

Test Report

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

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. 23, 2014~ Dec. 24, 2014
Issued Date : Jan. 20, 2015
Report No. : 1470479R-RF-US-P05V01
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-P05V01



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 C: 2014
 ANSI C63.4: 2009; KDB 558074
 Industry Canada RSS-Gen Issue 4/RSS-210 Issue 8
 Test Result : Complied
 Performed Location : Suzhou EMC Laboratory
 No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech
 Development Zone., Suzhou, China
 TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
 FCC Registration Number: 800392; IC Lab Code: 4075B

Documented By : Alice Ni
 Reviewed By : Dream Cao
 Approved By : Jeff Chen

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:

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

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

Suzhou Testing Laboratory :

No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China

TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098

E-Mail : service@quietek.com

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1470479R-RF-US-P05V01	V1.0	Initial Issued Report	Dec. 24, 2014
1470479R-RF-US-P05V01	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>For 2.4GHz Band</p> <p>802.11b/g/n(20MHz): 2412~2462MHz</p> <p>802.11n(40MHz): 2422~2452MHz</p> <p>For 5.0GHz Band</p> <p>802.11a/n(20MHz):</p> <p>5180~5240MHz, 5745~5825MHz</p> <p>802.11n(40MHz):</p> <p>5190~5230MHz, 5755~5795MHz</p>
Channel Number	<p>For 2.4GHz Band</p> <p>802.11b/g/n(20MHz): 11 802.11n(40MHz): 7</p> <p>For 5.0GHz Band</p> <p>802.11a /n(20MHz): 9 802.11n(40MHz): 4</p>
Type of Modulation	<p>802.11b: DSSS</p> <p>802.11a/g/n: OFDM</p>
Data Rate	<p>802.11a/g: 6/9/12/18/24/36/48/54 Mbps</p> <p>802.11b: 1/2/5.5/11 Mbps</p> <p>802.11n: up to 300 Mbps</p>
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	Ant0	Ant1	Ant0+1
802.11b	2412	74	78	×
	2437	66	70	×
	2462	70	66	×
802.11g	2412	70	74	×
	2437	72	84	×
	2462	64	68	×
802.11n(20MHz)	2412	58	74	58
	2437	84	76	84
	2462	56	60	58
802.11n(40MHz)	2422	52	60	46
	2437	84	75	70
	2452	52	54	50

Test Mode	Test Channel	Ant0	Ant1	Ant0+1
802.11a	5180	64	64	×
	5200	68	68	×
	5240	66	66	×
	5745	60	64	×
	5785	66	66	×
	5825	66	66	×
802.11n (20MHz)	5180	48	48	48
	5200	52	52	52
	5240	48	48	48
	5745	48	48	48
	5785	66	70	52
	5825	48	48	40
802.11n (40MHz)	5190	48	48	48
	5230	48	48	48
	5755	48	48	48
	5795	48	48	48

The test mode of the test software can support.

Test Mode	Ant0	Ant1	Ant0+1
802.11b	√	√	×
802.11g	√	√	×

802.11a	✓	✓	✓
802.11n(20MHz)	✓	✓	✓
802.11n(40MHz)	✓	✓	✓

Duty Cycle

2.4GHz Band

Test Mode	Duty Cycle
802.11b	98%
802.11g	96%
802.11n(20MHz)	92%
802.11n(40MHz)	90%

5.0GHz Band

Test Mode	Duty Cycle
802.11a	96%
802.11n(20MHz)	90%
802.11n(40MHz)	89%

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 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11a
Mode 4: Transmit by 802.11n(20MHz)
Mode 5: Transmit by 802.11n(40MHz)

Note:

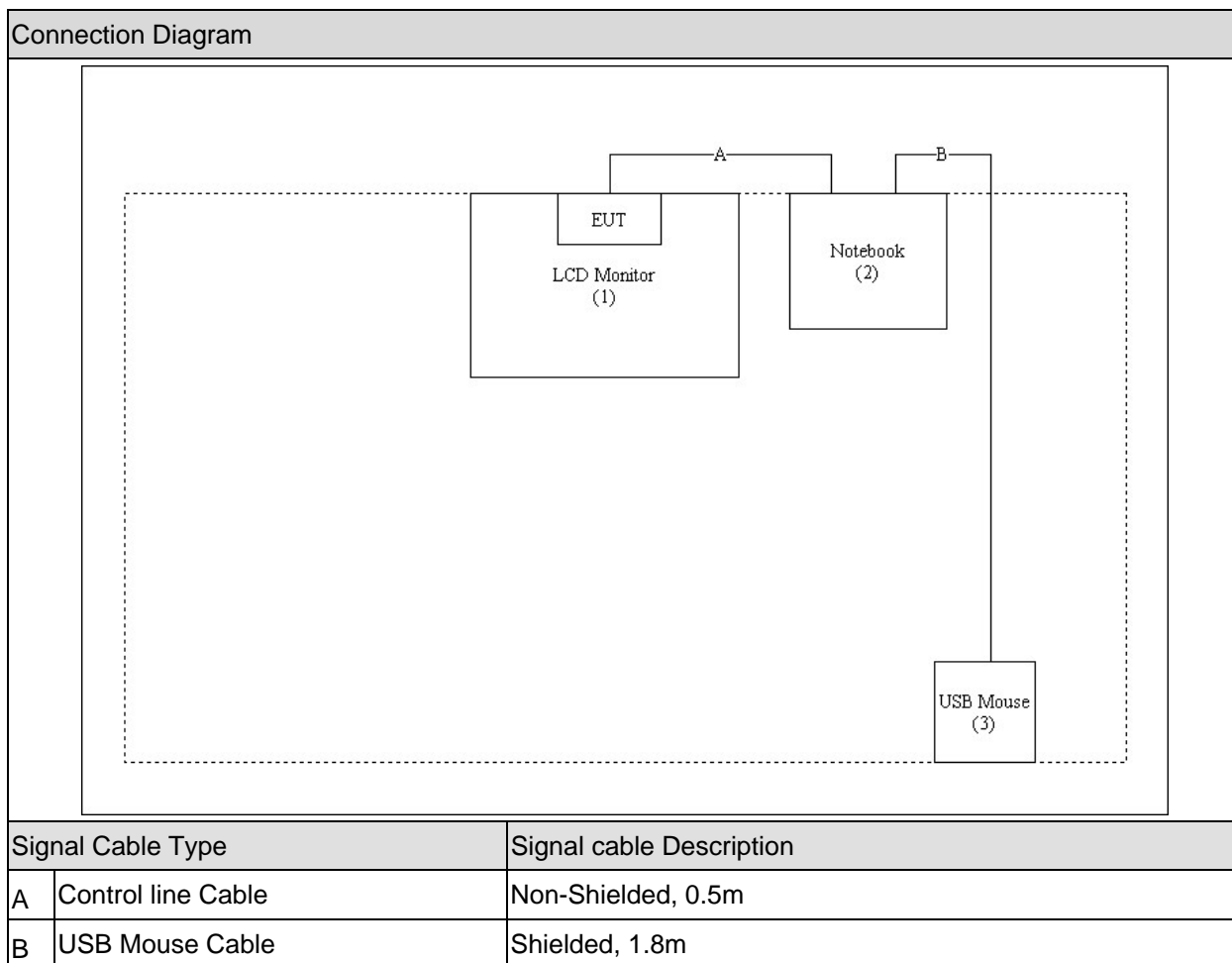
1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. For portable device, radiated spurious emission was verified over X, Y, Z Axis, and shown the worst case on this report.
3. This device is a composite device in accordance with Part 15 Subpart B regulations.

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 "hypertrm" 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 C: 2014 Section 15.207	No	N/A
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.209	Yes	No
RF Antenna Conducted Spurious	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(d)	No	N/A
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2014 15.247(d)	Yes	No
Operation Frequency Range of 20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2014 15.215(c)	No	N/A
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(a)(2)	No	N/A
Power Output	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(b)(3)	Yes	No
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2014 Section 15.247(e)	No	No

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	RSS-Gen Issue 4 November 2014 Section 7.2.2	No	N/A
Radiated Emission	RSS-210 Issue 8 December 2010 Section 2.7 Table 2 and Table 3	Yes	No
RF Antenna Conducted Spurious	RSS-210 Issue 8 December 2010 Section A8.5	No	N/A
Radiated Emission Band Edge	RSS-210 Issue 8 December 2010 Section A8.5	Yes	No
Occupied Bandwidth	RSS-Gen Issue 4 November 2014 Section 4.6.1 and 4.6.2 RSS-210 Issue 8 December 2010 Section A8.2(1)	No	N/A
Power Output	RSS-210 Issue 8 December 2010 Section A8.4(4)	No	N/A
Power Spectral Density	RSS-210 Issue 8 December 2010 Section A8.2(2)	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

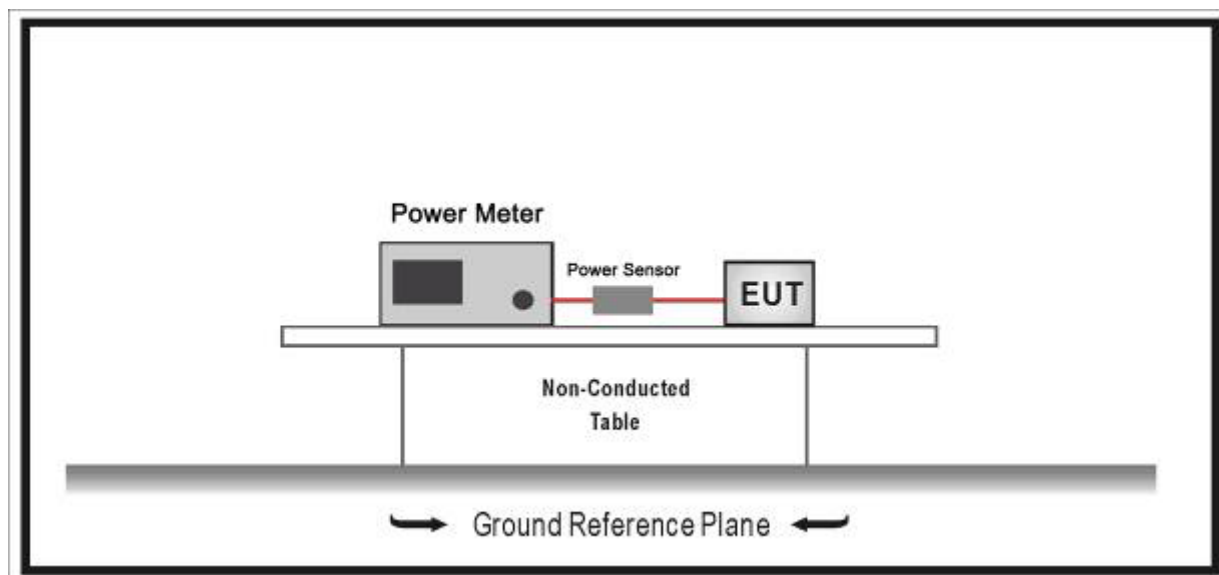
3.1. Test Equipment

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

The maximum peak power shall be less 1 Watt (30dBm).

Note: the conducted output power limit specified above is based on the use the antennas with directional gains that do not exceed 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values above, as appropriate, by the amount in dB that the directional gain of antenna exceeds 6 dBi.

3.4. Test Procedure

The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Use the broadband peak RF power meter to test peak power and record the result.

3.5. Uncertainty

The measurement uncertainty is defined as ± 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)						
		802.11b	802.11g	802.11a	20MHz Bandwidth		40MHz Bandwidth	
					800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	6	6.5	7.2	13.5	15.0
1	1	2	9	9	13.0	14.4	27.0	30.0
2	1	5.5	12	12	19.5	21.7	40.5	45.0
3	1	11	18	18	26.0	28.9	54.0	60.0
4	1	---	24	24	39.0	43.3	81.0	90.0
5	1	---	36	36	52.0	57.8	108.0	120.0
6	1	---	48	48	58.5	65.0	121.5	135.0
7	1	---	54	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	Peak Power (dBm)
802.11b(Ant 0)	20	2437	6	1	20.13
				5.5	20.03
				11	20.11
802.11g(Ant 0)	20	2437	6	6	24.23
				24	23.91
				54	23.96
802.11a(Ant 0)	20	5785	157	6	23.01
				24	22.86
				54	22.41
802.11n (Ant 0)	20	2437	6	MCS0	23.92
				MCS4	23.38
				MCS7	23.31
		5785	157	MCS0	23.13
				MCS4	23.02
				MCS7	22.85
802.11n (Ant 0)	40	2437	6	MCS0	23.82
				MCS4	22.97
				MCS7	22.90
		5755	151	MCS0	22.11
				MCS4	22.03
				MCS7	22.00

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 1: Transmit by 802.11b (Ant 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
1	2412	23.39	N/A	23.39	30.00	Pass
6	2437	20.13	N/A	20.13	30.00	Pass
11	2462	19.56	N/A	19.56	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 1: Transmit by 802.11b (Ant 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
1	2412	N/A	22.14	22.14	30.00	Pass
6	2437	N/A	20.09	20.09	30.00	Pass
11	2462	N/A	18.97	18.97	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 2: Transmit by 802.11g (Ant 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
1	2412	23.81	N/A	23.81	30.00	Pass
6	2437	24.23	N/A	24.23	30.00	Pass
11	2462	23.52	N/A	23.52	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 2: Transmit by 802.11g (Ant 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
1	2412	N/A	22.87	22.87	30.00	Pass
6	2437	N/A	22.64	22.64	30.00	Pass
11	2462	N/A	22.33	22.33	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 3: Transmit by 802.11a (Ant 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
149	5745	22.50	N/A	22.50	30.00	Pass
157	5785	23.01	N/A	23.01	30.00	Pass
165	5825	22.25	N/A	22.25	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 3: Transmit by 802.11a (Ant 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
149	5745	N/A	21.97	21.97	30.00	Pass
157	5785	N/A	22.83	22.83	30.00	Pass
165	5825	N/A	22.30	22.30	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 4: Transmit by 802.11n(20MHz) (Ant 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
1	2412	23.90	N/A	23.90	30.00	Pass
6	2437	23.92	N/A	23.92	30.00	Pass
11	2462	22.45	N/A	22.45	30.00	Pass
149	5745	22.44	N/A	22.44	30.00	Pass
157	5785	23.13	N/A	23.13	30.00	Pass
165	5825	22.22	N/A	22.22	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 4: Transmit by 802.11n(20MHz) (Ant 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
1	2412	N/A	22.57	22.57	30.00	Pass
6	2437	N/A	22.36	22.36	30.00	Pass
11	2462	N/A	21.40	21.40	30.00	Pass
149	5745	N/A	22.72	22.72	30.00	Pass
157	5785	N/A	23.68	23.68	30.00	Pass
165	5825	N/A	22.55	22.55	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 4: Transmit by 802.11n(20MHz) (Ant 0+1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
1	2412	24.92	22.77	26.99	30.00	Pass
6	2437	24.40	22.12	26.42	30.00	Pass
11	2462	24.49	22.86	26.76	30.00	Pass
149	5745	22.36	22.10	25.24	30.00	Pass
157	5785	23.00	22.96	25.99	30.00	Pass
165	5825	22.31	22.05	25.19	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 6: Transmit by 802.11n(40MHz) (Ant 0)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
3	2422	22.65	N/A	22.65	30.00	Pass
6	2437	23.82	N/A	23.82	30.00	Pass
9	2452	21.61	N/A	21.61	30.00	Pass
151	5755	22.11	N/A	22.11	30.00	Pass
159	5795	21.86	N/A	21.86	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 6: Transmit by 802.11n(40MHz) (Ant 1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
3	2422	N/A	22.14	22.14	30.00	Pass
6	2437	N/A	23.20	23.20	30.00	Pass
9	2452	N/A	22.80	22.80	30.00	Pass
151	5755	N/A	21.46	21.46	30.00	Pass
159	5795	N/A	21.33	21.33	30.00	Pass

Product	:	IP-STB
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 6: Transmit by 802.11n(40MHz) (Ant 0+1)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
3	2422	22.24	21.47	24.88	30.00	Pass
6	2437	22.75	22.42	25.60	30.00	Pass
9	2452	21.51	20.51	24.05	30.00	Pass
151	5755	22.13	21.85	25.00	30.00	Pass
159	5795	22.90	21.91	25.44	30.00	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	2013.11.17
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	2014.01.09

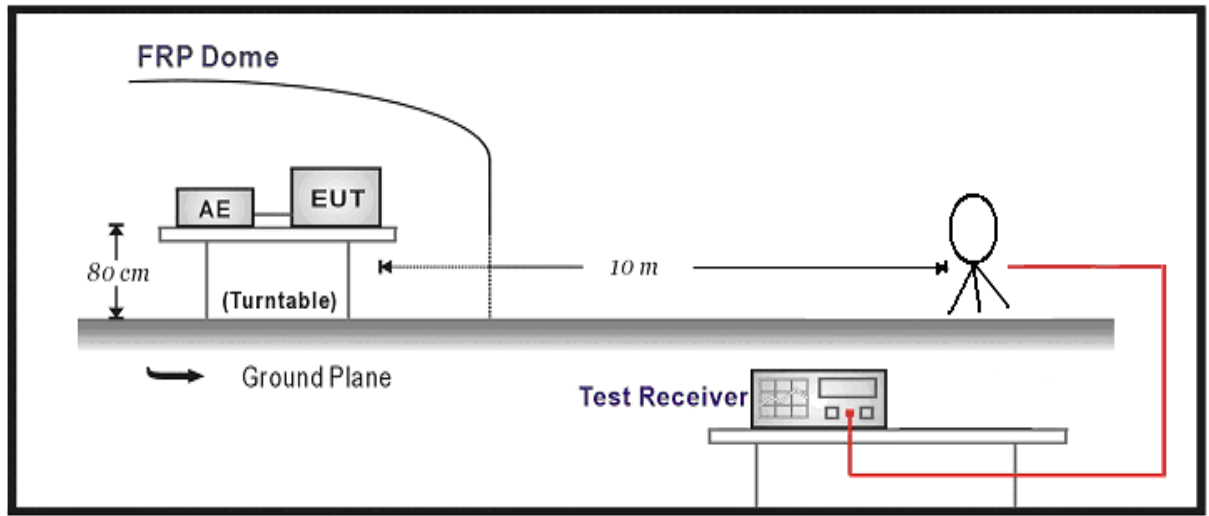
Radiated Emission / AC-5

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	2015.01.08

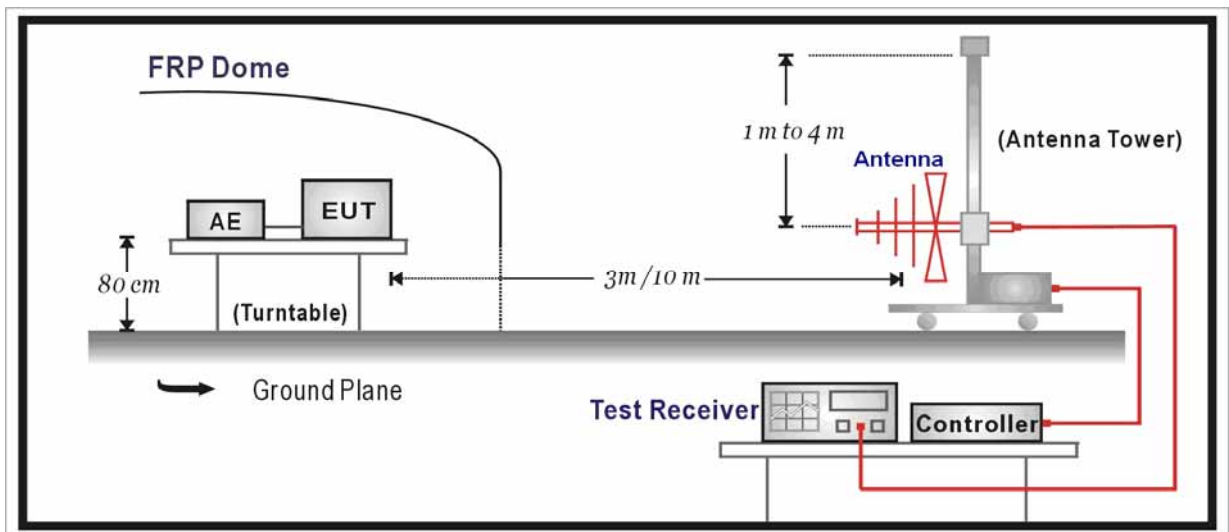
Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup

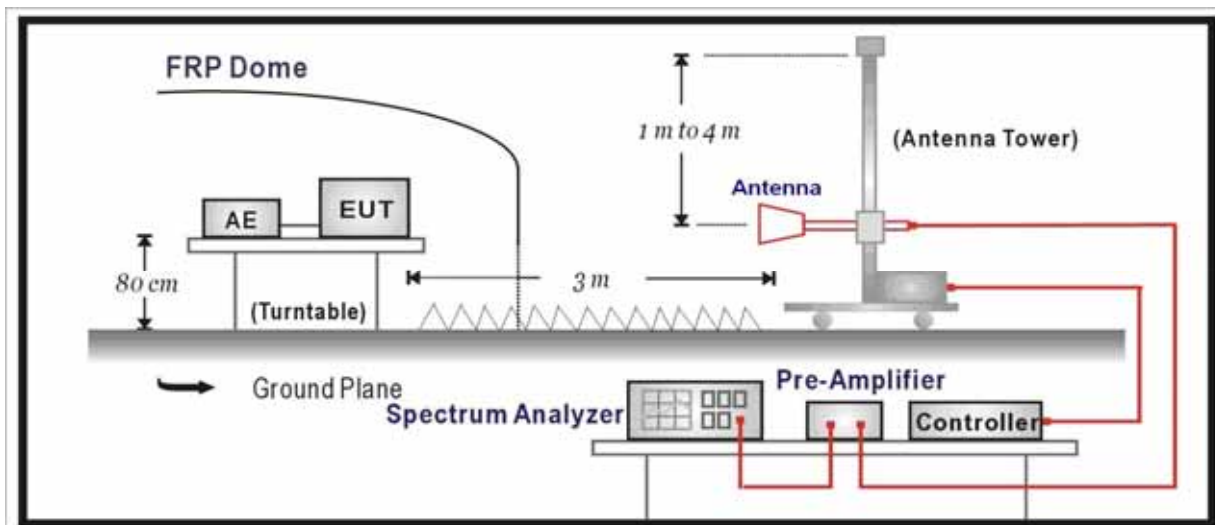
Below 30MHz Test Setup:



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 Antenna 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 and tested according to KDB 558074 for compliance to FCC 47CFR 15.247 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.

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 Antenna will be bended down a little (as horn Antenna has the narrow beamwidth) in order to keeping the Antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

4.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
below 1G is defined as ± 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.

Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamplifier Gain

Mode1: Transmit by 802.11b

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0	1	H	4825.1	42.9	7.1	50.0	54(note3)	-4.0	PK
		V	4825.3	47.1	7.1	54.2	74	-19.8	PK
		V	4825.0	45.1	7.1	52.2	54	-1.8	AV
		H	7236.2	31.8	10.7	42.5	54(note3)	-11.5	PK
		V	7236.0	31.2	10.7	41.9	54(note3)	-12.1	PK
		H	9648.3	39.4	4.9	44.3	54(note3)	-9.7	PK
		V	9648.0	39.5	4.9	44.4	54(note3)	-9.6	PK
	6	H	4876.1	45.0	7.2	52.2	54(note3)	-1.8	PK
		V	4876.4	49.2	7.2	56.4	74	-17.6	PK
		V	4876.2	46.0	7.2	51.2	54	-2.8	AV
		H	7311.3	30.6	10.8	41.4	54(note3)	-12.6	PK
		V	7311.0	30.9	10.8	41.7	54(note3)	-12.3	PK
		H	9748.1	38.4	5.0	43.4	54(note3)	-10.6	PK
		V	9748.0	37.9	5.1	43.0	54(note3)	-11.0	PK
	11	H	4927.2	45.8	7.3	53.1	54(note3)	-0.9	PK
		V	4927.0	51.5	7.4	58.9	74	-15.1	PK
		V	4927.5	45.9	7.4	53.3	54	-0.7	AV
		H	7386.0	31.8	10.9	42.7	54(note3)	-11.3	PK
		V	7386.0	31.5	10.9	42.4	54(note3)	-11.6	PK
		H	9848.6	39.0	5.2	44.2	54(note3)	-9.8	PK
		V	9848.0	37.4	5.3	42.7	54(note3)	-11.3	PK
Ant 1	1	H	4825.0	38.0	7.1	45.1	54(note3)	-8.9	PK
		V	4825.1	44.9	7.1	52.0	54(note3)	-2.0	PK
		H	7239.0	46.5	10.7	57.2	74	-16.8	PK
		H	7239.0	40.5	10.7	51.2	54	-2.8	AV
		V	7239.3	49.3	10.7	60.0	74	-14.0	PK
		V	7239.0	43.0	10.7	53.7	54	-0.3	AV

		H	9648.0	39.9	4.9	44.8	54(note3)	-9.2	PK
		V	9648.0	38.9	4.9	43.8	54(note3)	-10.2	PK
	6	H	4876.2	39.0	7.2	46.2	54(note3)	-7.8	PK
		V	4876.3	46.0	7.2	53.2	54(note3)	-0.8	PK
		H	7306.9	43.1	10.8	53.9	54(note3)	-0.1	PK
		V	7307.0	43.9	10.8	54.7	74	-19.3	PK
		V	7307.2	36.4	10.8	47.2	54	-6.8	AV
		H	9748.5	38.0	5.0	43.0	54(note3)	-11.0	PK
	11	V	9748.4	39.0	5.1	44.1	54(note3)	-9.9	PK
		H	4927.2	41.5	7.3	48.8	54(note3)	-5.2	PK
		V	4927.0	45.0	7.4	52.4	54(note3)	-1.6	PK
		H	7383.5	42.8	10.9	53.7	54(note3)	-0.3	PK
		V	7383.1	43.5	10.9	54.4	74	-19.6	PK
		V	7383.5	34.4	10.9	45.3	54	-8.7	AV
H		9848.0	38.8	5.2	44.0	54(note3)	-10.0	PK	
V	9848.3	38.9	5.3	44.2	54(note3)	-9.8	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.

Mode2: Transmit by 802.11g

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0	1	H	4825.1	37.6	7.1	44.7	54(note3)	-9.3	PK
		V	4825.3	38.1	7.1	45.2	54(note3)	-8.8	PK
		H	7236.4	30.2	10.7	40.9	54(note3)	-13.1	PK
		V	7236.1	30.4	10.7	41.1	54(note3)	-12.9	PK
		H	9648.2	39.2	4.9	44.1	54(note3)	-9.9	PK
		V	9648.0	38.1	4.9	43.0	54(note3)	-11.0	PK
	6	H	4876.0	34.2	7.2	41.4	54(note3)	-12.6	PK
		V	4876.5	45.4	7.2	52.6	54(note3)	-1.4	PK
		H	7311.0	30.5	10.8	41.3	54(note3)	-12.7	PK
		V	7311.1	30.5	10.8	41.3	54(note3)	-12.7	PK

Ant 1		H	9748.0	36.1	5.0	41.1	54(note3)	-12.9	PK
		V	9748.3	38.3	5.1	43.4	54(note3)	-10.6	PK
	11	H	4927.0	42.5	7.3	49.8	54(note3)	-4.2	PK
		V	4918.5	44.7	7.3	52.0	54(note3)	-2.0	PK
		H	7311.4	30.7	10.8	41.5	54(note3)	-12.5	PK
		V	7386.2	31.3	10.9	42.2	54(note3)	-11.8	PK
		H	9848.0	37.5	5.2	42.7	54(note3)	-11.3	PK
		V	9848.3	37.1	5.3	42.4	54(note3)	-11.6	PK
	1	H	4825.0	37.2	7.1	44.3	54(note3)	-9.7	PK
		V	4833.1	42.9	7.1	50.0	54(note3)	-4.0	PK
		H	7236.0	30.1	10.7	40.8	54(note3)	-13.2	PK
		V	7236.3	31.3	10.7	42.0	54(note3)	-12.0	PK
		H	9648.2	38.2	4.9	43.1	54(note3)	-10.9	PK
		V	9648.0	38.4	4.9	43.3	54(note3)	-10.7	PK
6		H	4876.0	41.2	7.2	48.4	54(note3)	-5.6	PK
		V	4876.5	45.3	7.2	52.5	54(note3)	-1.5	PK
		H	7311.1	31.1	10.8	41.9	54(note3)	-12.1	PK
		V	7311.0	31.5	10.8	42.3	54(note3)	-11.7	PK
		H	9748.3	38.3	5.0	43.3	54(note3)	-10.7	PK
		V	9748.0	38.2	5.1	43.3	54(note3)	-10.7	PK
11	H	4927.0	42.3	7.3	49.6	54(note3)	-4.4	PK	
	V	4927.2	46.5	7.4	53.9	54(note3)	-0.1	PK	
	H	7386.1	31.1	10.9	42.0	54(note3)	-12.0	PK	
	V	7386.0	31.3	10.9	42.2	54(note3)	-11.8	PK	
	H	9848.4	38.4	5.2	43.6	54(note3)	-10.4	PK	
	V	9848.2	37.2	5.3	42.5	54(note3)	-11.5	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 802.11a

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0	149	H	11489.3	31.3	15.5	46.8	54(note3)	-7.2	PK
		V	11489.0	33.1	15.4	48.5	54(note3)	-5.5	PK
		H	17235.0	23.2	23.1	46.3	54(note3)	-7.7	PK
		V	17235.4	22.7	23.1	45.8	54(note3)	-8.2	PK
	157	H	11565.2	30.3	16.6	46.9	54(note3)	-7.1	PK
		V	11565.1	30.2	16.5	46.7	54(note3)	-7.3	PK
		H	17355.0	22.3	24.5	46.8	54(note3)	-7.2	PK
		V	17294.6	23.1	24.5	47.6	54(note3)	-6.4	PK
	165	H	11650.1	27.2	16.0	43.2	54(note3)	-10.8	PK
		V	11650.6	31.1	15.9	47.0	54(note3)	-7.0	PK
		H	17475.2	22.3	23.7	46.0	54(note3)	-8.0	PK
		V	17475.1	21.5	23.8	45.3	54(note3)	-8.7	PK
Ant 1	147	H	11490.0	27.1	15.5	42.6	54(note3)	-11.4	PK
		V	11489.3	35.7	15.4	51.1	54(note3)	-2.9	PK
		H	17235.0	23.1	23.1	46.2	54(note3)	-7.8	PK
		V	17235.4	22.3	23.1	45.4	54(note3)	-8.6	PK
	157	H	11565.2	27.1	16.6	43.7	54(note3)	-10.3	PK
		V	11557.2	25.6	16.4	42.0	54(note3)	-12.0	PK
		H	17294.1	22.1	24.4	46.5	54(note3)	-7.5	PK
		V	17354.0	21.3	24.6	45.9	54(note3)	-8.1	PK
	165	H	11650.3	23.2	16.0	39.2	54(note3)	-14.8	PK
		V	11599.5	30.4	15.7	46.1	54(note3)	-7.9	PK
		H	17475.0	21.4	23.7	45.1	54(note3)	-8.9	PK
		V	17475.1	20.2	23.8	44.0	54(note3)	-10.0	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.

