4. Test Procedure

The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

Use the wideband power meter to test RMS power and record the result.

### 3.5. Uncertainty

The measurement uncertainty is defined as  $\pm 1.27$  dB

**3.6. Test Result**

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (blue marker) for final test of each channel.

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)				
		802.11a	20MHz Bandwidth		40MHz Bandwidth	
			800ns GI	400ns GI	800ns GI	400ns GI
0	1	6	6.5	7.2	13.5	15.0
1	1	9	13.0	14.4	27.0	30.0
2	1	12	19.5	21.7	40.5	45.0
3	1	18	26.0	28.9	54.0	60.0
4	1	24	39.0	43.3	81.0	90.0
5	1	36	52.0	57.8	108.0	120.0
6	1	48	58.5	65.0	121.5	135.0
7	1	54	65.0	72.2	135.0	150.0
8	2	---	13.0	14.4	27.0	30.0
9	2	---	26.0	28.9	54.0	60.0
10	2	---	39.0	43.3	81.0	90.0
11	2	---	52.0	57.8	108.0	120.0
12	2	---	78.0	86.7	162.0	180.0
13	2	---	104.0	115.6	216.0	240.0
14	2	---	117.0	130.0	243.0	270.0
15	2	---	130.0	144.0	270.0	300.0

Power output at various data rates:

Test Mode	Bandwidth	Frequency (MHz)	Channel	Data Rate	RMS Power (dBm)
802.11a(Ant 0)	20	5200	40	6	16.51
				24	16.33
				54	16.26
802.11n(Ant 0)	20	5200	40	HT0	12.62
				HT4	12.23
				HT7	12.30
802.11n(Ant 0)	40	5190	38	HT0	11.17
				HT4	11.01
				HT7	10.91

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (ant0 )

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
36	5180	15.82	N/A	15.82	17.00	Pass
40	5200	16.51	N/A	16.51	17.00	Pass
48	5240	16.30	N/A	16.30	17.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n(20MHz) (ant0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
36	5180	11.71	N/A	11.71	17.00	Pass
40	5200	12.62	N/A	12.62	17.00	Pass
48	5240	11.77	N/A	11.77	17.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n(40MHz) (ant0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
38	5190	11.17	N/A	11.17	17.00	Pass
46	5230	11.21	N/A	11.21	17.00	Pass

Product	: IP-STB
Test Item	: Power Output
Test Site	: TR-8
Test Mode	: Mode 1: Transmit by 802.11a (ant1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
36	5180	N/A	15.65	15.65	17.00	Pass
40	5200	N/A	16.70	16.70	17.00	Pass
48	5240	N/A	16.40	16.40	17.00	Pass

Product	: IP-STB
Test Item	: Power Output
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11n(20MHz) (ant1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
36	5180	N/A	11.85	11.85	17.00	Pass
40	5200	N/A	12.95	12.95	17.00	Pass
48	5240	N/A	11.60	11.60	17.00	Pass

Product	: IP-STB
Test Item	: Power Output
Test Site	: TR-8
Test Mode	: Mode 3: Transmit by 802.11n(40MHz) (ant1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
38	5190	N/A	11.24	11.24	17.00	Pass
46	5230	N/A	11.62	11.62	17.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n(20MHz) (ant0+1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
36	5180	10.10	11.35	13.78	17.00	Pass
40	5200	11.31	12.23	14.80	17.00	Pass
48	5240	10.22	11.31	13.81	17.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n(40MHz) (ant0+1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
38	5190	10.02	11.30	13.72	17.00	Pass
46	5230	9.41	11.65	13.68	17.00	Pass

#### 4. Radiated Emission

##### 4.1. Test Equipment

###### Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2014.03.30
Loop Antenna	R&S	HFH2-Z2	833799/003	2014.11.17
Bilog Chainenna	Teseq GmbH	CBL6112D	27611	2014.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2014.03.01
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC2-TH	2014.01.08

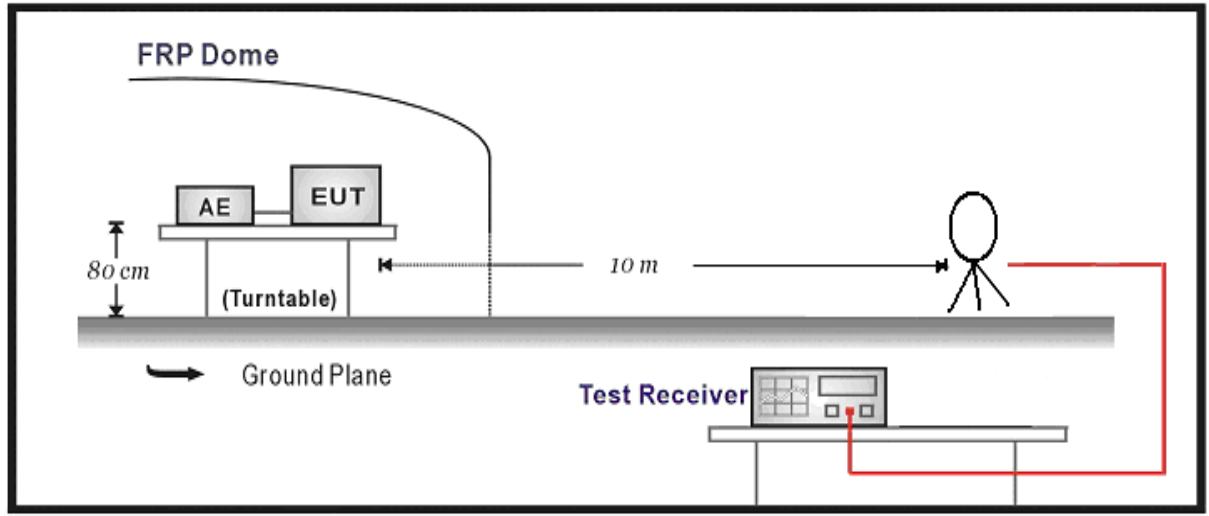
###### Radiated Emission / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2014.03.30
Spectrum Analyzer	Agilent	E4446A	MY45300103	2014.01.21
Preamplifier	Miteq	NSP1800-25	1364185	2014.05.04
Preamplifier	QuieTek	AP-040G	CHM-0906001	2014.05.04
DRG Horn	ETS-Lindgren	3117	00123988	2014.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2014.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2014.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2014.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2014.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2014.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2014.01.08

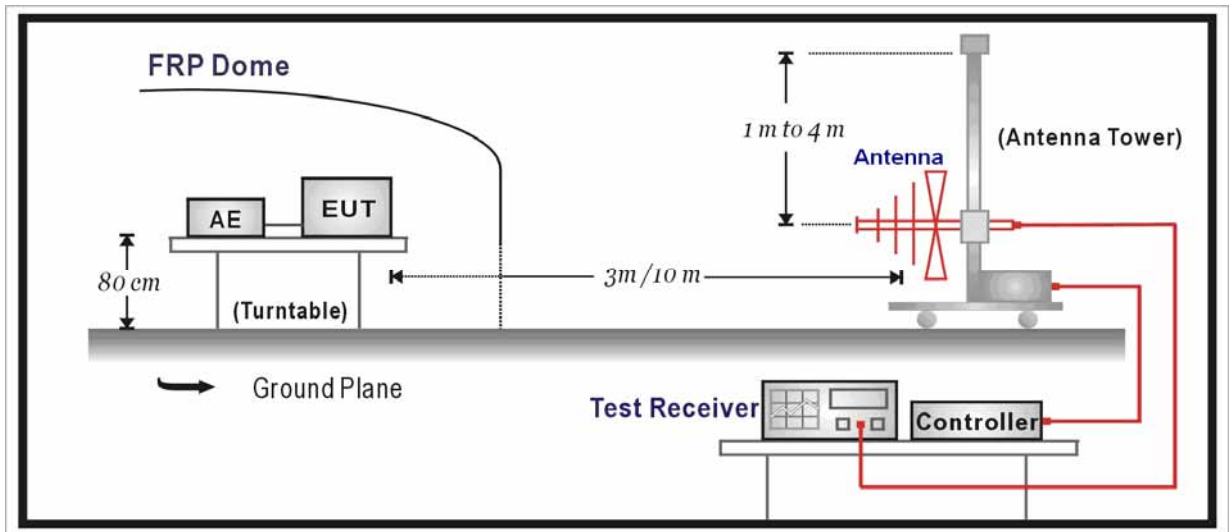
Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup

Below 30MHz Test Setup:

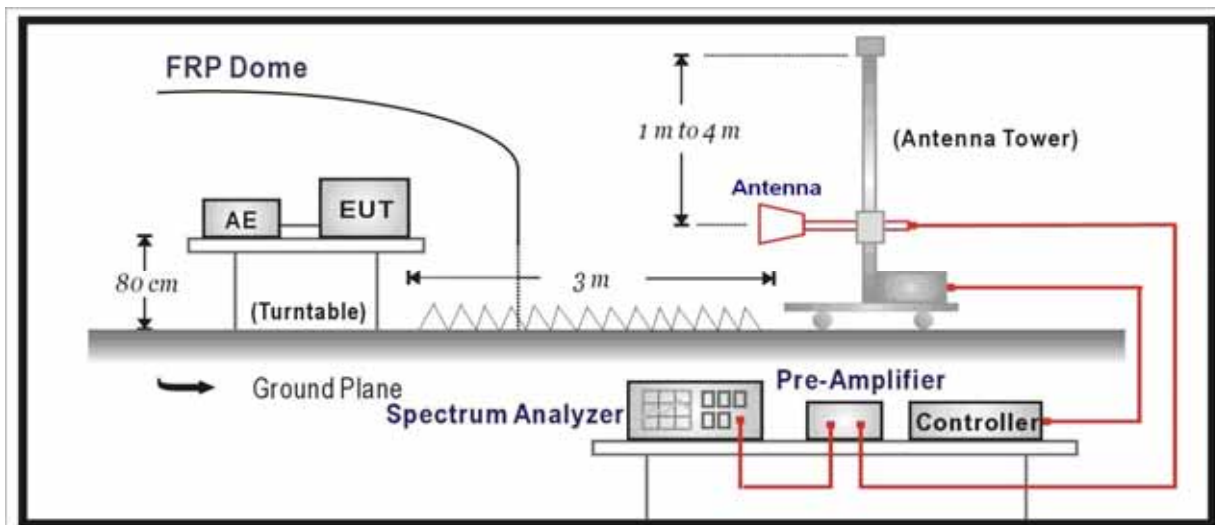


Below 1GHz Test Setup:





Above 1GHz Test Setup:



### 4.3. Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument Chainenna and the closed point of any part of the device or system.

Note 3:  $E$  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 & KDB 789033.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from Chainenna to the EUT was 3 meters.

The Chainenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the Chainenna. In order to find

the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn Chainenna will be bended down a little (as horn Chainenna has the narrow beamwidth) in order to keeping the Chainenna in the “cone of radiation” of EUT. The 3dB beamwidth is 60~10 degrees for H-plane and 90~10 degrees for E-plane.

#### **4.5. Uncertainty**

The measurement uncertainty above 1G is defined as  $\pm 3.9$  dB  
below 1G is defined as  $\pm 3.8$  dB

## 4.6. Test Result

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Mode1: Transmit by 802.11a

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0	36	H	10358.4	35.5	13.7	49.2	54(Note3)	-4.8	PK
		V	10360.0	37.4	13.7	51.1	54(Note3)	-2.9	PK
		H	15540.0	23.3	22	45.3	54(Note3)	-8.7	PK
		V	15540.0	23.2	21.8	45.0	54(Note3)	-9.0	PK
	40	H	10401.0	35.5	13.8	49.3	54(Note3)	-4.7	PK
		V	10401.0	38.4	13.8	52.2	54(Note3)	-1.8	PK
		H	15600.0	22.1	22.9	45.0	54(Note3)	-9.0	AV
		V	15603.0	25.3	22.8	48.1	54(Note3)	-5.9	PK
	48	H	10476.8	37.5	13.7	51.2	54(Note3)	-2.8	PK
		V	10486.5	38.3	13.7	52.0	54(Note3)	-2.0	PK
		H	15720.0	22.1	22.1	44.2	54(Note3)	-9.8	PK
		V	15720.5	24.2	22	46.2	54(Note3)	-7.8	AV
Ant 1	36	H	10358.0	41.4	13.7	55.1	74.0	-18.9	PK
		H	10358.0	32.3	13.7	46.0	54.0	-8.0	AV
		V	10358.5	44.6	13.7	58.3	74.0	-15.7	PK
		V	10358.0	32.2	13.7	45.9	54.0	-8.1	AV
		H	15543.5	30.7	22.0	52.7	54(Note3)	-1.3	PK
		V	15535.0	31.4	21.8	53.2	54(Note3)	-0.8	PK
	40	H	10408.0	39.3	13.8	53.1	54(Note3)	-0.9	PK
		V	10393.5	39.1	13.8	52.9	54(Note3)	-1.1	PK
		H	15600.0	23.5	22.9	46.4	54(Note3)	-7.6	PK
		V	15600.05	22.4	22.8	45.2	54(Note3)	-8.8	PK
	48	H	10477.0	42.3	13.7	56.0	74.0	-18.0	PK
		H	10477.0	32.6	13.7	46.3	54.0	-7.7	AV
		V	10486.5	47.4	13.7	61.1	74.0	-12.9	PK
		V	10486.5	34.1	13.7	47.8	54.0	-6.2	AV
		H	15722.0	28.3	22.1	50.4	54(Note3)	-3.6	PK

		V	15713.0	29.2	22.1	51.3	54(Note3)	-2.7	PK
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Note: 1. Measure Level = Reading Level + Factor.

2. The test trace is same as the ambient noise (the test frequency range: 9kHz~30MHz, 18GHz~25GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode2: Transmit by 802.11n(20MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0	36	H	10358.5	36.4	13.7	50.1	54(Note3)	-3.9	PK
		V	10358.7	39.3	13.7	53.0	54(Note3)	-1.0	PK
		H	15543.5	25.1	22.0	47.1	54(Note3)	-6.9	PK
		V	15535.5	25.9	21.8	47.7	54(Note3)	-6.3	PK
	44	H	10401.6	32.5	13.8	46.3	54(Note3)	-7.7	PK
		V	10392.4	32.1	13.8	45.9	54(Note3)	-8.1	PK
		H	15600.2	20.3	22.9	43.2	54(Note3)	-10.8	PK
		V	15600.3	20.5	22.8	43.3	54(Note3)	-10.7	AV
	48	H	10486.4	32.1	13.7	45.8	54(Note3)	-8.2	PK
		V	10477.5	39.3	13.7	53.0	54(Note3)	-1.0	PK
		H	15720.0	21.3	22.1	43.4	54(Note3)	-10.6	PK
		V	15730.4	25.1	22.0	47.1	54(Note3)	-6.9	PK
Ant 1	36	H	10358.5	37.4	13.7	51.1	54(Note3)	-2.9	PK
		V	10358.0	44.1	13.7	57.8	74.0	-16.2	PK
		V	10358.0	31.5	13.7	45.2	54.0	-8.8	AV
		H	15543.0	31.3	22.0	53.3	54(Note3)	-0.7	PK
		V	15543.5	34.5	21.8	56.3	74.0	-17.7	PK
		V	15543.5	22.4	21.8	44.2	54.0	-9.8	AV
	44	H	10401.0	29.5	13.8	43.3	54.0	-10.7	AV
		V	10401.0	40.4	13.8	54.2	74.0	-19.8	PK
		V	10401.5	36.1	13.8	49.9	54(Note3)	-4.1	PK
		H	15600.5	20.2	22.9	43.1	54(Note3)	-10.9	PK
48	V	15603.0	22.3	22.8	45.1	54(Note3)	-8.9	PK	
	H	10486.3	43.9	13.7	57.6	74.0	-16.4	PK	
		H	10486.5	31.5	13.7	45.2	54.0	-8.8	AV

		V	10486.0	46.1	13.7	59.8	74.0	-14.2	PK
		V	10486.0	36.3	13.7	50.0	54.0	-4.0	AV
		H	15722.4	25.2	22.1	47.3	54(Note3)	-6.7	PK
		V	15730.3	31.1	22.0	53.1	54(Note3)	-0.9	PK
Ant 0+1	36	H	10358.0	38.5	13.7	52.2	54(Note3)	-1.8	PK
		V	10358.0	43.1	13.7	56.8	74.0	-17.2	PK
		V	10358.0	31.3	13.7	45.0	54.0	-9.0	AV
		H	15543.0	31.1	22.0	53.1	54(Note3)	-0.9	PK
		V	15543.5	31.5	21.8	53.3	54(Note3)	-0.7	PK
	44	H	10401.5	39.1	13.8	52.9	54(Note3)	-1.1	PK
		V	10401.4	37.7	13.8	51.5	54(Note3)	-2.5	PK
		H	15600.0	21.5	22.9	44.4	54(Note3)	-9.6	PK
		V	15603.3	22.8	22.8	45.6	54(Note3)	-8.4	PK
	48	H	10477.2	40.5	13.7	53.4	54(Note3)	-0.6	PK
		V	10469.0	39.3	13.7	53.0	54(Note3)	-1.0	PK
		H	15720.1	20.4	22.1	42.5	54(Note3)	-11.5	PK
V		15720.0	20.6	22.0	42.6	54(Note3)	-11.4	PK	

Note: 1. Measure Level = Reading Level + Factor.

2. The test trace is same as the ambient noise (the test frequency range: 9kHz~30MHz, 18GHz~25GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode3: Transmit by 802.11n(40MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0	38	H	10380.5	27.4	13.7	41.1	54(Note3)	-12.9	PK
		V	10375.5	31.5	13.7	45.2	54(Note3)	-8.8	PK
		H	15570.4	21.1	22.0	43.1	54(Note3)	-10.9	PK
		V	15570.0	21.2	21.8	43.0	54(Note3)	-11.0	PK
	46	H	10460.2	27.3	13.7	41.0	54(Note3)	-13.0	PK
		V	10452.0	34.7	13.7	48.4	54(Note3)	-5.6	PK
		H	15690.0	21.5	22.1	43.6	54(Note3)	-10.4	PK
		V	15690.3	22.5	22.1	44.6	54(Note3)	-9.4	PK
	38	H	10375.5	33.6	13.7	47.3	54(Note3)	-6.7	PK

Ant 1		V	10375.5	39.4	13.7	53.1	54(Note3)	-0.9	PK
		H	15570.0	21.9	22.0	43.9	54(Note3)	-10.1	PK
		V	15570.5	23.5	21.8	45.3	54(Note3)	-8.7	PK
	46	H	10469.0	34.5	13.7	48.2	54(Note3)	-5.8	PK
		V	10469.5	39.4	13.7	53.1	54(Note3)	-0.9	PK
		H	15690.0	20.3	22.1	42.4	54(Note3)	-11.6	PK
		V	15690.5	23.2	22.1	45.3	54(Note3)	-8.7	PK
Ant 0+1	38	H	10392.5	35.7	13.7	49.4	54(Note3)	-4.6	PK
		V	10375.0	39.5	13.7	53.2	54(Note3)	-0.8	PK
		H	15570.5	23.1	22.0	45.1	54(Note3)	-8.9	PK
		V	15569.4	27.9	21.8	49.7	54(Note3)	-4.3	PK
	46	H	10460.5	37.2	13.7	50.9	54(Note3)	-3.1	PK
		V	10460.5	43.1	13.7	56.8	74.0	-17.2	PK
		V	10460.0	31.3	13.7	45.0	54.0	-9.0	AV
		H	15690.0	24.2	22.1	46.3	54(Note3)	-7.7	PK
		V	15688.5	29.7	22.1	51.8	54(Note3)	-2.2	PK

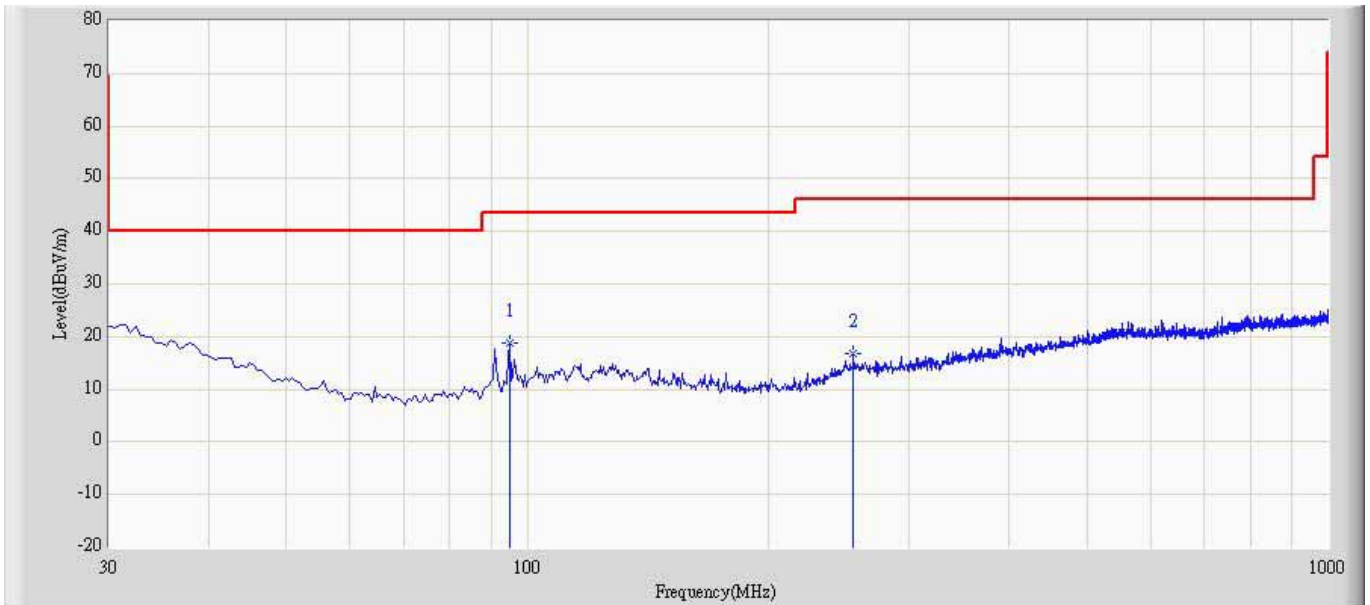
Note: 1. Measure Level = Reading Level + Factor.

2. The test trace is same as the ambient noise (the test frequency range: 9kHz~30MHz, 18GHz~25GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

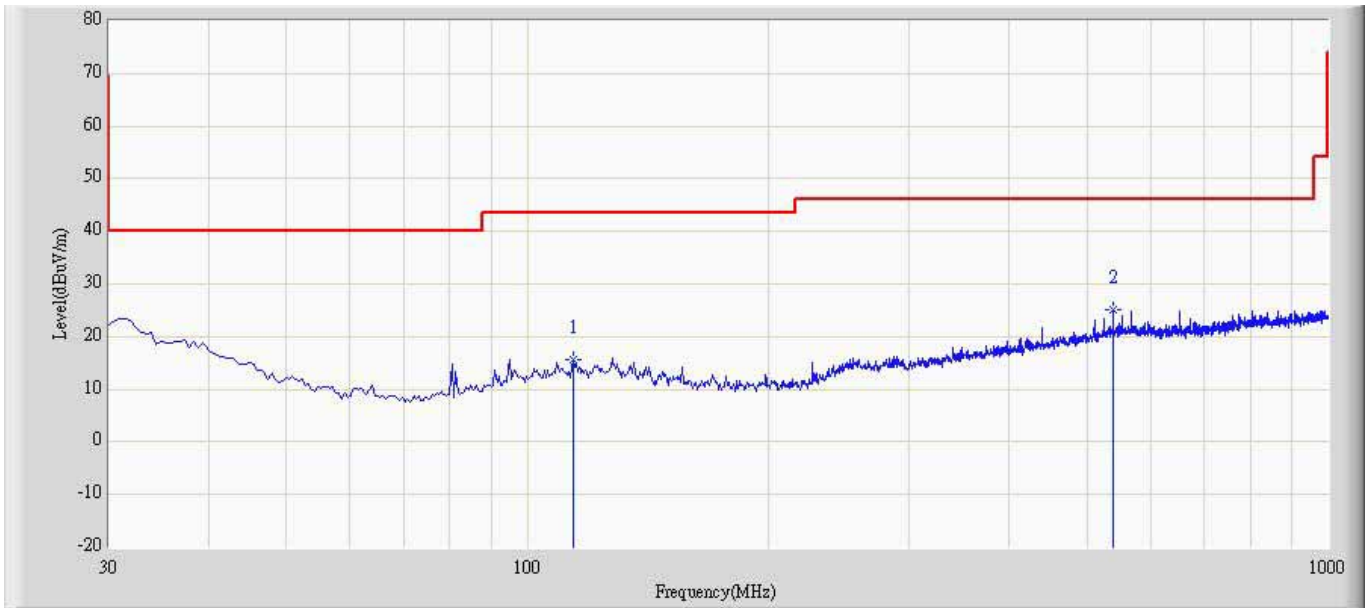
### The worst case of Radiated Emission below 1GHz:

Engineer: Cloud	
Site: AC3	Time: 2014/12/22 - 14:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_10m (30-1000MHz)20130511	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at channel 5180MHz by 802.11n20MHz ant0	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	94.990	18.717	8.038	-24.783	43.500	10.679	QP
2		255.525	16.892	2.401	-29.108	46.000	14.491	QP

Engineer: Cloud	
Site: AC3	Time: 2014/12/22 - 14:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_10m (30-1000MHz)20130511	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at channel 5180MHz by 802.11n20MHz ant0	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		113.905	15.665	2.990	-27.835	43.500	12.675	QP
2	*	539.250	25.255	4.343	-20.745	46.000	20.912	QP



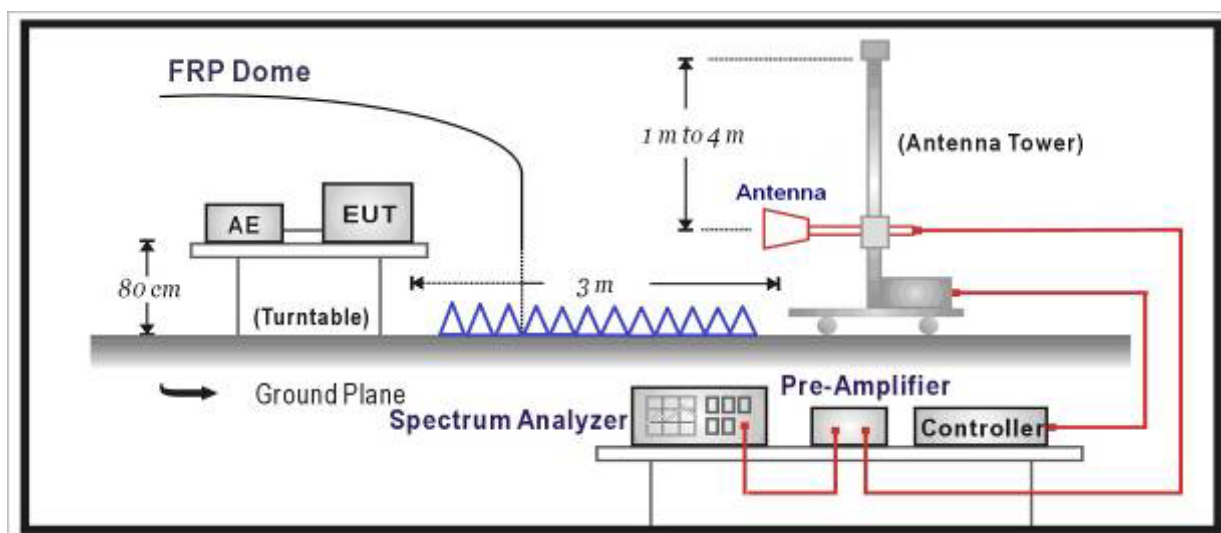
## 5. Radiated Emission Band Edge

### 5.1. Test Equipment

☒ Radiated Emission Band Edge / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2014.03.30
Preamplifier	Miteq	NSP1800-25	1364185	2014.05.04
Preamplifier	QuieTek	AP-040G	CHM-0906001	2014.05.04
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2014.10.15
DRG Horn	ETS-Lindgren	3117	00123988	2015.01.21
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2014.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2014.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2014.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2014.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2014.01.08

### 5.2. Test Setup



### 5.3. Limit

**For 15.205 requirement:**

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )

**For 15.407(b) requirement:**

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

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBuV/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3
5725 - 5825	-27 [Note(1)]	68.3
	-17 [Note(2)]	78.3

Note(1): Outside the frequency range 5715 - 5835MHz.

Note(2): Within the frequency range from the band edge to 10MHz below or above the band edge, 5715 – 5725MHz and 5825 - 5835MHz.

## 5.4. Test Procedure

The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 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 is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2009 on radiated measurement.

Note: When doing emission measurement above 1GHz, the horn Chainenna will be bended down a little (as horn Chainenna has the narrow beamwidth) in order to keeping the Chainenna in the "cone of radiation" of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

## 5.5. Uncertainty

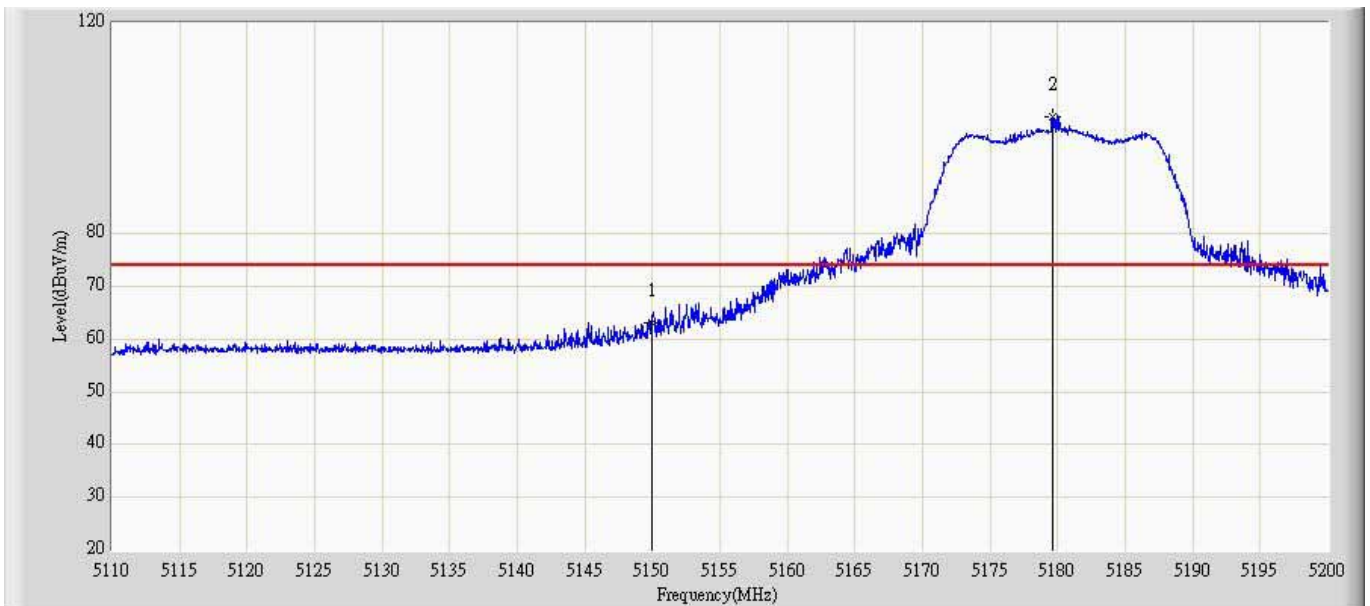
The measurement uncertainty above 1GHz is defined as  $\pm 3.9$  dB

5.6. Test Result

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

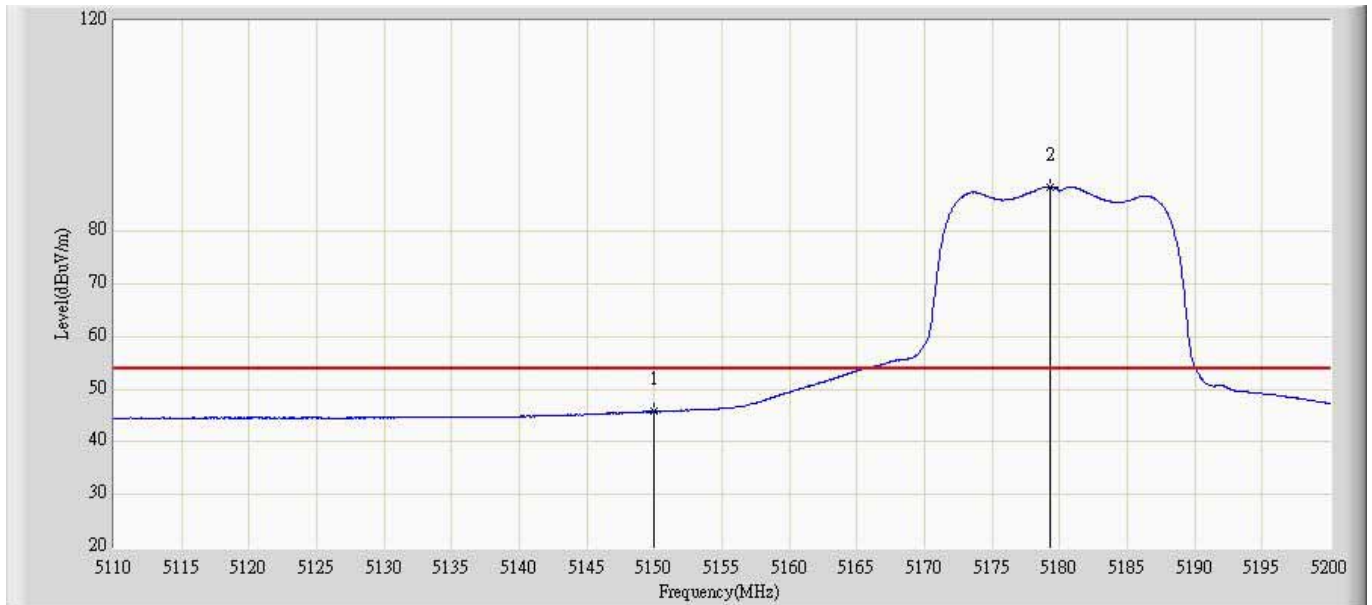
Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 09:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant0	



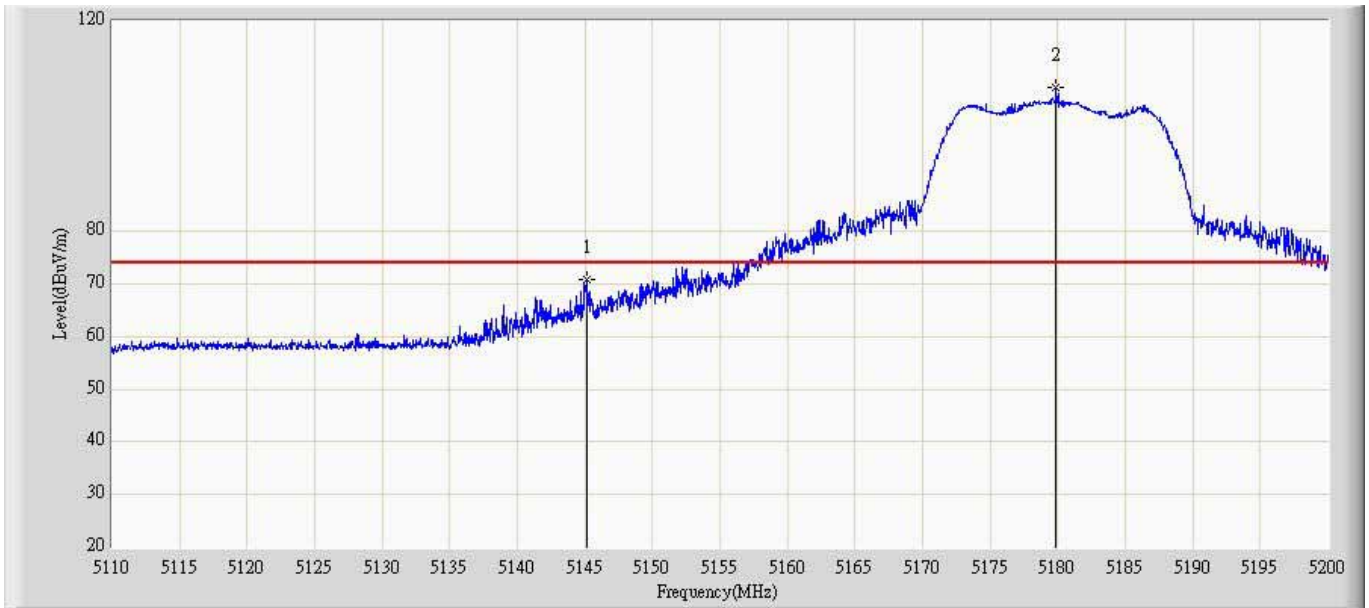
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	63.264	21.223	-10.736	74.000	42.041	PK
2		*	5179.351	102.241	60.124	N/A	N/A	42.117	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 09:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant0	



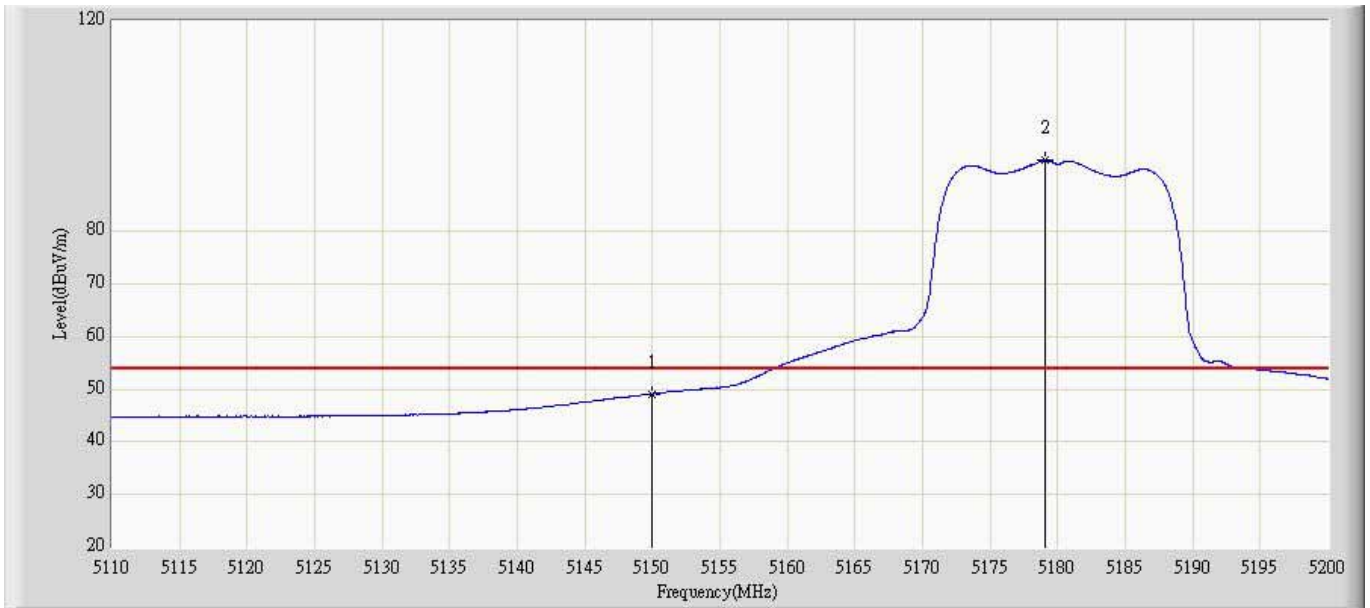
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	45.822	3.781	-8.178	54.000	42.041	AV
2		*	5179.356	88.342	46.225	N/A	N/A	42.117	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 09:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant0	



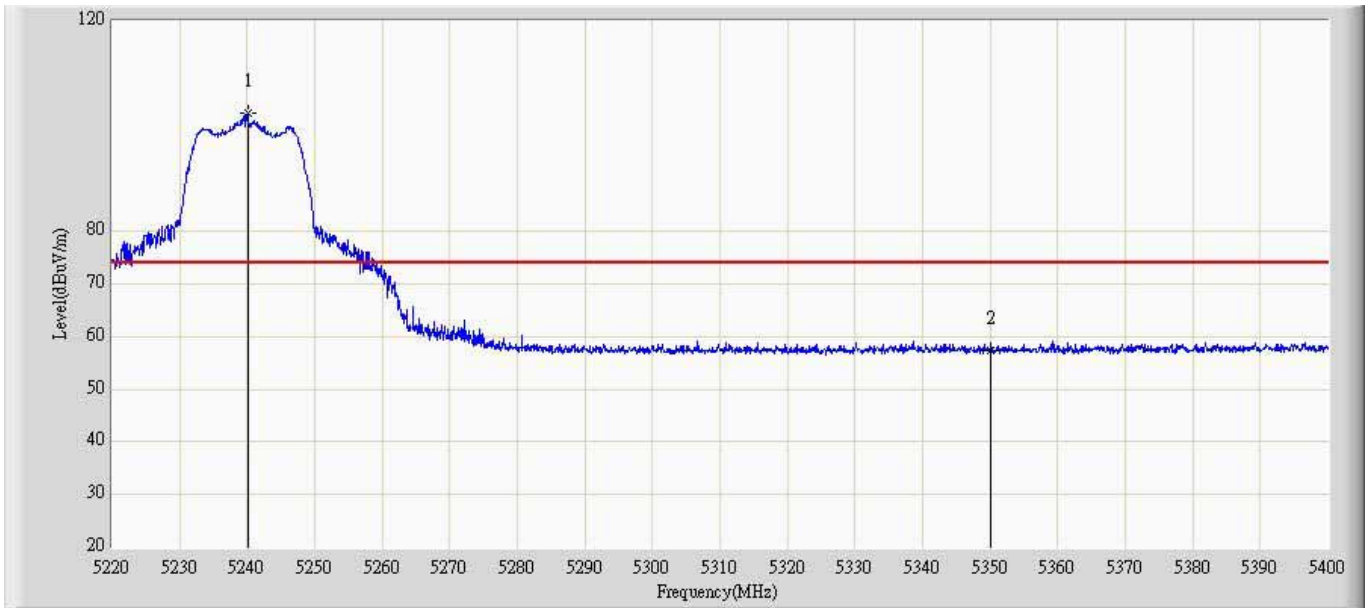
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5145.168	70.895	28.897	-3.105	74.000	41.998	PK
2		*	5179.697	107.365	65.335	N/A	N/A	42.030	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 09:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	49.257	7.256	-4.743	54.000	42.001	AV
2		*	5179.125	93.375	51.345	N/A	N/A	42.030	AV

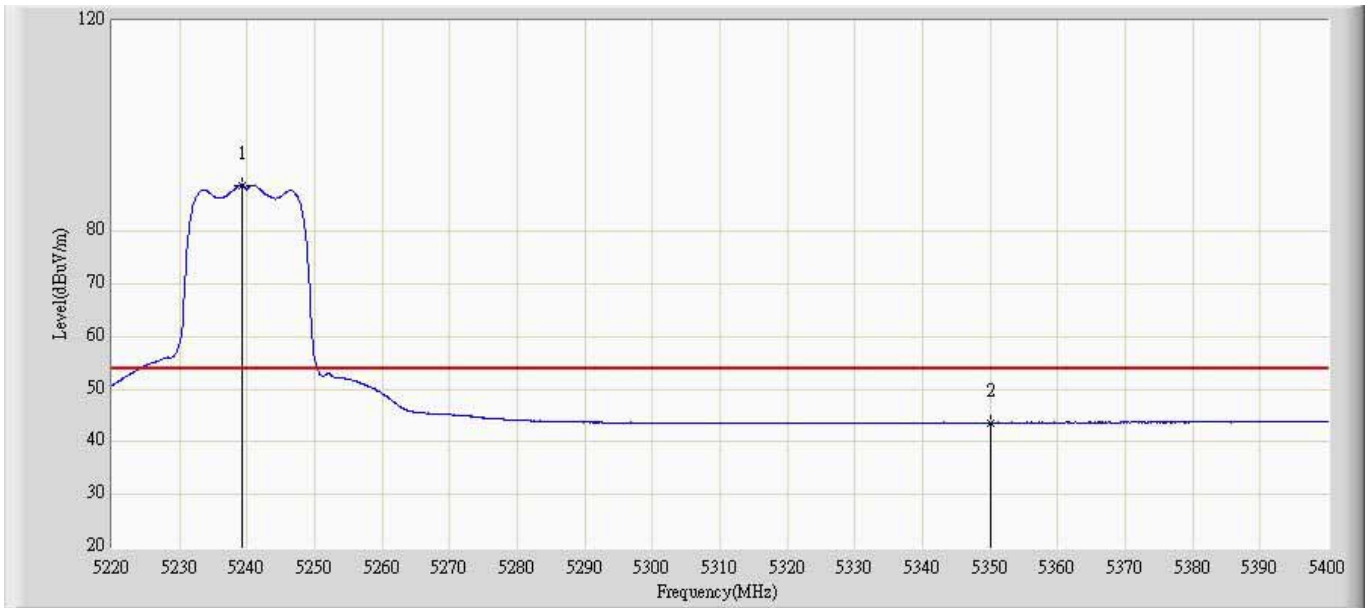
Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 09:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5240.162	102.500	60.239	N/A	N/A	42.261	PK
2			5350.000	57.510	15.117	-16.490	74.000	42.393	PK

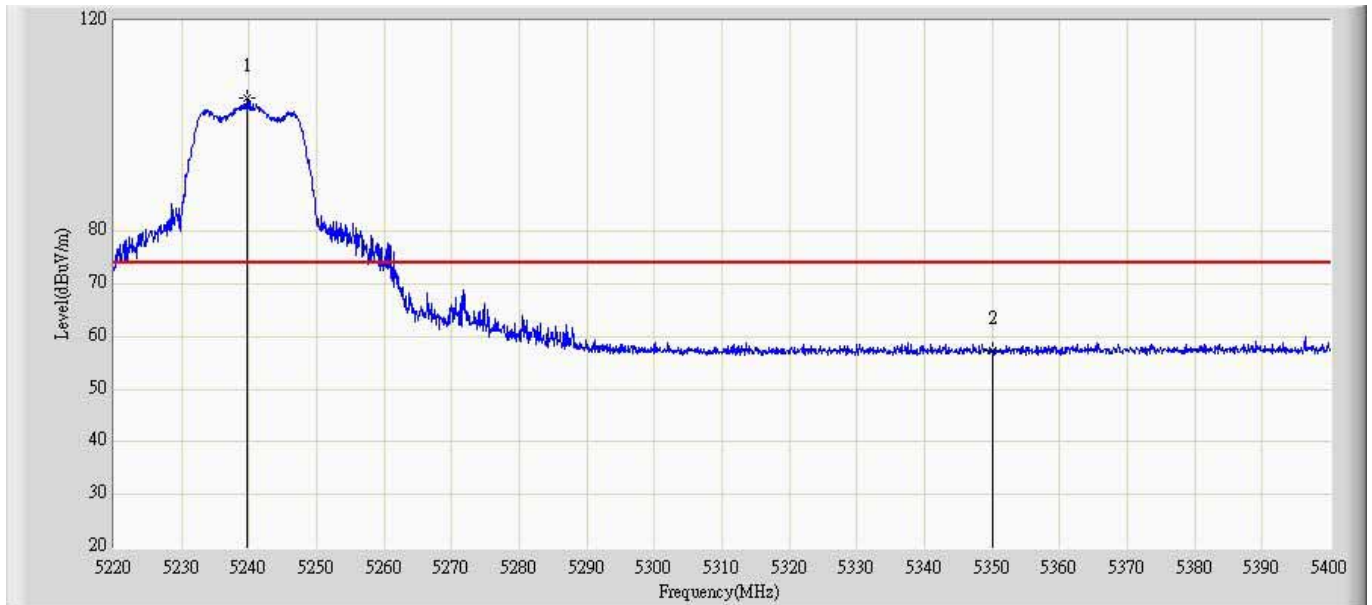


Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 09:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant0	