Mode4: 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	1	H	4825.2	34.1	7.1	41.2	54(note3)	-12.8	PK	
		V	4825.4	38.2	7.1	45.3	54(note3)	-8.7	PK	
		H	7236.2	31.3	10.7	42.0	54(note3)	-12.0	PK	
		V	7236.1	31.2	10.7	41.9	54(note3)	-12.1	PK	
		H	9648.0	38.4	4.9	43.3	54(note3)	-10.7	PK	
		V	9648.4	38.6	4.9	43.5	54(note3)	-10.5	PK	
	6	H	4867.5	41.1	7.2	48.3	54(note3)	-5.7	PK	
		V	4876.0	47.2	7.2	54.4	74	-19.6	PK	
		V	4876.2	33.3	7.2	40.5	54	-13.5	AV	
		H	7311.0	32.4	10.8	43.2	54(note3)	-10.8	PK	
		V	7311.1	32.2	10.8	43.0	54(note3)	-11.0	PK	
		H	9748.2	37.1	5.0	42.1	54(note3)	-11.9	PK	
	11	V	9748.0	37.3	5.1	42.4	54(note3)	-11.6	PK	
		H	4918.1	39.1	7.3	46.4	54(note3)	-7.6	PK	
		V	4927.0	44.3	7.4	51.7	54(note3)	-2.3	PK	
		H	7386.2	31.4	10.9	42.3	54(note3)	-11.7	PK	
		V	7386.0	31.2	10.9	42.1	54(note3)	-11.9	PK	
		H	9848.3	38.3	5.2	43.5	54(note3)	-10.5	PK	
	149	V	9848.0	39.1	5.3	44.4	54(note3)	-9.6	PK	
		H	11489.7	30.5	15.5	46.0	54(note3)	-8.0	PK	
		V	11489.6	32.4	15.4	47.8	54(note3)	-6.2	PK	
		H	17235.8	22.7	23.1	45.8	54(note3)	-8.2	PK	
	157	V	17235.1	23.2	23.1	46.3	54(note3)	-7.7	PK	
		H	11565.5	30.1	16.6	46.7	54(note3)	-7.3	PK	
		V	11565.5	29.2	16.5	45.7	54(note3)	-8.3	PK	
		H	17355.0	21.4	24.5	45.9	54(note3)	-8.1	PK	
	165	V	17303.0	23.3	24.5	47.8	54(note3)	-6.2	PK	
		H	11650.0	26.1	16	42.1	54(note3)	-11.9	PK	
		V	11650.5	30.2	15.9	46.1	54(note3)	-7.9	PK	
		H	17475.6	20.7	23.7	44.4	54(note3)	-9.6	PK	
	Ant 1	1	V	17475.3	21.3	23.8	45.1	54(note3)	-8.9	PK
			H	4824.4	32.0	7.1	39.1	54(note3)	-14.9	PK
			V	4825.2	37.1	7.1	44.2	54(note3)	-9.8	PK

		H	7247.1	45.5	10.7	56.2	74	-17.8	PK	
		H	7247.3	26.1	10.7	36.8	54	-17.2	AV	
		V	7239.1	47.2	10.7	57.9	74	-16.1	PK	
		V	7239.5	28.4	10.7	39.1	54	-14.9	AV	
		H	9648.1	38.3	4.9	43.2	54(note3)	-10.8	PK	
		V	9648.2	39.4	4.9	44.3	54(note3)	-9.7	PK	
	6		H	4876.4	36.7	7.2	43.9	54(note3)	-10.1	PK
			V	4876.5	39.1	7.2	46.3	54(note3)	-7.7	PK
			H	7307.8	45.1	10.8	55.9	74	-18.1	PK
			H	7307.2	28.2	10.8	39.0	54	-15.0	AV
			V	7315.1	48.5	10.8	59.3	74	-14.7	PK
			V	7315.5	27.1	10.8	37.9	54	-16.1	AV
			H	9748.0	38.2	5.0	43.2	54(note3)	-10.8	PK
			V	9748.3	37.4	5.1	42.5	54(note3)	-11.5	PK
	11		H	4927.2	36.1	7.3	43.4	54(note3)	-10.6	PK
			V	4918.5	40.3	7.3	47.6	54(note3)	-6.4	PK
			H	7383.7	40.2	10.9	51.1	54(note3)	-2.9	PK
			V	7383.5	42.1	10.9	53.0	54(note3)	-1.0	PK
			H	9848.4	37.3	5.2	42.5	54(note3)	-11.5	PK
			V	9848.2	38.2	5.3	43.5	54(note3)	-10.5	PK
	149		H	11490.7	27.1	15.5	42.6	54(note3)	-11.4	PK
			V	11497.5	34.3	15.4	49.7	54(note3)	-4.3	PK
			H	17235.6	23.2	23.1	46.3	54(note3)	-7.7	PK
			V	17235.0	22.6	23.1	45.7	54(note3)	-8.3	PK
	157		H	11571.6	26.5	16.6	43.1	54(note3)	-10.9	PK
			V	11570.5	27.1	16.5	43.6	54(note3)	-10.4	PK
			H	17354.2	22.3	24.5	46.8	54(note3)	-7.2	PK
			V	17355.3	23.2	24.6	47.8	54(note3)	-6.2	PK
	165		H	11650.7	26.4	16	42.4	54(note3)	-11.6	PK
			V	11642.2	29.2	15.9	45.1	54(note3)	-8.9	PK
			H	17475.6	21.1	23.7	44.8	54(note3)	-9.2	PK
			V	17475.1	21.3	23.8	45.1	54(note3)	-8.9	PK
Ant 0+1	1	H	4824.0	33.2	7.1	40.3	54(note3)	-13.7	PK	
		V	4825.1	34.5	7.1	41.6	54(note3)	-12.4	PK	
		H	7230.5	36.2	10.7	46.9	54(note3)	-7.1	PK	
		V	7239.3	38.1	10.7	48.8	54(note3)	-5.2	PK	
		H	9648.2	38.3	4.9	43.2	54(note3)	-10.8	PK	

		V	9648.1	39.7	4.9	44.6	54(note3)	-9.4	PK
	6	H	4867.5	38.2	7.2	45.4	54(note3)	-8.6	PK
		V	4876.3	45.4	7.2	52.6	54(note3)	-1.4	PK
		H	7307.0	48.3	10.8	59.1	74	-14.9	PK
		H	7307.4	34.6	10.8	45.4	54	-8.6	AV
		V	7315.2	51.1	10.8	61.9	74	-12.1	PK
		V	7315.1	36.7	10.8	47.5	54	-6.5	AV
		H	9748.4	38.4	5.0	43.4	54(note3)	-10.6	PK
		V	9748.0	37.3	5.1	42.4	54(note3)	-11.6	PK
		11	H	4918.1	33.1	7.3	40.4	54(note3)	-13.6
	V		4918.5	37.2	7.3	44.5	54(note3)	-9.5	PK
	H		7392.3	42.3	10.9	53.2	54(note3)	-0.8	PK
	V		7383.5	42.2	10.9	53.1	54(note3)	-0.9	PK
	H		9848.0	34.1	5.2	39.3	54(note3)	-14.7	PK
	V		9848.2	35.3	5.3	40.6	54(note3)	-13.4	PK
	149	H	11489.1	28.4	15.5	43.9	54(note3)	-10.1	PK
		V	11489.0	34.9	15.4	50.3	54(note3)	-3.7	PK
		H	17235.2	24.5	23.1	47.6	54(note3)	-6.4	PK
		V	17235.1	22.2	23.1	45.3	54(note3)	-8.7	PK
	157	H	11570.4	23.1	16.6	39.7	54(note3)	-14.3	PK
		V	11570.6	22.2	16.5	38.7	54(note3)	-15.3	PK
		H	17355.1	20.3	24.5	44.8	54(note3)	-9.2	PK
		V	17355.0	21.1	24.6	45.7	54(note3)	-8.3	PK
	165	H	11650.2	25.2	16.0	41.2	54(note3)	-12.8	PK
		V	11659.0	32.1	16.0	48.1	54(note3)	-5.9	PK
		H	17475.4	23.3	23.7	47.0	54(note3)	-7.0	PK
		V	17475.2	21.4	23.8	45.2	54(note3)	-8.8	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.

Mode5: 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	3	H	4844.1	31.6	7.2	38.8	54(note3)	-15.2	PK
		V	4867.5	38.4	7.2	45.6	54(note3)	-8.4	PK
		H	7266.0	31.1	10.7	41.8	54(note3)	-12.2	PK
		V	7266.4	30.3	10.7	41.0	54(note3)	-13.0	PK
		H	9688.0	38.5	5.0	43.5	54(note3)	-10.5	PK
		V	9688.2	38.7	5.1	43.8	54(note3)	-10.2	PK
	6	H	4876.0	39.2	7.2	46.4	54(note3)	-7.6	PK
		V	4876.3	44.1	7.2	51.3	54(note3)	-2.7	PK
		H	7311.0	31.3	10.8	42.1	54(note3)	-11.9	PK
		V	7311.2	31.2	10.8	42.0	54(note3)	-12.0	PK
		H	9748.1	38.7	5.0	43.7	54(note3)	-10.3	PK
		V	9748.5	37.1	5.1	42.2	54(note3)	-11.8	PK
	9	H	4918.2	35.2	7.3	42.5	54(note3)	-11.5	PK
		V	4918.5	40.9	7.3	48.2	54(note3)	-5.8	PK
		H	7356.4	31.4	10.8	42.2	54(note3)	-11.8	PK
		V	7356.0	30.2	10.8	41.0	54(note3)	-13.0	PK
		H	9808.2	37.3	5.1	42.4	54(note3)	-11.6	PK
		V	9808.1	37.7	5.2	42.9	54(note3)	-11.1	PK
	151	H	11514.6	28.5	15.6	44.1	54(note3)	-9.9	PK
		V	11506.0	30.1	15.5	45.6	54(note3)	-8.4	PK
		H	17265.2	22.3	23.1	45.4	54(note3)	-8.6	PK
		V	17265.4	22.2	23.2	45.4	54(note3)	-8.6	PK
	159	H	11630.2	23.1	15.9	39.0	54(note3)	-15.0	PK
		V	11630.7	24.4	15.8	40.2	54(note3)	-13.8	PK
H		17445.1	20.2	23.6	43.8	54(note3)	-10.2	PK	
V		17445.4	21.5	23.7	45.2	54(note3)	-8.8	PK	
Ant 1	3	H	4844.1	32.1	7.2	39.3	54(note3)	-14.7	PK
		V	4842.3	34.2	7.1	41.3	54(note3)	-12.7	PK
		H	7273.0	37.4	10.7	48.1	54(note3)	-5.9	PK
		V	7256.4	38.2	10.7	48.9	54(note3)	-5.1	PK
		H	9688.0	38.3	5.0	43.3	54(note3)	-10.7	PK

Ant 0+1	6	V	9688.2	37.2	5.1	42.3	54(note3)	-11.7	PK
		H	4867.5	33.2	7.2	40.4	54(note3)	-13.6	PK
		V	4867.5	38.4	7.2	45.6	54(note3)	-8.4	PK
		H	7307.1	42.3	10.8	53.1	54(note3)	-0.9	PK
		V	7307.0	44.1	10.8	54.9	74	-19.1	PK
		V	7307.4	28.2	10.8	39.0	54	-15.0	AV
		H	9748.1	37.1	5.0	42.1	54(note3)	-11.9	PK
		V	9748.2	37.3	5.1	42.4	54(note3)	-11.6	PK
		H	4986.4	33.5	7.3	40.8	54(note3)	-13.2	PK
		V	4901.5	36.7	7.3	44.0	54(note3)	-10.0	PK
		H	7358.1	34.3	10.8	45.1	54(note3)	-8.9	PK
		V	7366.5	35.2	10.9	46.1	54(note3)	-7.9	PK
		H	9808.2	37.1	5.1	42.2	54(note3)	-11.8	PK
		V	9808.5	37.2	5.2	42.4	54(note3)	-11.6	PK
	H	11510.1	26.9	15.6	42.5	54(note3)	-11.5	PK	
	V	11506.5	32.2	15.5	47.7	54(note3)	-6.3	PK	
	H	17265.3	22.1	23.1	45.2	54(note3)	-8.8	PK	
	V	17265.1	22.5	23.2	45.7	54(note3)	-8.3	PK	
	H	11630.8	24.2	15.9	40.1	54(note3)	-13.9	PK	
	V	11630.2	24.3	15.8	40.1	54(note3)	-13.9	PK	
	H	17445.6	21.1	23.6	44.7	54(note3)	-9.3	PK	
	V	17445.5	21.4	23.7	45.1	54(note3)	-8.9	PK	
	H	4844.1	30.2	7.2	37.4	54(note3)	-16.6	PK	
	V	4986.3	32.9	7.5	40.4	54(note3)	-13.6	PK	
	H	7266.4	30.1	10.7	40.8	54(note3)	-13.2	PK	
	V	7264.5	32.6	10.7	43.3	54(note3)	-10.7	PK	
	H	9688.1	35.7	5.0	40.7	54(note3)	-13.3	PK	
	V	9688.0	35.9	5.1	41.0	54(note3)	-13.0	PK	
H	4876.4	34.2	7.2	41.4	54(note3)	-12.6	PK		
V	4876.2	38.1	7.2	45.3	54(note3)	-8.7	PK		
H	7315.1	41.2	10.8	52.0	54(note3)	-2.0	PK		
V	7298.2	41.3	10.8	52.1	54(note3)	-1.9	PK		
H	9748.1	35.5	5.0	40.5	54(note3)	-13.5	PK		
V	9748.4	35.9	5.1	41.0	54(note3)	-13.0	PK		
H	4904.2	30.7	7.2	37.9	54(note3)	-16.1	PK		
V	4893.3	32.3	7.2	39.5	54(note3)	-14.5	PK		
H	7349.1	33.5	10.8	44.3	54(note3)	-9.7	PK		

		V	7358.2	33.4	10.8	44.2	54(note3)	-9.8	PK
		H	9808.7	34.9	5.1	40.0	54(note3)	-14.0	PK
		V	9808.1	34.6	5.2	39.8	54(note3)	-14.2	PK
	151	H	11510.5	27.1	15.6	42.7	54(note3)	-11.3	PK
		V	11506.3	31.9	15.5	47.4	54(note3)	-6.6	PK
		H	17265.7	23.3	23.1	46.4	54(note3)	-7.6	PK
		V	17265.4	22.4	23.2	45.6	54(note3)	-8.4	PK
	159	H	11630.2	24.7	15.9	40.6	54(note3)	-13.4	PK
		V	11574.0	28.8	15.7	44.5	54(note3)	-9.5	PK
		H	17445.0	21.5	23.6	45.1	54(note3)	-8.9	PK
		V	17445.0	21.1	23.7	44.8	54(note3)	-9.2	PK

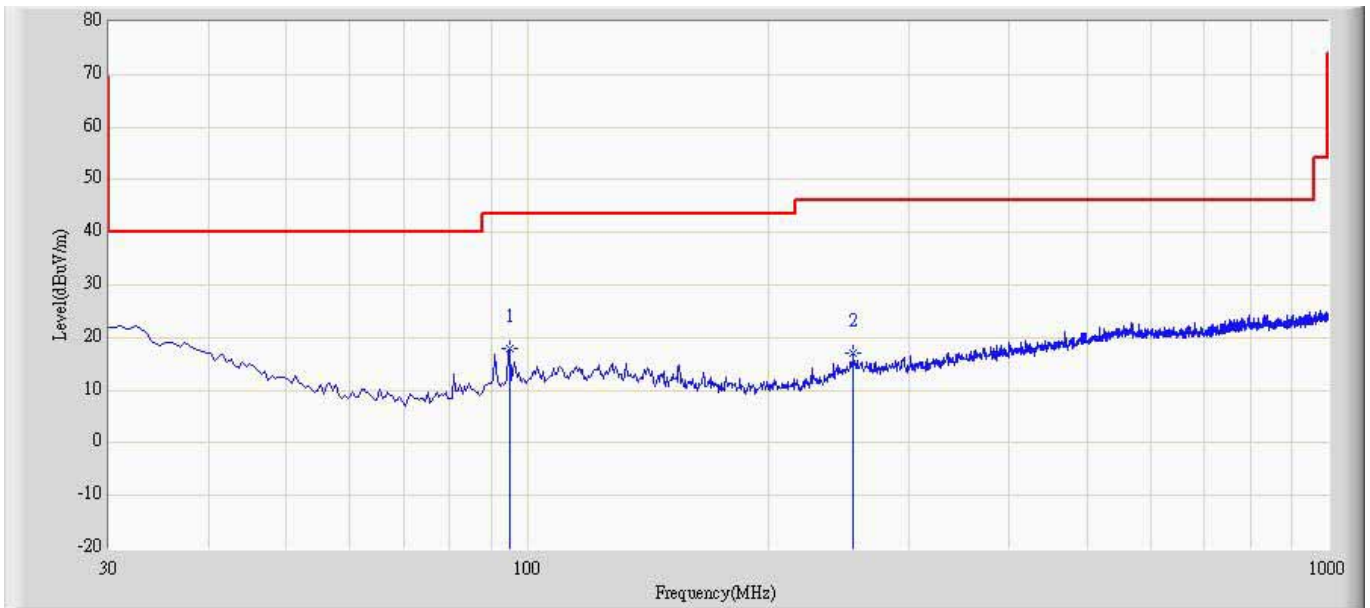
Note: 1. Measure Level = Reading Level + Factor.

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.

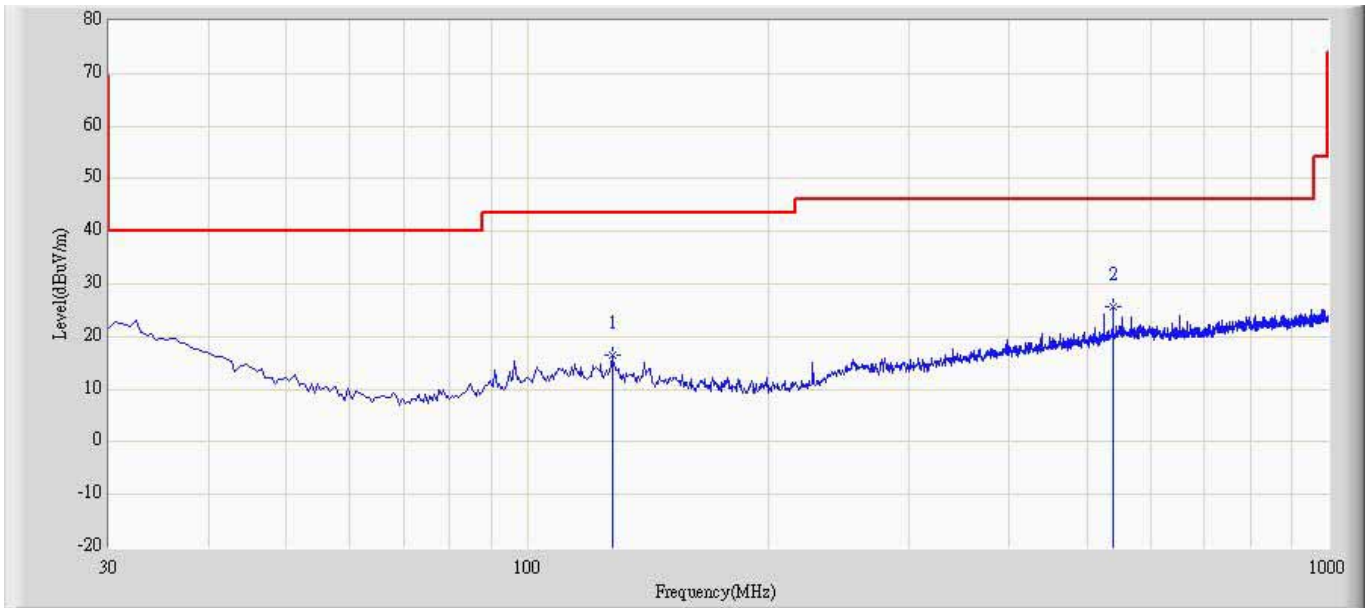
The worst case of Radiated Emission below 1GHz:

Engineer: Cloud	
Site: AC3	Time: 2014/12/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_10m (30-1000MHz)	Polarity: Horizontal
EUT: IP-STB	Power: AC120V/60Hz
Note: Mode 4: Transmit at channel 2437MHz by 802.11n20(MHz) Ant0	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	94.990	18.057	7.378	-25.443	43.500	10.679	QP
2		255.525	16.969	2.478	-29.031	46.000	14.491	QP

Engineer: Pig	
Site: AC3	Time: 2014/12/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_10m (30-1000MHz)	Polarity: Vertical
EUT: IP-STB	Power: AC120V/60Hz
Note: Mode 4: Transmit at channel 2437MHz by 802.11n20(MHz) Ant0	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		127.485	16.567	3.632	-26.933	43.500	12.935	QP
2	*	539.240	25.611	4.699	-20.389	46.000	20.912	QP

5. Radiated Emission Band Edge

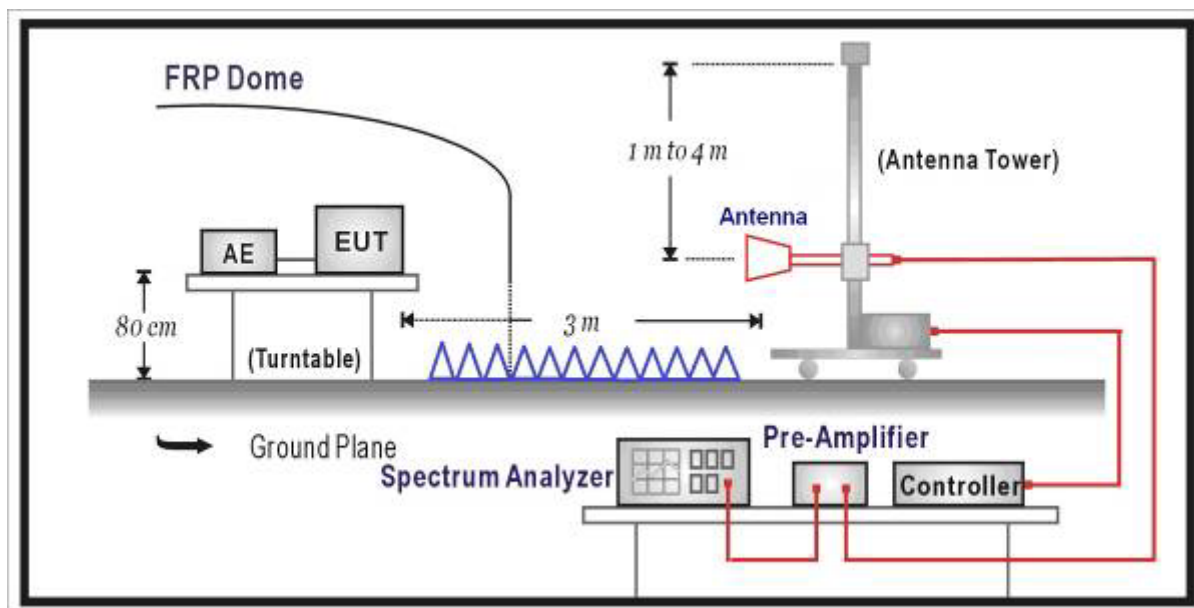
5.1. Test Equipment

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	2013.10.15
DRG Horn	ETS-Lindgren	3117	00123988	2014.01.21
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	2014.01.11

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

5.2. Test Setup



5.3. Limit

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) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to KDB 558074 for compliance to FCC 47CFR 15.247 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.

5.5. Uncertainty

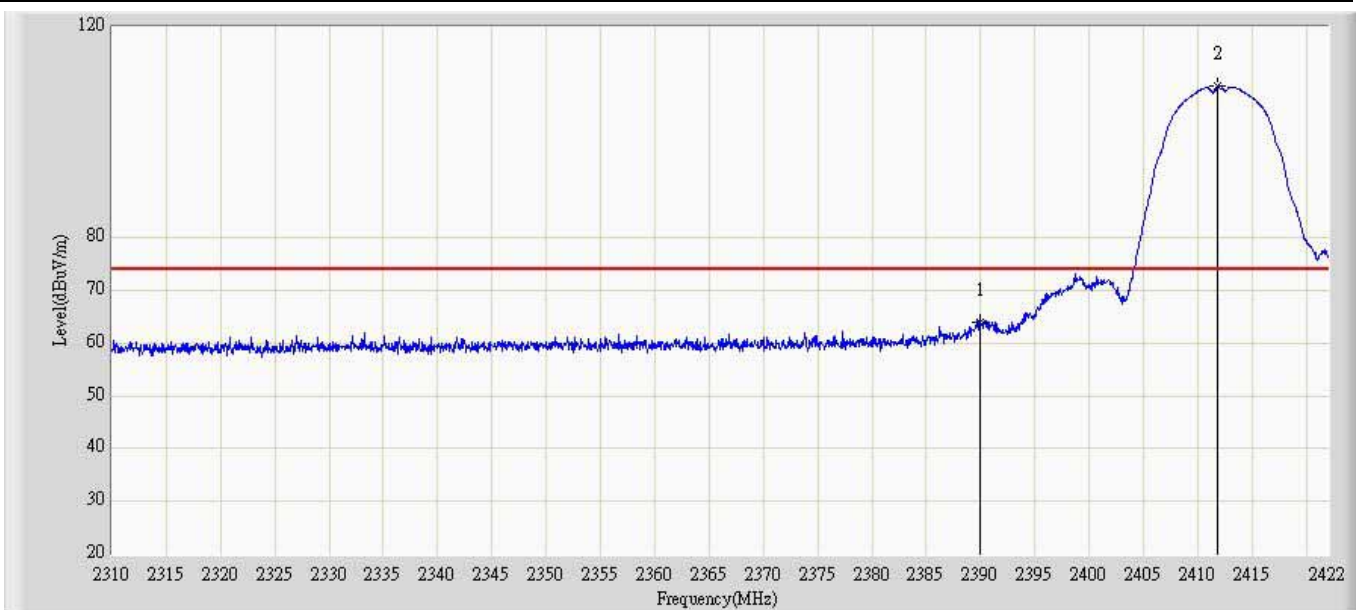
The measurement uncertainty above 1G is defined as ± 3.9 dB

5.6. Test Result

Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamplifier Gain

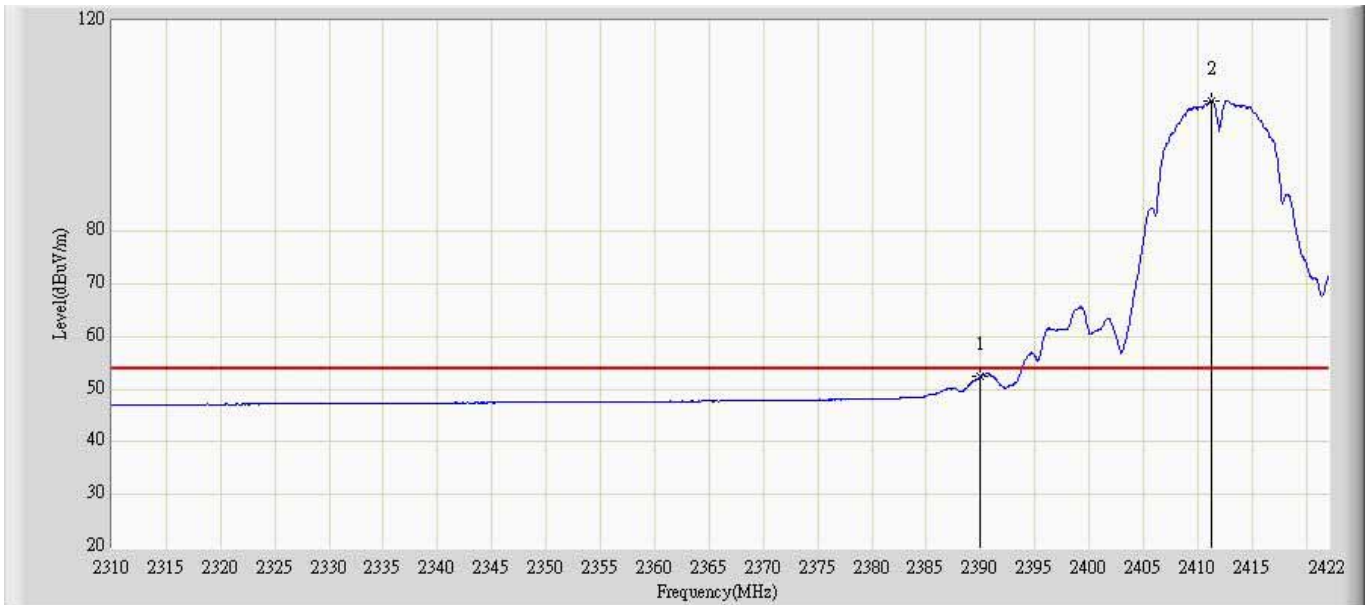
In case the emission is fail due to the used RB/VB is too wide, marker-delta method of FCC Public Notice will be followed.