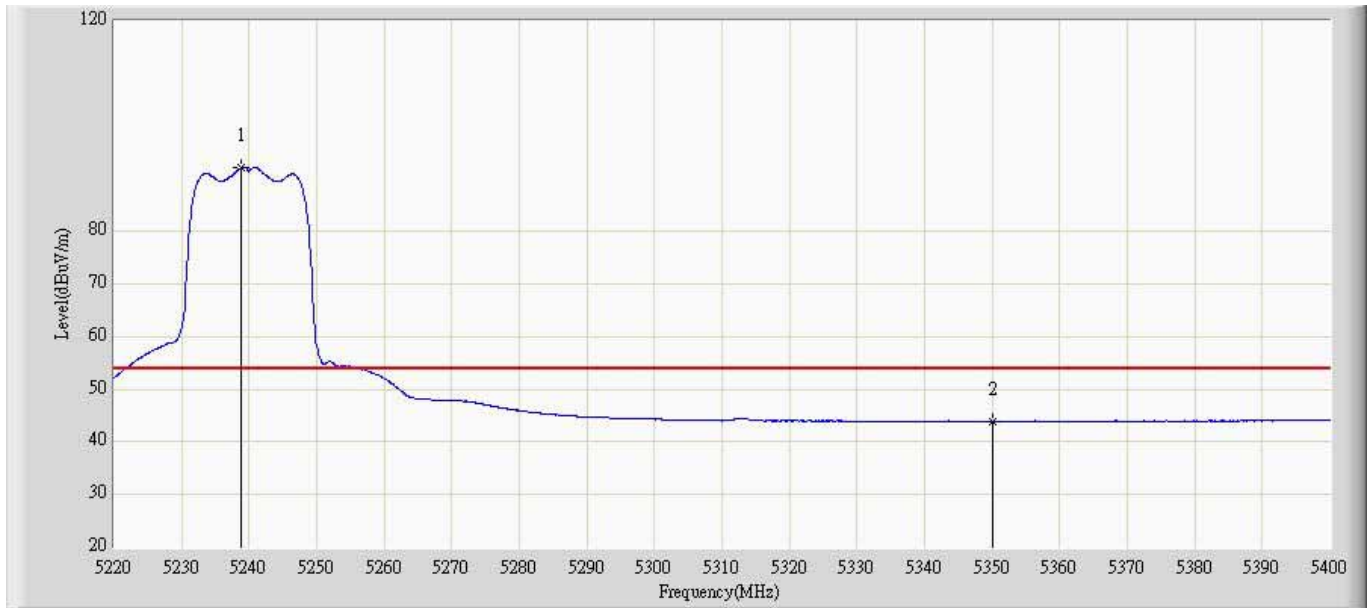
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.139	88.573	46.314	N/A	N/A	42.259	AV
2			5350.000	43.845	1.452	-10.155	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 09:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant0	



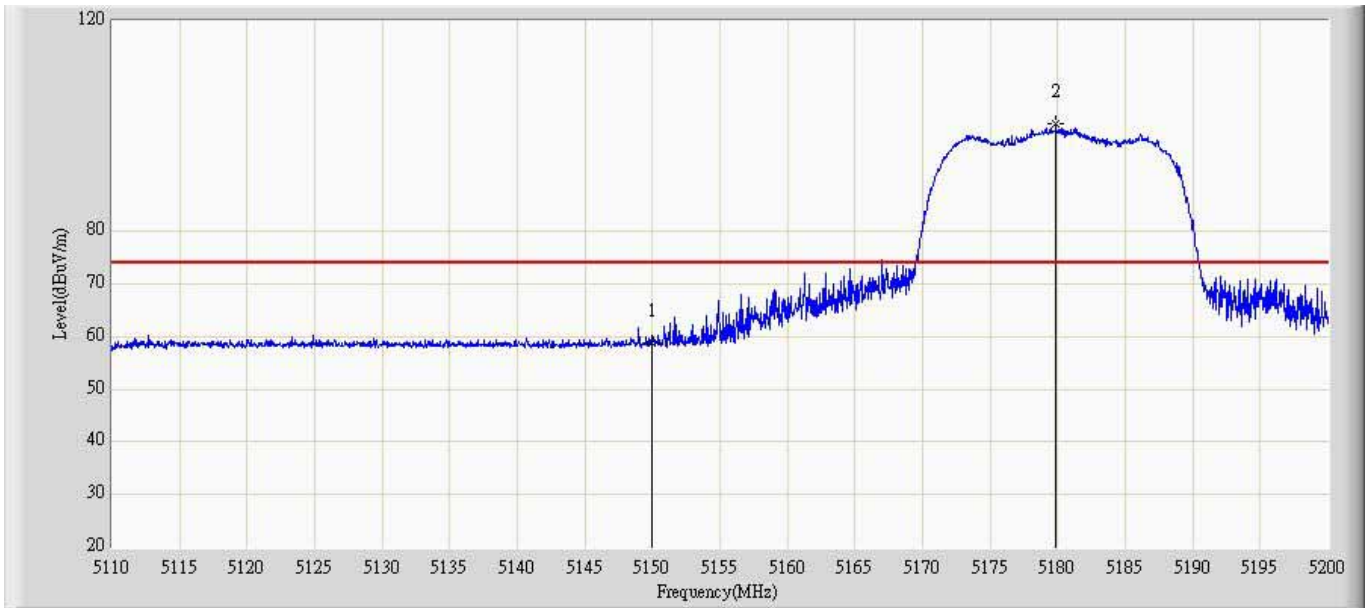
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.634	105.144	63.067	N/A	N/A	42.077	PK
2			5350.000	57.348	15.115	-16.652	74.000	42.233	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant0	



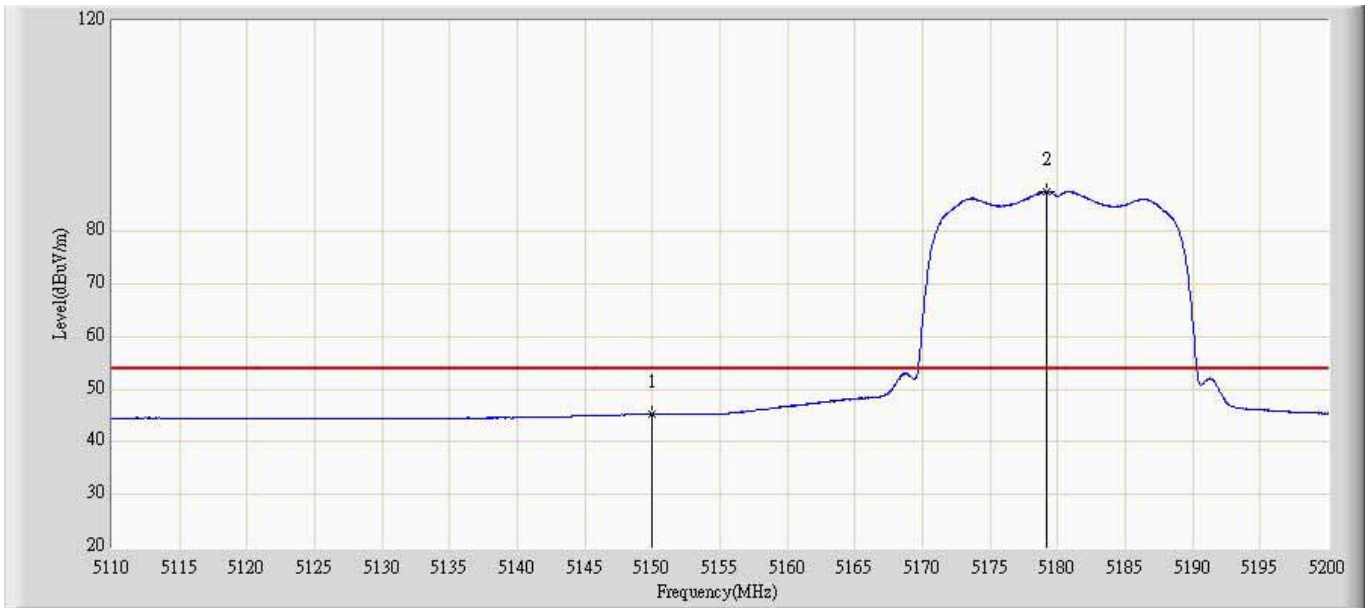
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5238.726	92.190	50.114	N/A	N/A	42.076	AV
2			5350.000	43.756	1.523	-10.244	54.000	42.233	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0	



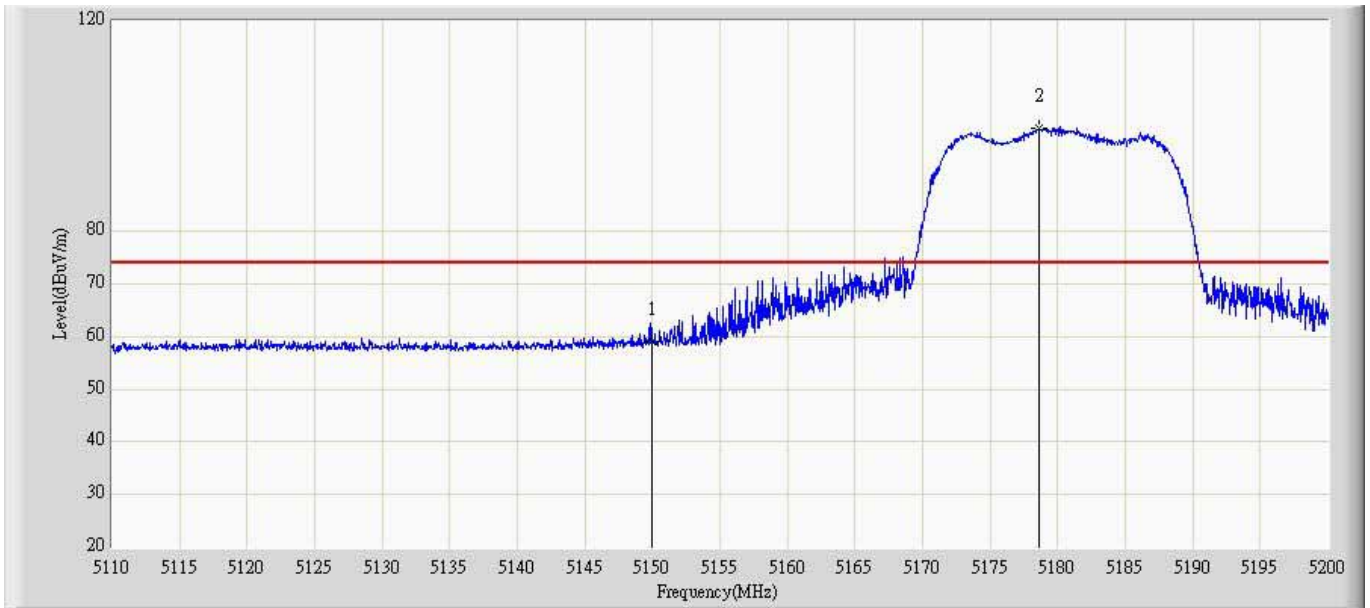
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	58.562	16.521	-15.438	74.000	42.041	PK
2		*	5179.741	100.287	58.169	N/A	N/A	42.118	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0	



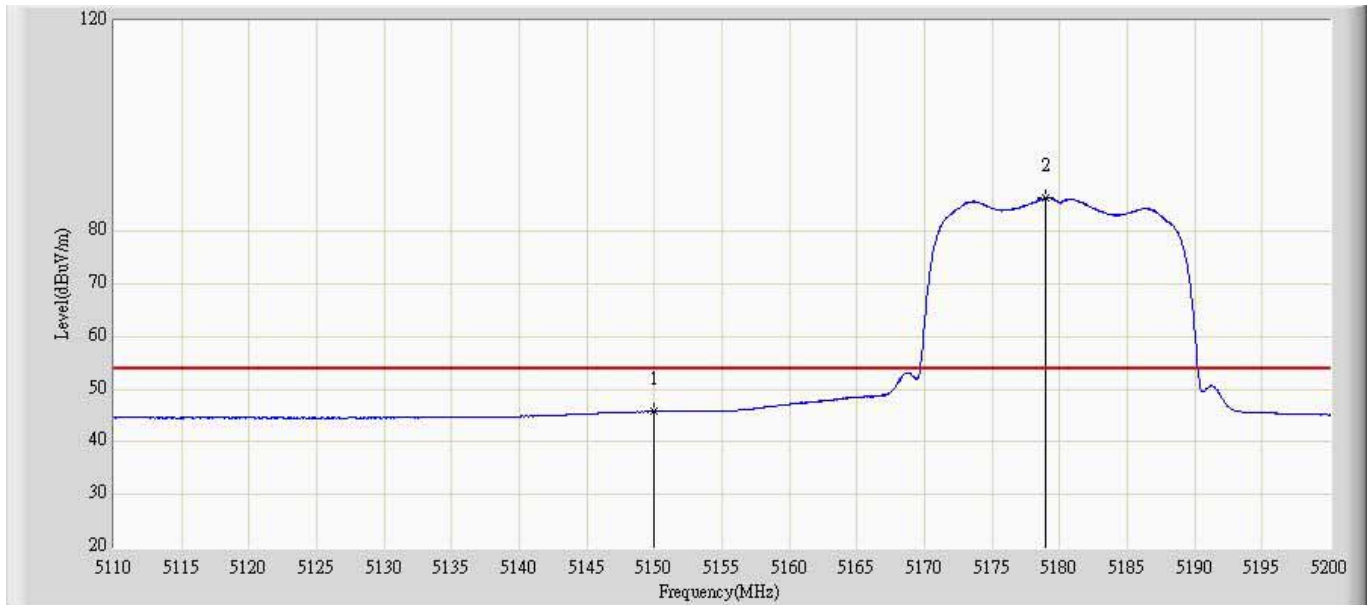
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	45.382	3.341	-8.648	54.000	42.041	AV
2		*	5179.254	87.375	45.259	N/A	N/A	42.116	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0	



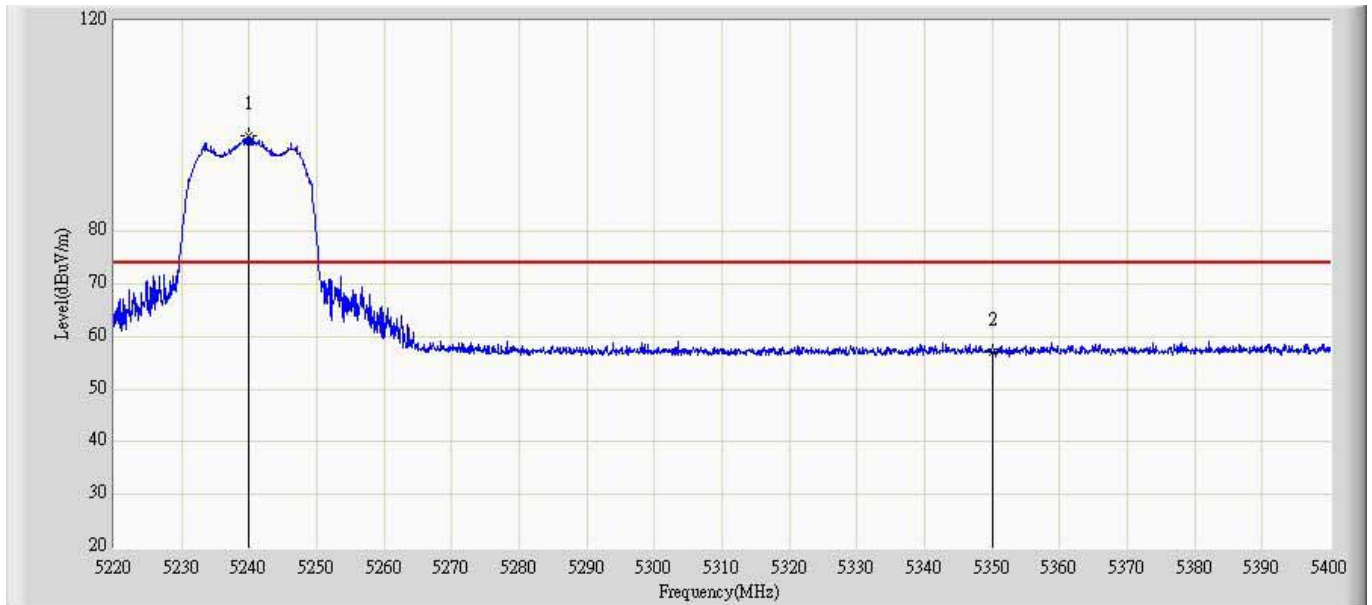
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	58.847	16.846	-15.153	74.000	42.001	PK
2		*	5178.334	99.568	57.539	N/A	N/A	42.029	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	45.794	3.793	-8.206	54.000	42.001	AV
2		*	5178.771	86.456	44.427	N/A	N/A	42.029	AV

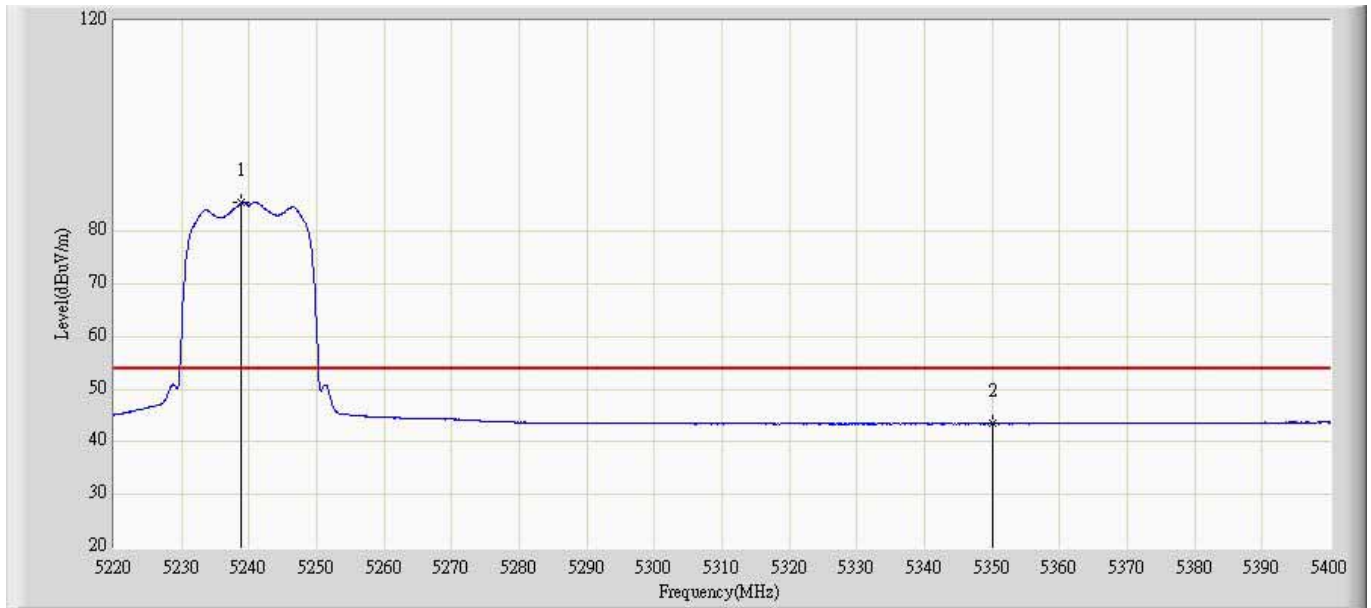
Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.346	98.407	56.146	N/A	N/A	42.261	PK
2			5350.000	57.024	14.631	-16.976	74.000	42.393	PK

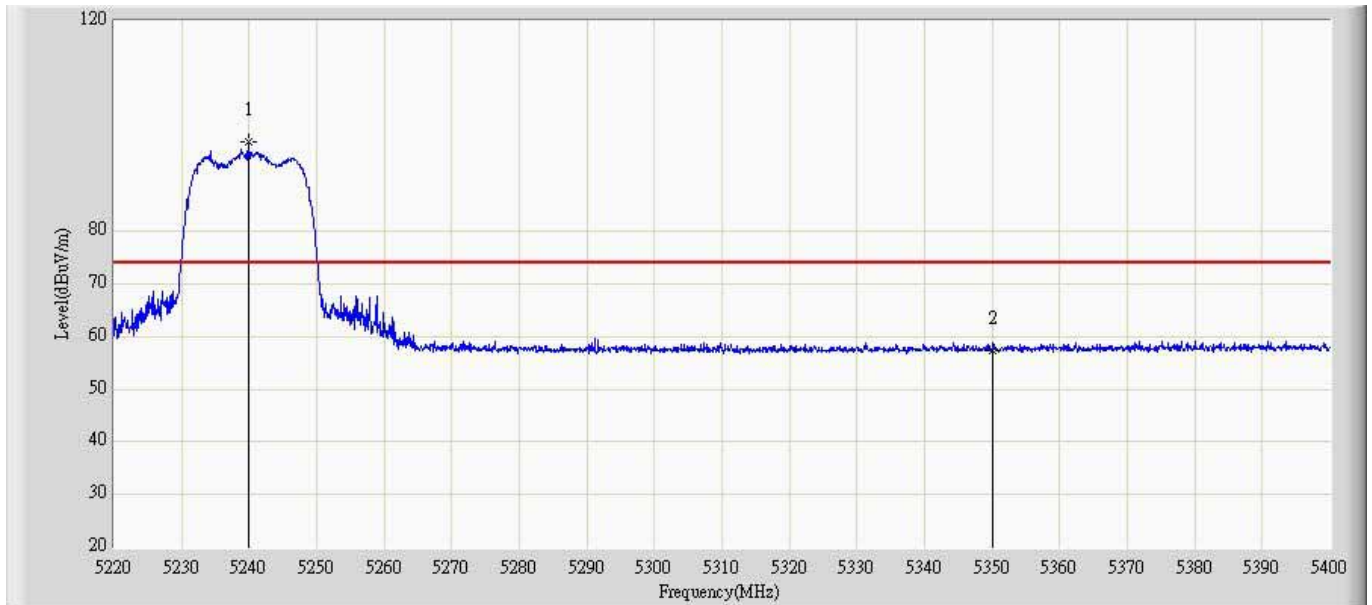


Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0	



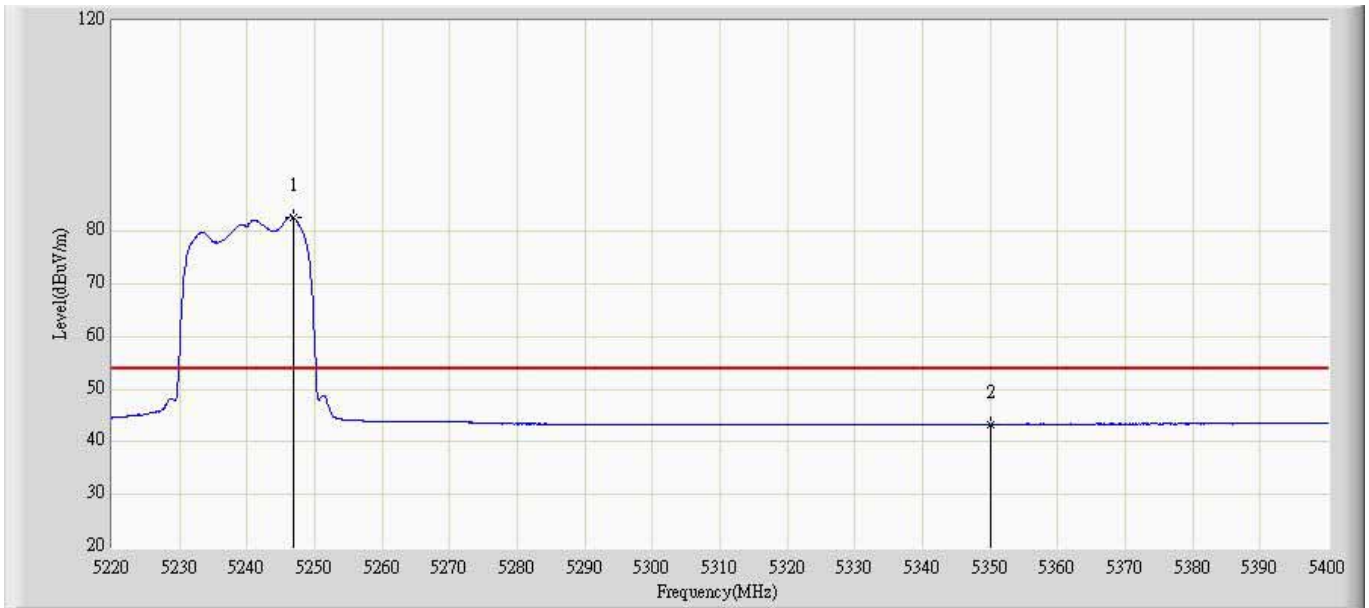
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5238.765	85.471	43.213	N/A	N/A	42.258	AV
2			5350.000	43.521	1.128	-10.479	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0	



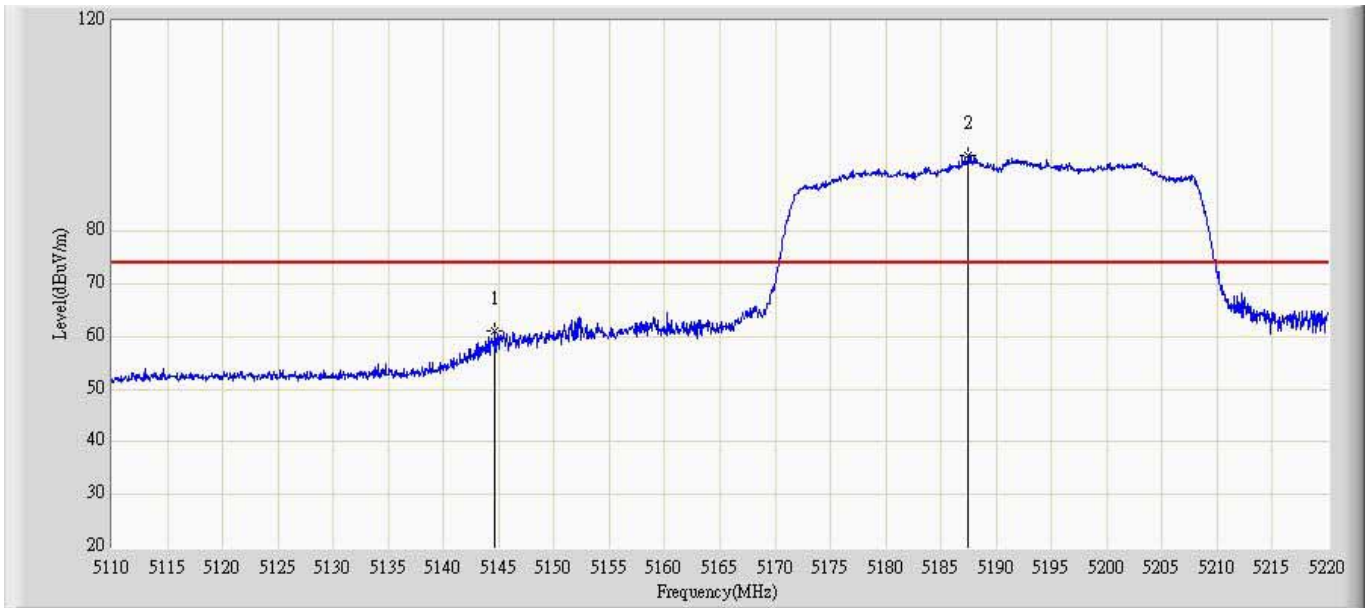
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.685	96.813	54.736	N/A	N/A	42.077	PK
2			5350.000	57.378	15.145	-16.622	74.000	42.233	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0	



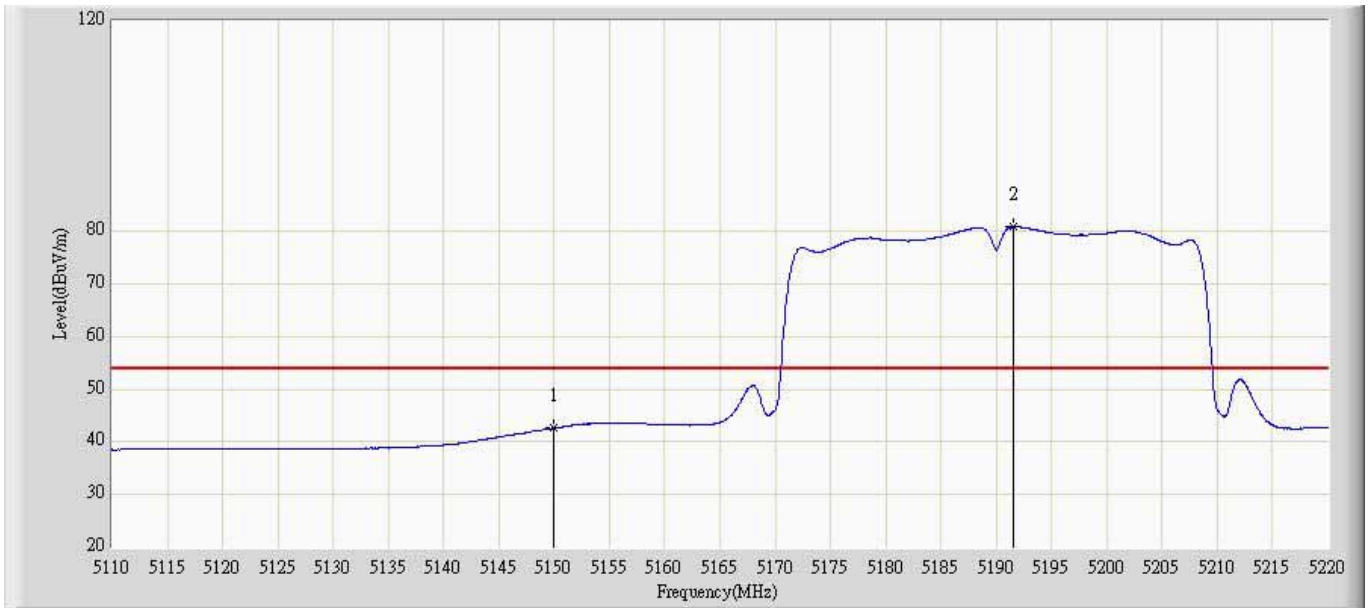
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5246.335	82.948	40.864	N/A	N/A	42.084	AV
2			5350.000	43.375	1.142	-10.625	54.000	42.233	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0	



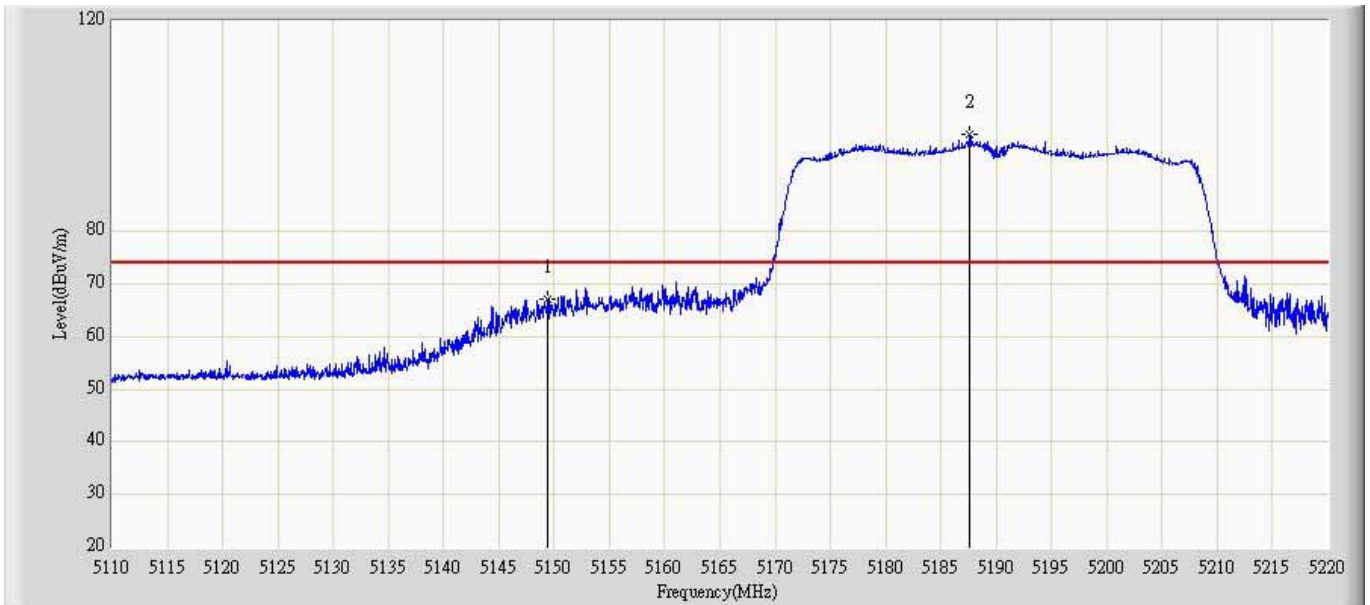
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5144.730	61.283	19.254	-12.717	74.000	42.029	PK
2		*	5187.268	94.499	52.364	N/A	N/A	42.135	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0	



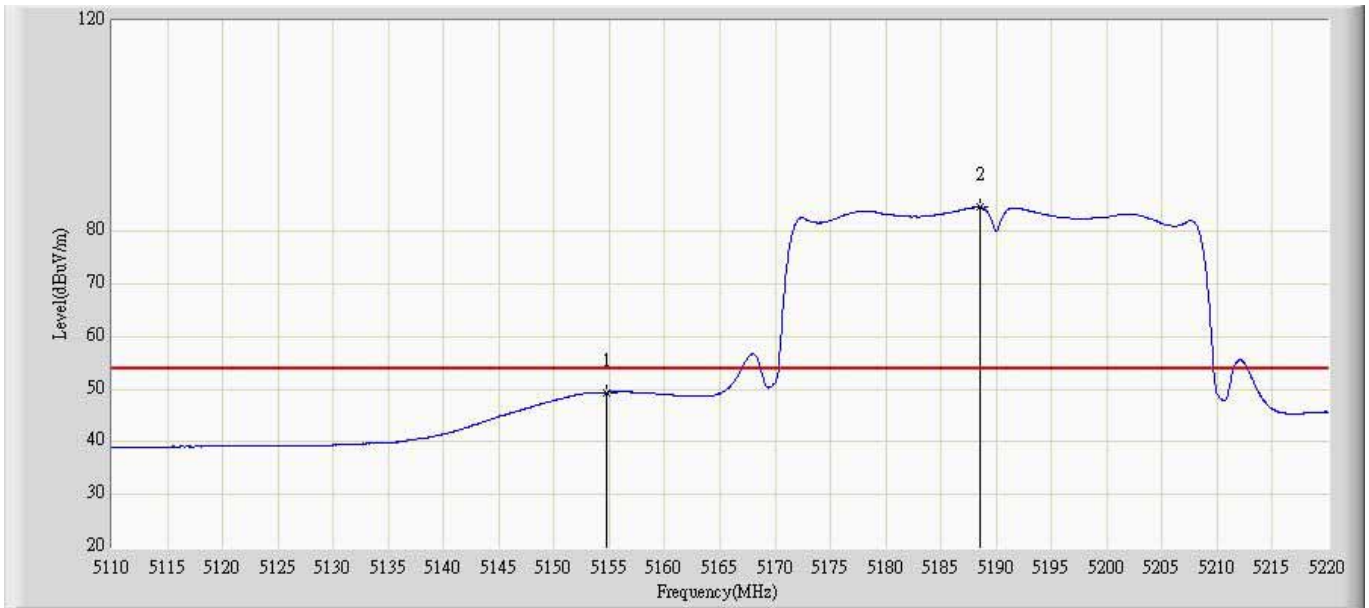
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	42.826	0.785	-11.174	54.000	42.041	AV
2		*	5191.345	80.680	38.536	N/A	N/A	42.144	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/23 - 10:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0	



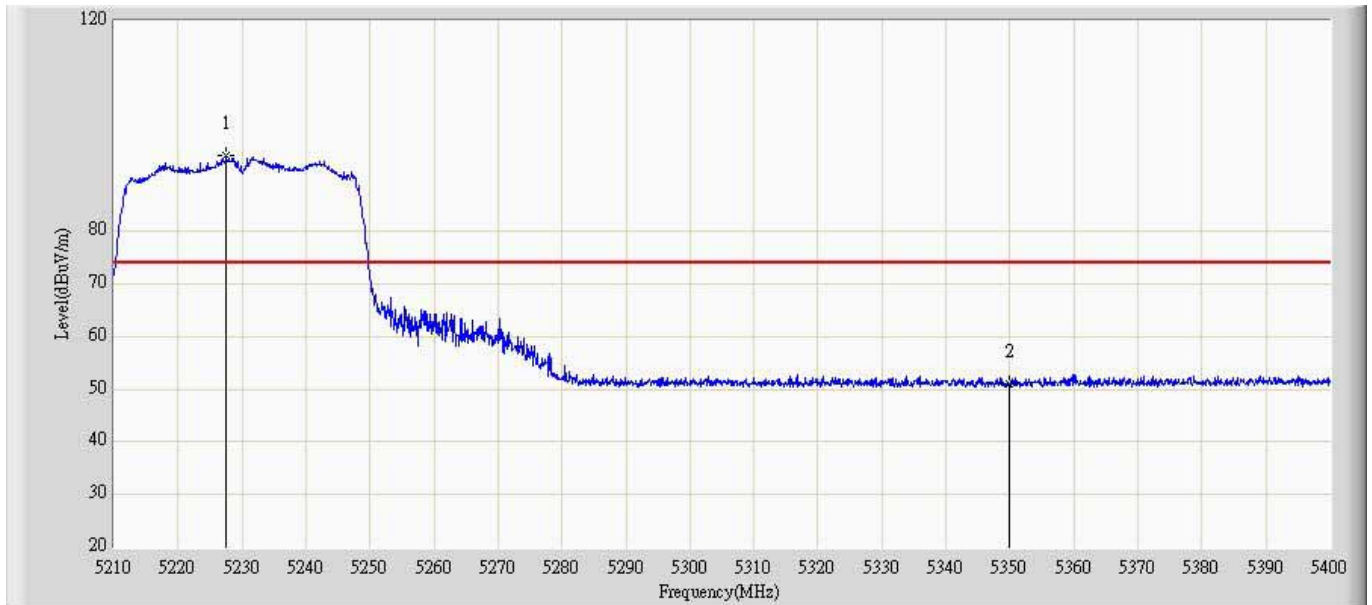
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5149.124	67.322	25.321	-6.678	74.000	42.001	PK
2		*	5187.531	98.493	56.458	N/A	N/A	42.035	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 10:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5154.661	49.338	7.331	-4.662	54.000	42.007	AV
2		*	5188.348	84.505	42.469	N/A	N/A	42.036	AV

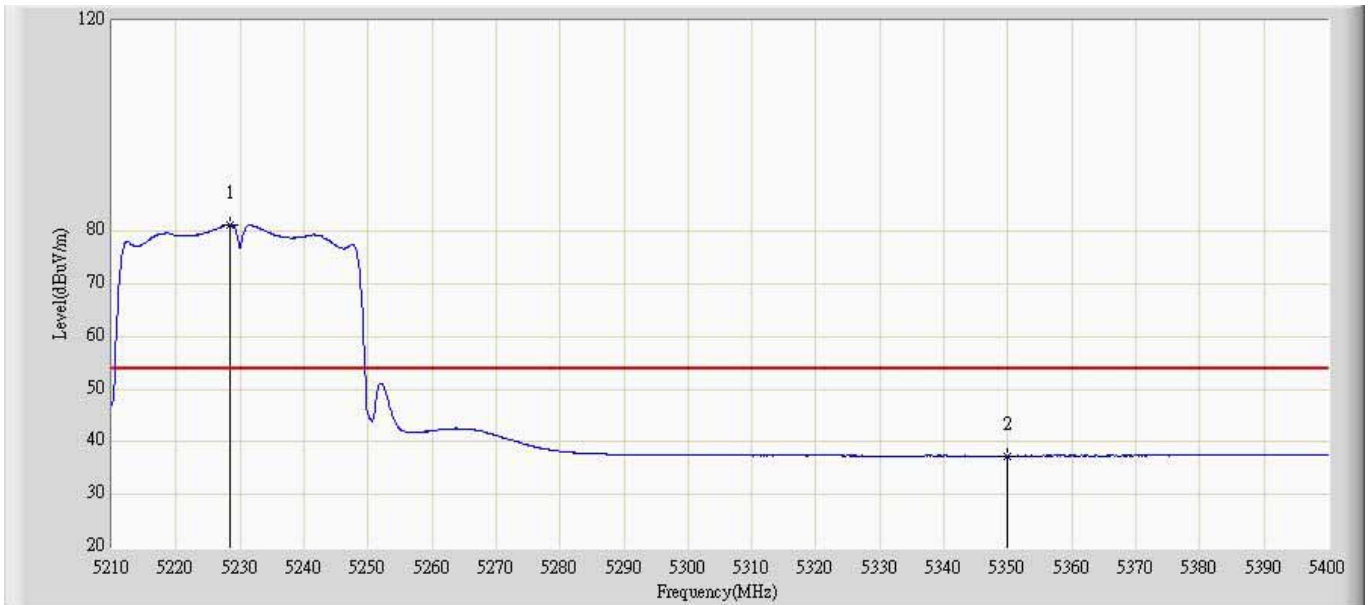
Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5227.662	94.543	52.314	N/A	N/A	42.229	PK
2			5350.000	51.085	8.692	-22.915	74.000	42.393	PK

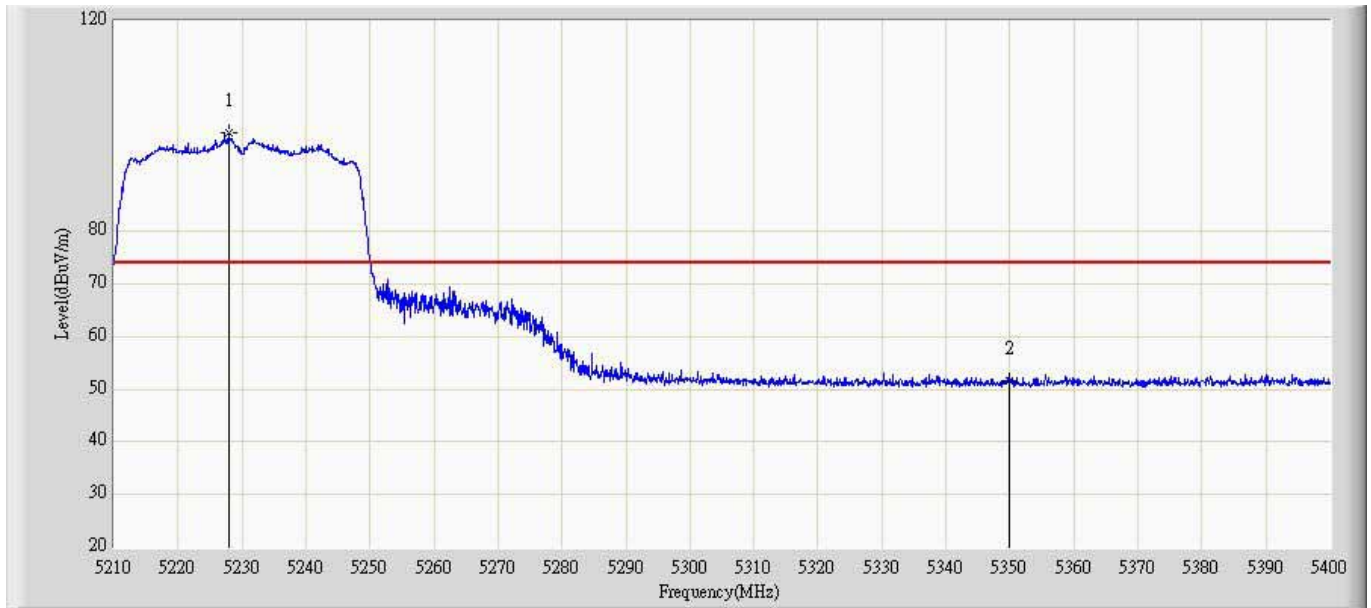


Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0	



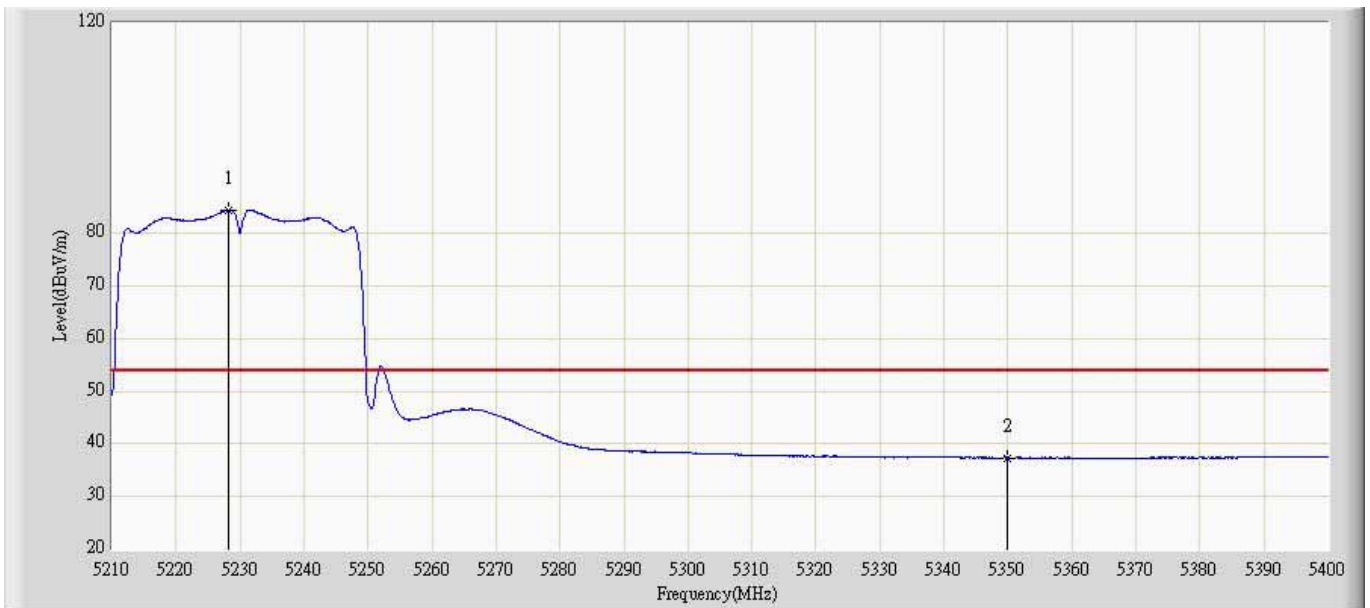
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5228.652	81.356	39.124	N/A	N/A	42.232	AV
2			5350.000	37.280	-5.113	-16.720	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0	



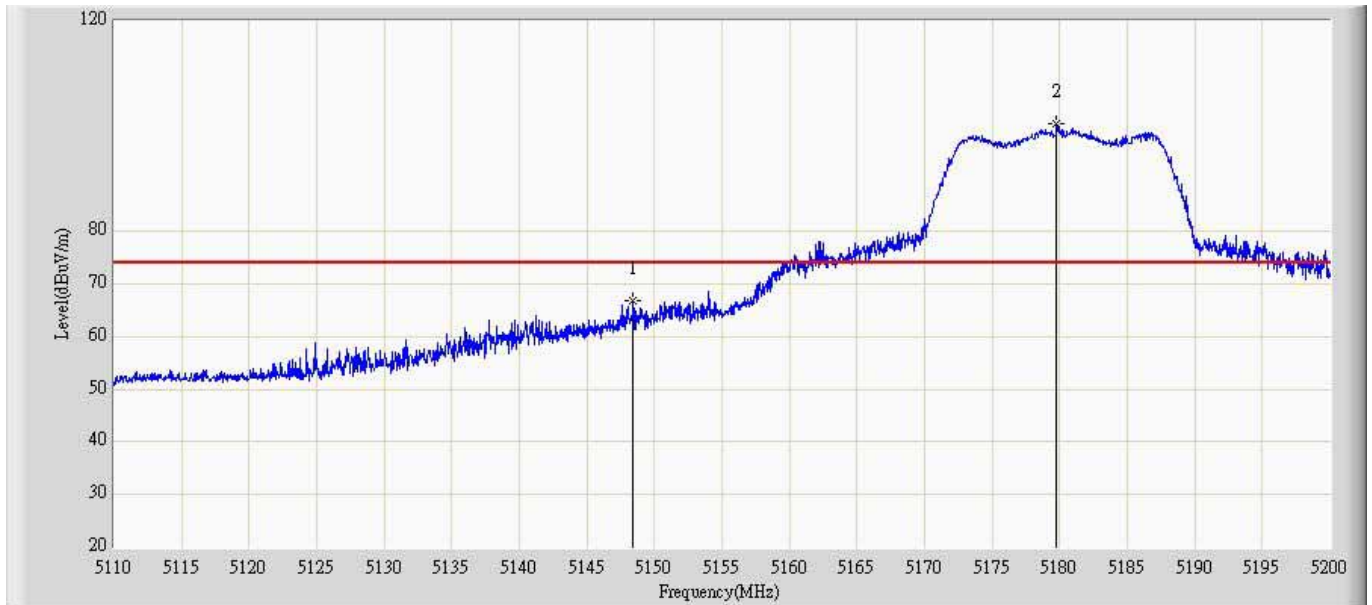
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5227.765	98.579	56.514	N/A	N/A	42.065	PK
2			5350.000	51.547	9.314	-22.453	74.000	42.233	PK

Site: AC5	Time: 2014/12/24 - 11:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0	