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 12:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH1 by 802.11b ant0	



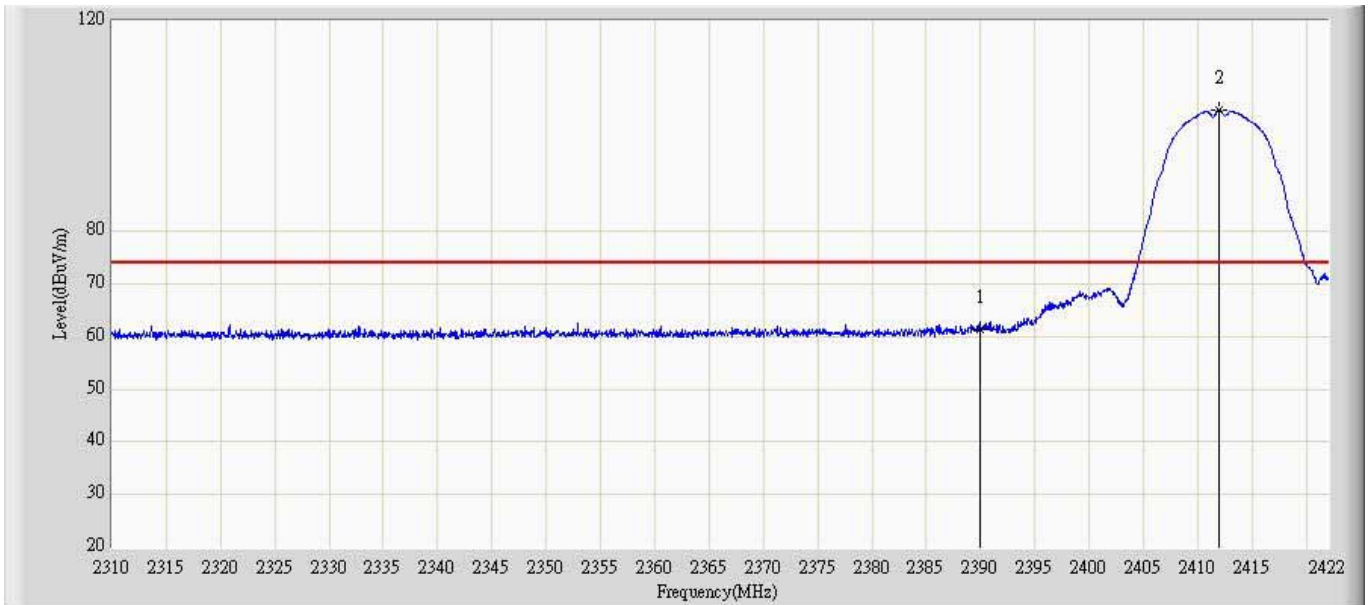
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	63.772	26.124	-10.228	74.000	37.648	PK
2		*	2411.837	108.483	70.639	N/A	N/A	37.844	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 13:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH1 by 802.11b ant0	



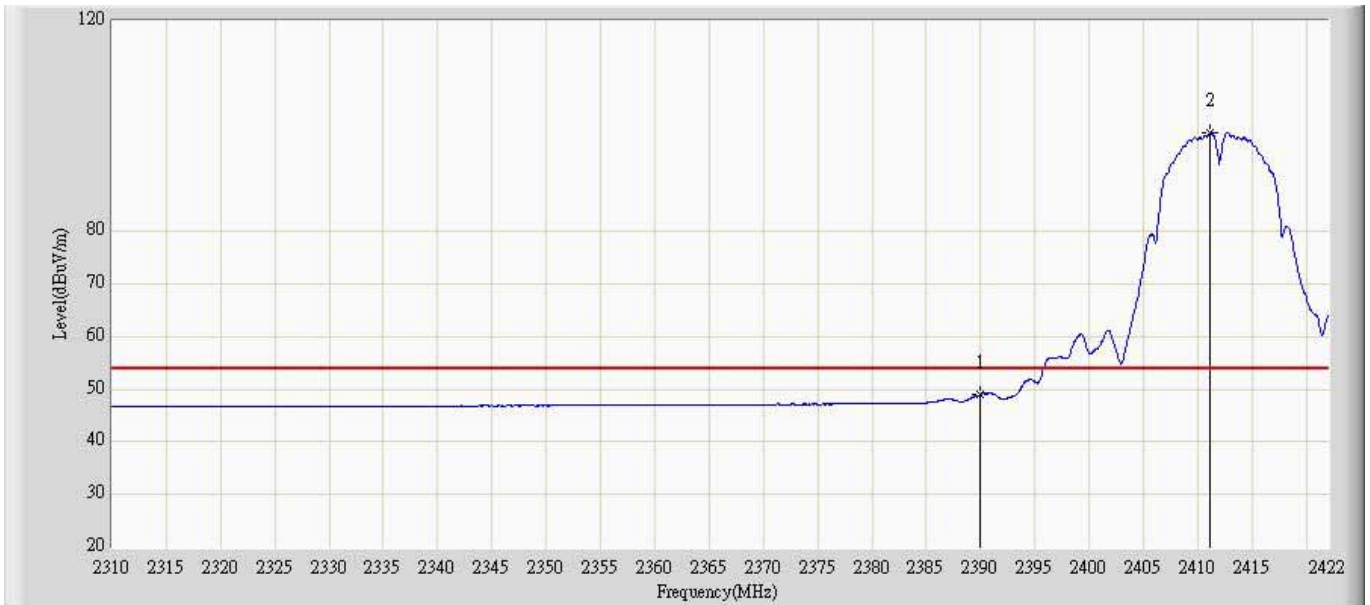
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	52.374	14.726	-1.626	54.000	37.648	AV
2		*	2411.269	104.577	66.739	N/A	N/A	37.838	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 13:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH1 by 802.11b ant0	



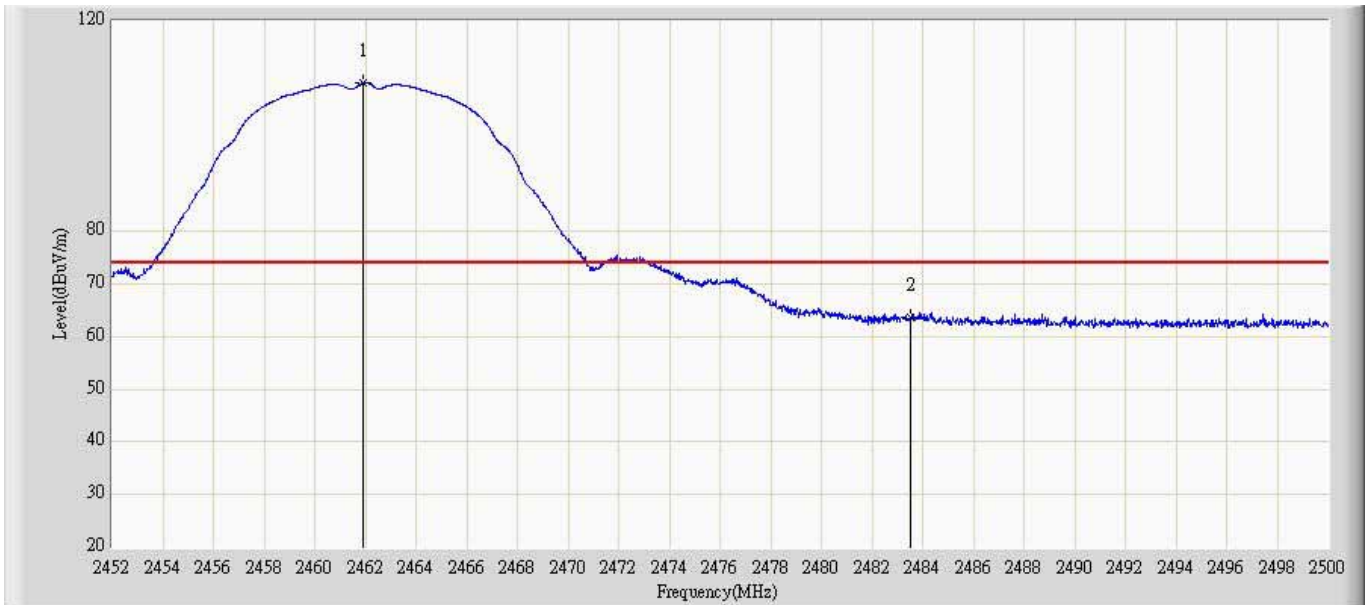
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.374	24.386	-12.626	74.000	36.988	PK
2		*	2412.032	102.869	65.772	N/A	N/A	37.097	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 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: Mode 1: Transmit at CH1 by 802.11b ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.524	11.536	-5.476	54.000	36.988	AV
2		*	2411.332	98.39	61.297	N/A	N/A	37.093	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 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: Mode 1: Transmit at CH11 by 802.11b ant0	



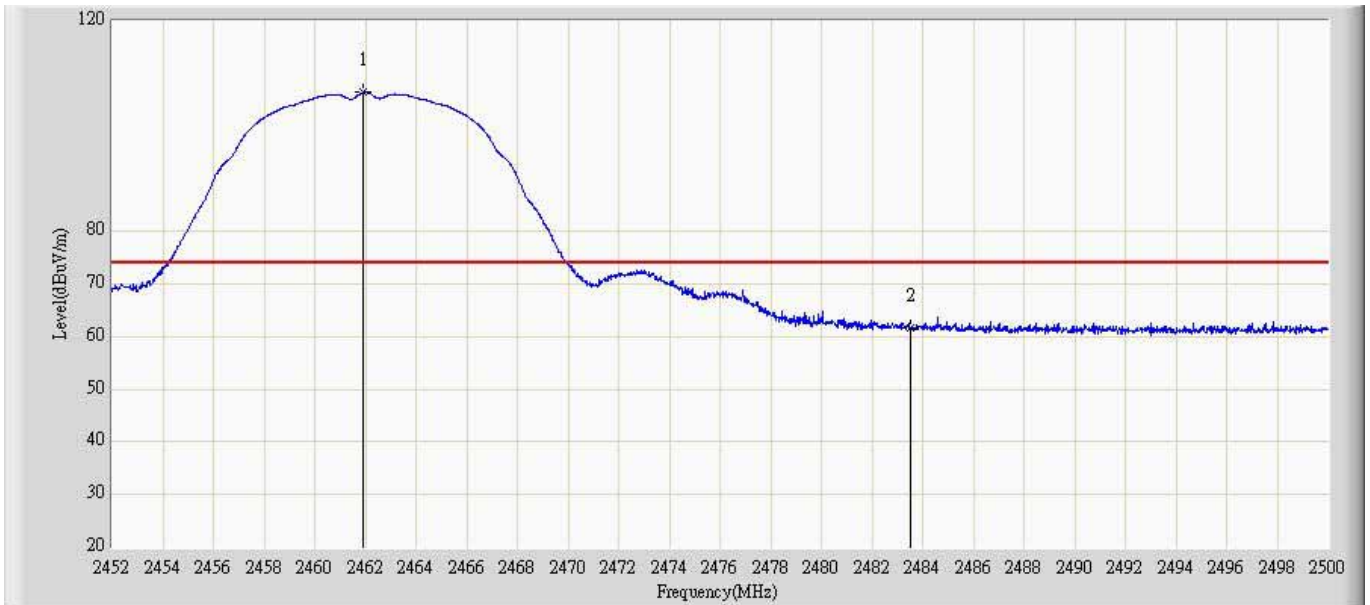
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.912	107.877	69.593	N/A	N/A	38.284	PK
2			2483.432	63.599	25.124	-10.401	74.000	38.475	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 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: Mode 1: Transmit at CH11 by 802.11b ant0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.240	103.681	65.403	N/A	N/A	38.278	AV
2			2483.530	50.104	11.629	-3.896	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 13:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH11 by 802.11b ant0	



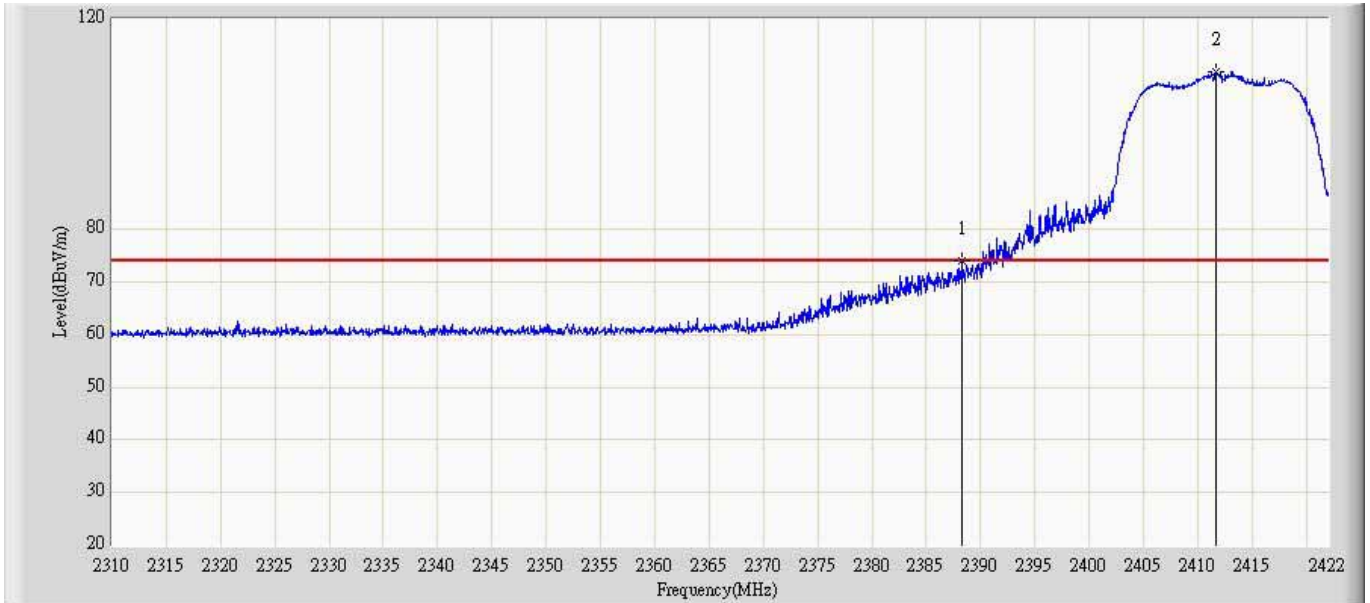
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.942	106.476	69.139	N/A	N/A	37.337	PK
2			2483.500	61.568	24.127	-12.432	74.000	37.441	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 13:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH11 by 802.11b ant0	



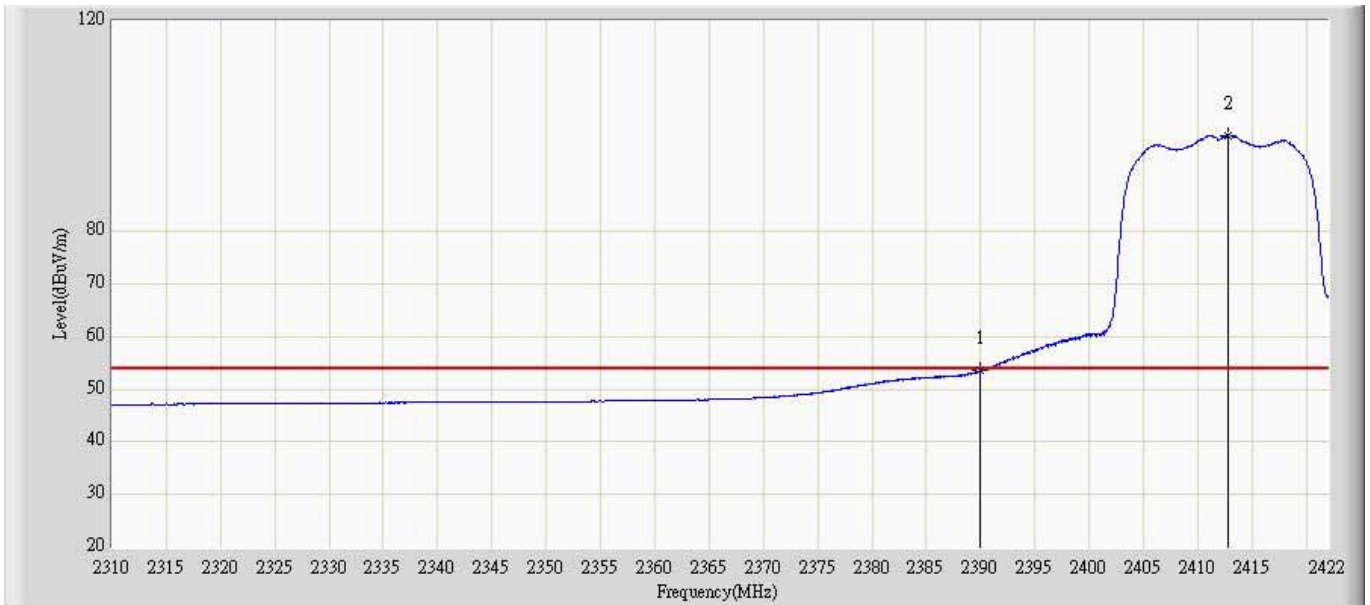
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.435	102.380	65.039	N/A	N/A	37.341	AV
2			2483.500	49.165	11.724	-4.835	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 13:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant0	



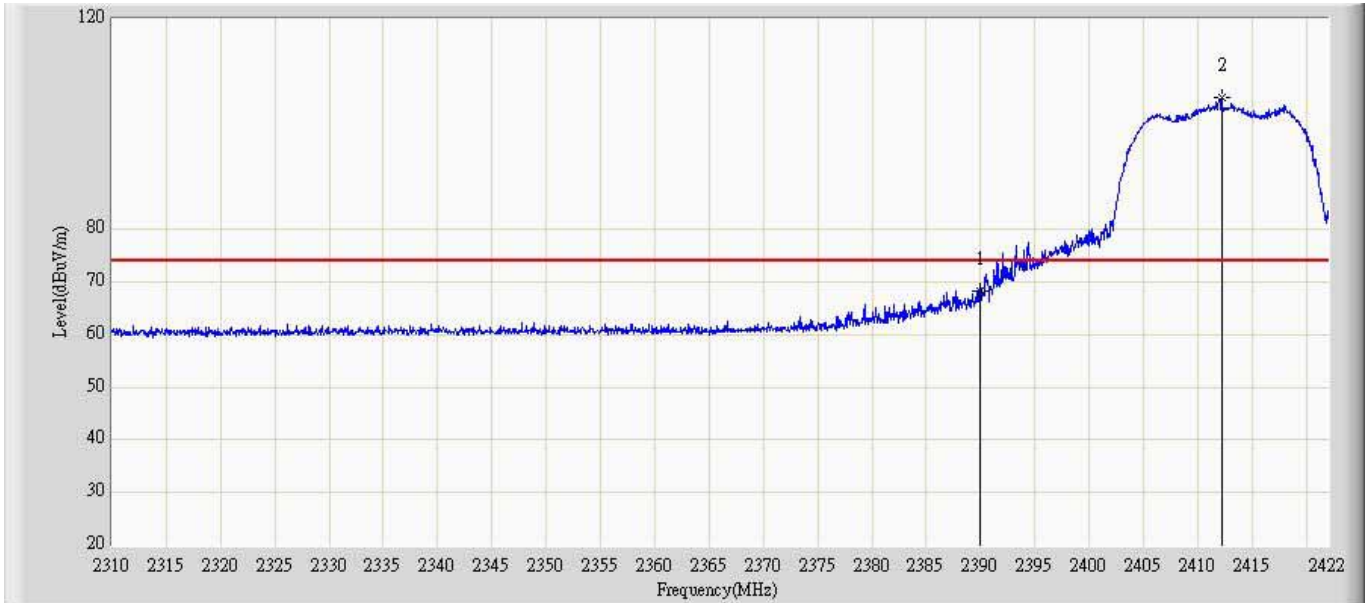
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2387.214	73.745	36.112	-0.255	74.000	37.633	PK
2		*	2411.715	110.079	72.236	N/A	N/A	37.843	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 13:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant0	



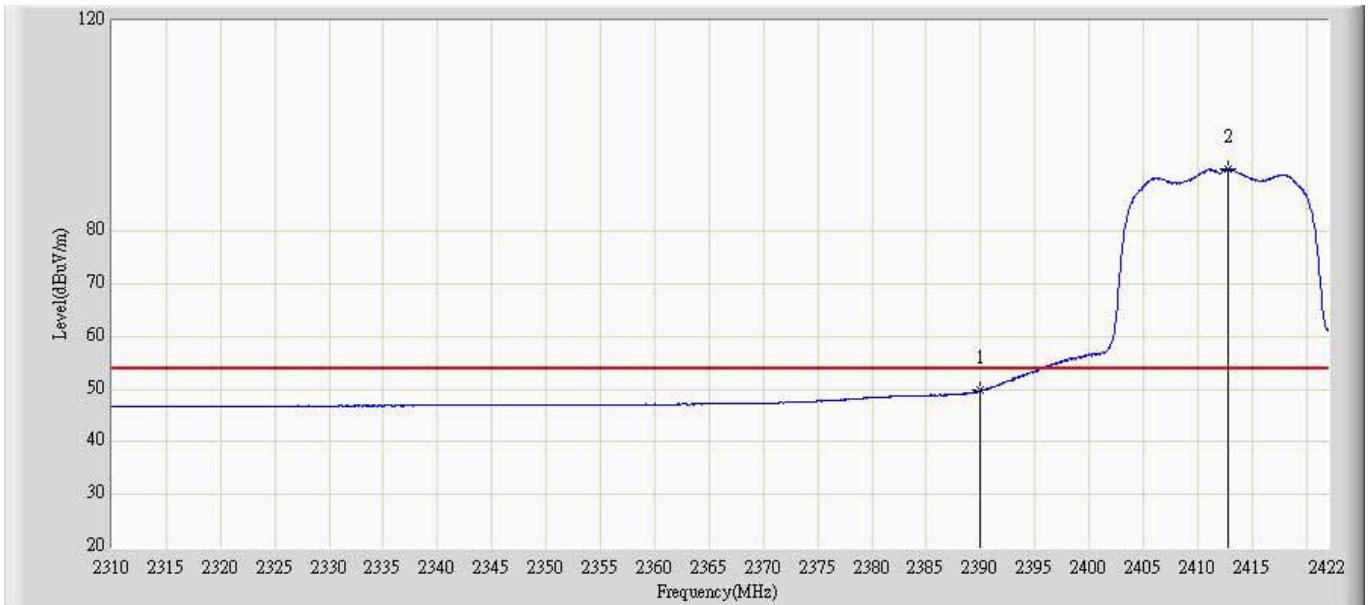
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.086	15.438	-0.914	54.000	37.648	AV
2		*	2412.536	97.980	60.128	N/A	N/A	37.852	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant0	



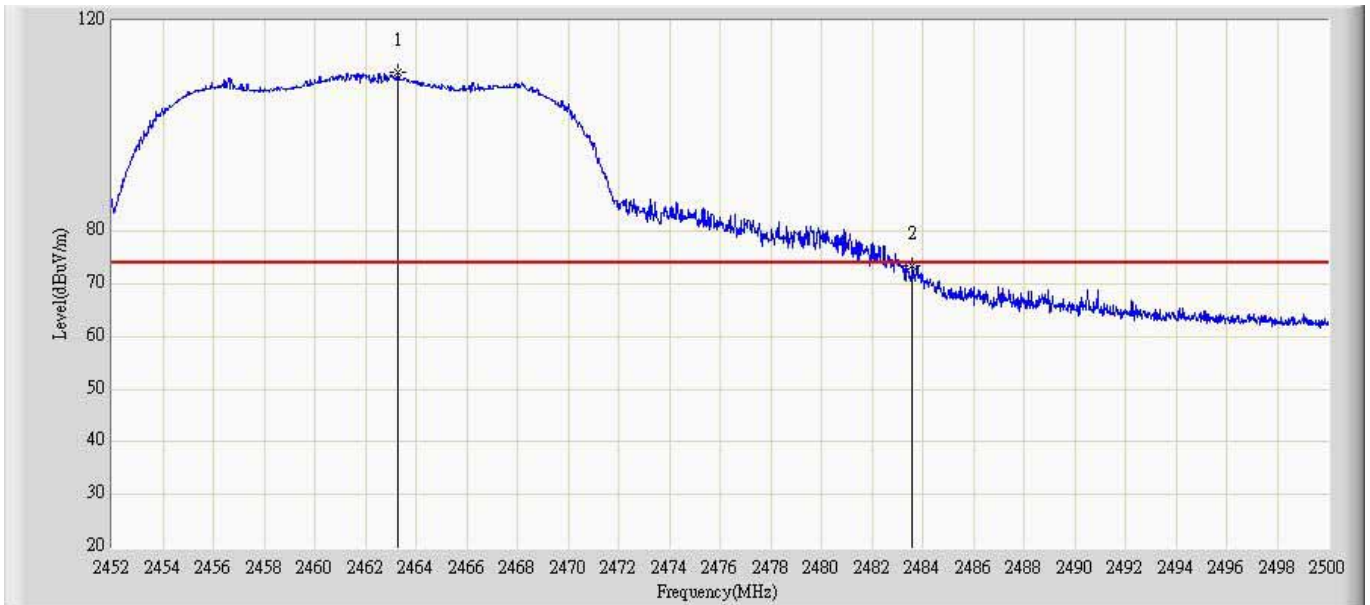
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	68.123	31.135	-5.887	74.000	36.988	PK
2		*	2412.325	104.933	67.836	N/A	N/A	37.097	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant0	



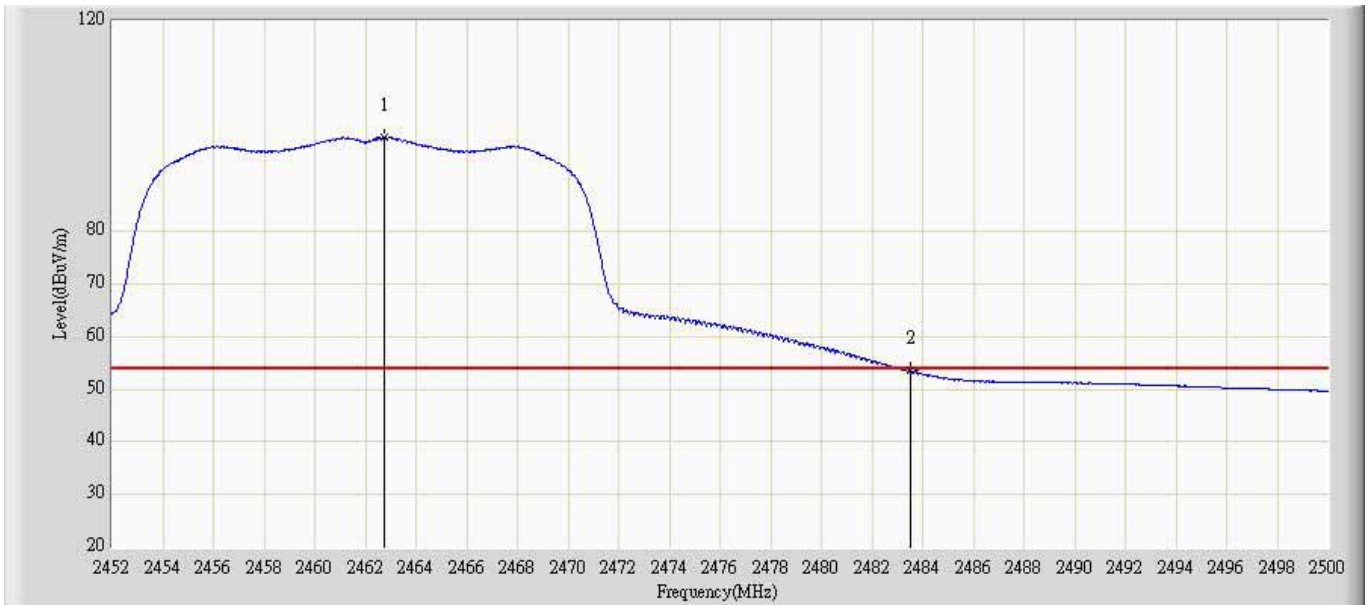
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	49.520	12.532	-4.480	54.000	36.988	AV
2		*	2412.432	91.627	54.527	N/A	N/A	37.100	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant0	