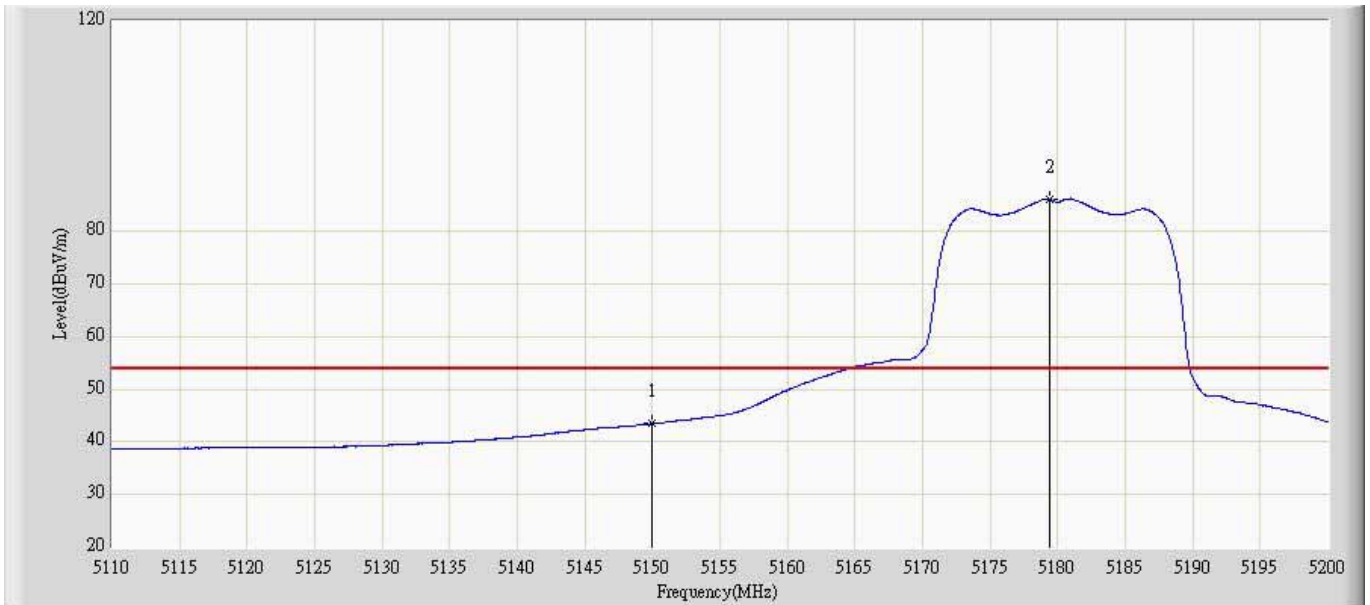
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5228.330	84.440	42.374	N/A	N/A	42.066	AV
2			5350.000	37.302	-4.931	-16.698	54.000	42.233	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant1	



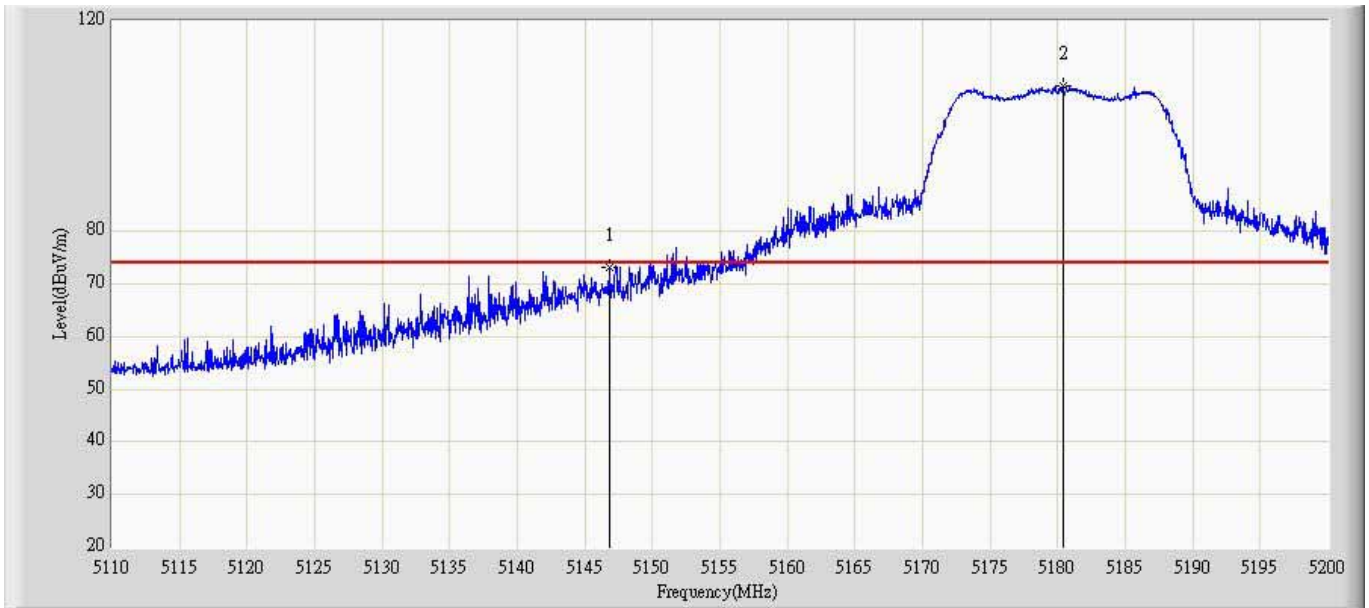
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5148.430	66.829	24.792	-7.171	74.000	42.037	PK
2		*	5179.750	100.530	58.413	N/A	N/A	42.117	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant1	



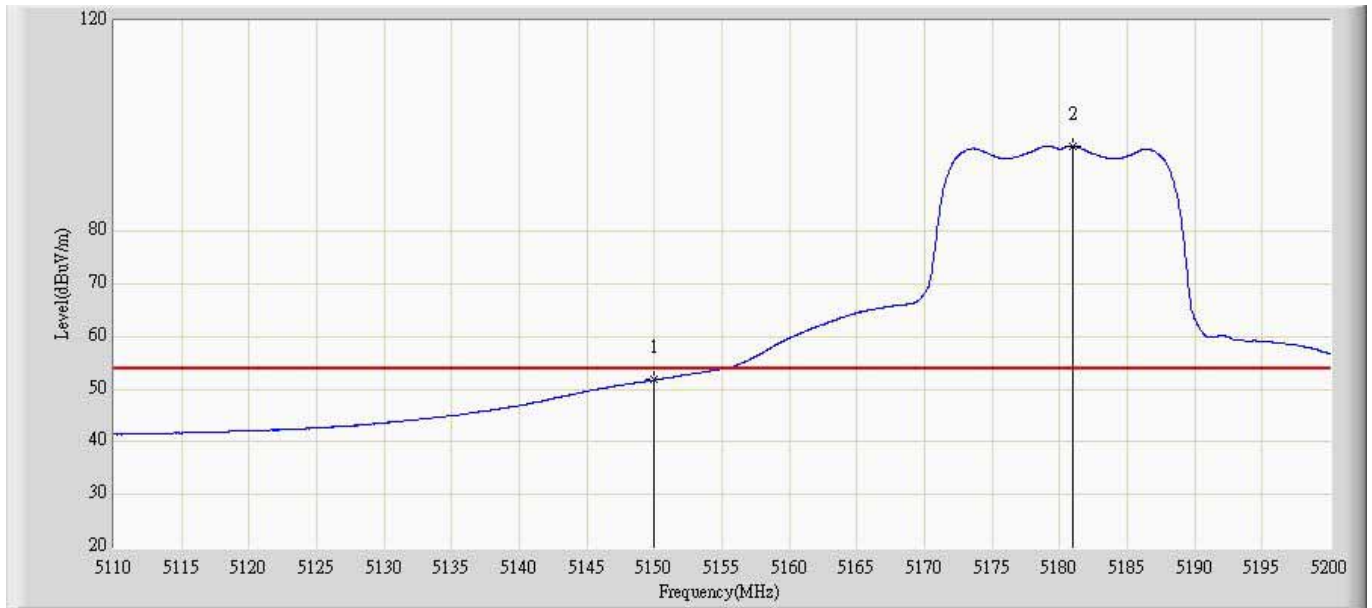
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	43.262	1.221	-10.738	54.000	42.041	AV
2		*	5179.413	85.853	43.736	N/A	N/A	42.117	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant1	



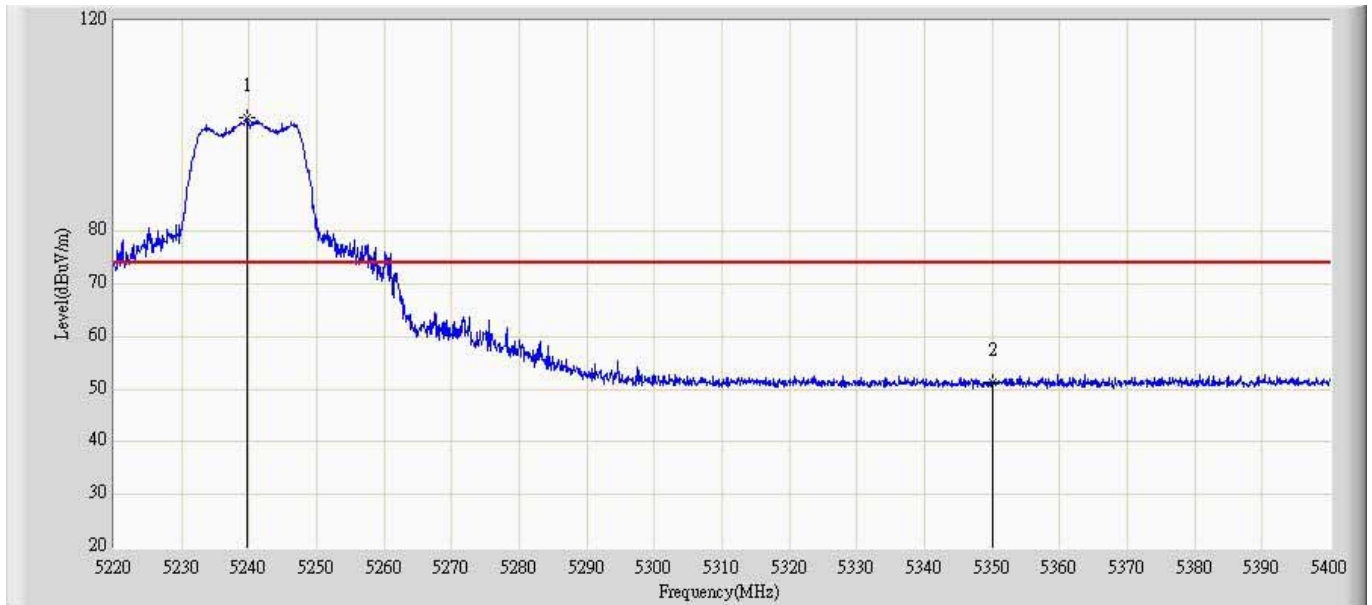
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5146.746	73.410	31.412	-0.590	74.000	41.998	PK
2		*	5180.225	107.628	65.597	N/A	N/A	42.031	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5180 by 802.11a ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	51.696	9.695	-2.304	54.000	42.001	AV
2		*	5180.884	96.366	54.335	N/A	N/A	42.031	AV

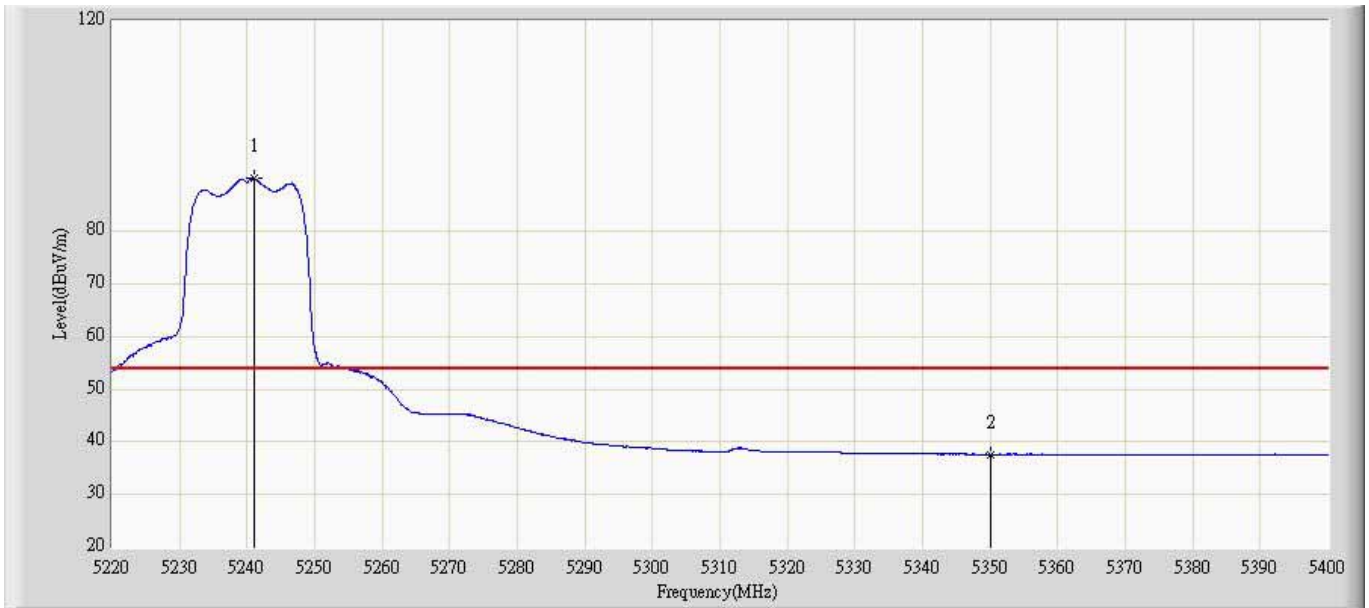
Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.697	101.596	59.335	N/A	N/A	42.261	PK
2			5350.000	51.518	9.125	-22.482	74.000	42.393	PK

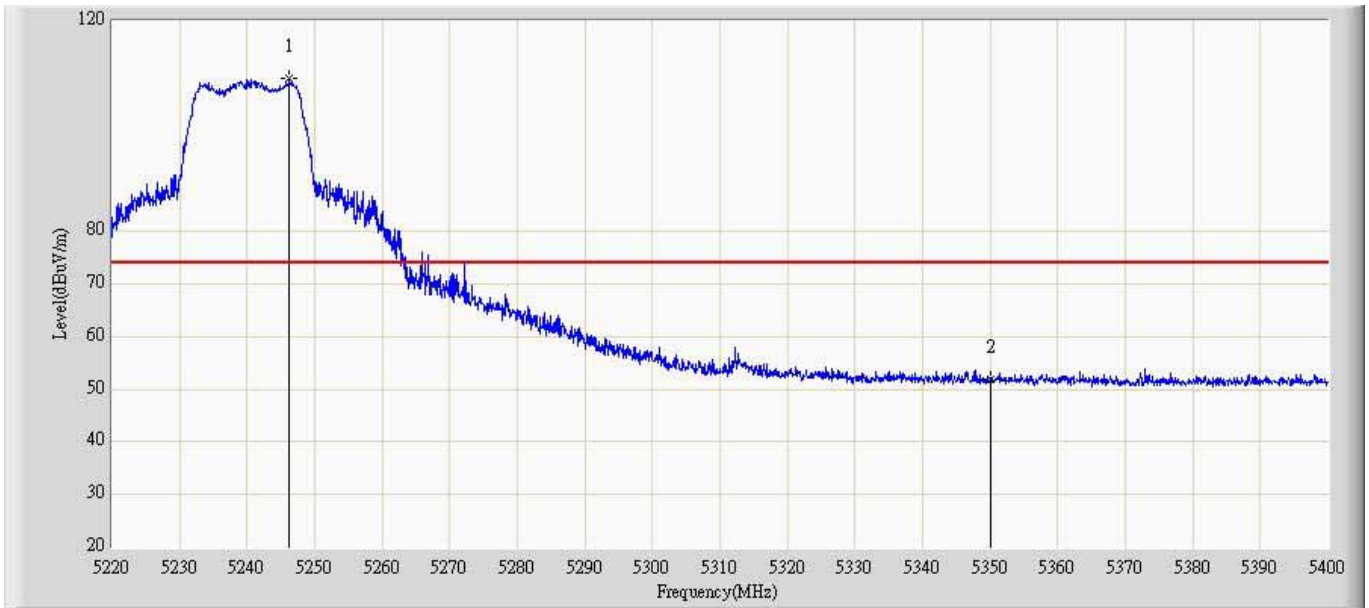


Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant1	



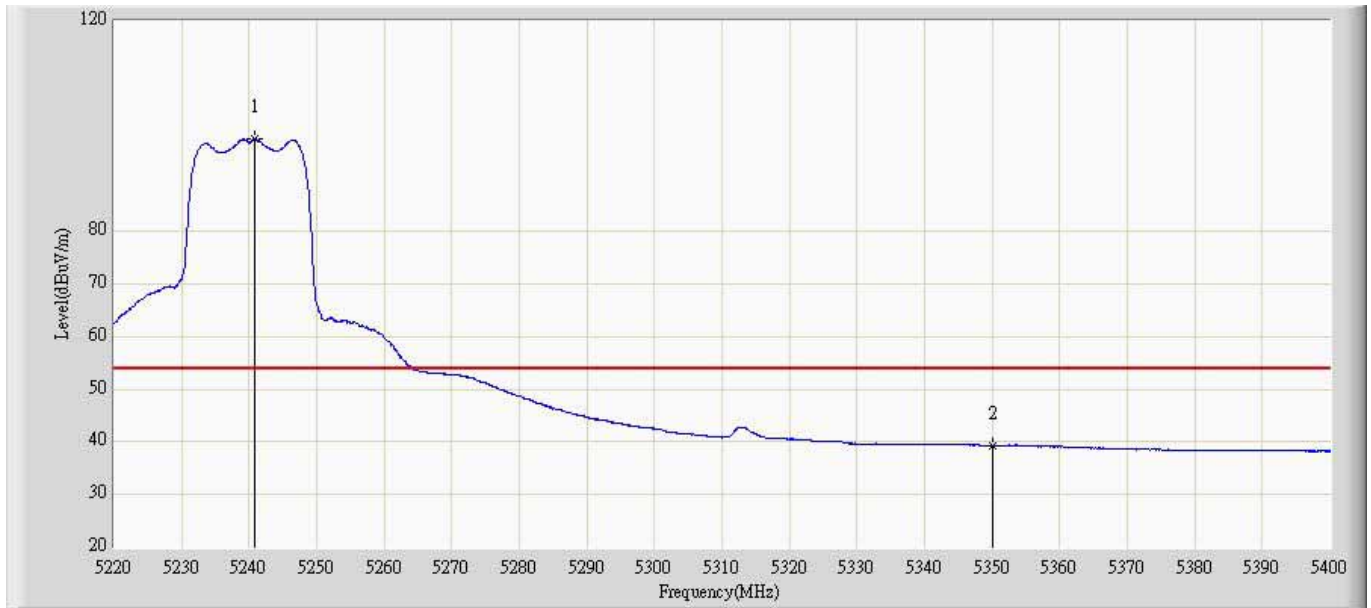
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5241.104	90.128	47.864	N/A	N/A	42.264	AV
2			5350.000	37.768	-4.625	-16.232	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant1	



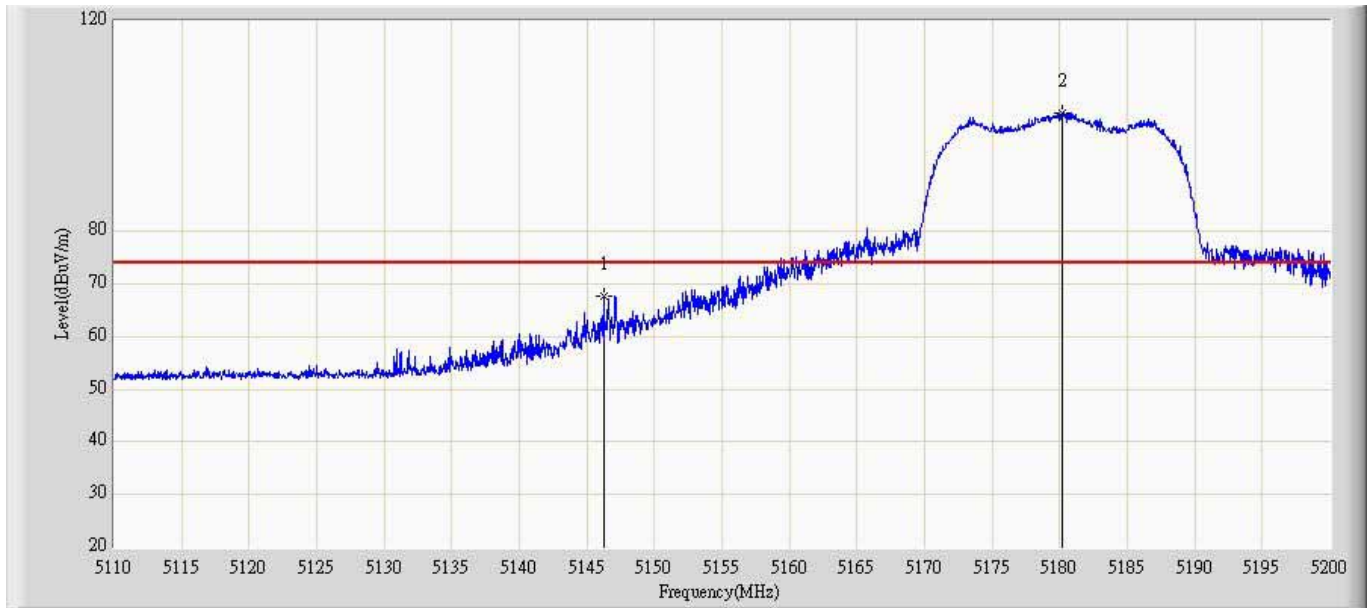
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5246.139	109.447	67.364	N/A	N/A	42.083	PK
2			5350.000	51.680	9.447	-22.320	74.000	42.233	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode1: Transmit at CH5240 by 802.11a ant1	



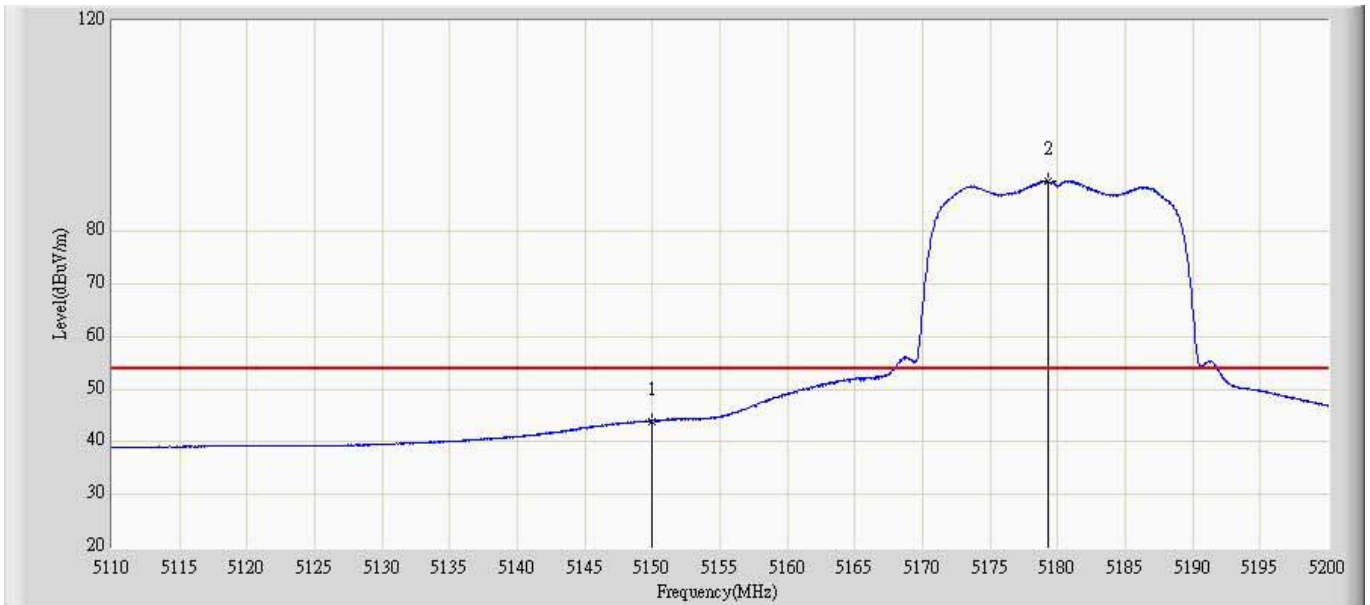
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5240.862	97.590	55.512	N/A	N/A	42.078	AV
2			5350.000	39.273	-2.960	-14.727	54.000	42.233	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant1	



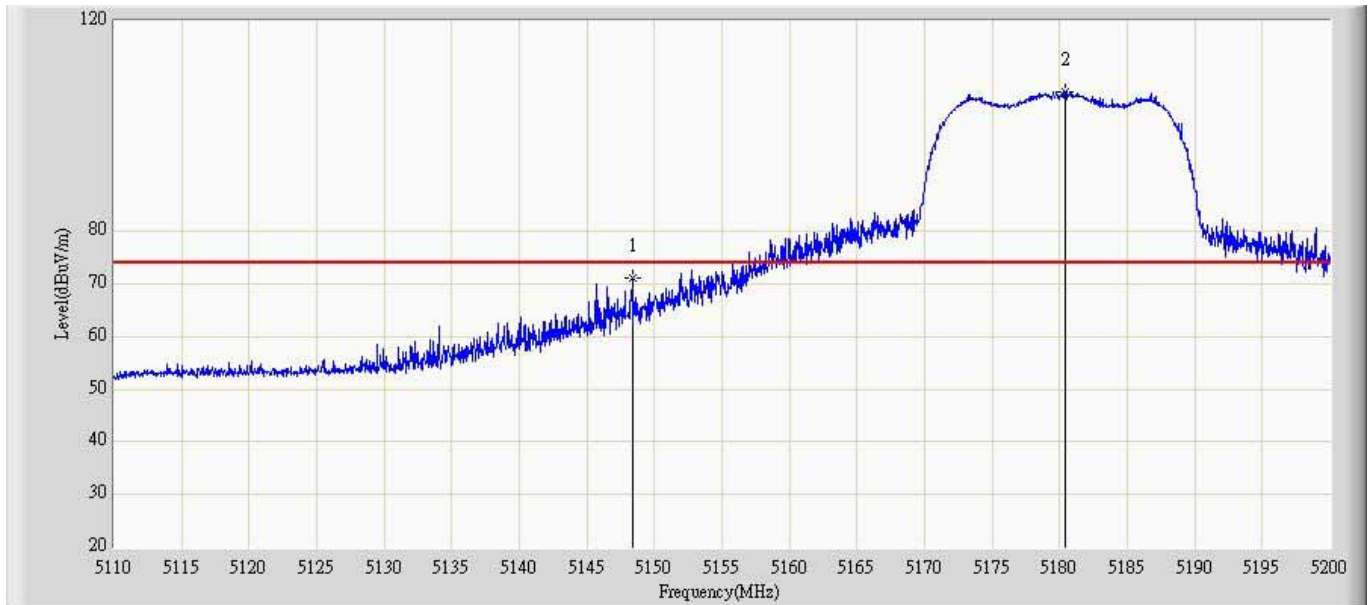
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5146.179	67.595	25.563	-6.405	74.000	42.032	PK
2		*	5180.236	102.472	60.354	N/A	N/A	42.118	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	43.904	1.863	-10.096	54.000	42.041	AV
2		*	5179.346	89.575	47.458	N/A	N/A	42.117	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 11:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant1	



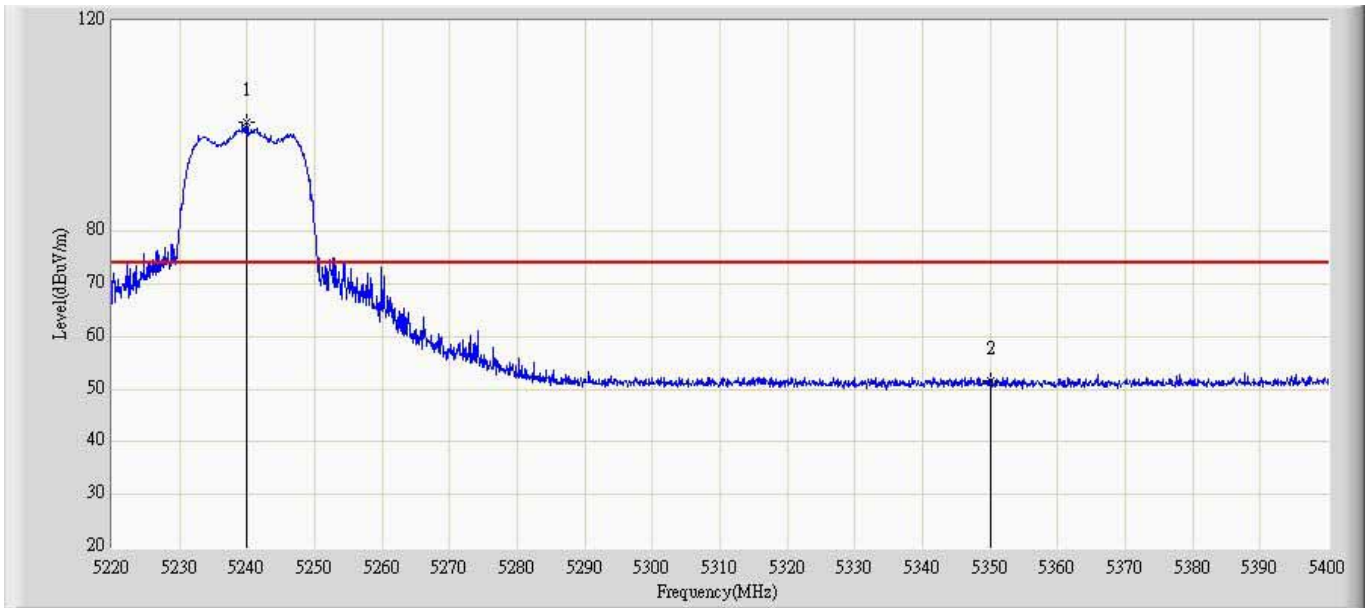
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5148.520	71.331	29.332	-2.669	74.000	41.999	PK
2		*	5180.480	106.600	64.569	N/A	N/A	42.031	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	47.613	5.612	-6.387	54.000	42.001	AV
2		*	5179.365	94.722	52.692	N/A	N/A	42.030	AV

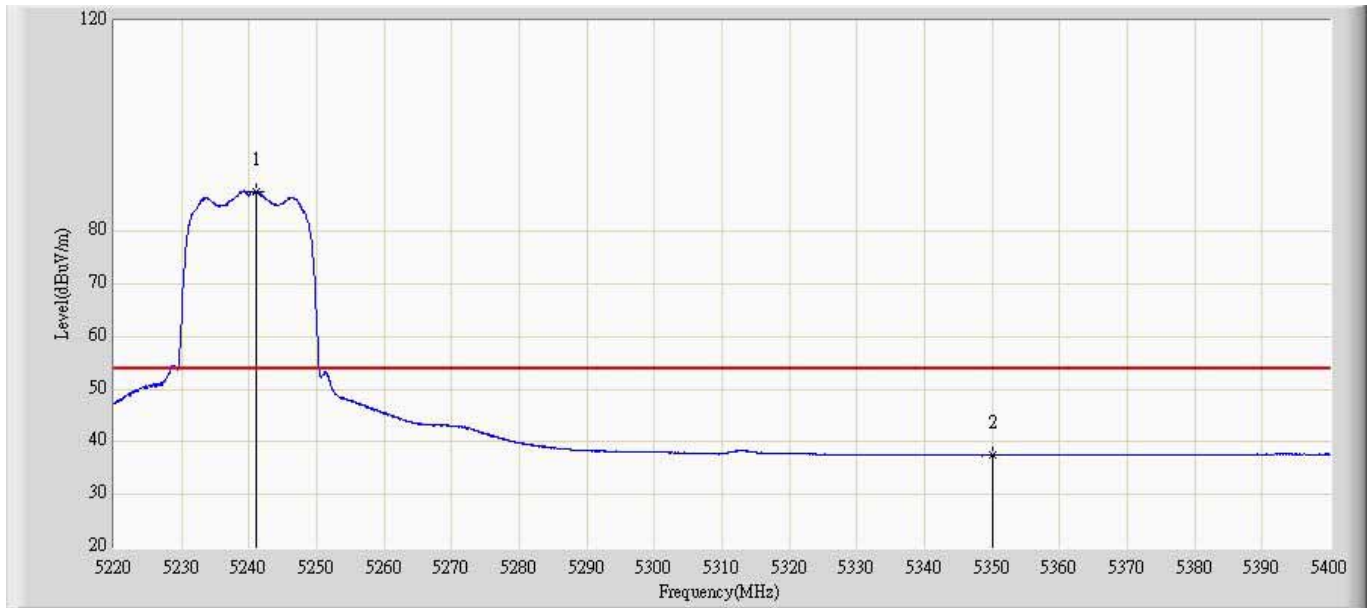
Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.893	100.701	58.440	N/A	N/A	42.261	PK
2			5350.000	51.628	9.235	-22.372	74.000	42.393	PK

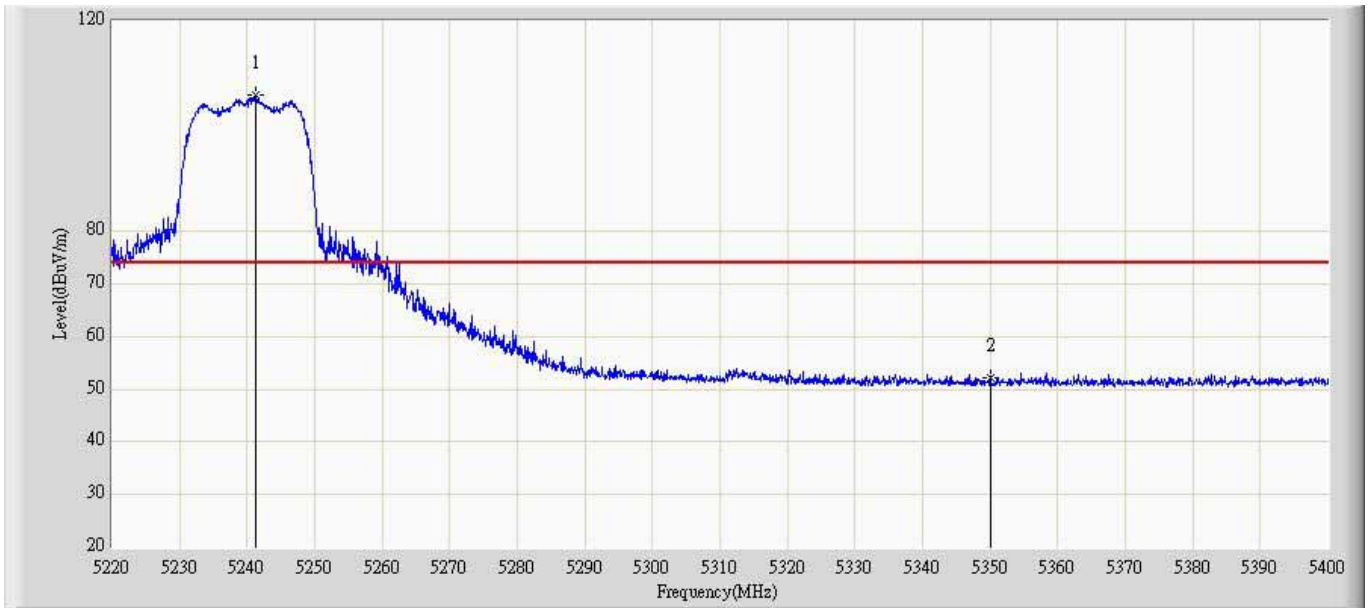


Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant1	



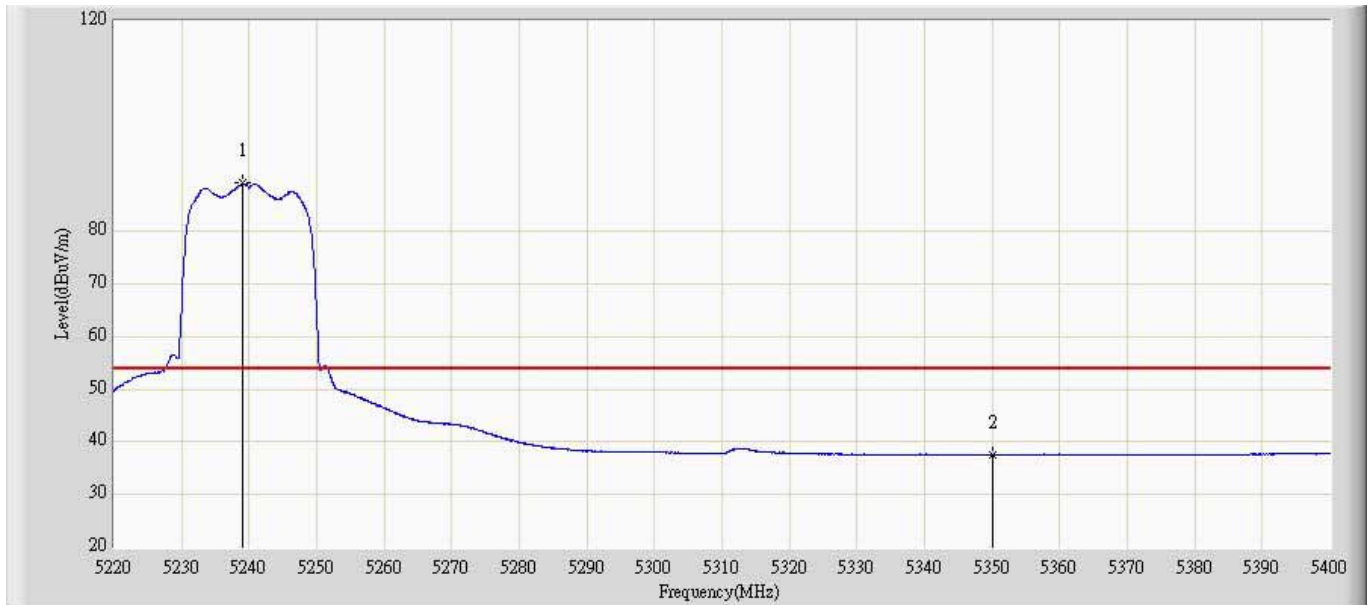
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5241.250	87.689	45.425	N/A	N/A	42.264	AV
2			5350.000	37.528	-4.865	-16.472	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant1	



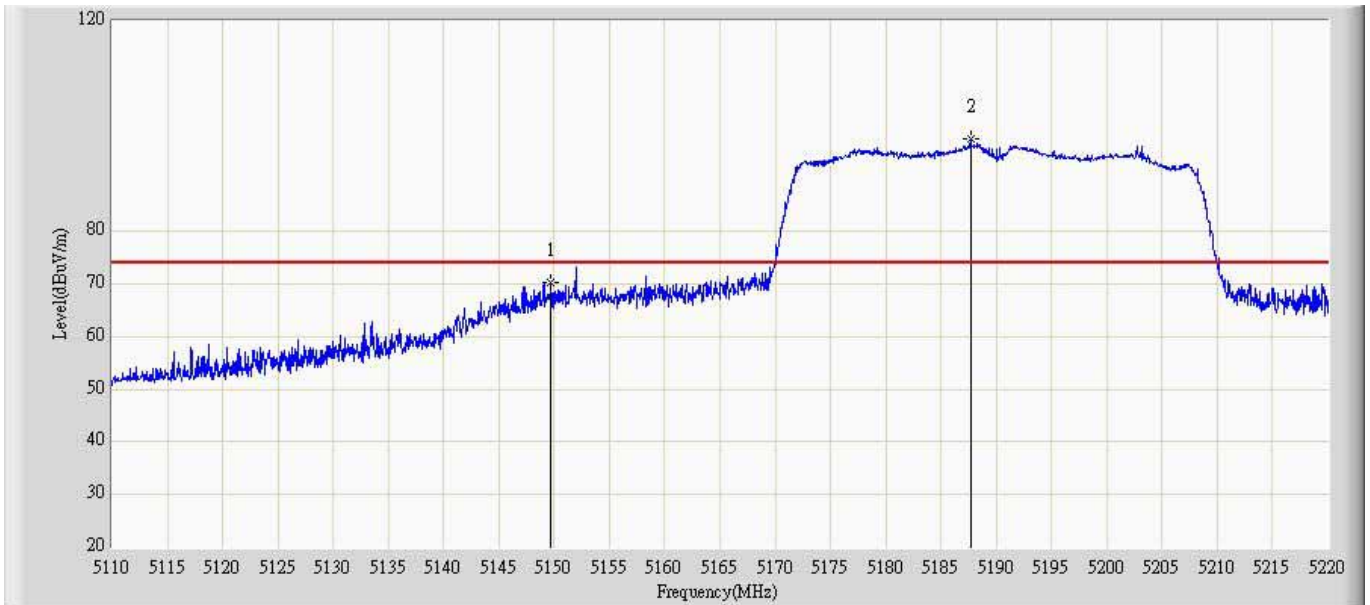
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5241.189	105.776	63.698	N/A	N/A	42.078	PK
2			5350.000	51.969	9.736	-22.031	74.000	42.233	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.260	89.232	47.156	N/A	N/A	42.076	AV
2			5350.000	37.371	-4.862	-16.629	54.000	42.233	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant1	



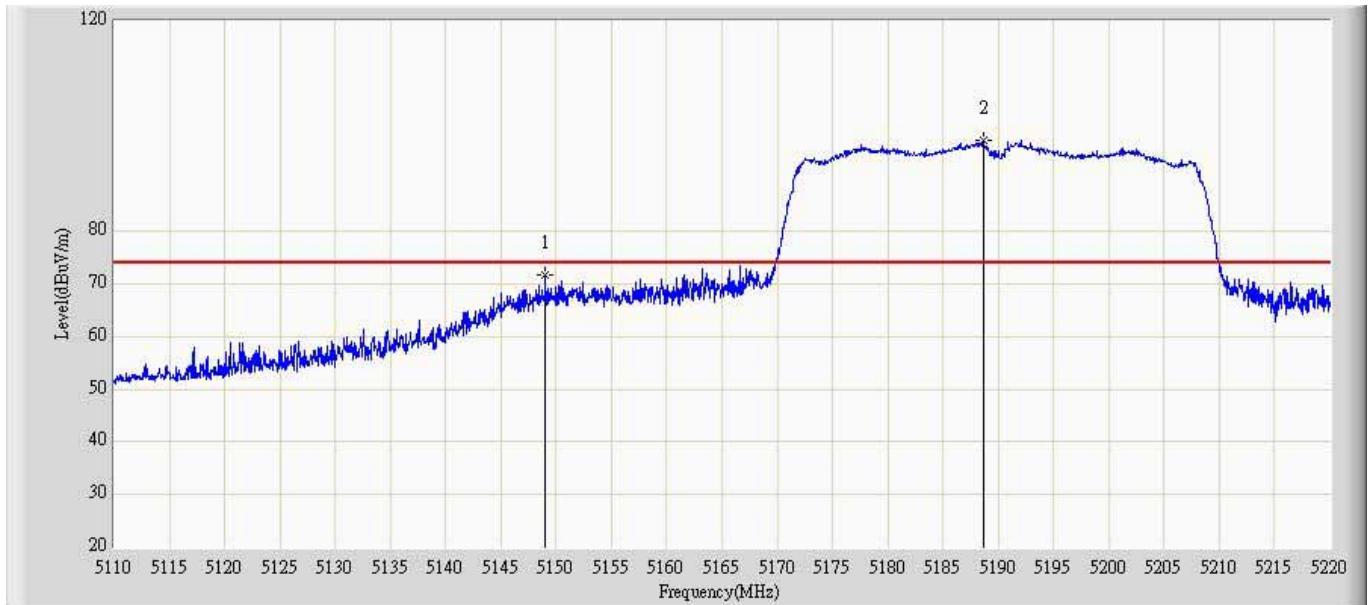
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5149.489	70.297	28.256	-3.703	74.000	42.041	PK
2		*	5187.531	97.570	55.435	N/A	N/A	42.135	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant1	



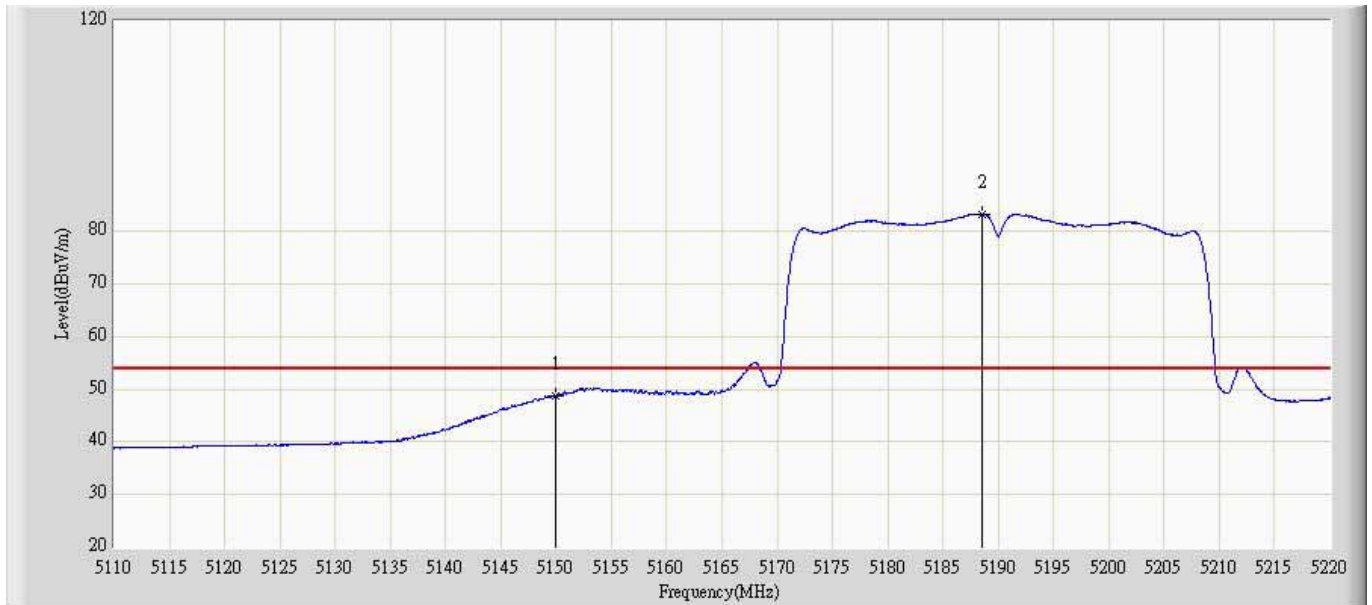
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	48.776	6.735	-5.224	54.000	42.041	AV
2		*	5188.752	82.790	40.652	N/A	N/A	42.138	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant1	



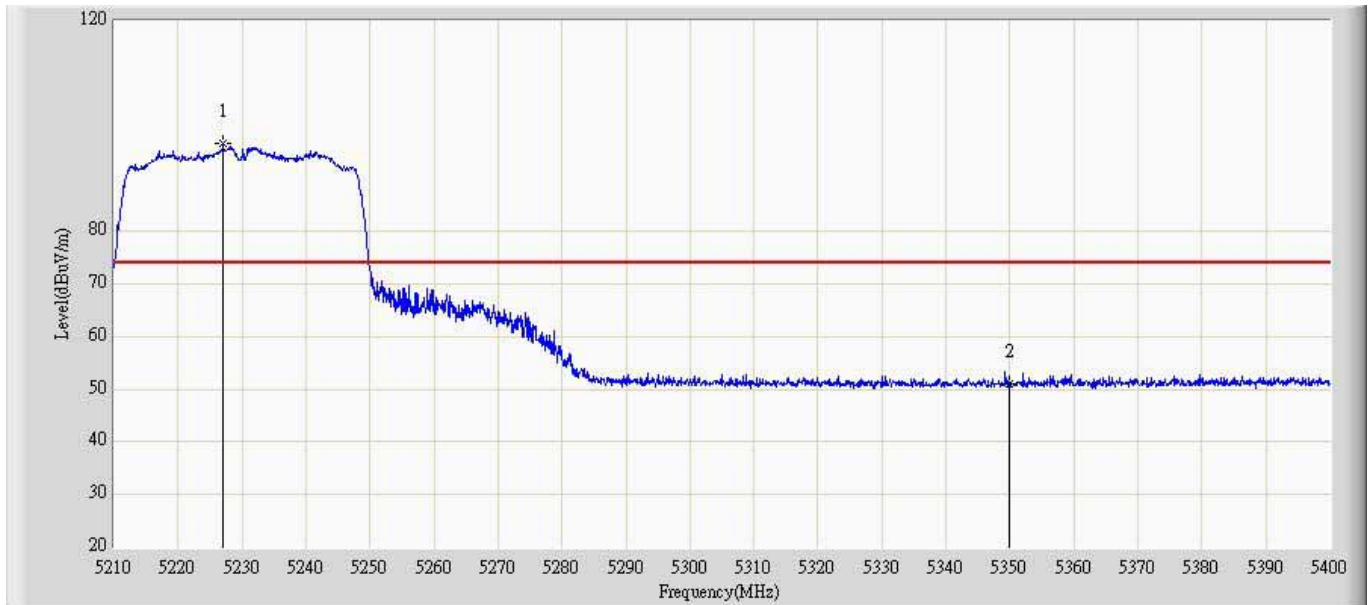
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5149.125	71.528	29.528	-2.472	74.000	42.000	PK
2		*	5188.541	97.492	55.456	N/A	N/A	42.036	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	48.594	6.593	-5.406	54.000	42.001	AV
2		*	5188.352	83.271	41.235	N/A	N/A	42.036	AV