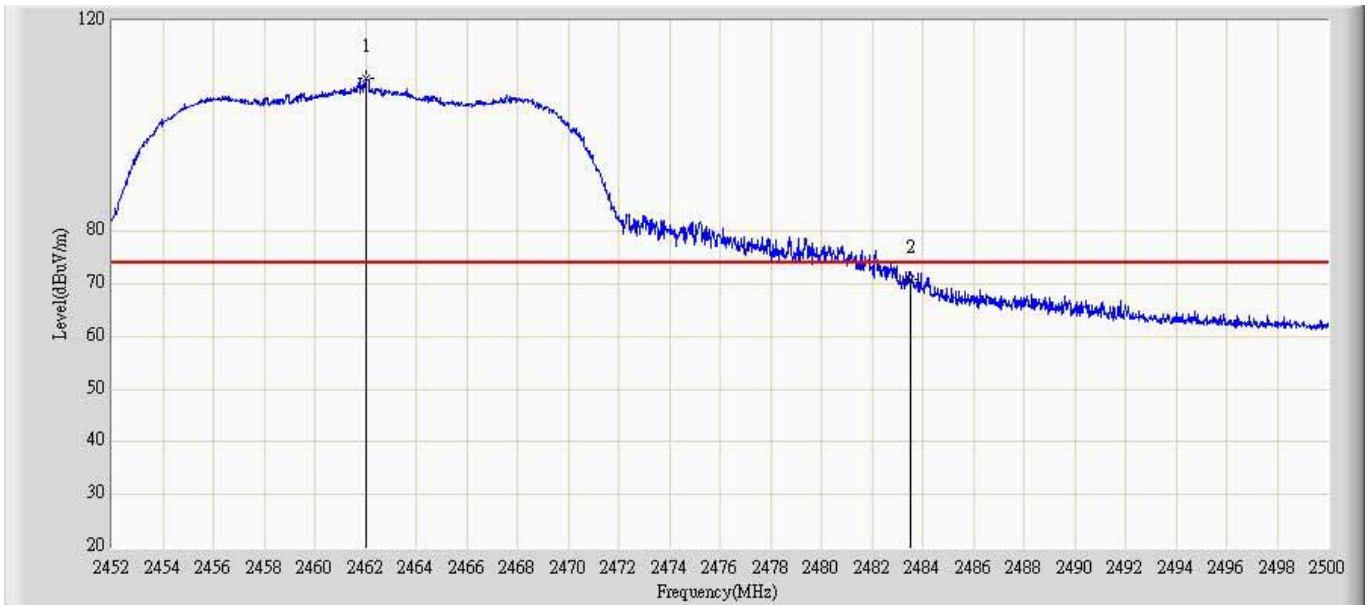
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.468	109.729	71.432	N/A	N/A	38.297	PK
2			2483.608	73.079	34.603	-0.921	74.000	38.476	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant0	



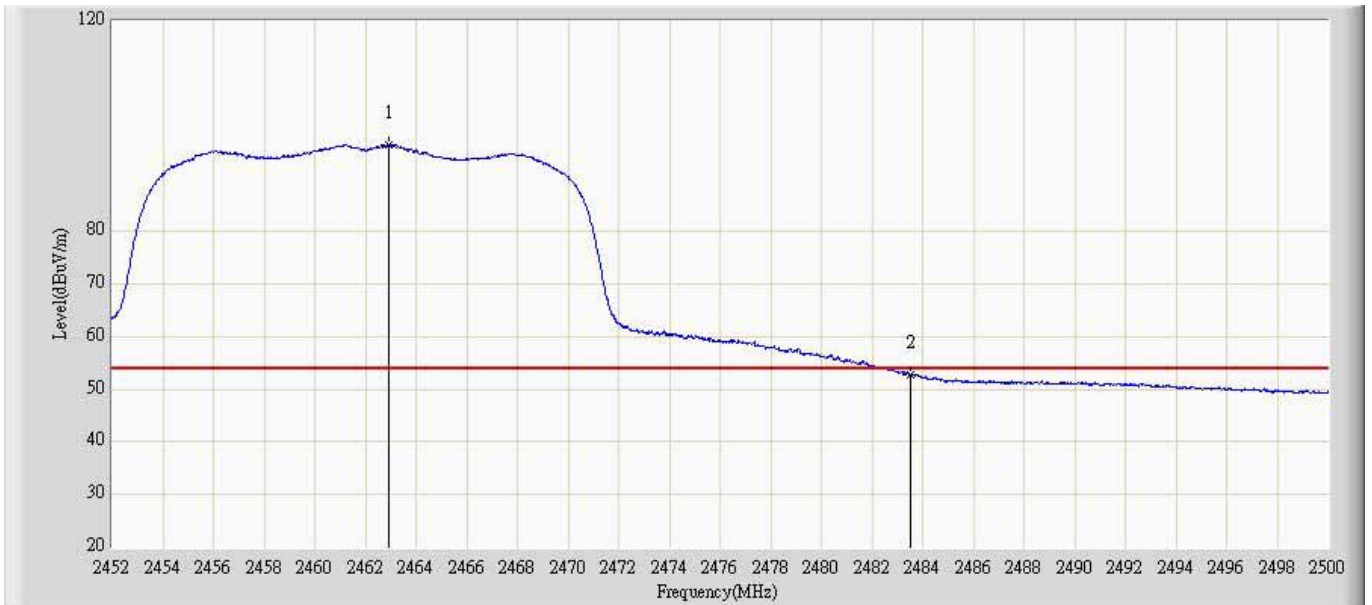
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.523	97.444	59.152	N/A	N/A	38.292	AV
2			2483.500	53.400	14.925	-0.600	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant0	



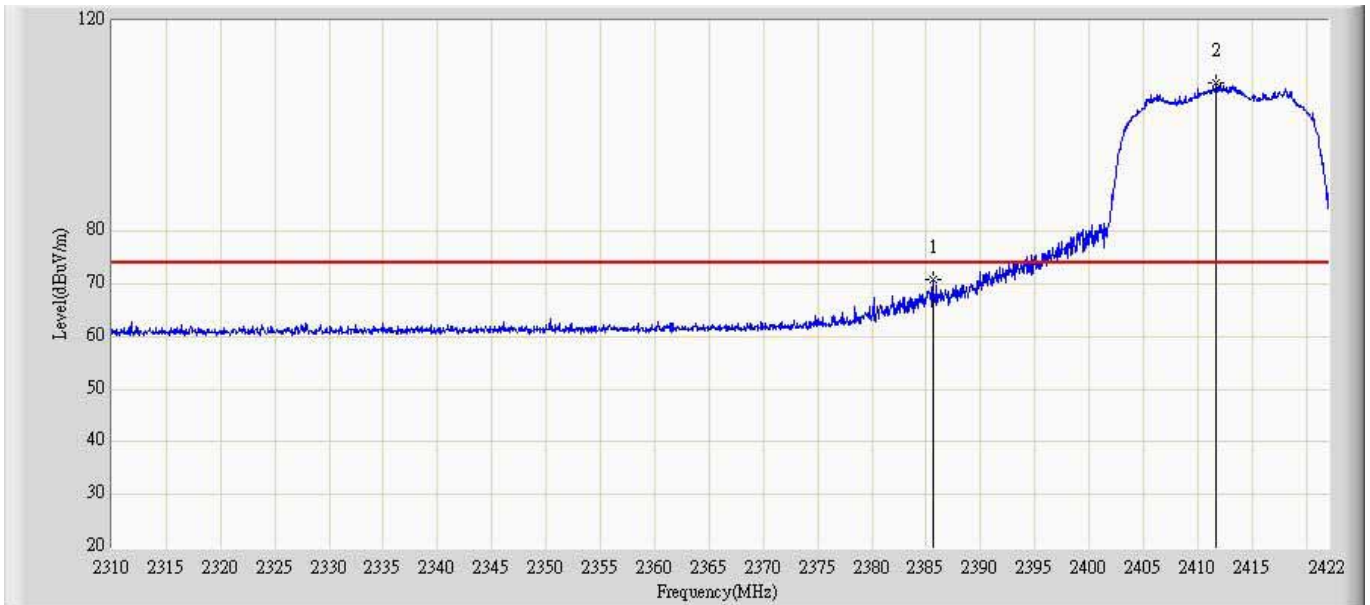
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.105	109.061	71.724	N/A	N/A	37.337	PK
2			2483.500	70.476	33.035	-3.524	74.000	37.441	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant0	



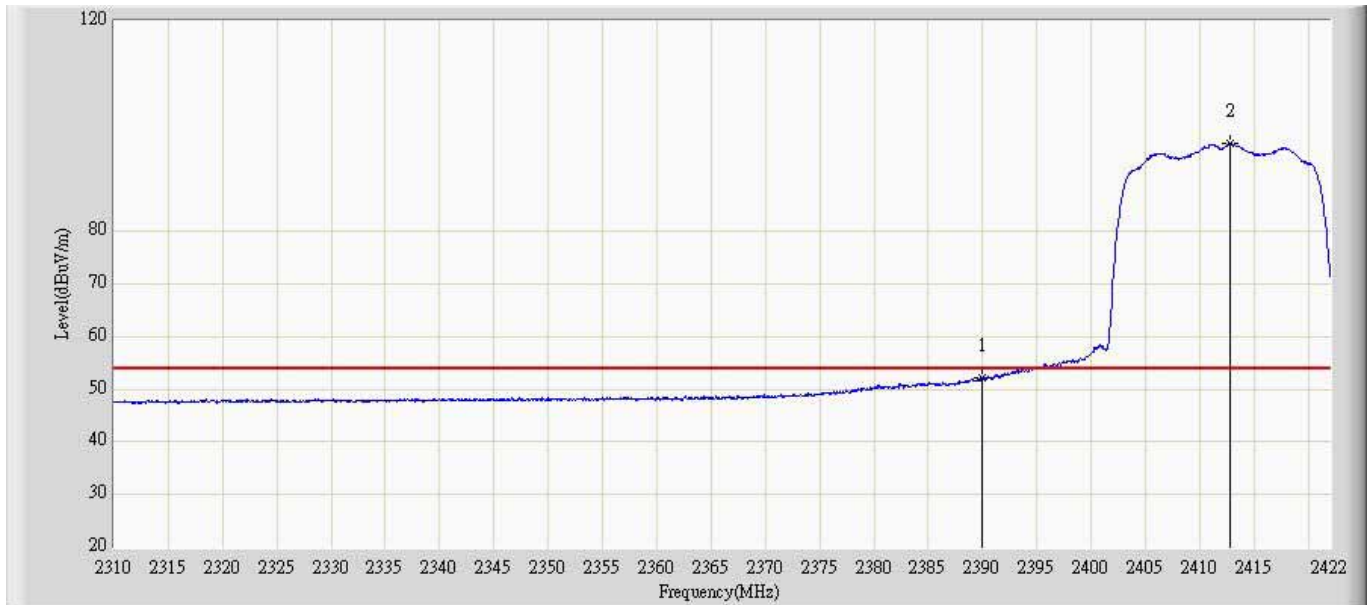
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.876	95.984	58.643	N/A	N/A	37.341	AV
2			2483.500	52.720	15.279	-1.280	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant0	



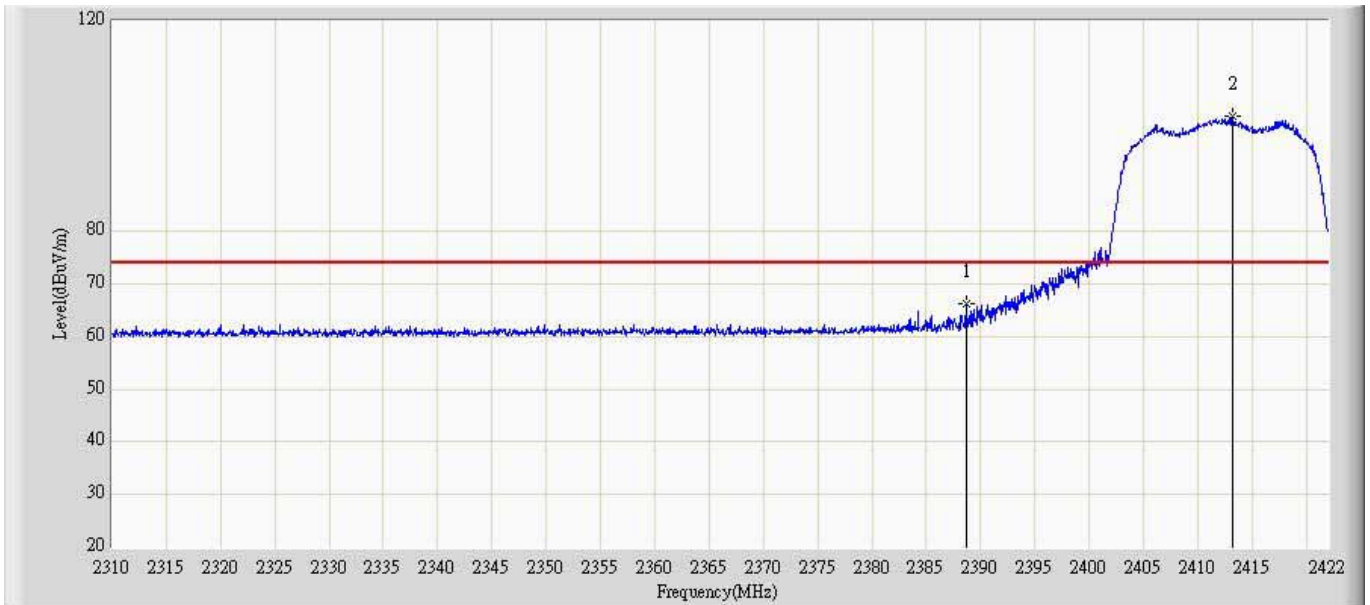
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2385.590	71.044	33.436	-2.956	74.000	37.608	PK
2		*	2411.183	107.971	70.128	N/A	N/A	37.843	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 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: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant0	



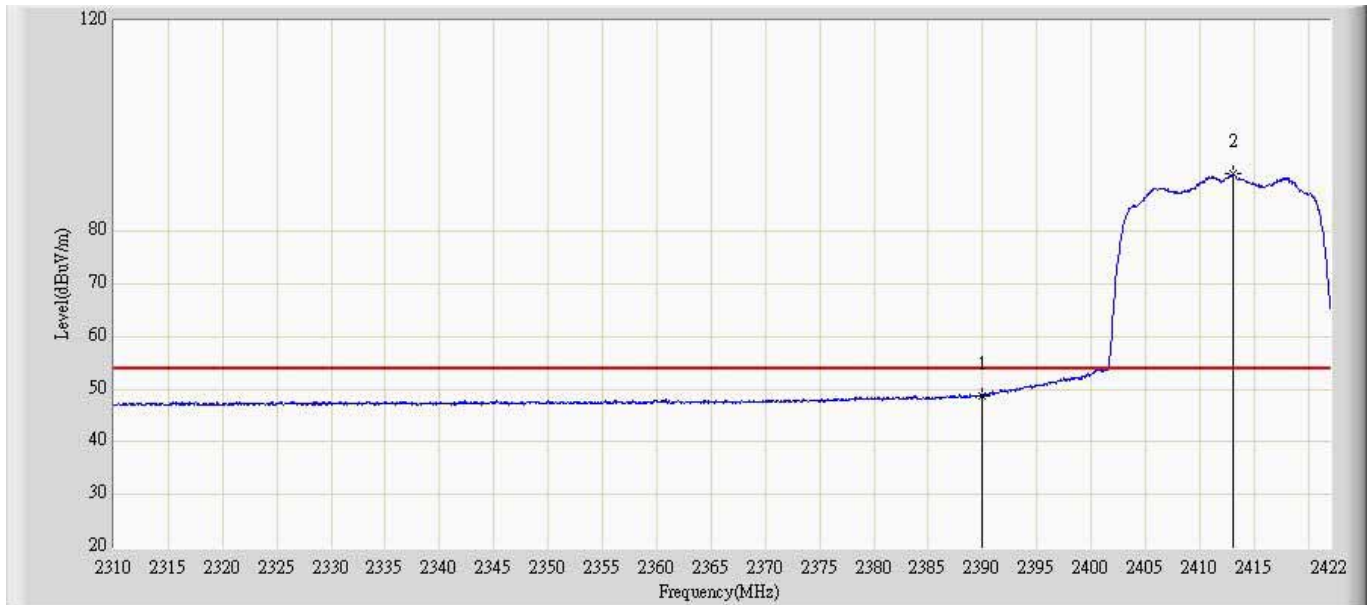
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	51.887	14.239	-2.113	54.000	37.648	AV
2		*	2412.528	96.284	58.432	N/A	N/A	37.852	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 14:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant0	



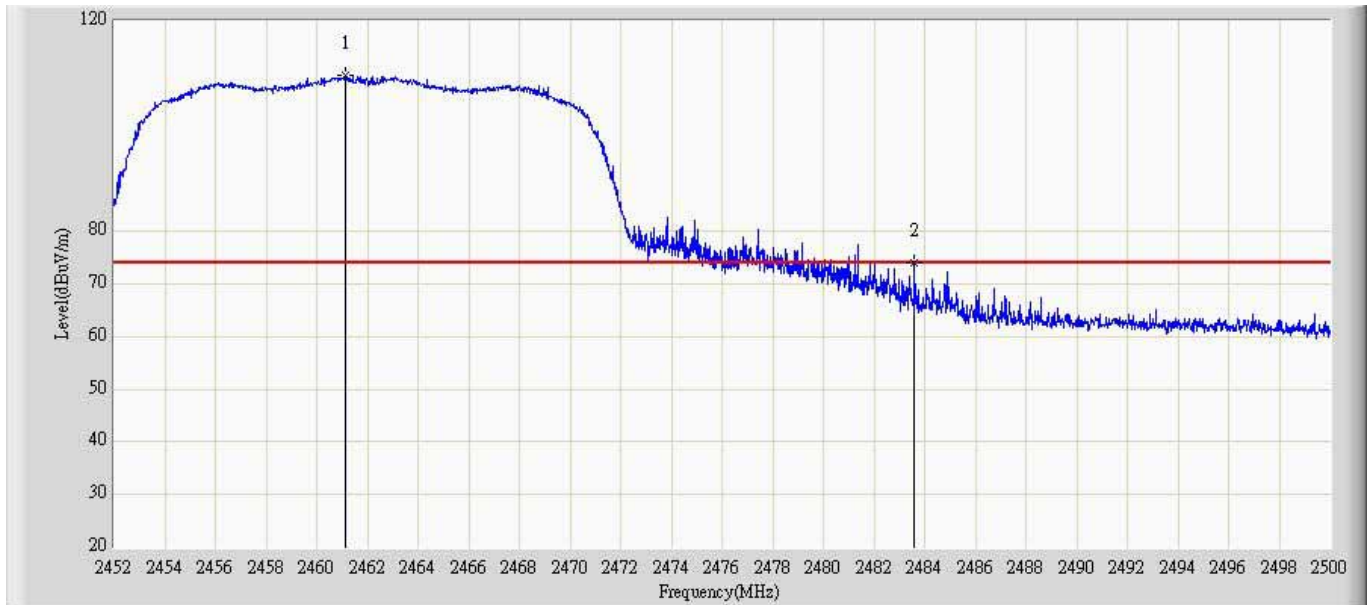
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2388.715	66.320	29.339	-7.680	74.000	36.981	PK
2		*	2413.334	101.470	64.367	N/A	N/A	37.103	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant0	



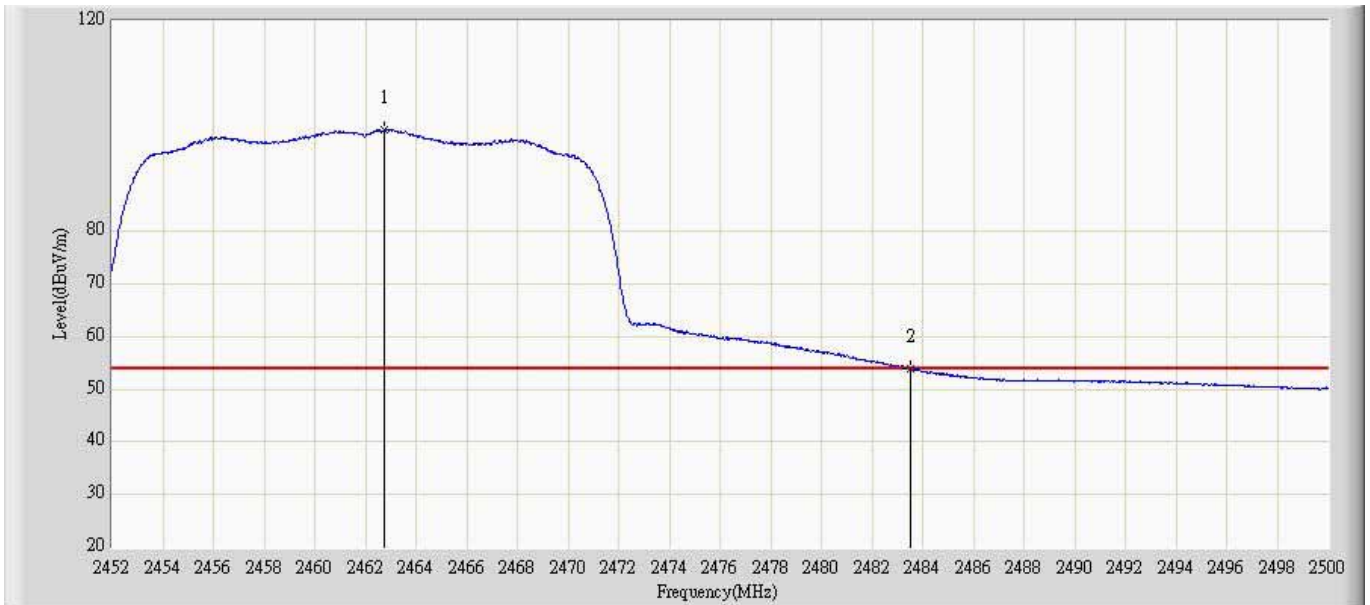
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.681	11.693	-5.319	54.000	36.988	AV
2		*	2413.179	90.614	53.512	N/A	N/A	37.102	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0	



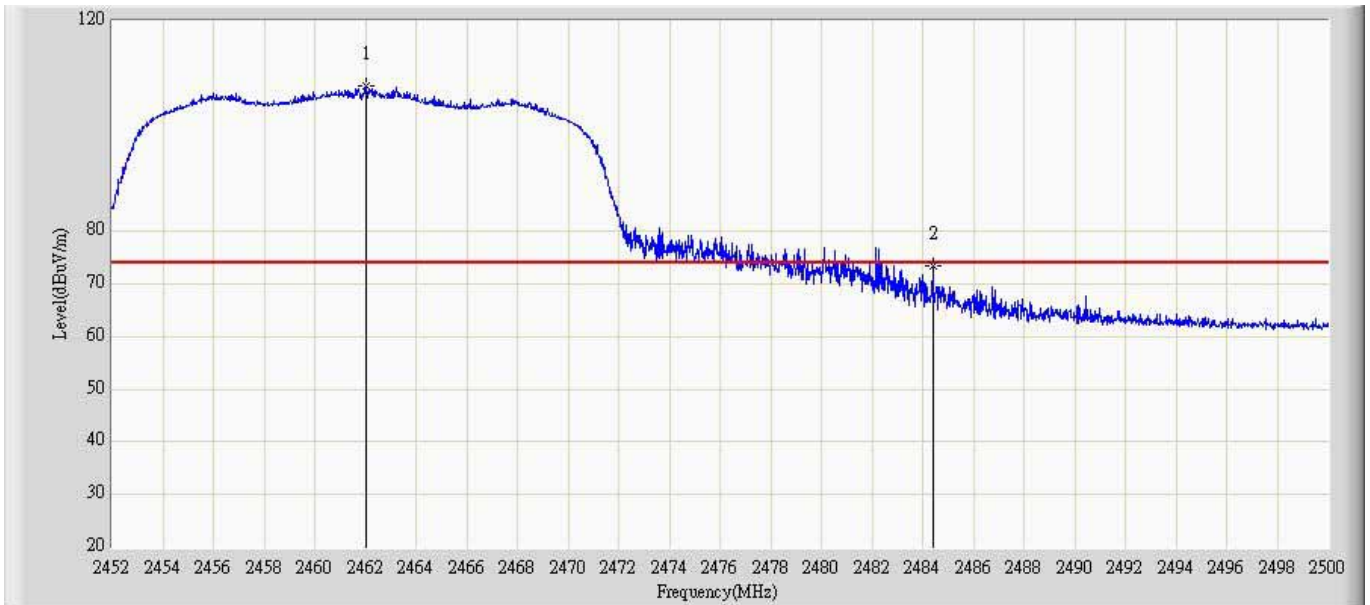
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.358	109.651	71.373	N/A	N/A	38.278	PK
2			2483.523	73.718	35.242	-0.282	74.000	38.476	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 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: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0	



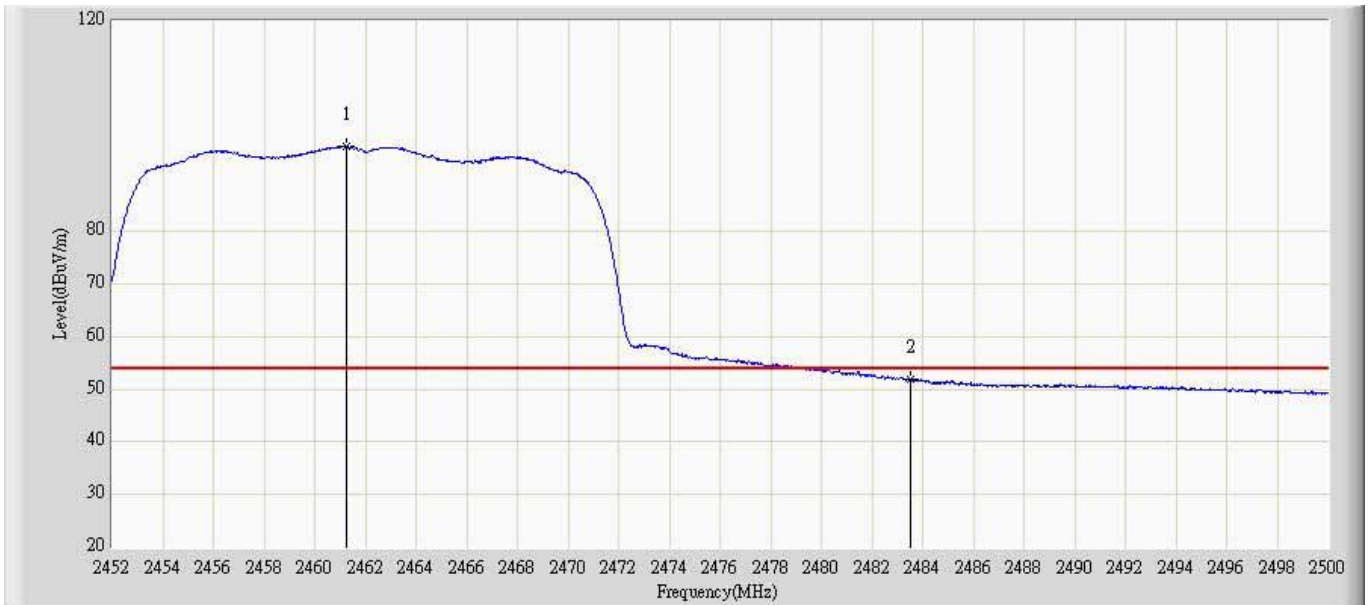
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.367	98.531	60.239	N/A	N/A	38.292	AV
2			2483.500	53.833	15.358	-0.167	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0	