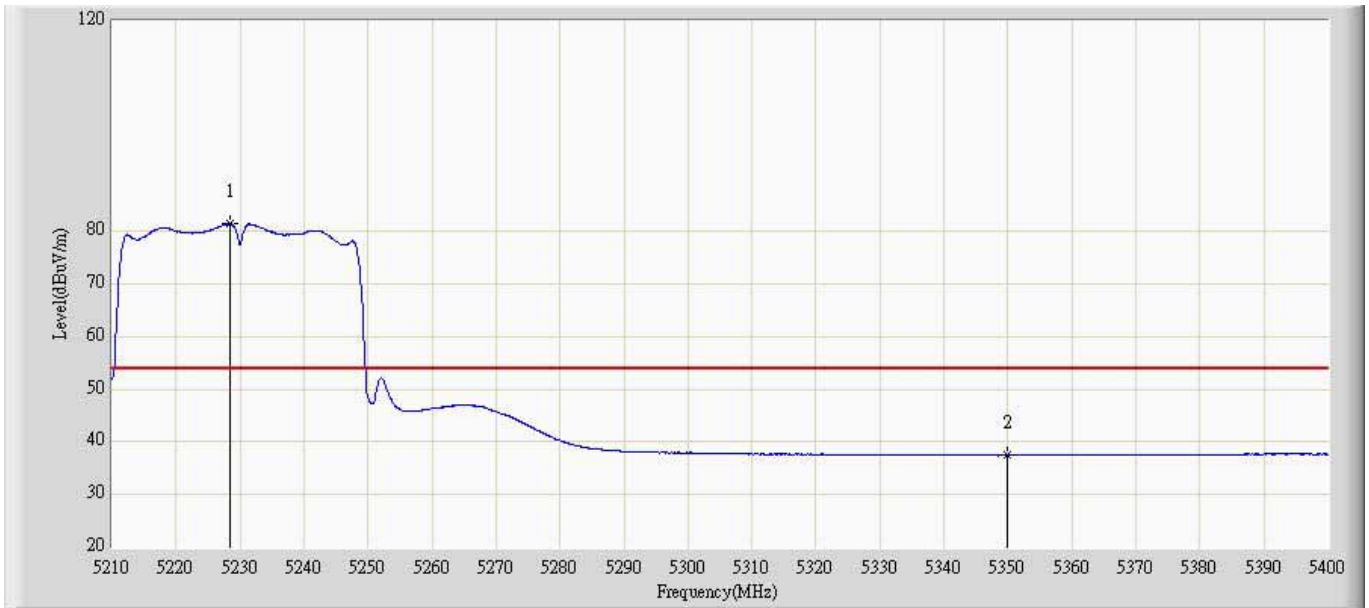
Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 13:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5227.059	96.968	54.741	N/A	N/A	42.227	PK
2			5350.000	50.841	8.448	-23.159	74.000	42.393	PK

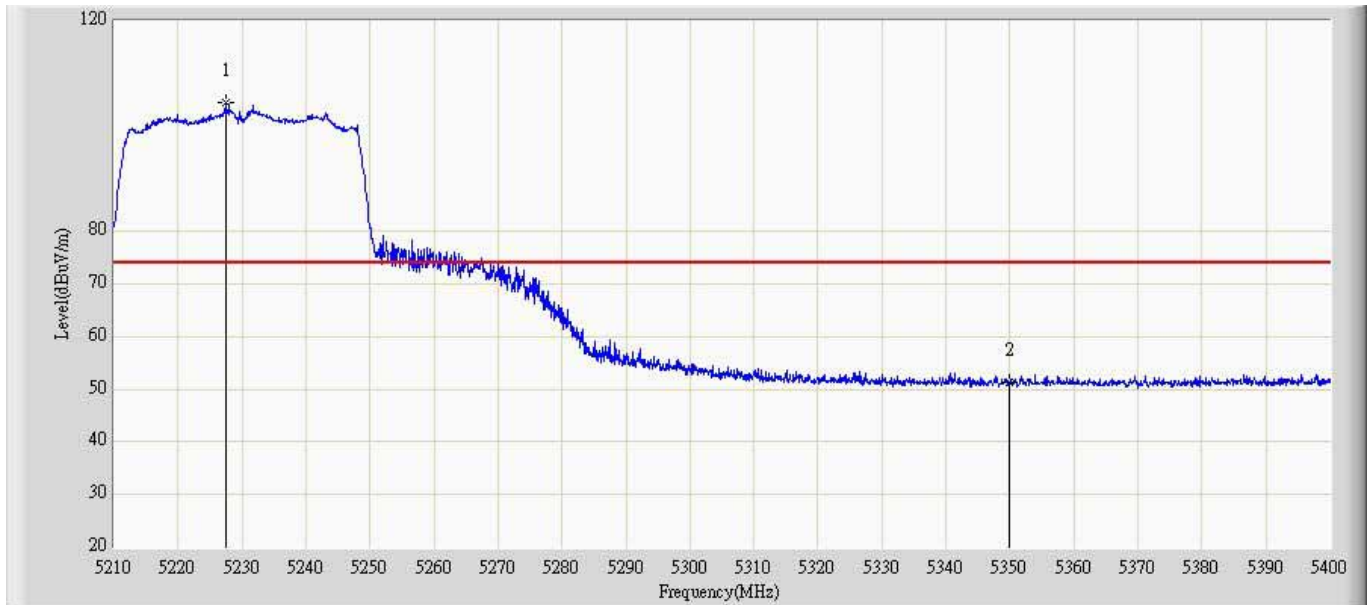


Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 14:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant1	



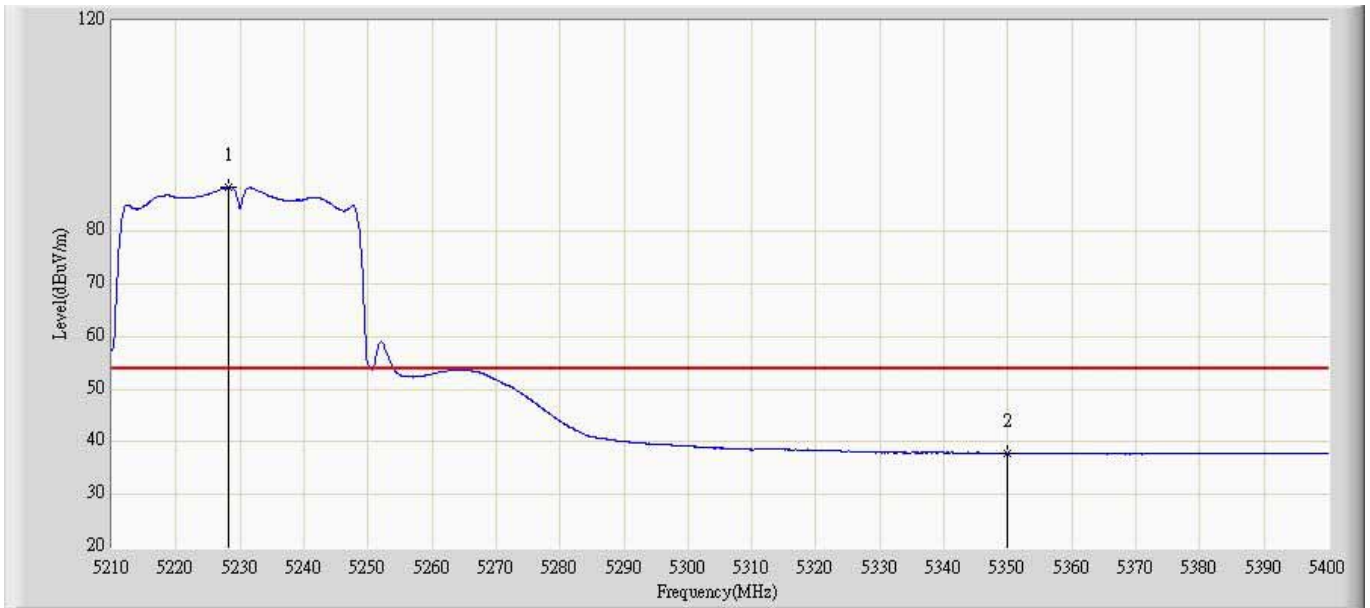
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5228.623	81.467	39.235	N/A	N/A	42.232	AV
2			5350.000	37.497	-4.896	-16.503	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 14:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant1	



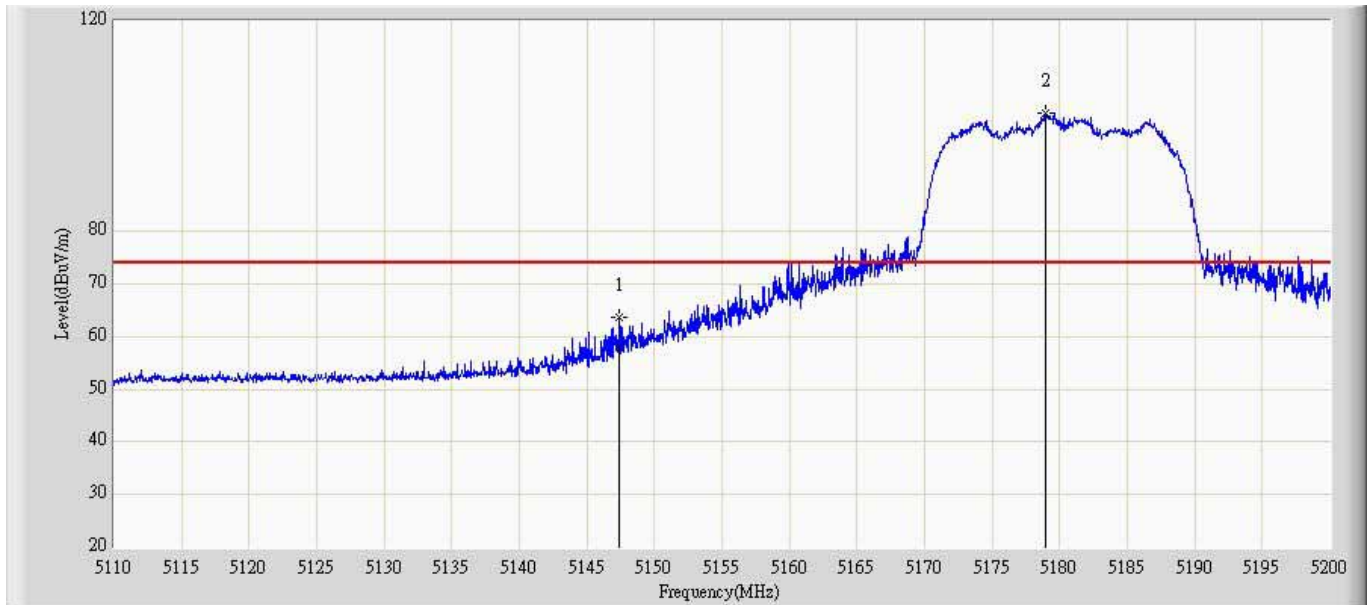
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5227.441	104.601	62.536	N/A	N/A	42.065	PK
2			5350.000	51.489	9.256	-22.511	74.000	42.233	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 14:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant1	



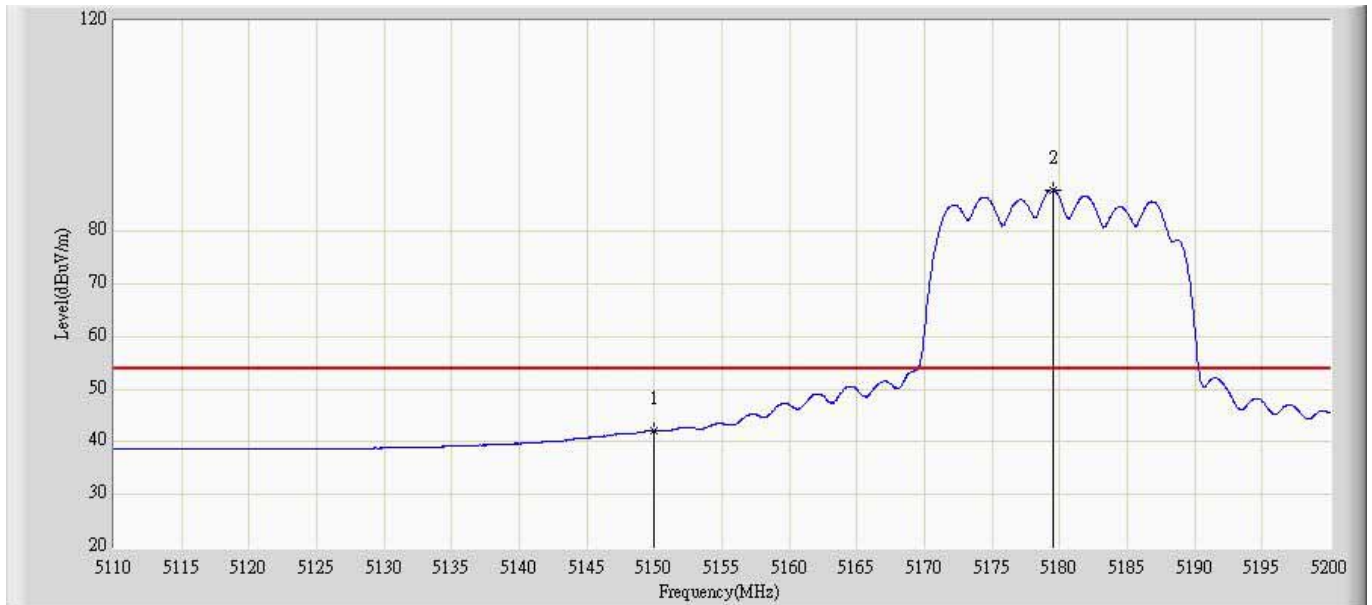
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5228.139	88.518	46.452	N/A	N/A	42.066	AV
2			5350.000	37.877	-4.356	-16.123	54.000	42.233	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 14:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0+1	



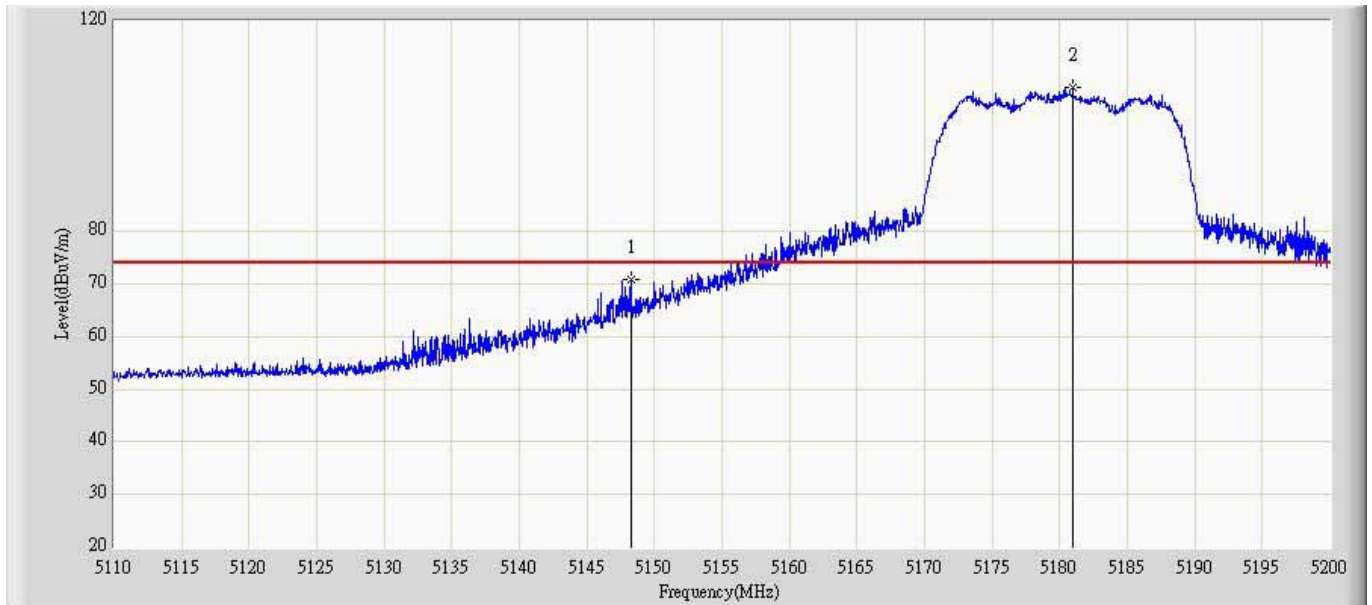
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5147.339	63.642	21.607	-10.358	74.000	42.035	PK
2		*	5178.876	102.608	60.493	N/A	N/A	42.115	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 14:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	42.277	0.236	-11.723	54.000	42.041	AV
2		*	5179.634	87.910	45.793	N/A	N/A	42.117	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 14:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0+1	



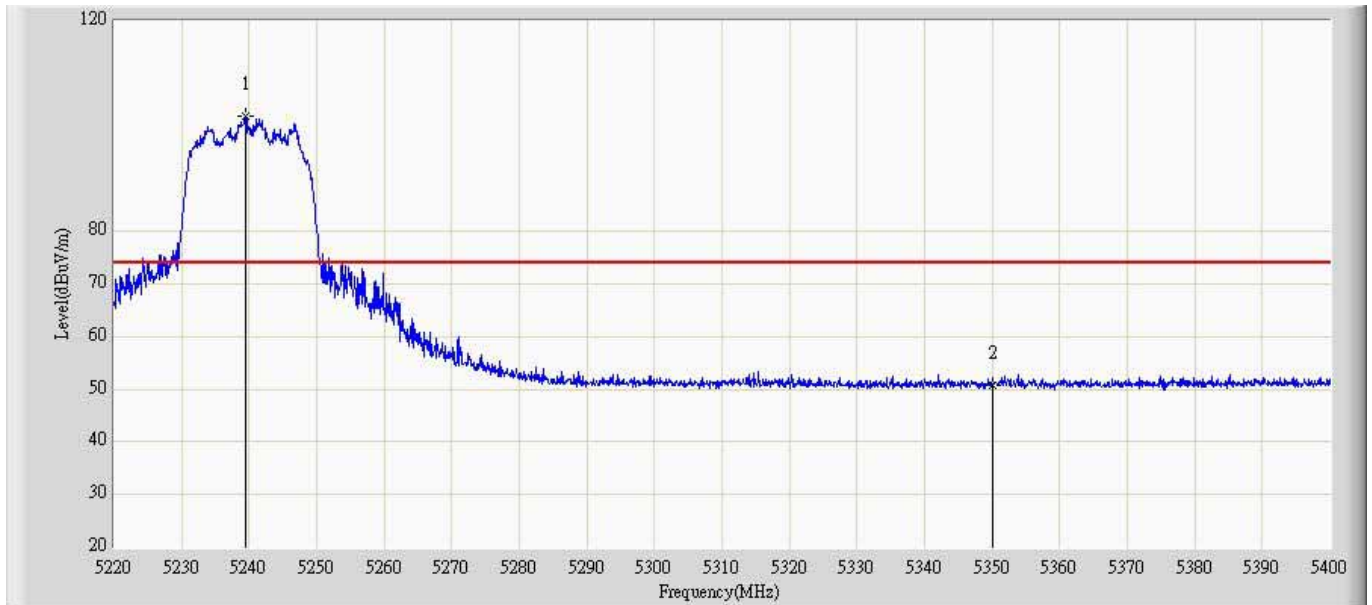
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5148.310	70.895	28.896	-3.105	74.000	41.999	PK
2		*	5180.915	107.452	65.421	N/A	N/A	42.031	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 14:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5180 by 802.11n(20MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	46.570	4.569	-7.430	54.000	42.001	AV
2		*	5180.425	93.927	51.896	N/A	N/A	42.031	AV

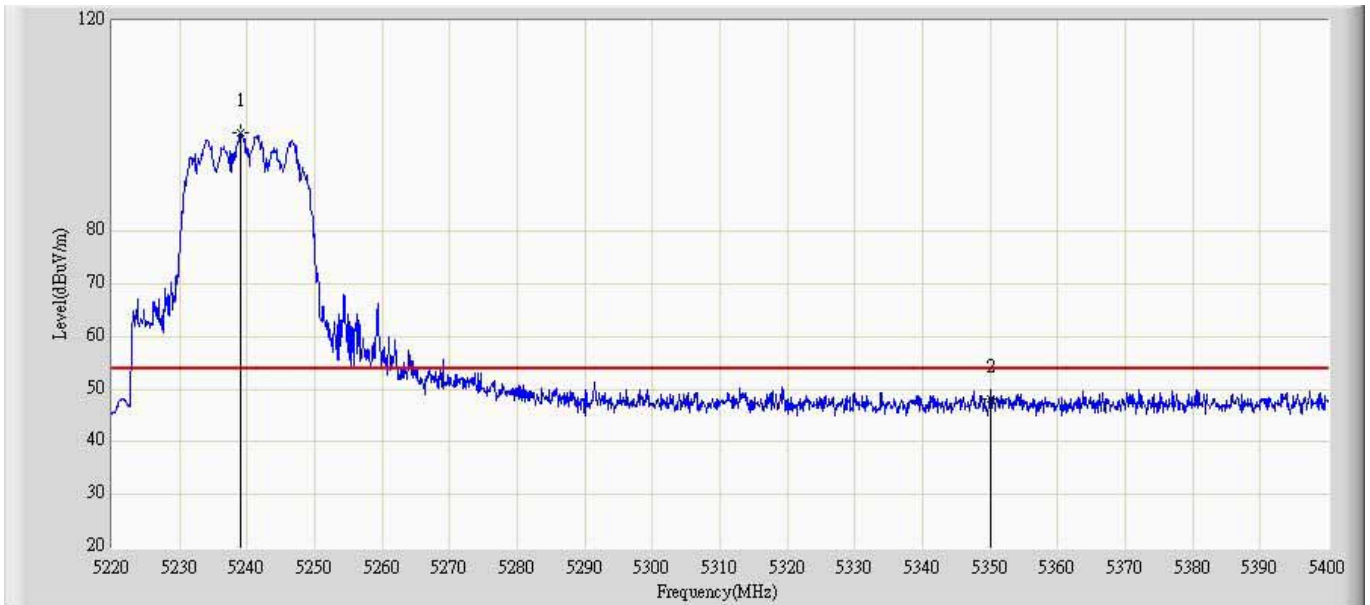
Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.485	101.888	59.628	N/A	N/A	42.260	PK
2			5350.000	50.540	8.147	-23.460	74.000	42.393	PK