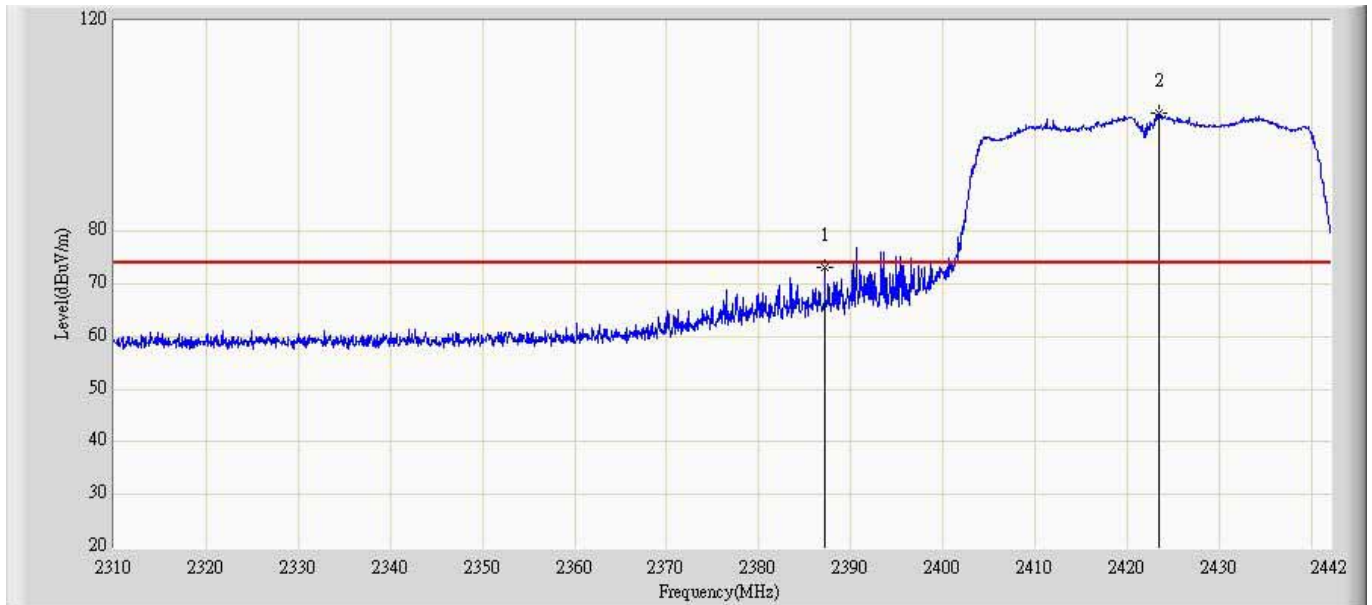
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.112	107.445	70.108	N/A	N/A	37.337	PK
2			2484.312	73.802	36.356	-0.198	74.000	37.446	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0	



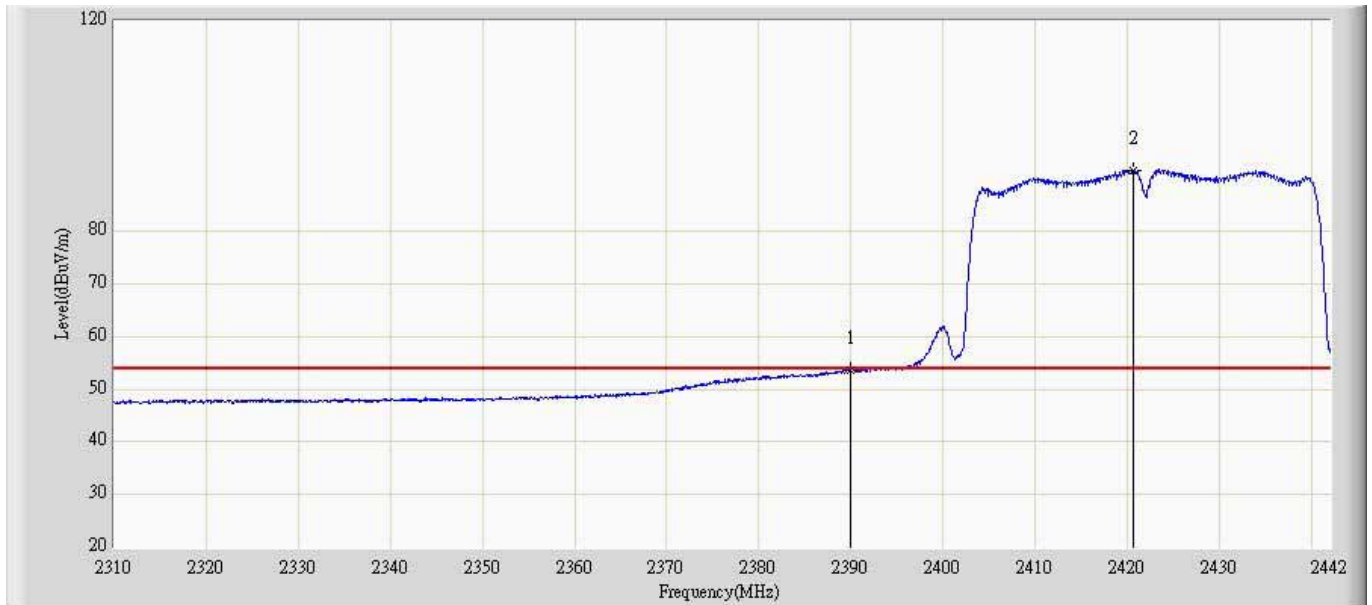
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.128	95.680	58.347	N/A	N/A	37.333	AV
2			2483.500	51.700	14.259	-2.300	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0	



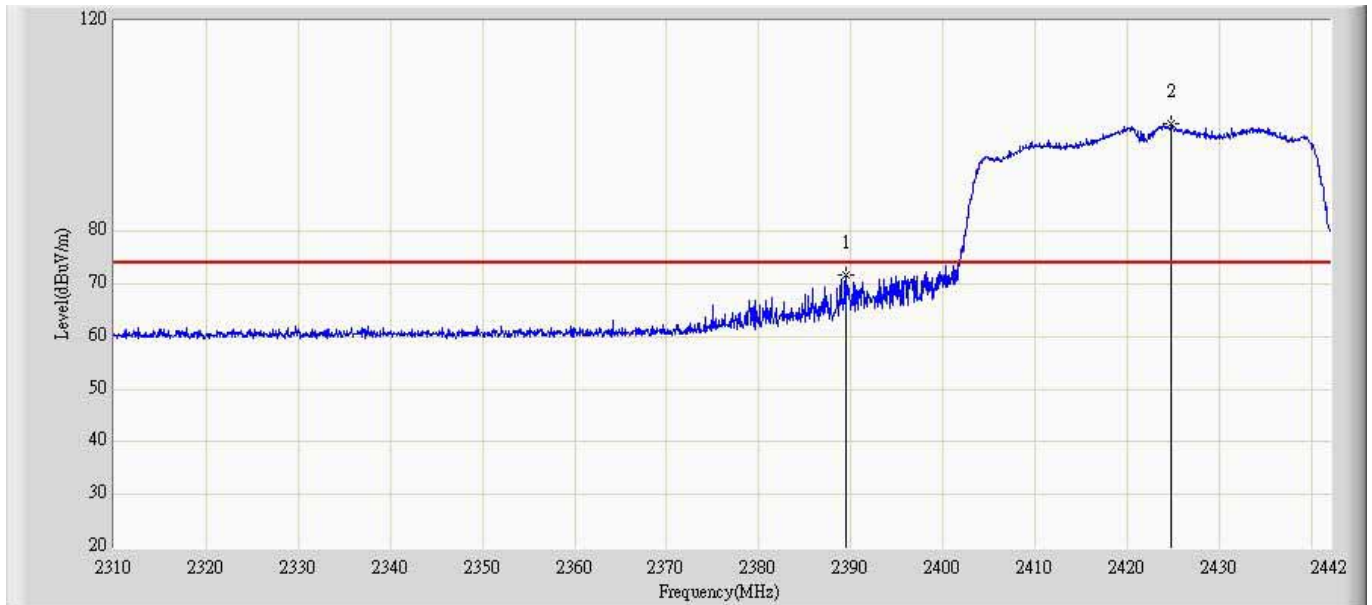
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2387.253	72.980	35.358	-1.020	74.000	37.622	PK
2		*	2423.388	102.684	64.739	N/A	N/A	37.945	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0	



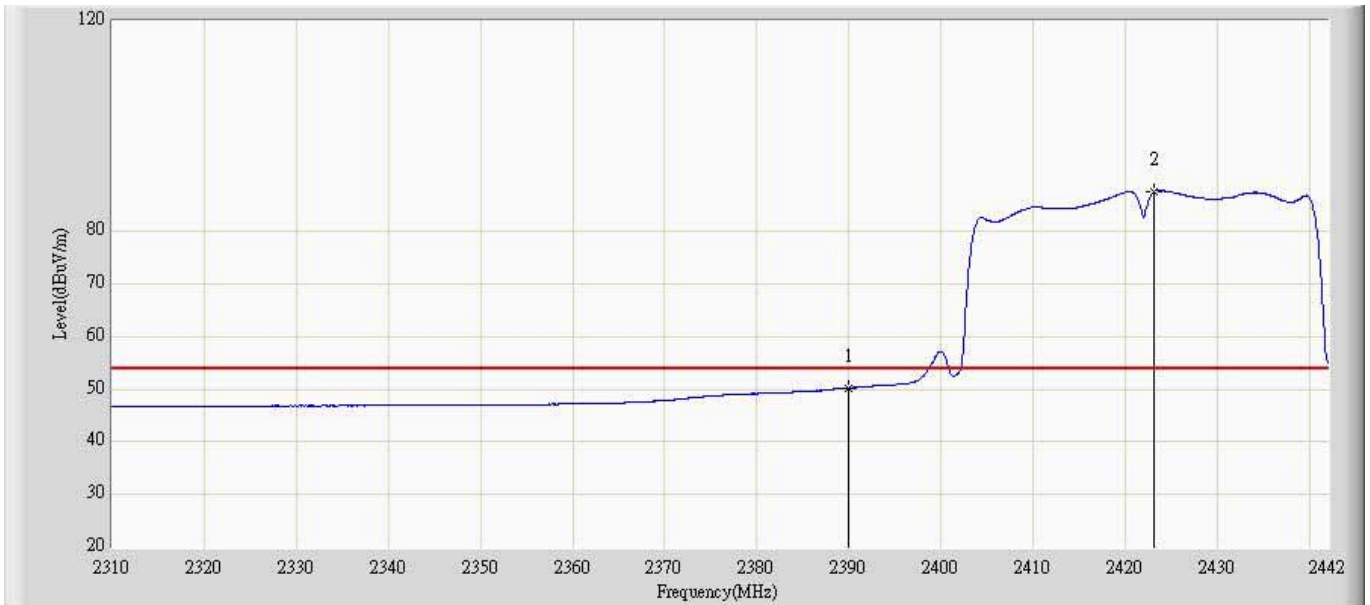
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.373	15.725	-0.627	54.000	37.648	AV
2		*	2420.441	91.190	53.269	N/A	N/A	37.921	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0	



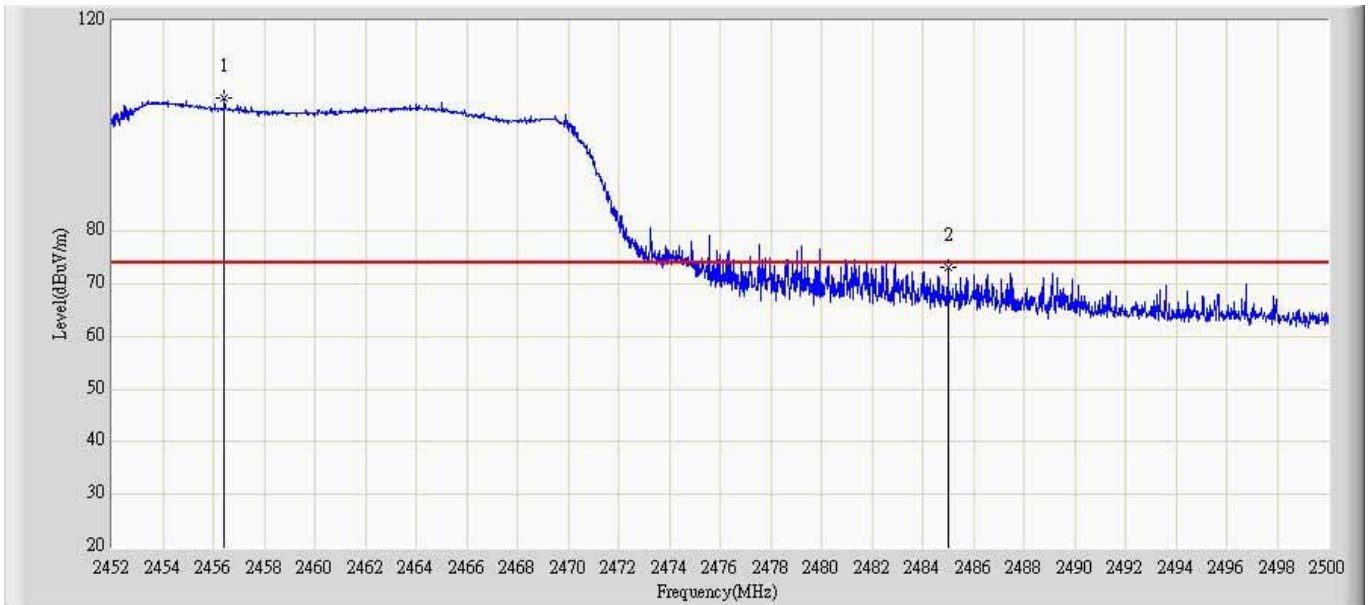
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.432	71.417	34.432	-2.583	74.000	36.985	PK
2		*	2424.995	100.028	62.869	N/A	N/A	37.159	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0	



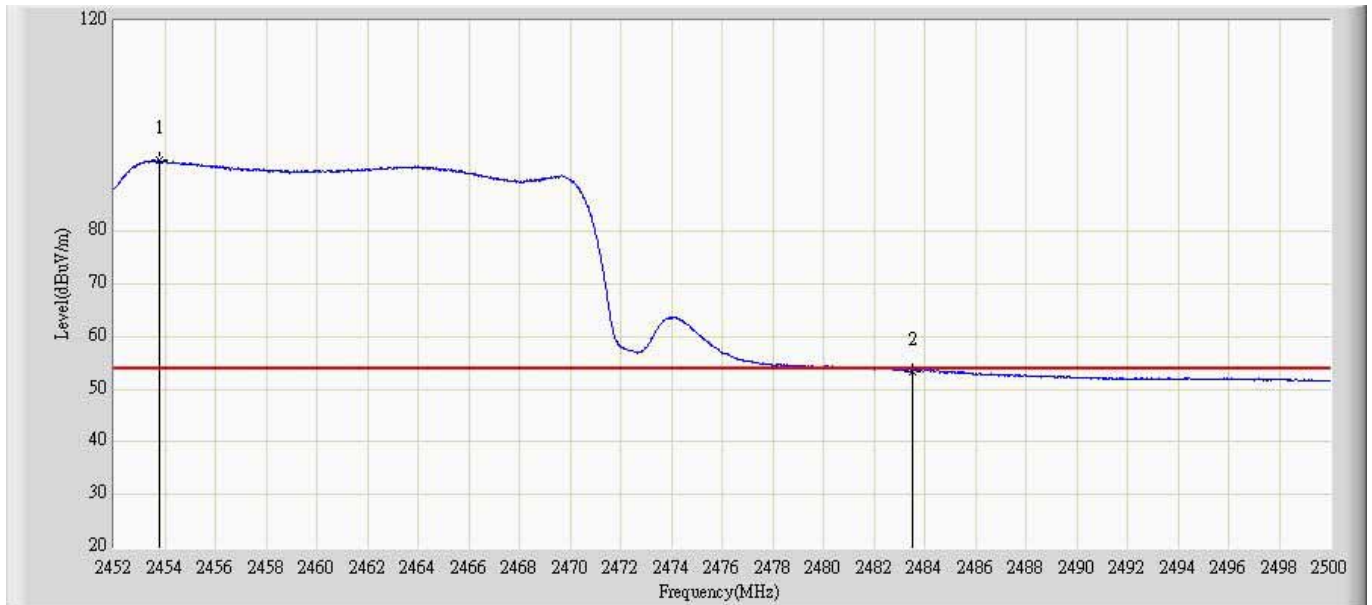
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	50.103	13.115	-3.897	54.000	36.988	AV
2		*	2423.521	87.407	50.256	N/A	N/A	37.151	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 15:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant0	



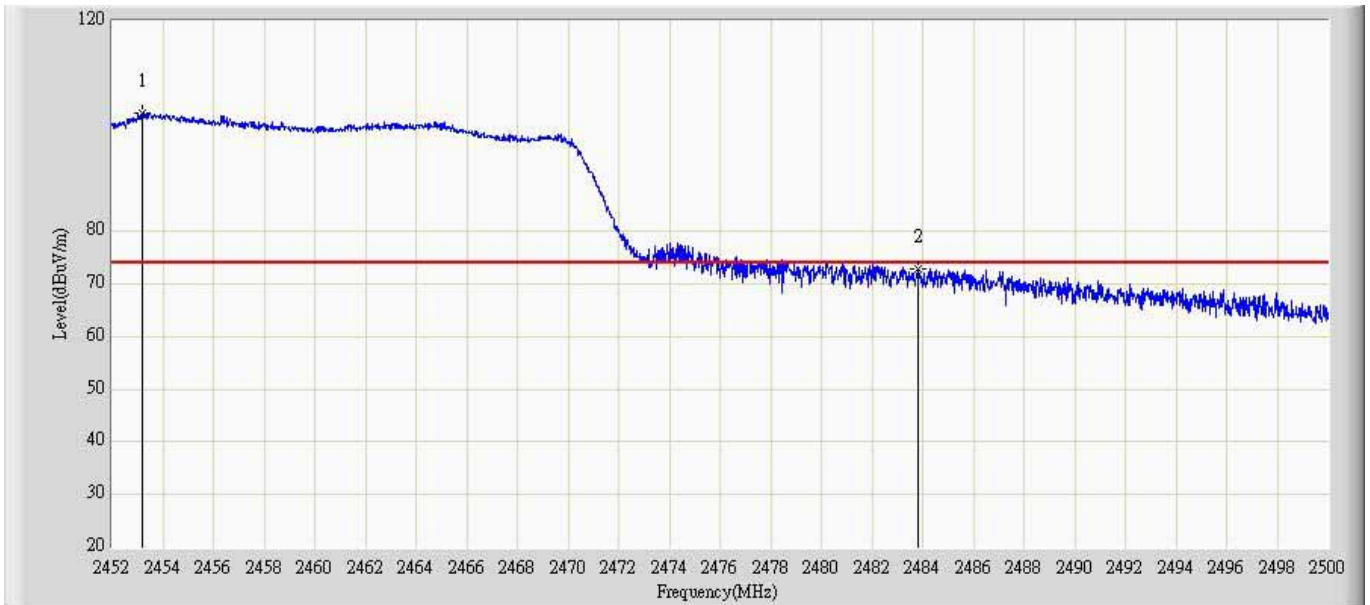
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2456.251	105.428	67.192	N/A	N/A	38.236	PK
2			2485.250	72.971	34.483	-1.029	74.000	38.488	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant0	



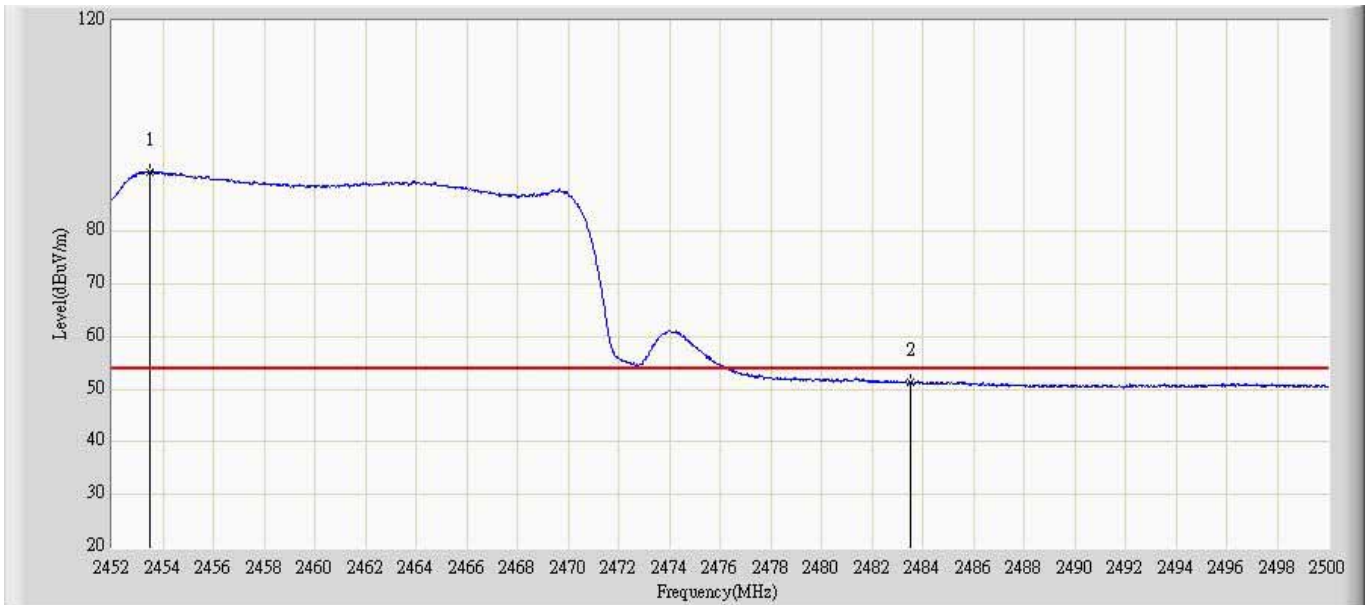
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2453.293	93.228	55.015	N/A	N/A	38.213	AV
2			2483.500	53.210	14.735	-0.790	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant0	



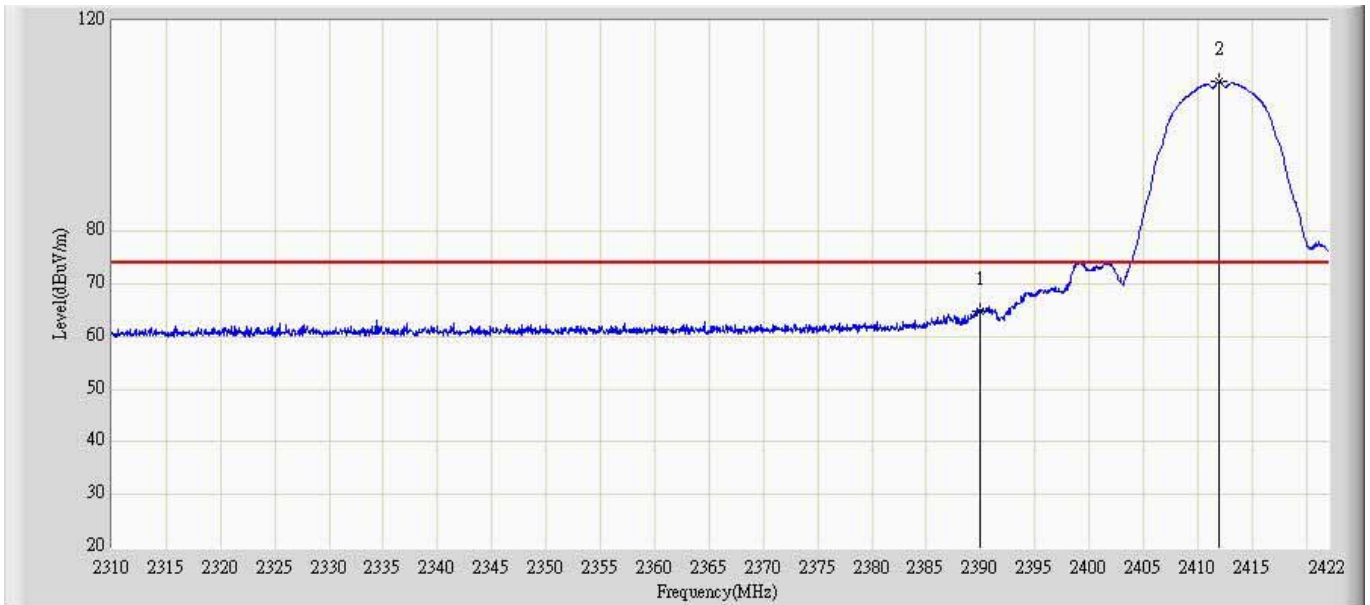
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2453.429	102.533	65.239	N/A	N/A	37.294	PK
2			2483.600	72.479	35.036	-1.521	74.000	37.443	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant0	



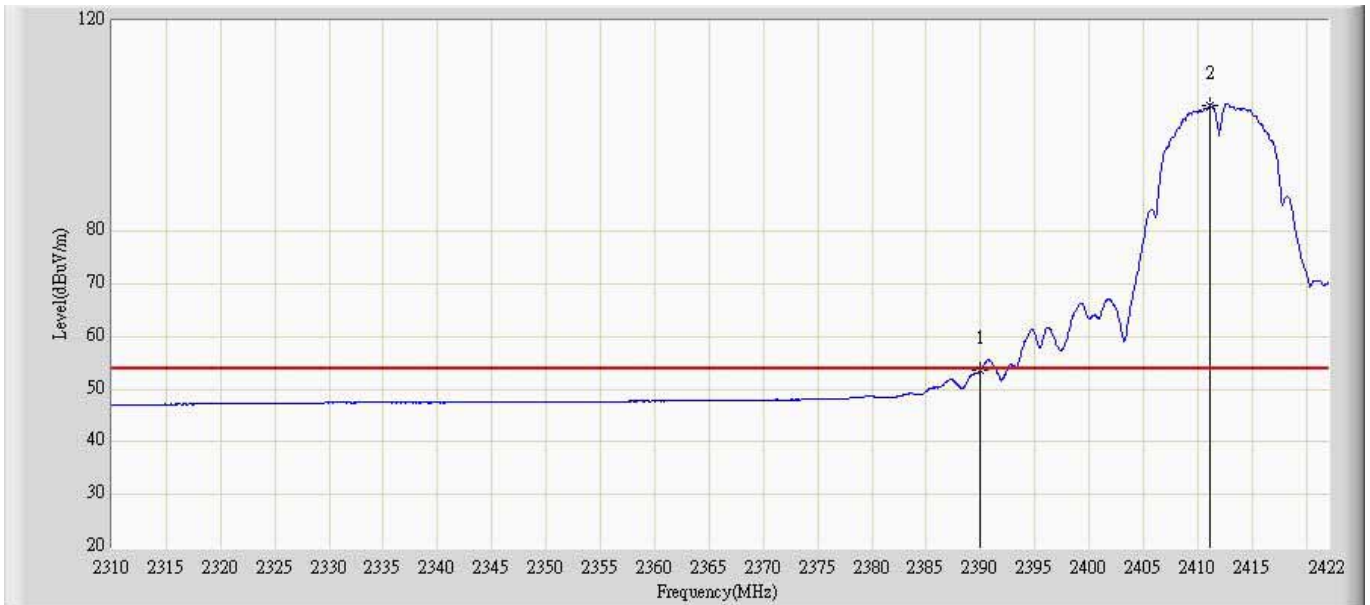
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2453.204	91.634	54.339	N/A	N/A	37.295	AV
2			2483.500	50.569	13.128	-3.431	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH1 by 802.11b ant1	



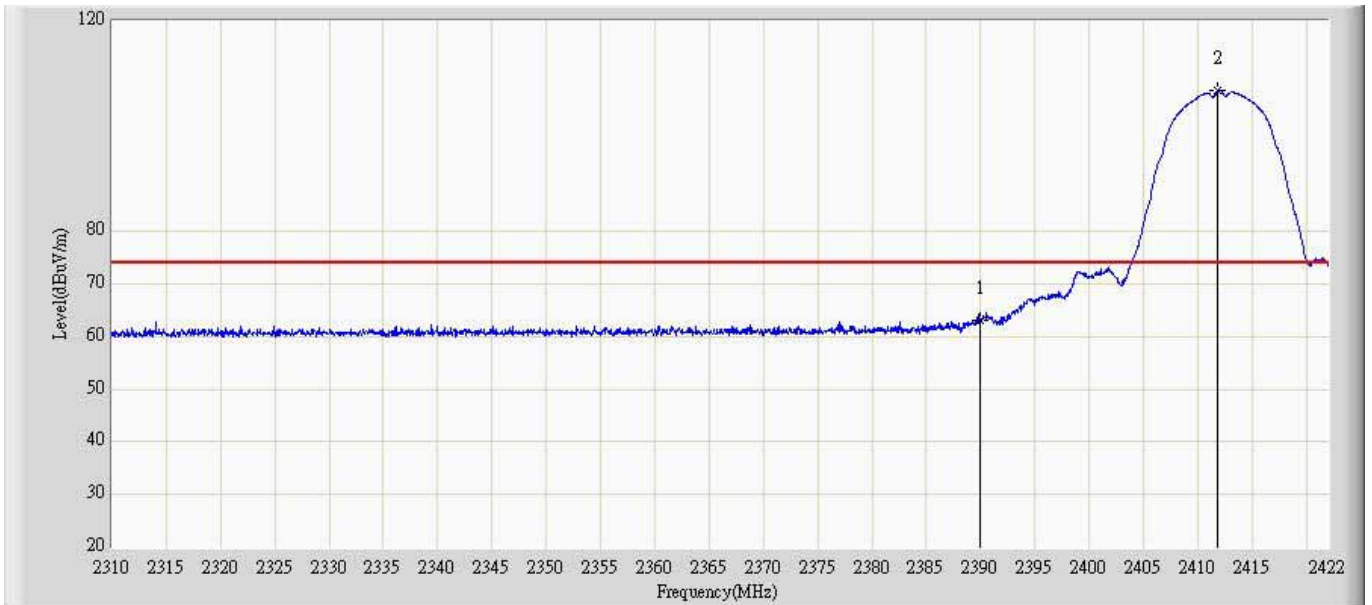
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	64.901	27.253	-9.099	74.000	37.648	PK
2		*	2412.337	108.114	70.269	N/A	N/A	37.845	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH1 by 802.11b ant1	



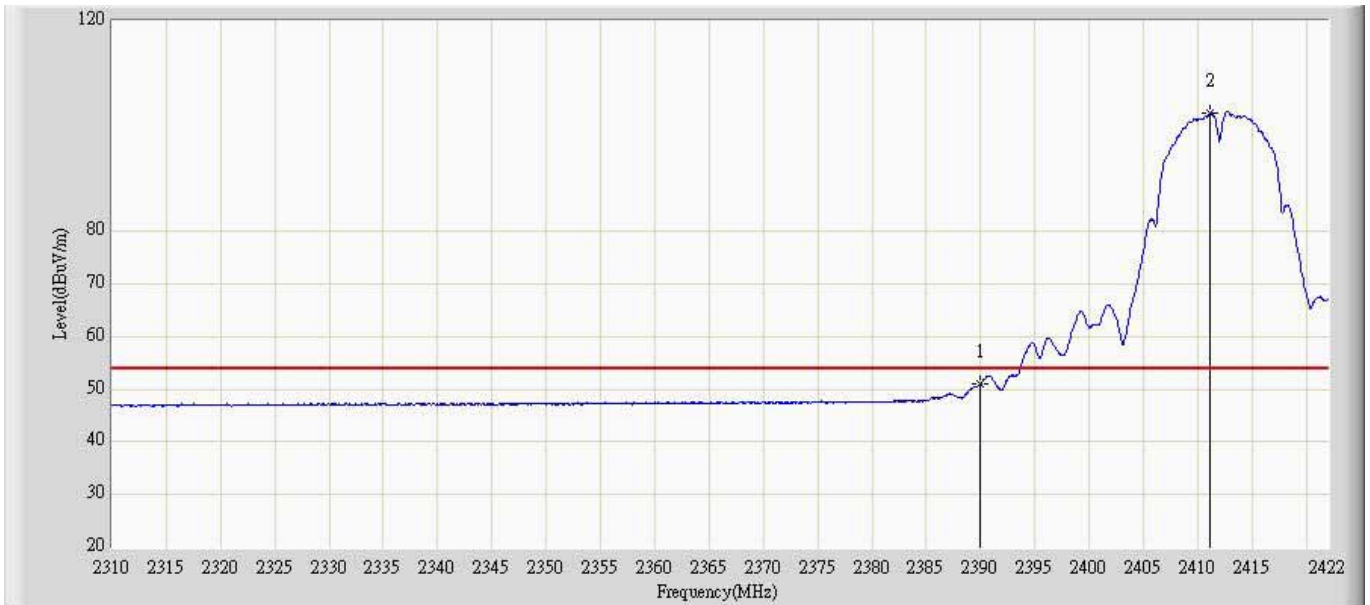
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.787	16.139	-0.213	54.000	37.648	AV
2		*	2411.345	104.072	66.235	N/A	N/A	37.837	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH1 by 802.11b ant1	



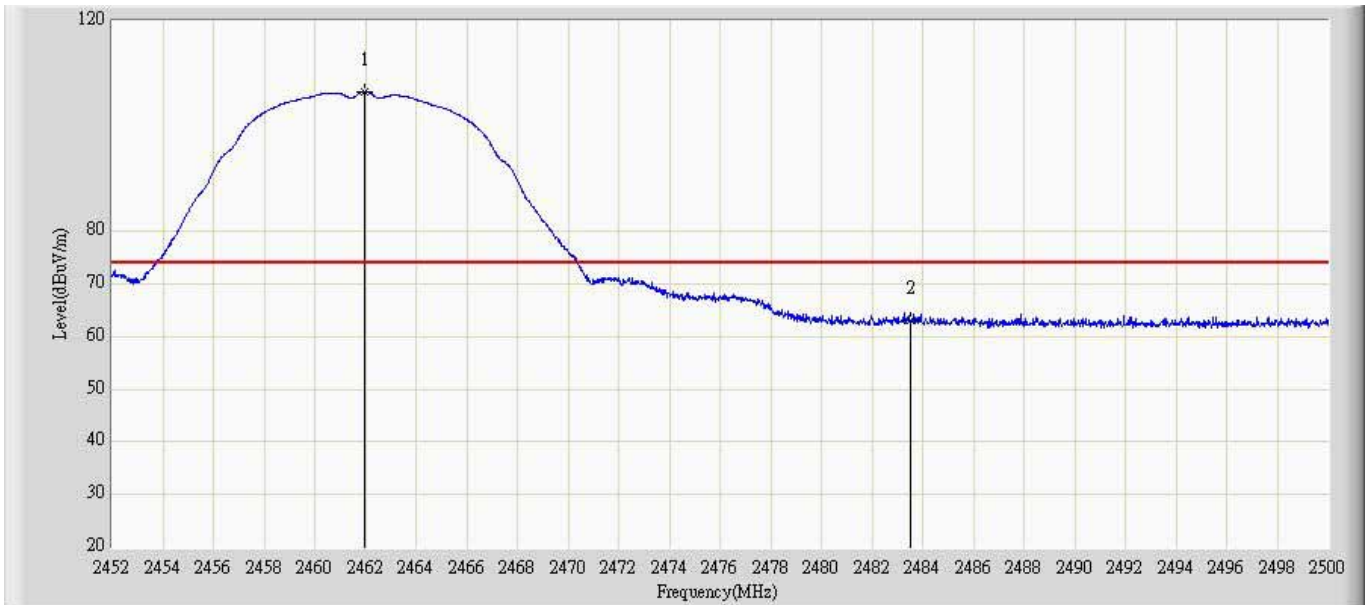
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	62.522	25.534	-11.030	74.000	36.988	PK
2		*	2411.334	106.330	69.234	N/A	N/A	37.096	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH1 by 802.11b ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	50.729	13.741	-3.271	54.000	36.988	AV
2		*	2411.236	102.307	65.214	N/A	N/A	37.093	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH11 by 802.11b ant1	



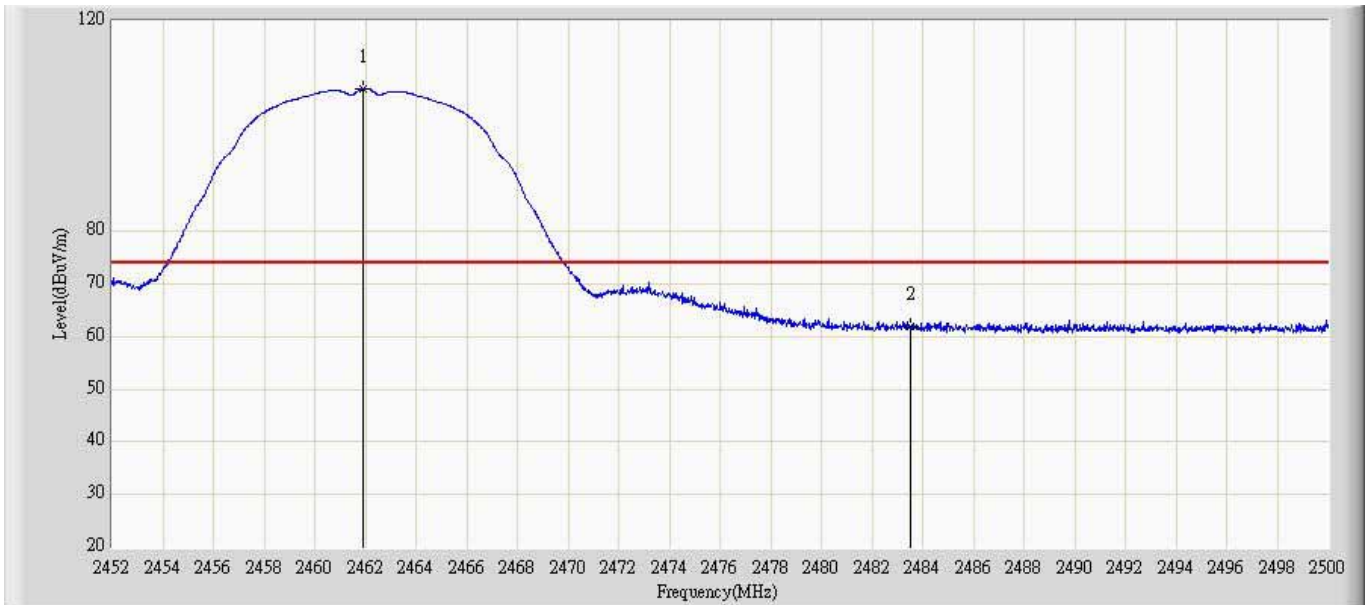
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.623	106.621	68.336	N/A	N/A	38.285	PK
2			2483.500	62.816	24.341	-11.184	74.000	38.475	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH11 by 802.11b ant1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.142	102.603	64.324	N/A	N/A	38.279	AV
2			2483.500	49.711	11.236	-4.289	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH11 by 802.11b ant1	



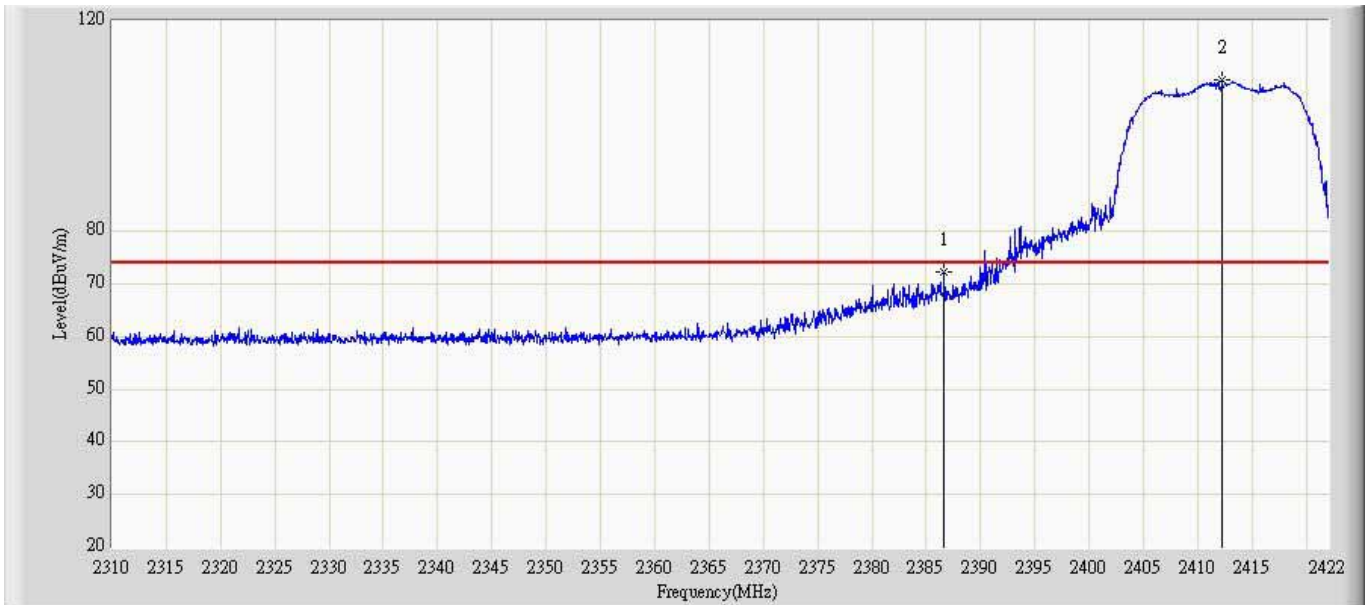
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.631	106.883	69.546	N/A	N/A	37.337	PK
2			2483.500	61.694	24.253	-12.306	74.000	37.441	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 16:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 1: Transmit at CH11 by 802.11b ant1	



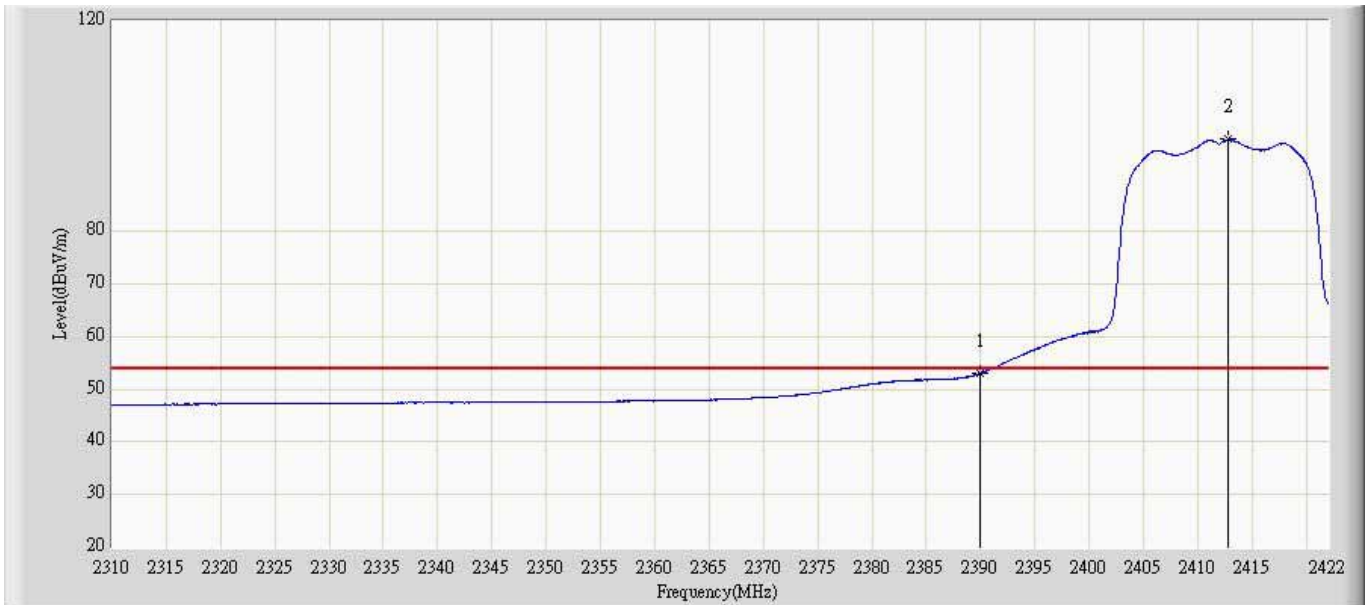
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.345	102.667	65.326	N/A	N/A	37.341	AV
2			2483.500	48.568	11.127	-5.432	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/20 - 17:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant1	



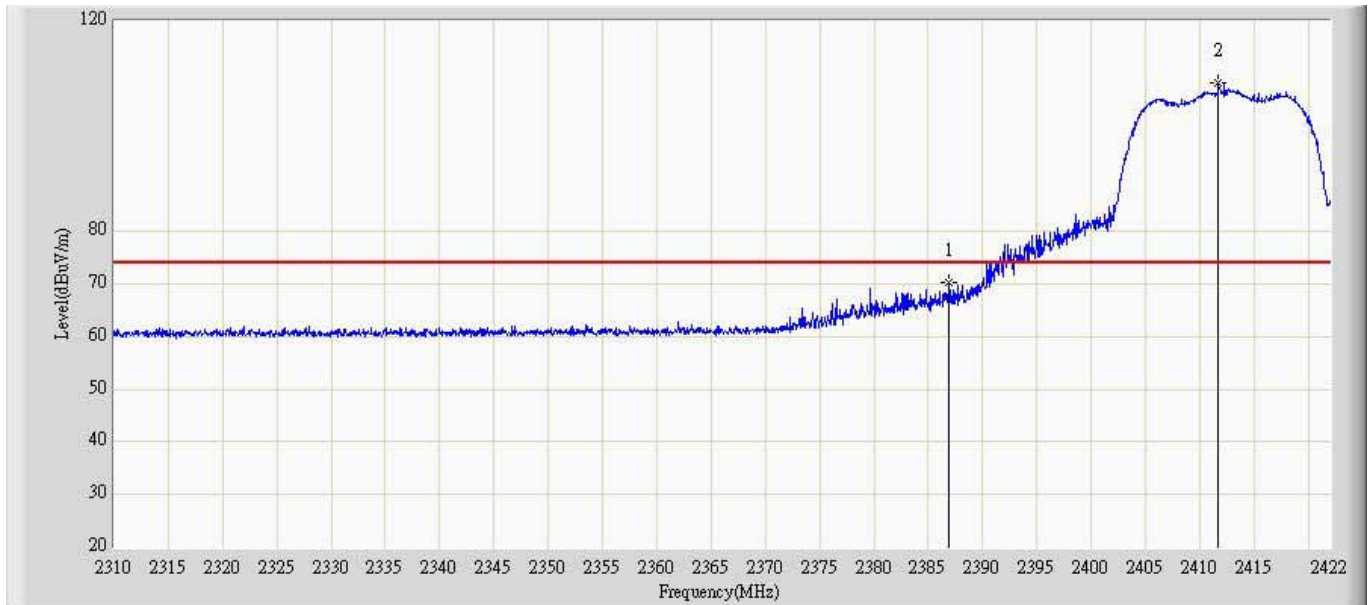
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2386.752	71.952	34.334	-2.048	74.000	37.618	PK
2		*	2412.331	108.471	70.623	N/A	N/A	37.848	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant1	



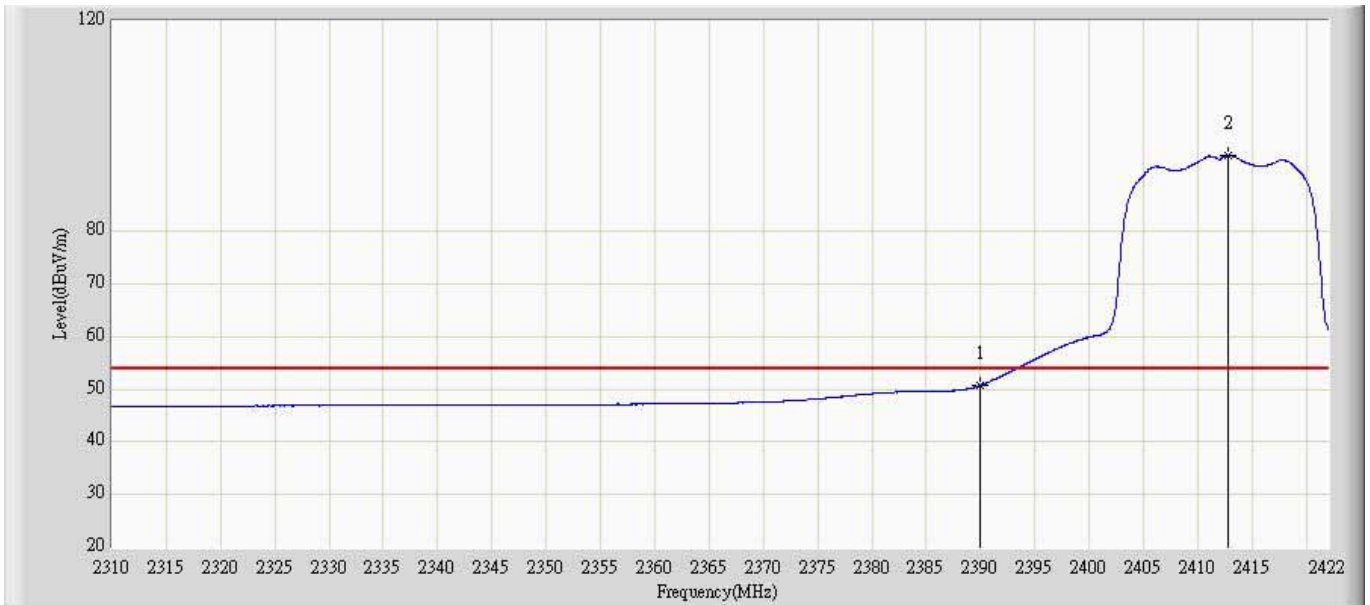
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	52.982	15.334	-1.018	54.000	37.648	AV
2		*	2412.623	97.273	59.421	N/A	N/A	37.852	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant1	



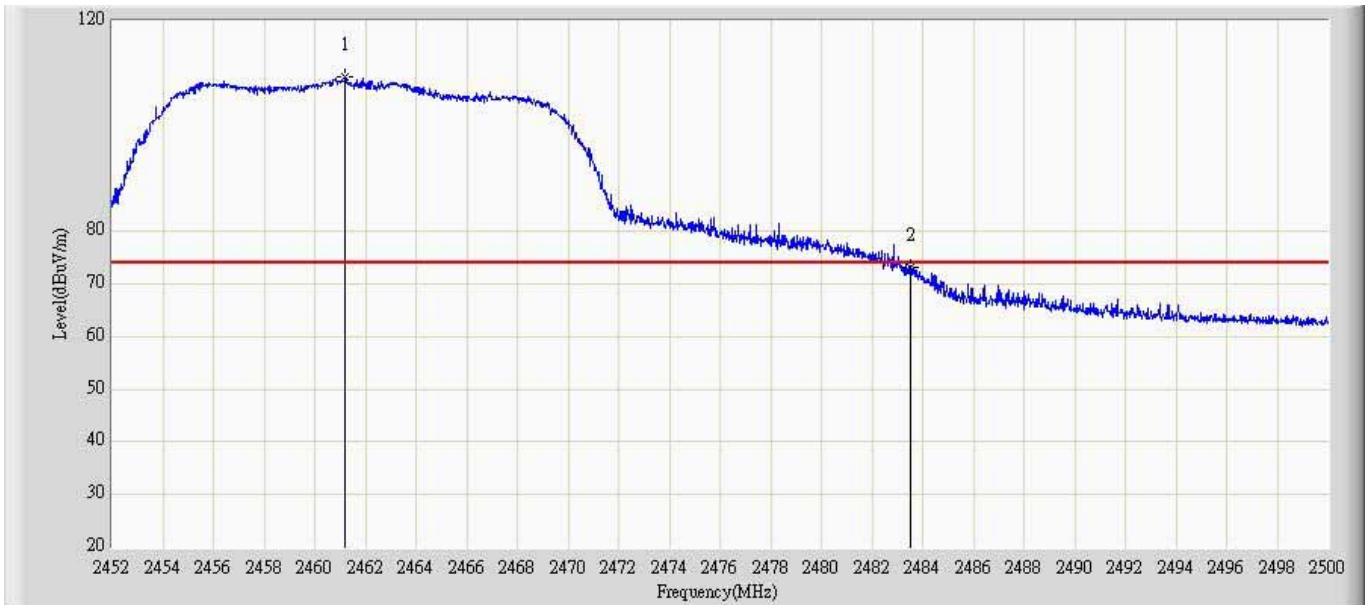
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2386.254	70.308	33.335	-3.692	74.000	36.973	PK
2		*	2411.315	107.959	70.864	N/A	N/A	37.095	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH1 by 802.11g ant1	



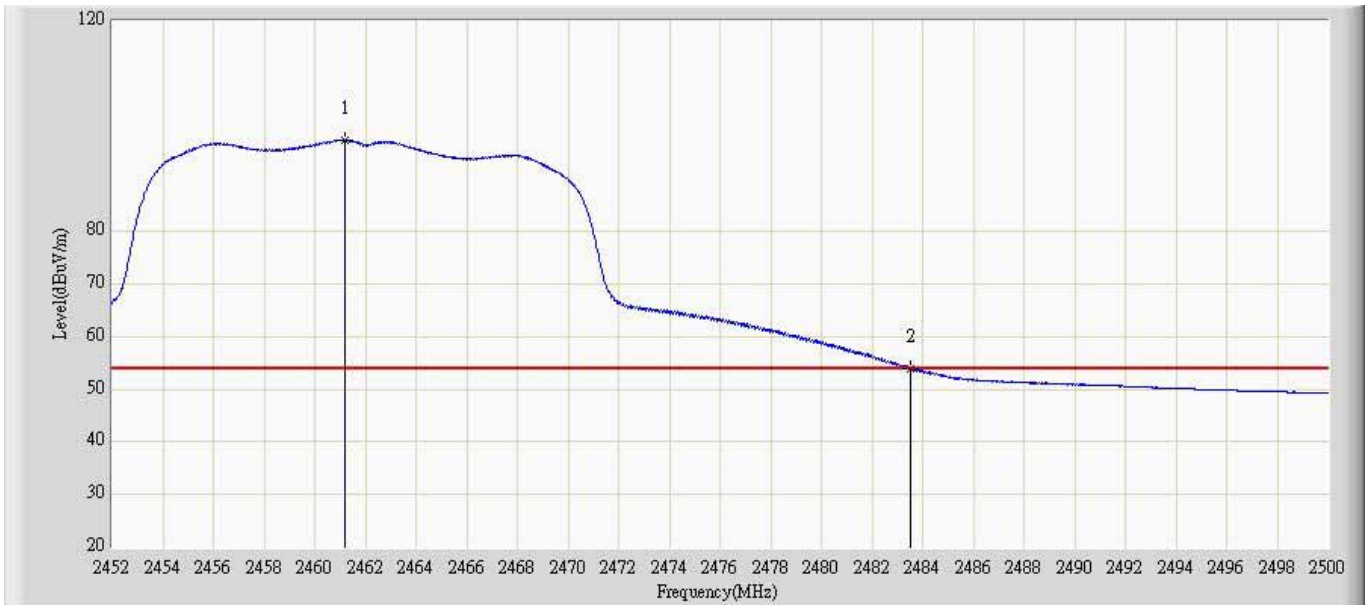
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	50.333	13.345	-3.667	54.000	36.988	AV
2		*	2412.625	94.526	57.425	N/A	N/A	37.101	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant1	



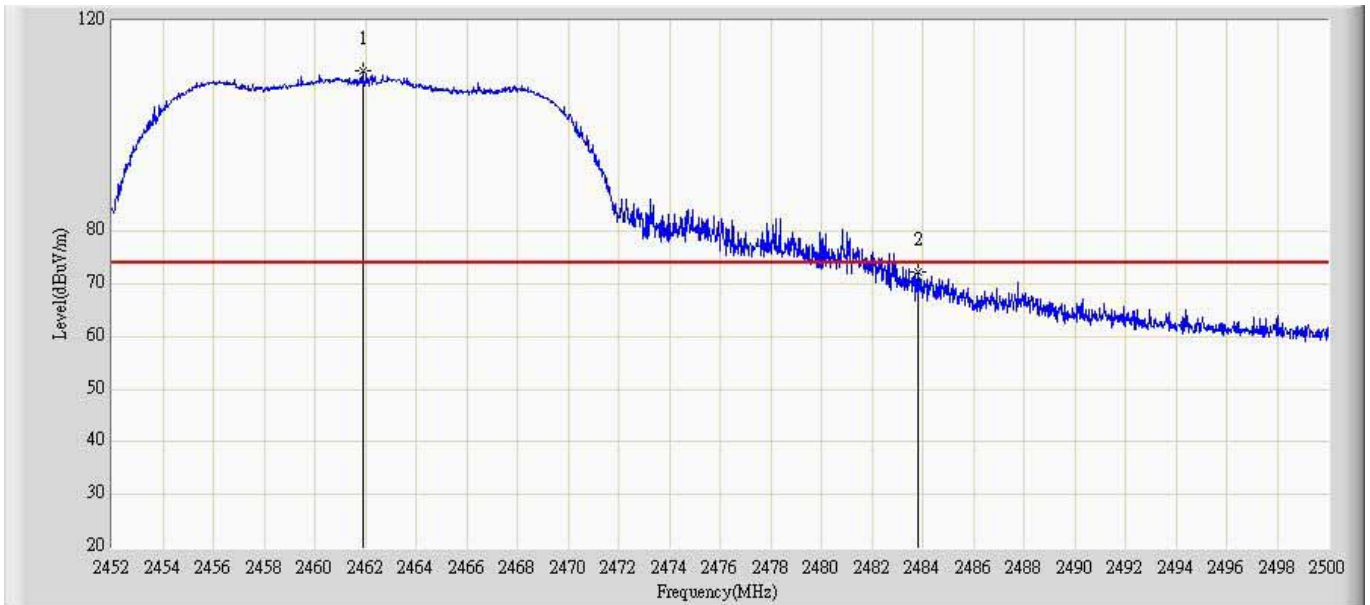
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.264	109.142	70.864	N/A	N/A	38.278	PK
2			2483.500	72.829	34.354	-1.171	74.000	38.475	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant1	