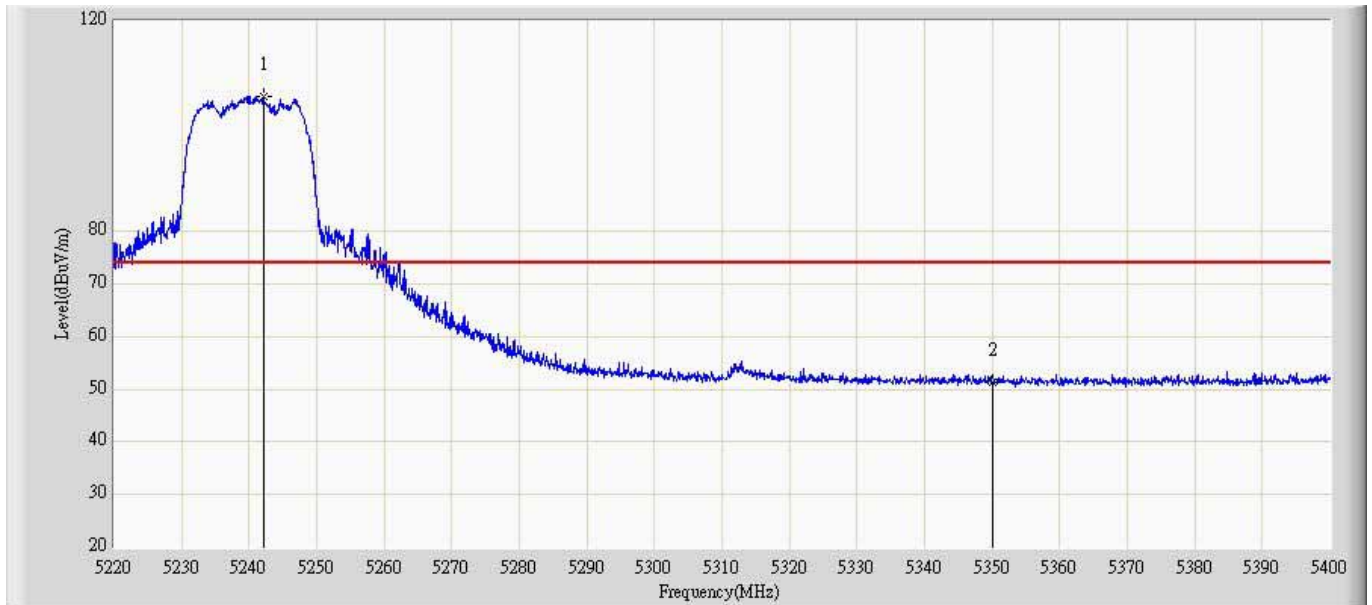


Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.138	98.755	56.496	N/A	N/A	42.259	AV
2			5350.000	48.145	5.752	-5.855	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0+1	



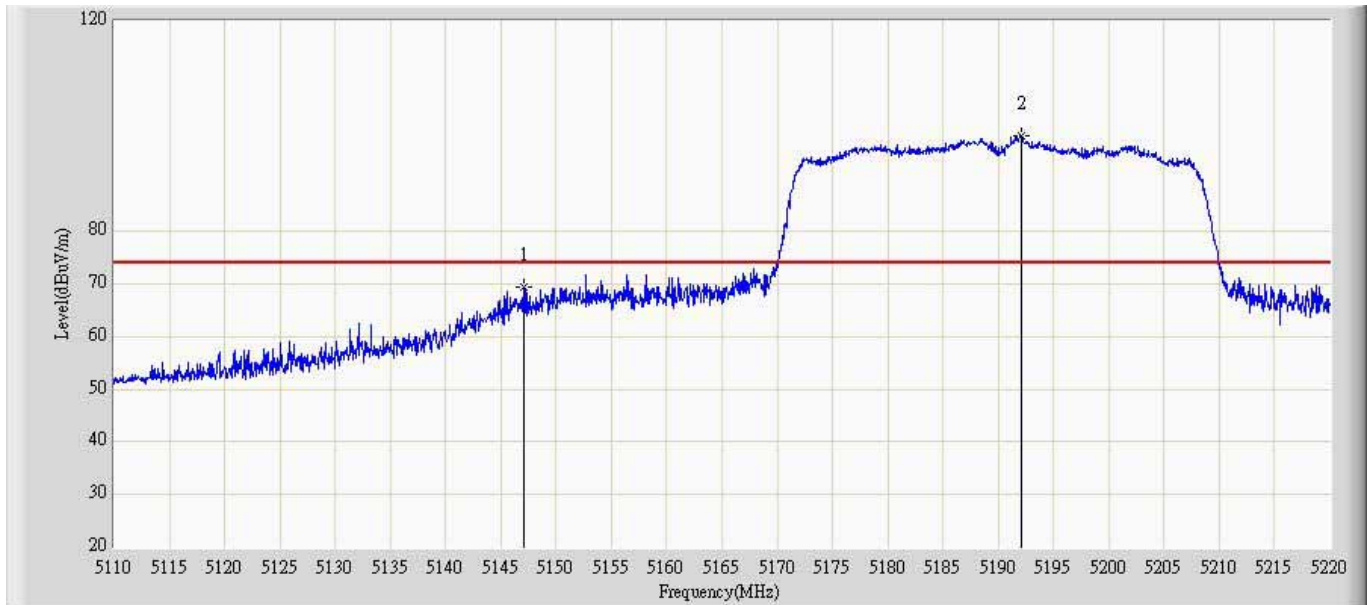
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5242.225	105.583	63.504	N/A	N/A	42.079	PK
2			5350.000	51.138	8.905	-22.862	74.000	42.233	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode2: Transmit at CH5240 by 802.11n(20MHz) ant0+1	



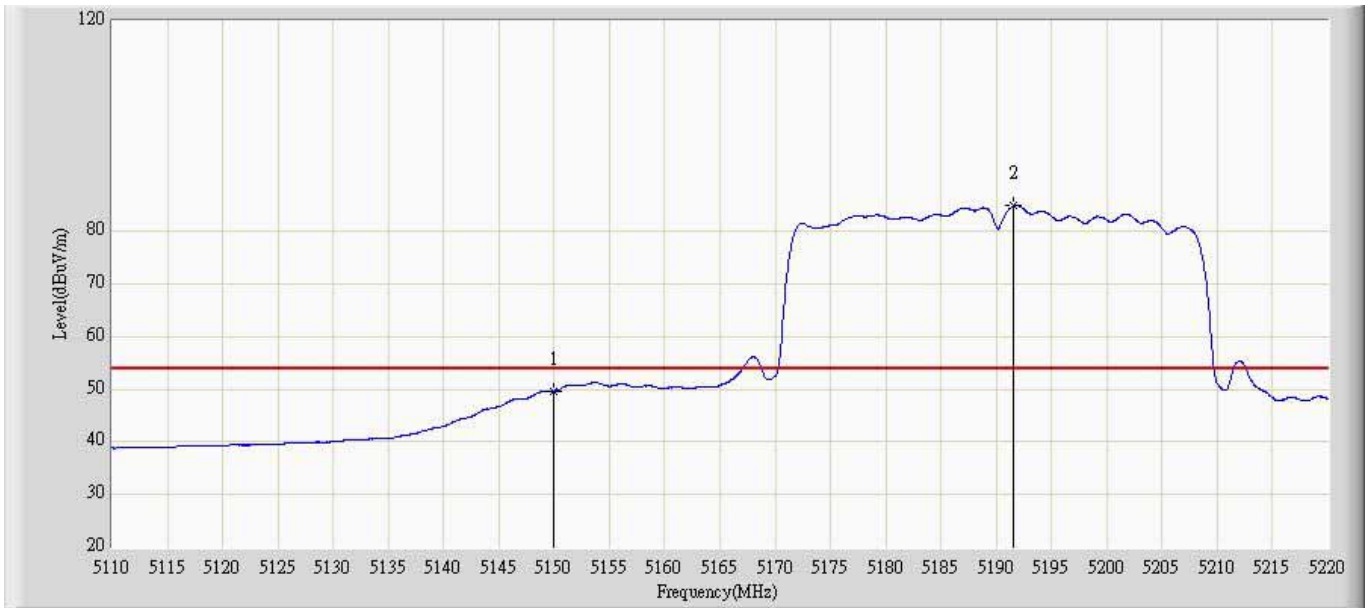
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5239.135	92.897	50.821	N/A	N/A	42.076	AV
2			5350.000	38.471	-3.762	-15.529	54.000	42.233	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0+1	



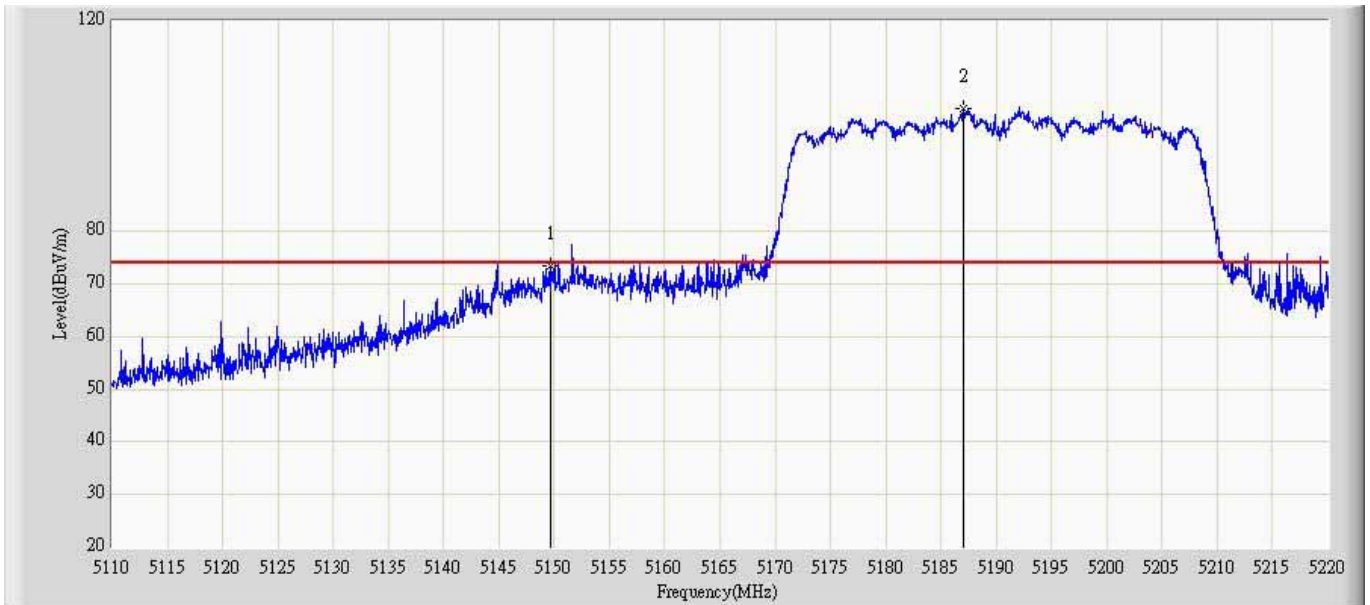
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5147.125	69.390	27.356	-4.610	74.000	42.034	PK
2		*	5192.060	98.369	56.224	N/A	N/A	42.145	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0+1	



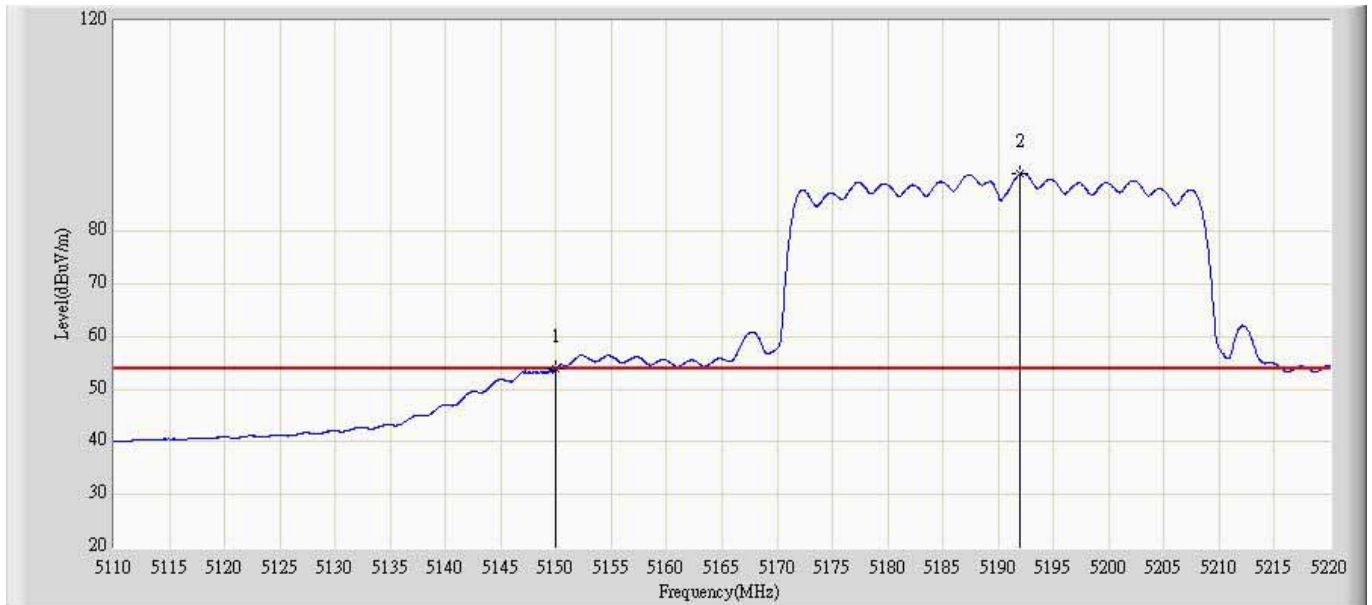
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	49.526	7.485	-4.474	54.000	42.041	AV
2		*	5191.692	84.879	42.735	N/A	N/A	42.144	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0+1	



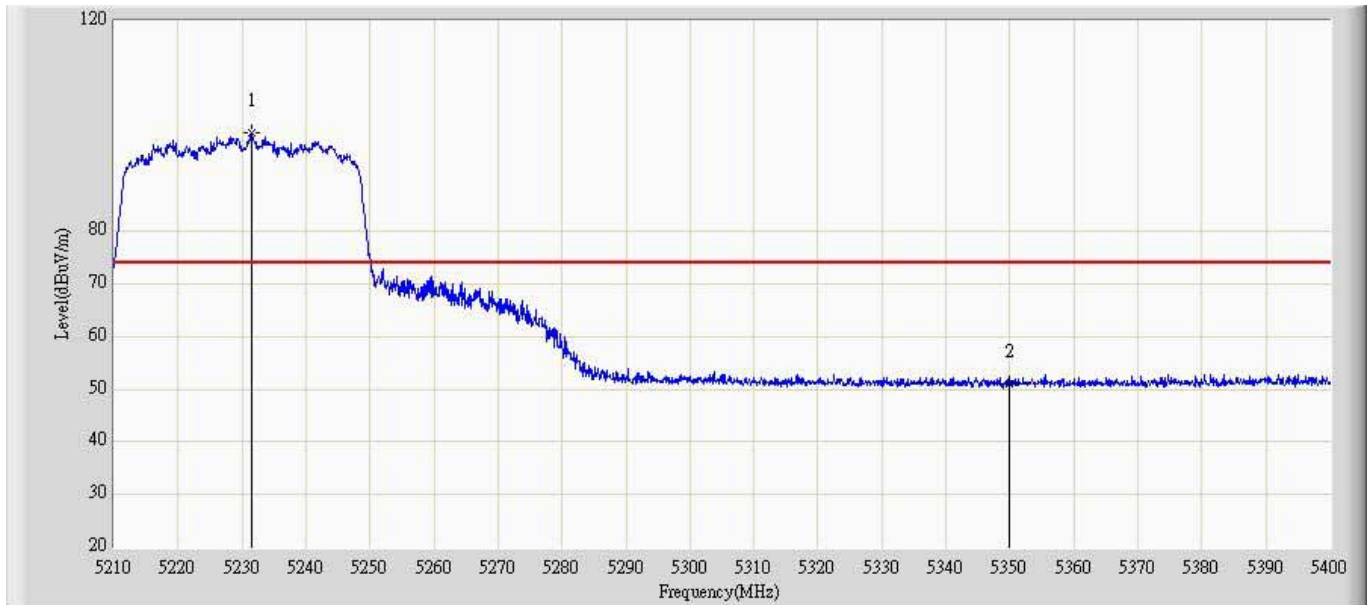
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5149.736	73.753	31.752	-0.247	74.000	42.001	PK
2		*	5187.000	103.291	61.256	N/A	N/A	42.035	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 15:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5190 by 802.11n(40MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5150.000	53.784	11.783	-0.216	54.000	42.001	AV
2		*	5192.148	90.902	48.864	N/A	N/A	42.038	AV

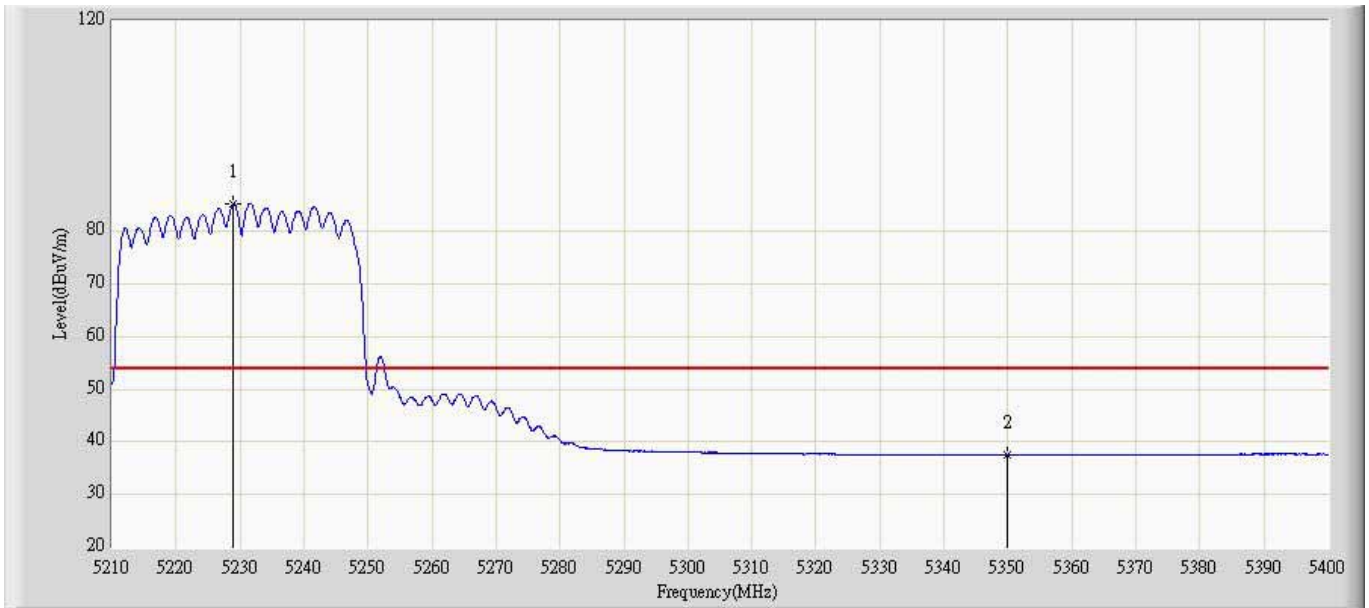
Engineer: Cloud	
Site: AC5	Time: 2014/12/24- 16:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5231.530	98.692	56.452	N/A	N/A	42.240	PK
2			5350.000	51.158	8.765	-22.842	74.000	42.393	PK

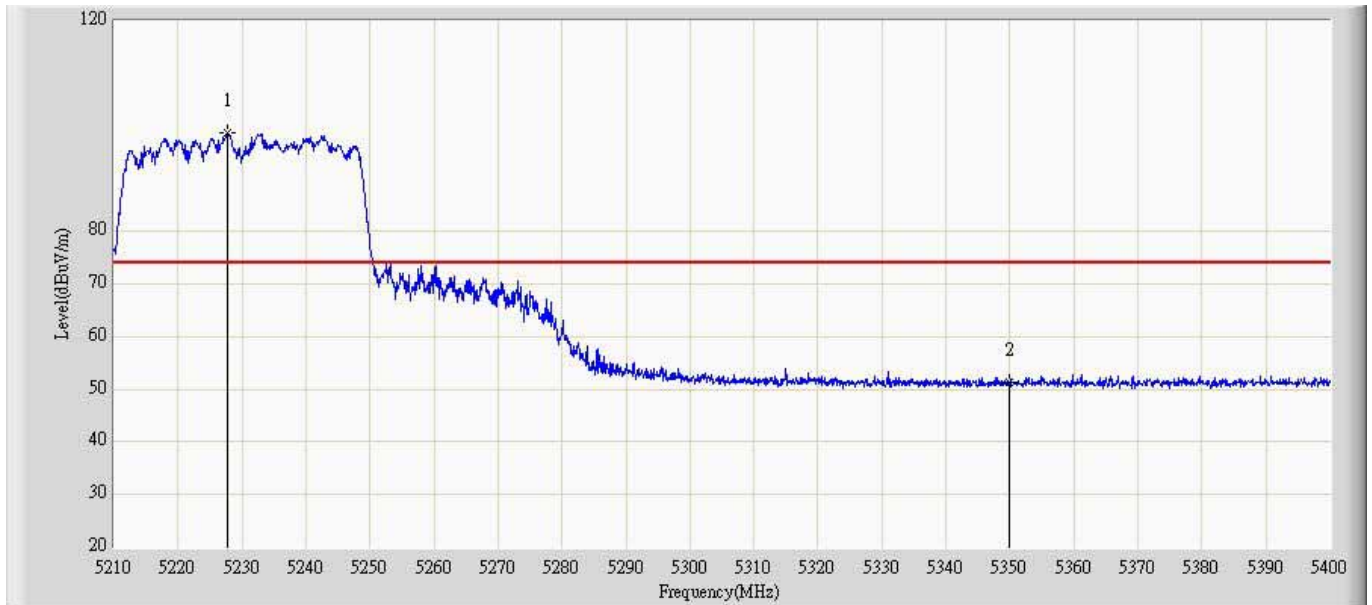


Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 16:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0+1	



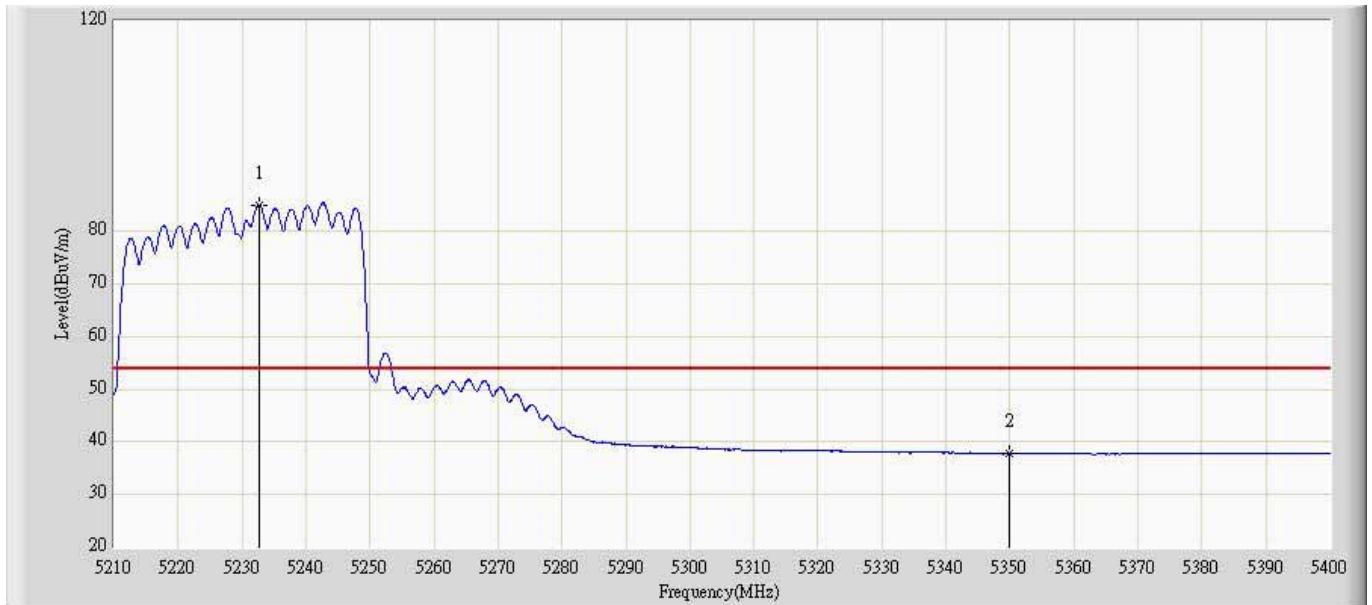
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5229.140	85.123	42.890	N/A	N/A	42.233	AV
2			5350.000	37.529	-4.864	-16.471	54.000	42.393	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 16:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5227.670	98.635	56.570	N/A	N/A	42.065	PK
2			5350.000	51.589	9.356	-22.411	74.000	42.233	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/24 - 16:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode3: Transmit at CH5230 by 802.11n(40MHz) ant0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5232.610	85.208	43.138	N/A	N/A	42.070	AV
2			5350.000	37.821	-4.412	-16.179	54.000	42.233	AV

————— The End —————