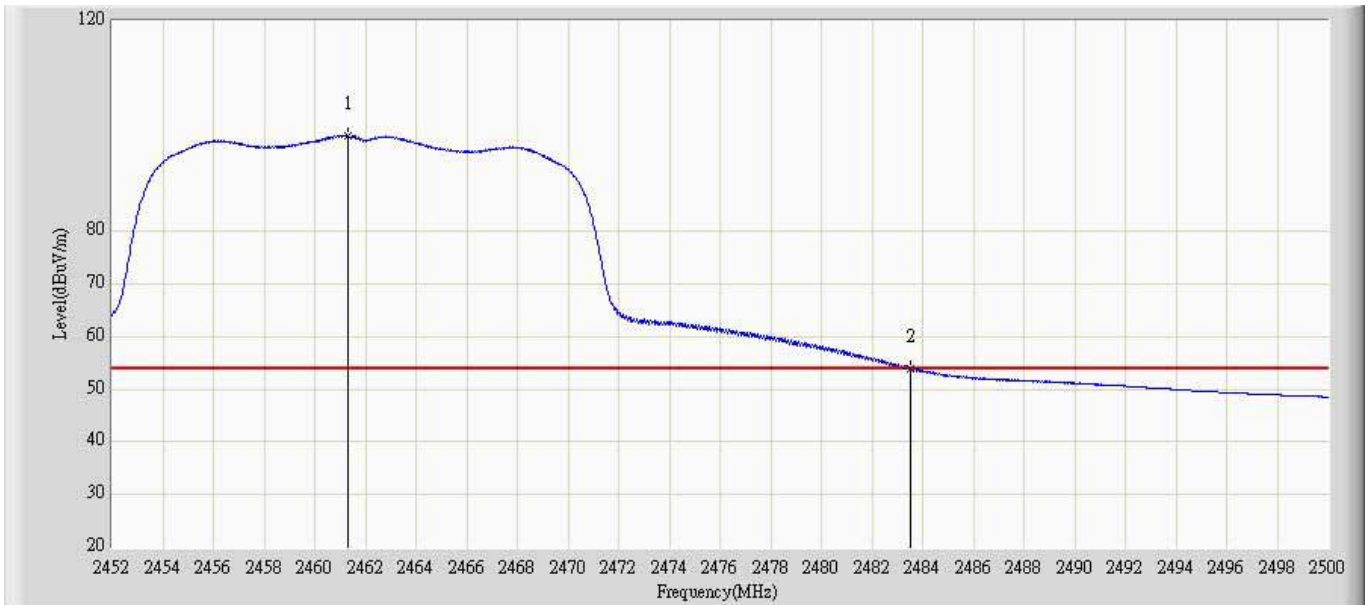
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.368	97.403	59.125	N/A	N/A	38.278	AV
2			2483.500	53.711	15.236	-0.289	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant1	



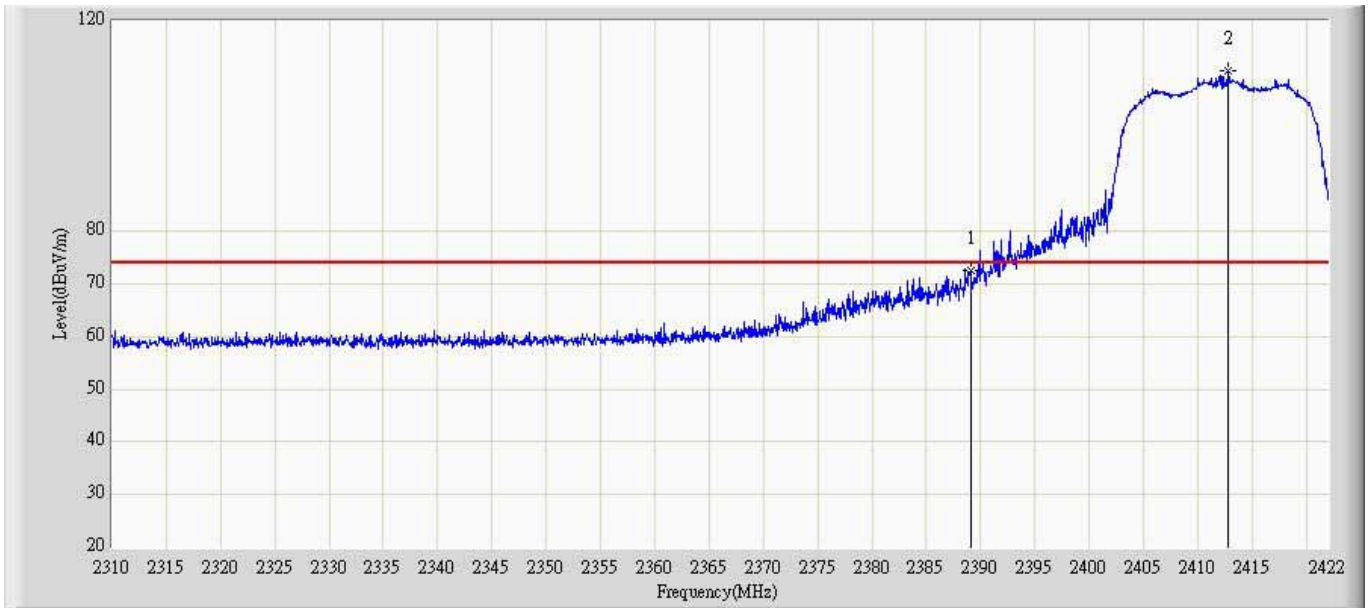
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.841	110.520	73.183	N/A	N/A	37.337	PK
2			2483.782	71.955	34.512	-2.045	74.000	37.443	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 2: Transmit at CH11 by 802.11g ant1	



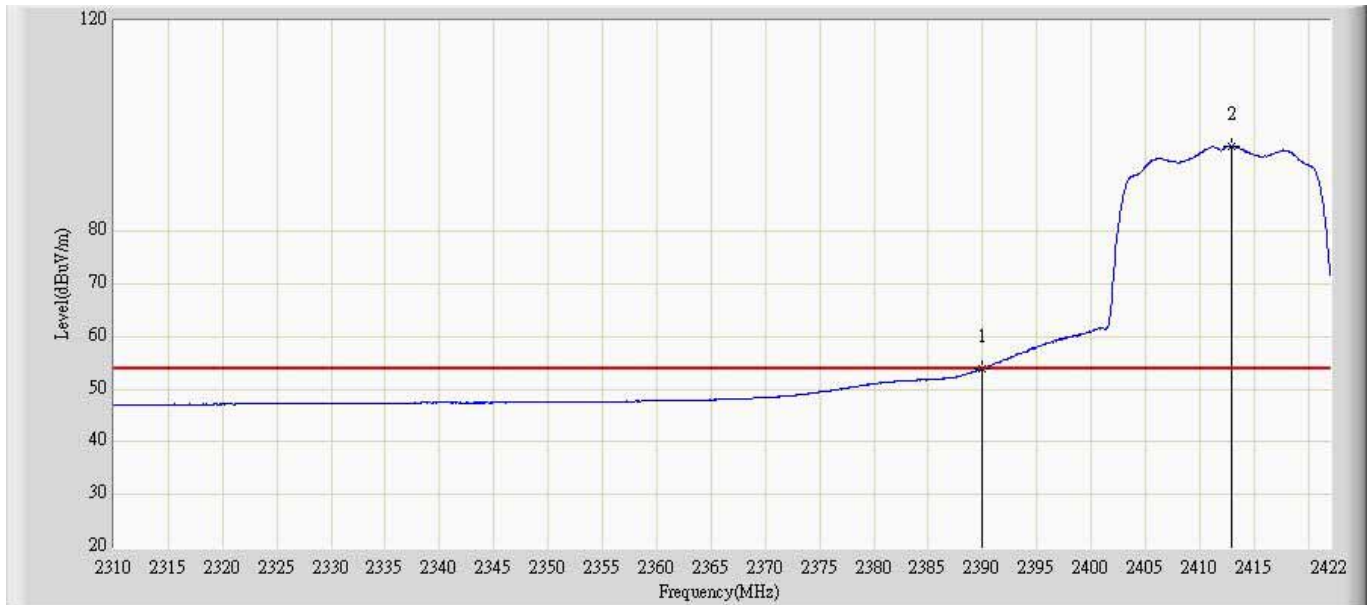
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.125	97.869	60.536	N/A	N/A	37.333	AV
2			2483.500	53.565	16.124	-0.435	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant1	



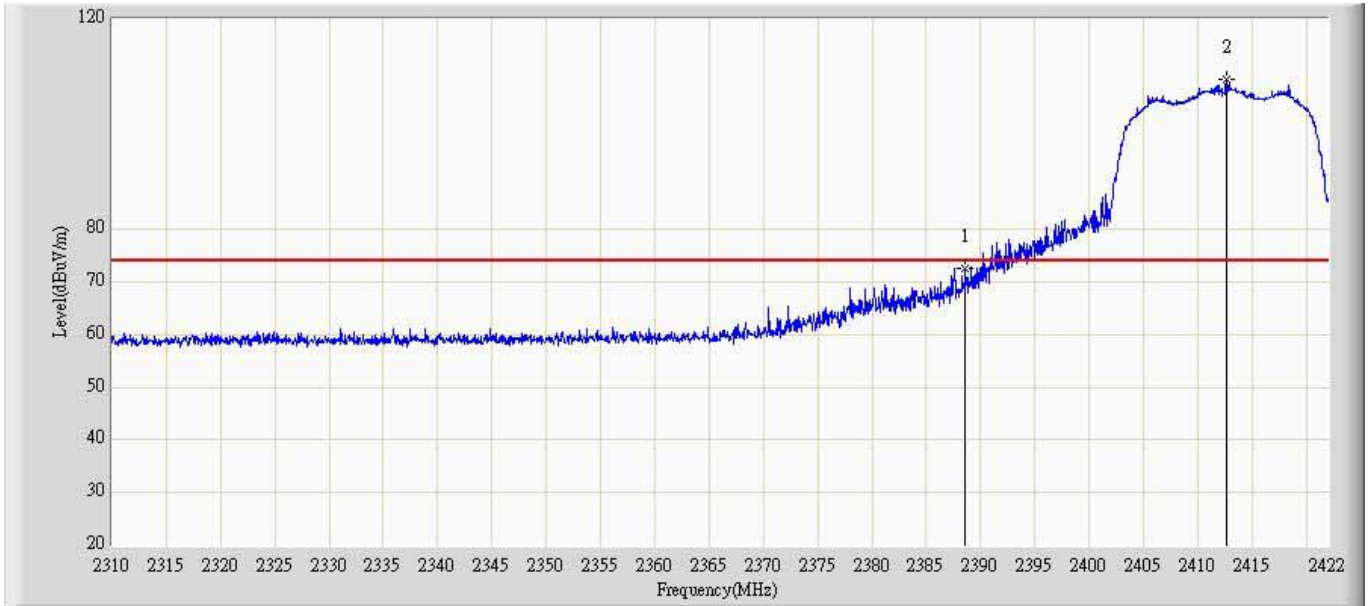
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.364	72.764	35.124	-1.236	74.000	37.640	PK
2		*	2412.142	110.293	72.441	N/A	N/A	37.852	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 17:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant1	



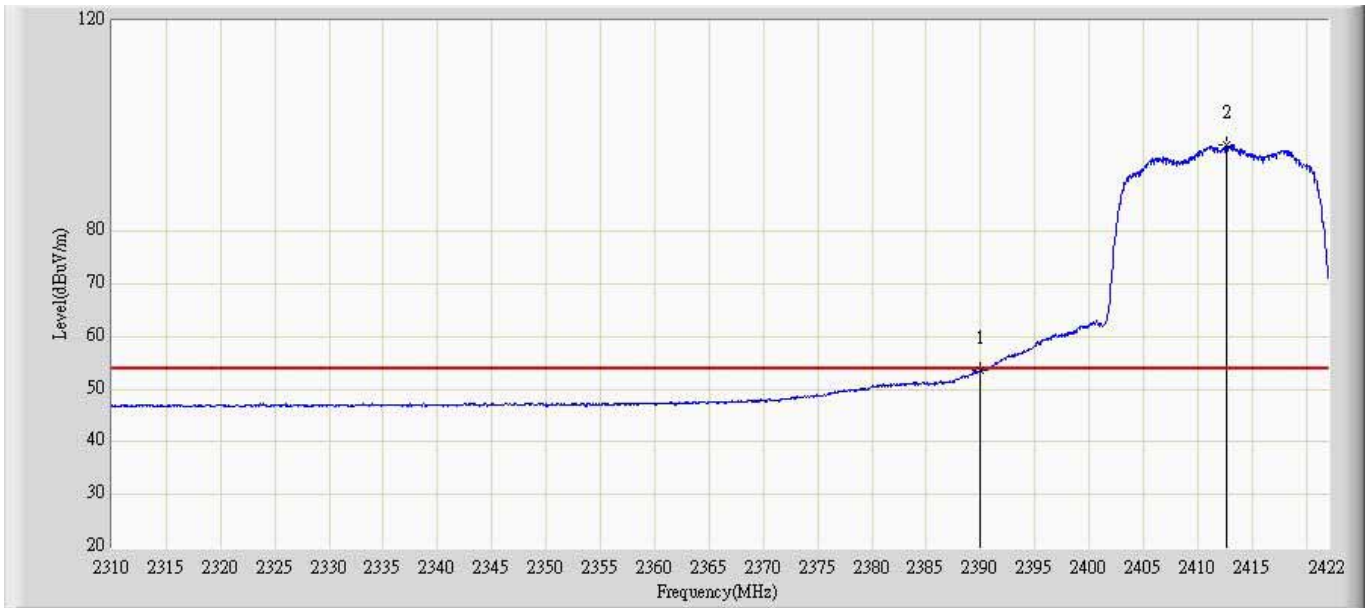
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.701	16.053	-0.299	54.000	37.648	AV
2		*	2412.348	95.976	58.123	N/A	N/A	37.853	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant1	



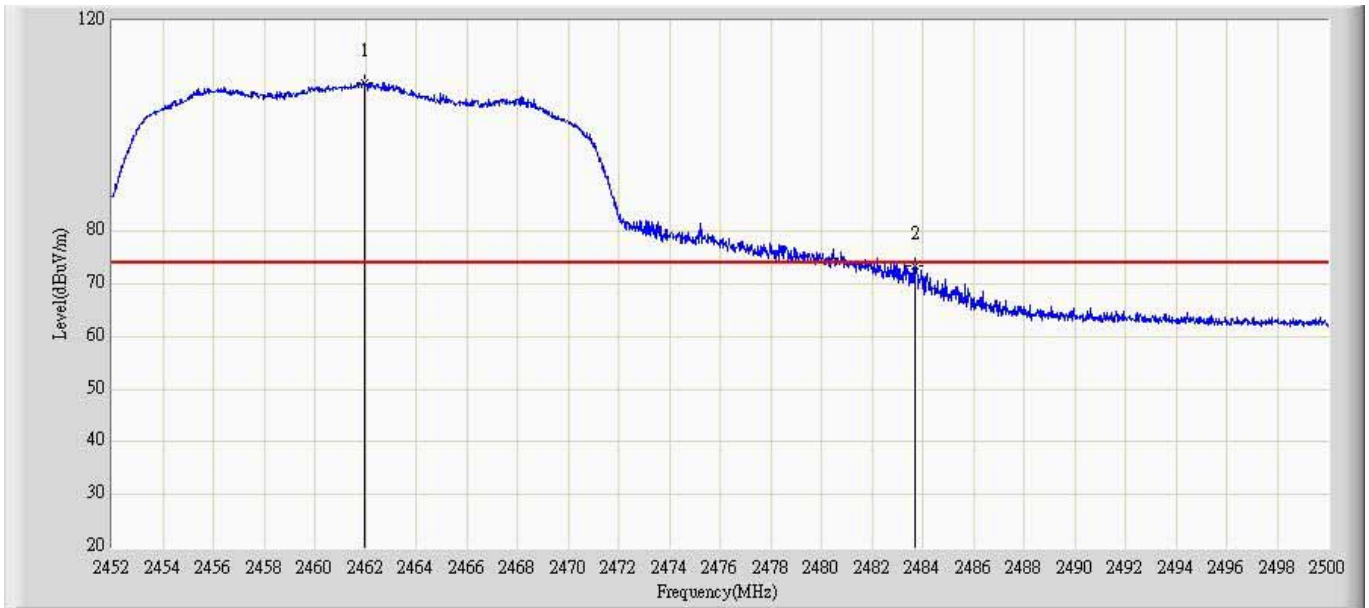
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2388.125	72.339	35.358	-1.661	74.000	36.981	PK
2		*	2412.369	108.225	71.125	N/A	N/A	37.100	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant1	



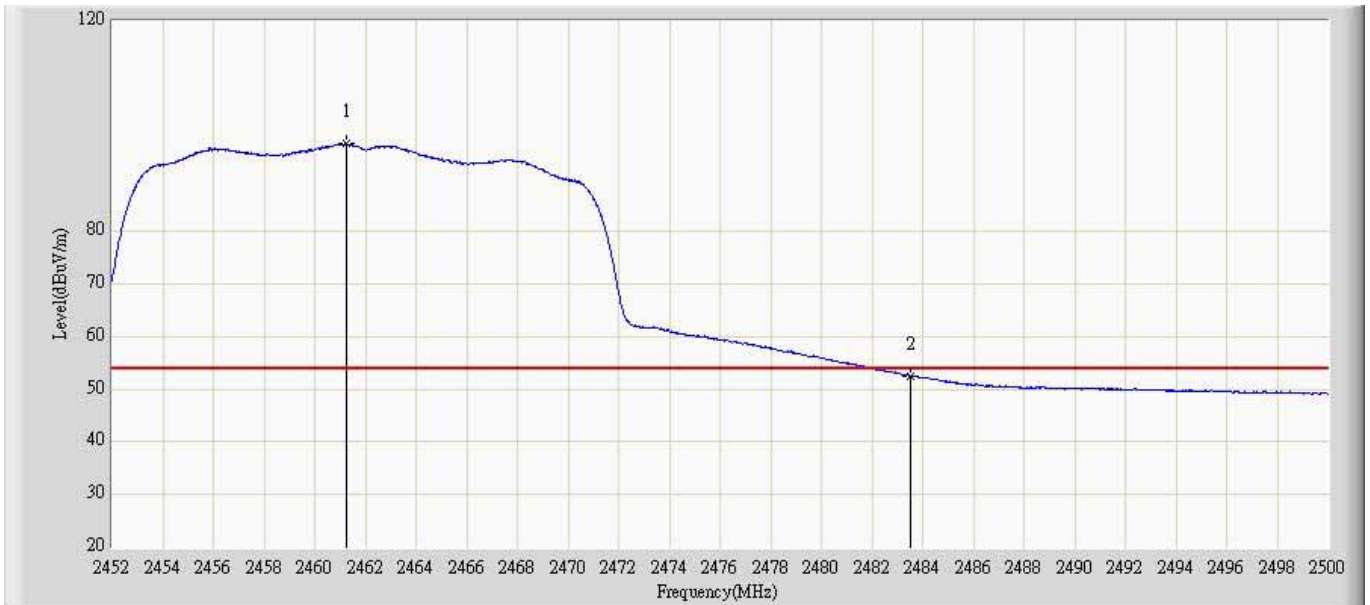
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.277	16.289	-0.723	54.000	36.988	AV
2		*	2412.434	96.225	59.125	N/A	N/A	37.100	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant1	



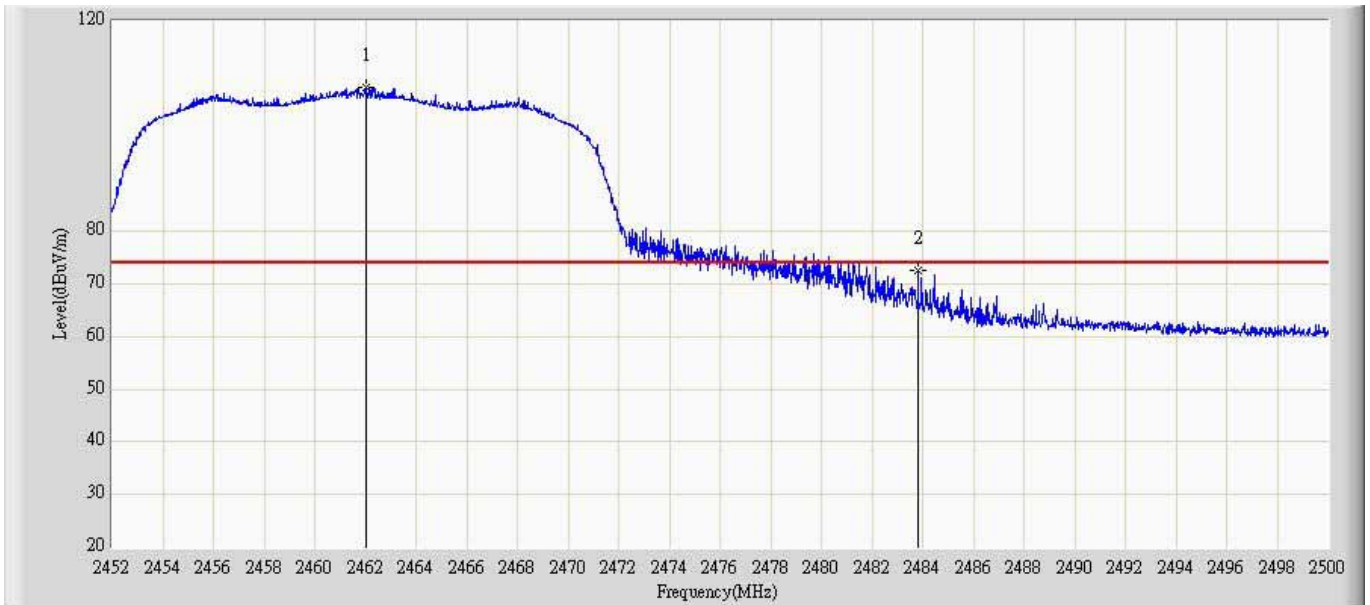
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.652	107.781	69.496	N/A	N/A	38.285	PK
2			2483.335	73.612	35.135	-0.388	74.000	38.477	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant1	



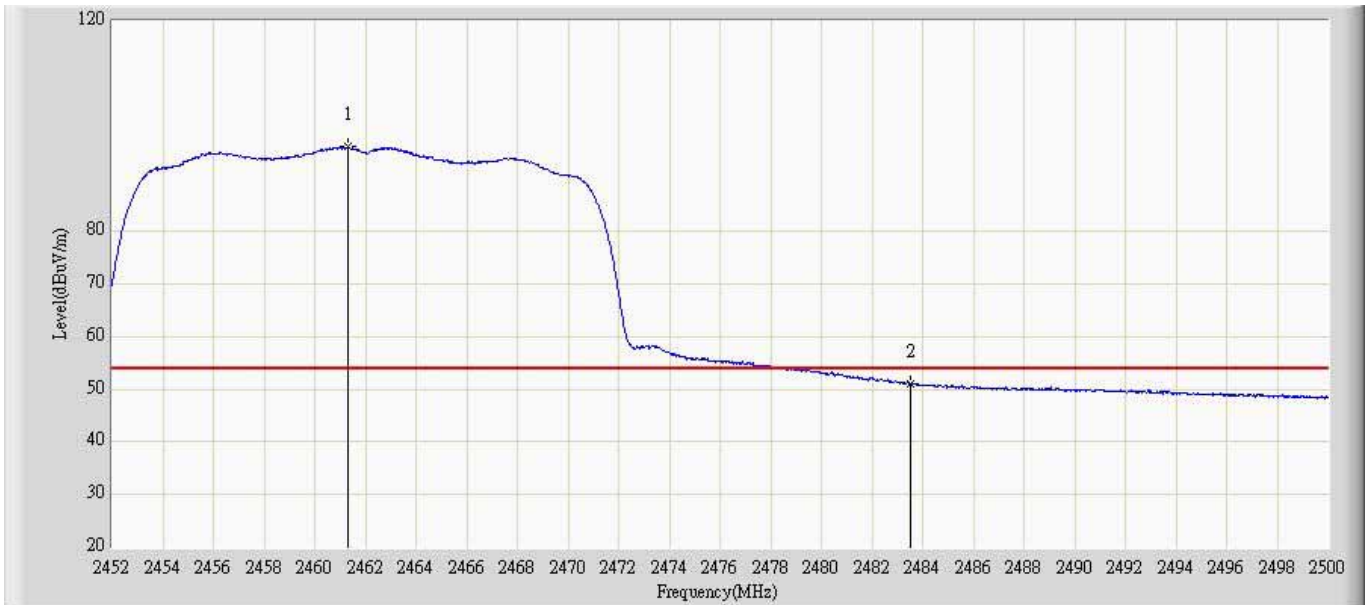
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.125	96.643	58.365	N/A	N/A	38.278	AV
2			2483.500	52.726	14.251	-1.274	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant1	



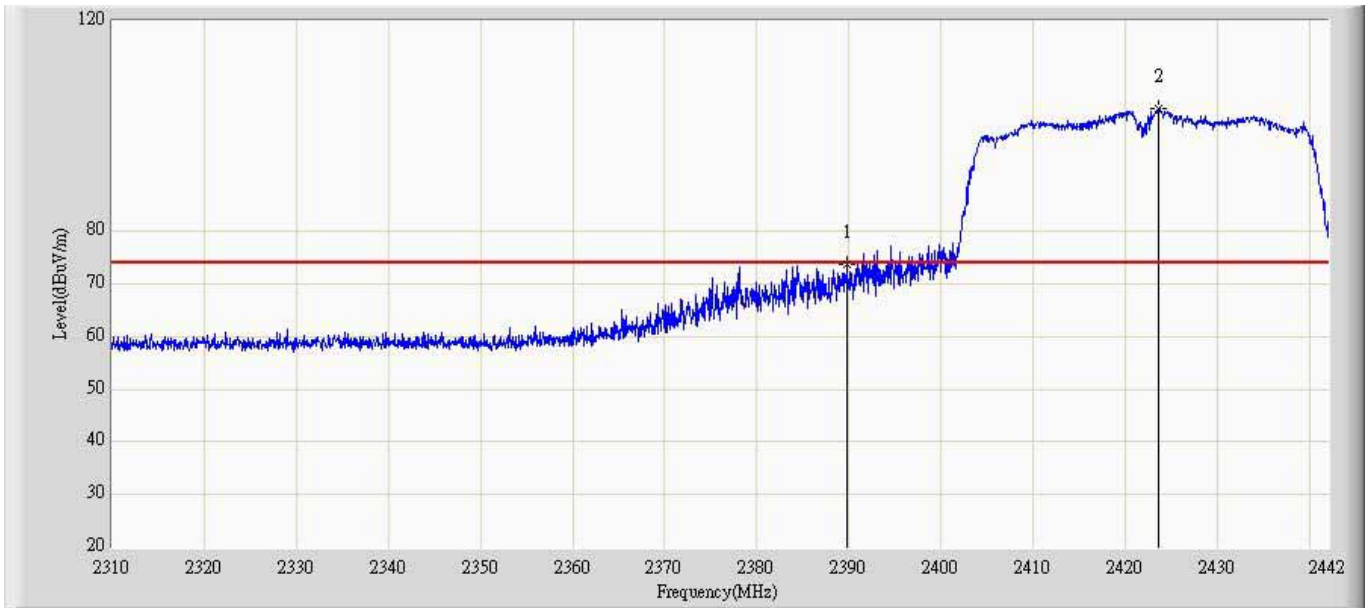
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.115	107.106	69.769	N/A	N/A	37.337	PK
2			2483.824	72.557	35.114	-1.443	74.000	37.443	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant1	



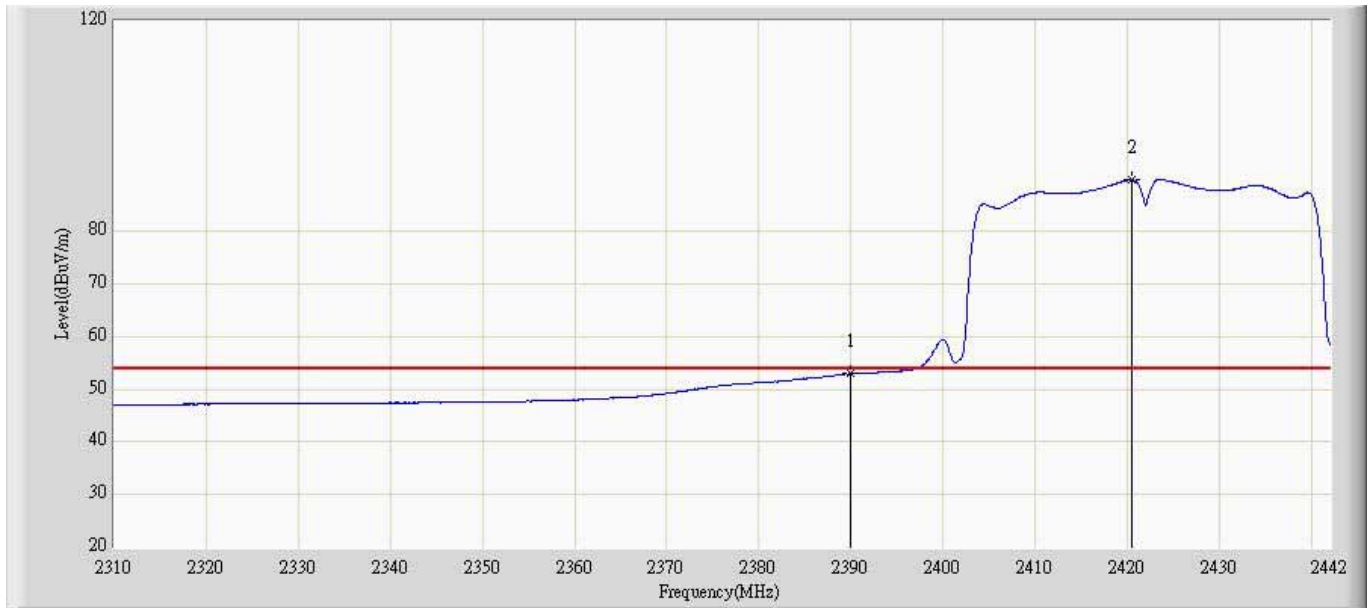
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.124	95.759	58.425	N/A	N/A	37.334	AV
2			2483.500	50.837	13.396	-3.163	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant1	



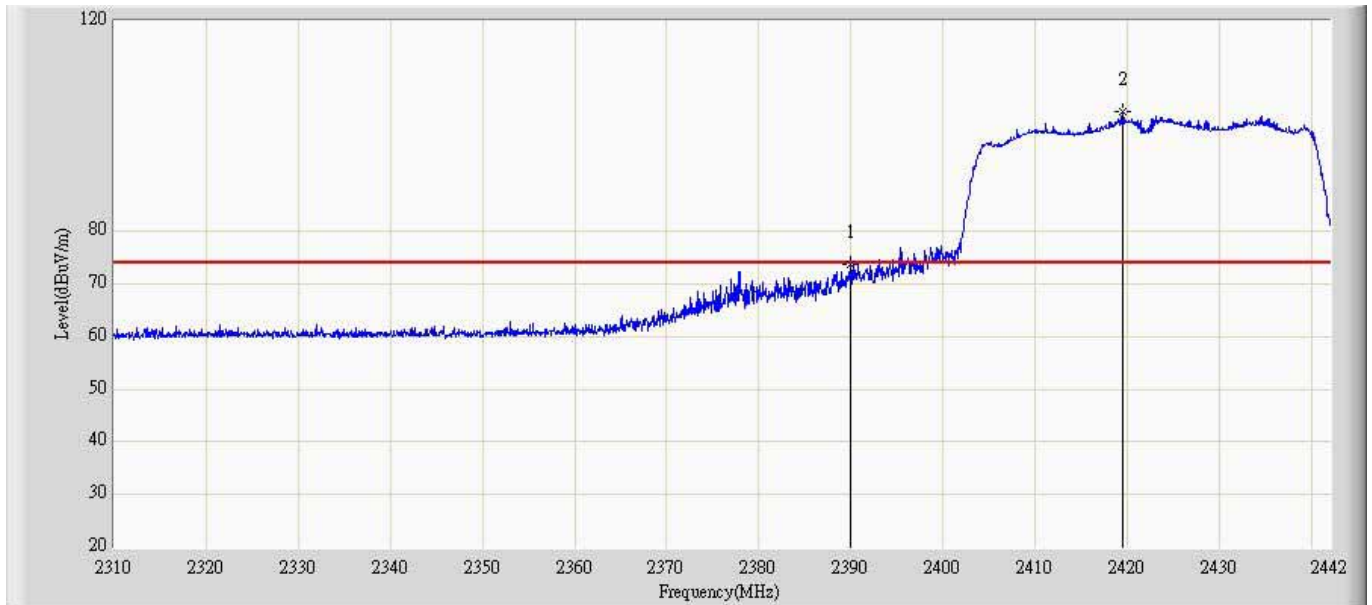
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.458	73.882	36.236	-0.204	74.000	37.646	PK
2		*	2423.336	103.073	65.125	N/A	N/A	37.948	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant1	



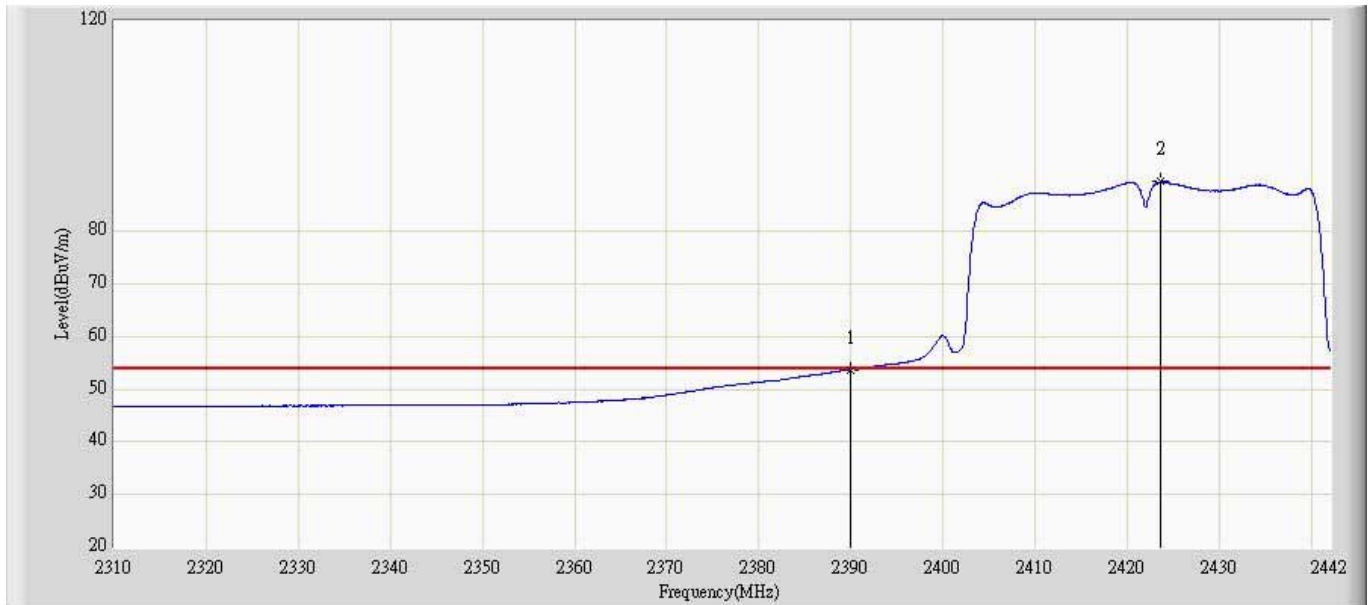
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	52.760	15.112	-1.24	54.000	37.648	AV
2		*	2420.695	89.612	51.692	N/A	N/A	37.920	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant1	



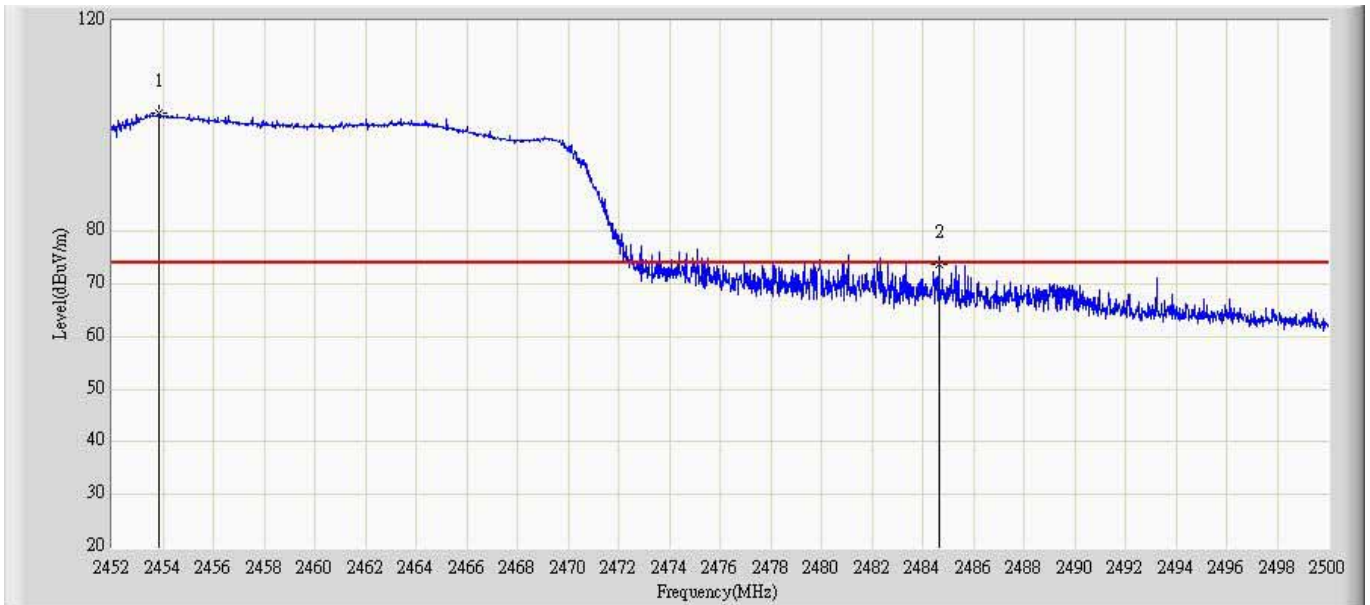
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.741	73.549	36.562	-0.451	74.000	36.987	PK
2		*	2419.332	102.584	65.452	N/A	N/A	37.132	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant1	



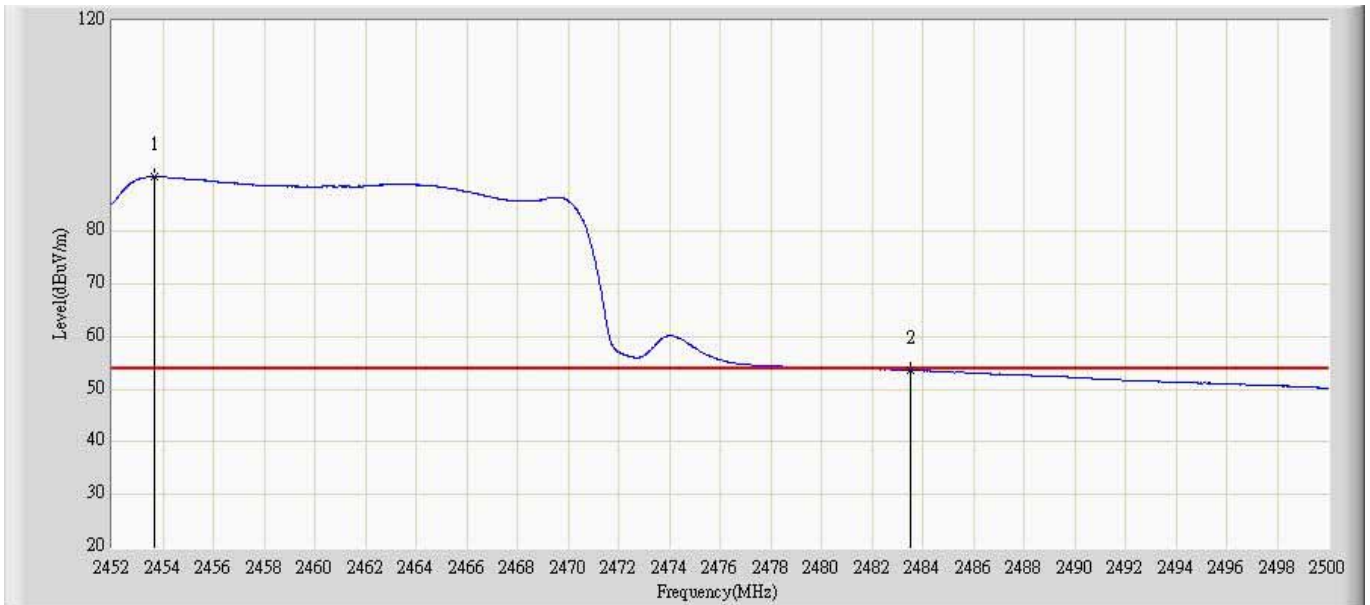
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.524	16.536	-0.276	54.000	36.988	AV
2		*	2423.425	89.278	52.125	N/A	N/A	37.153	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 18:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant1	



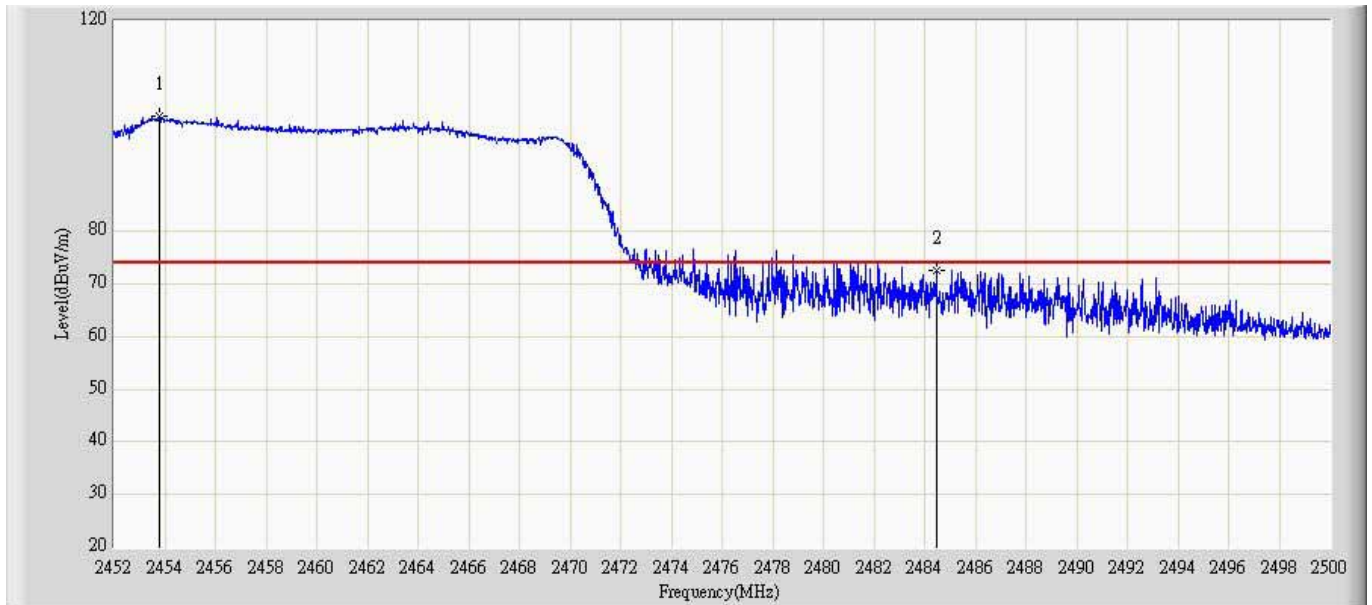
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2453.774	102.337	64.124	N/A	N/A	38.213	PK
2			2484.563	73.724	35.239	-0.276	74.000	38.485	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 19:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant1	



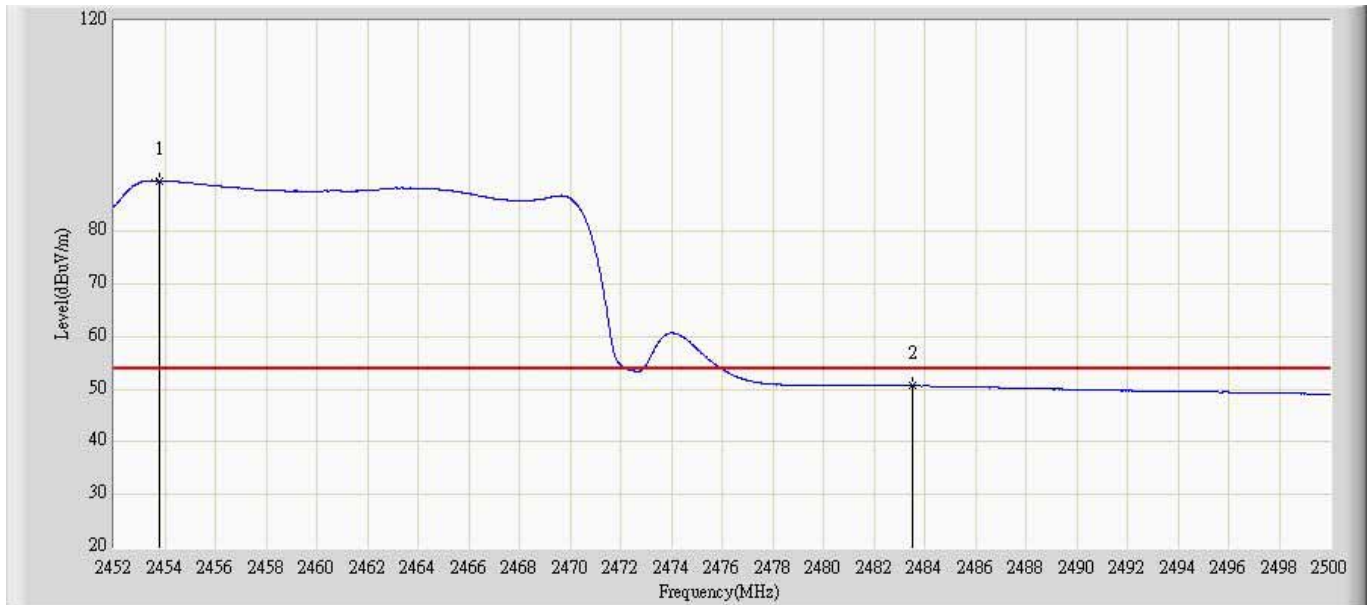
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2453.567	90.465	52.253	N/A	N/A	38.212	AV
2			2483.500	53.529	15.054	-0.471	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 19:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant1	



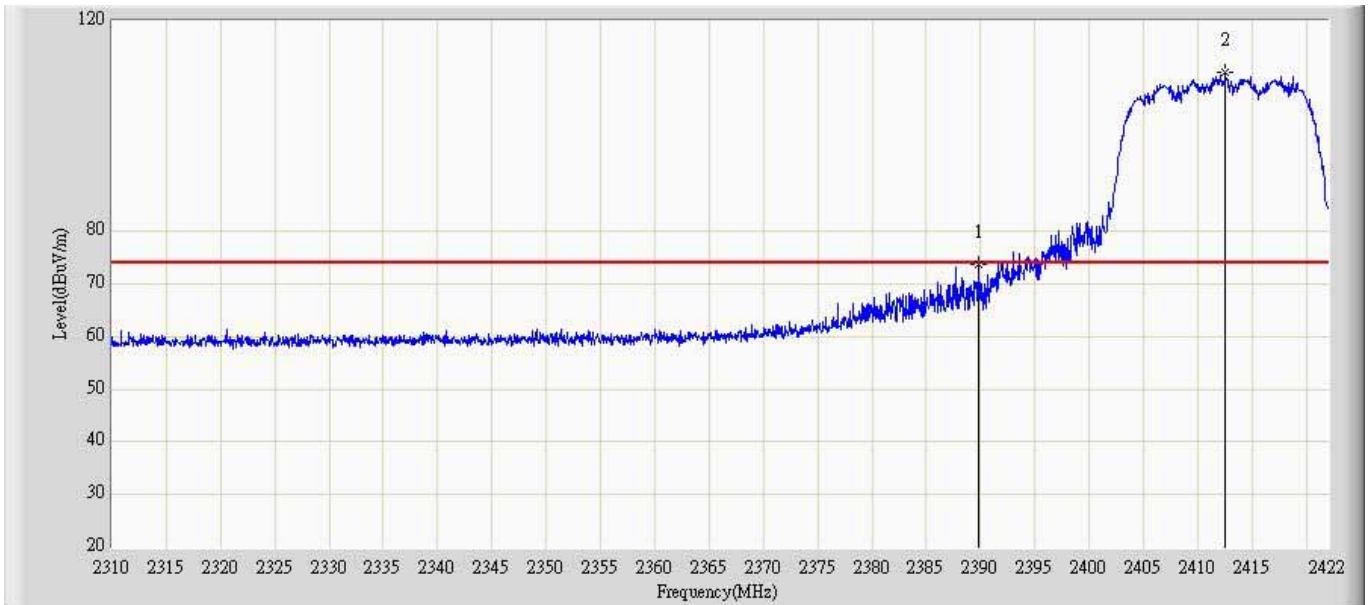
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2453.568	101.732	64.435	N/A	N/A	37.297	PK
2			2484.335	72.571	35.125	-1.429	74.000	37.446	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 19:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant1	



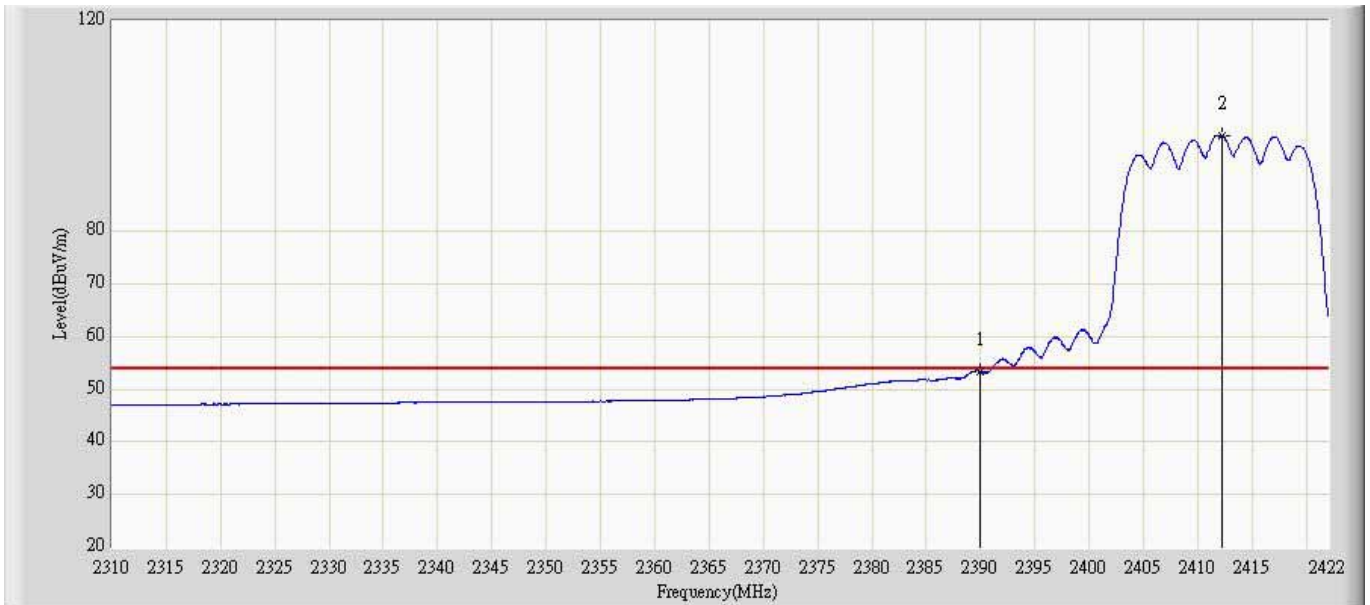
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2453.356	89.460	52.163	N/A	N/A	37.297	AV
2			2483.500	50.574	13.133	-3.426	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 19:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant0+1	



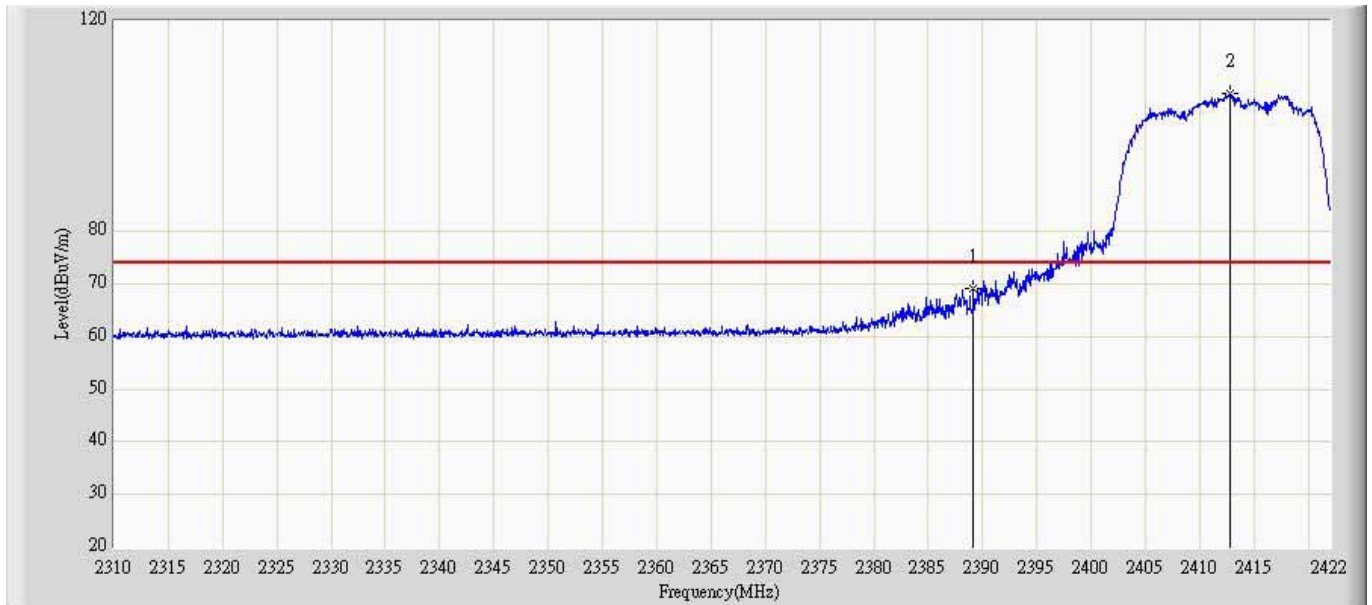
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.758	73.516	35.869	-0.484	74.000	37.647	PK
2		*	2412.536	109.985	72.135	N/A	N/A	37.850	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 19:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant0+1	



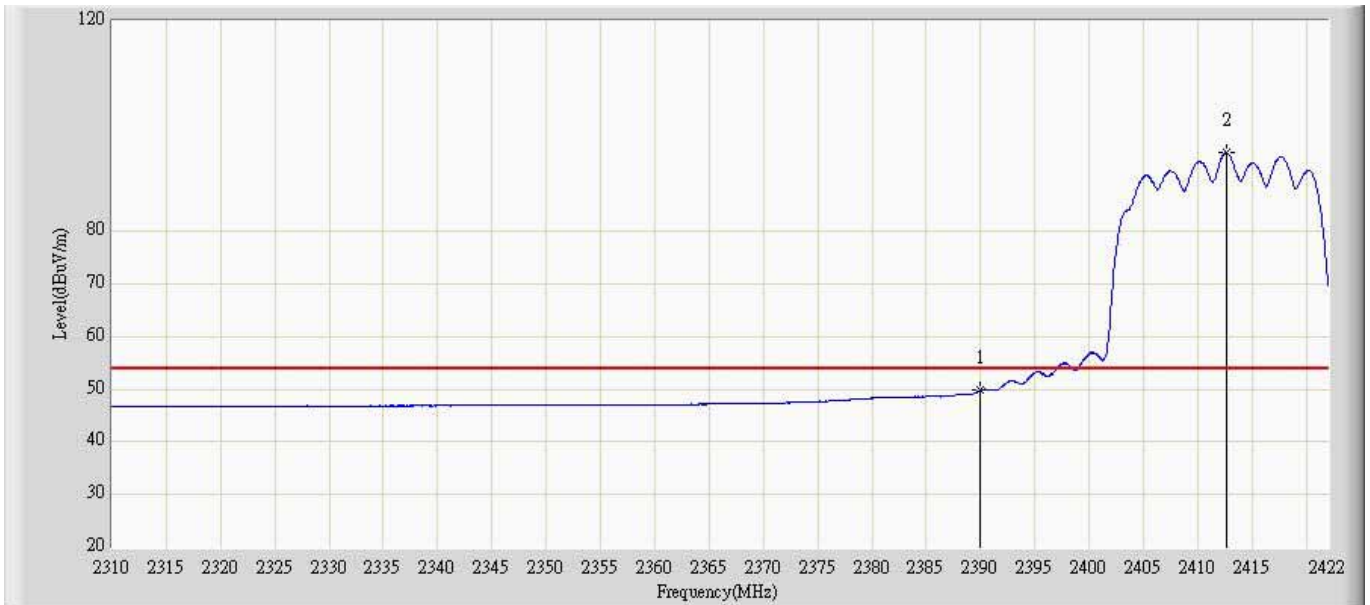
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.896	53.216	15.569	-0.784	54.000	37.647	AV
2		*	2412.114	97.973	60.125	N/A	N/A	37.848	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 20:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 by 802.11n(20MHz) ant0+1	



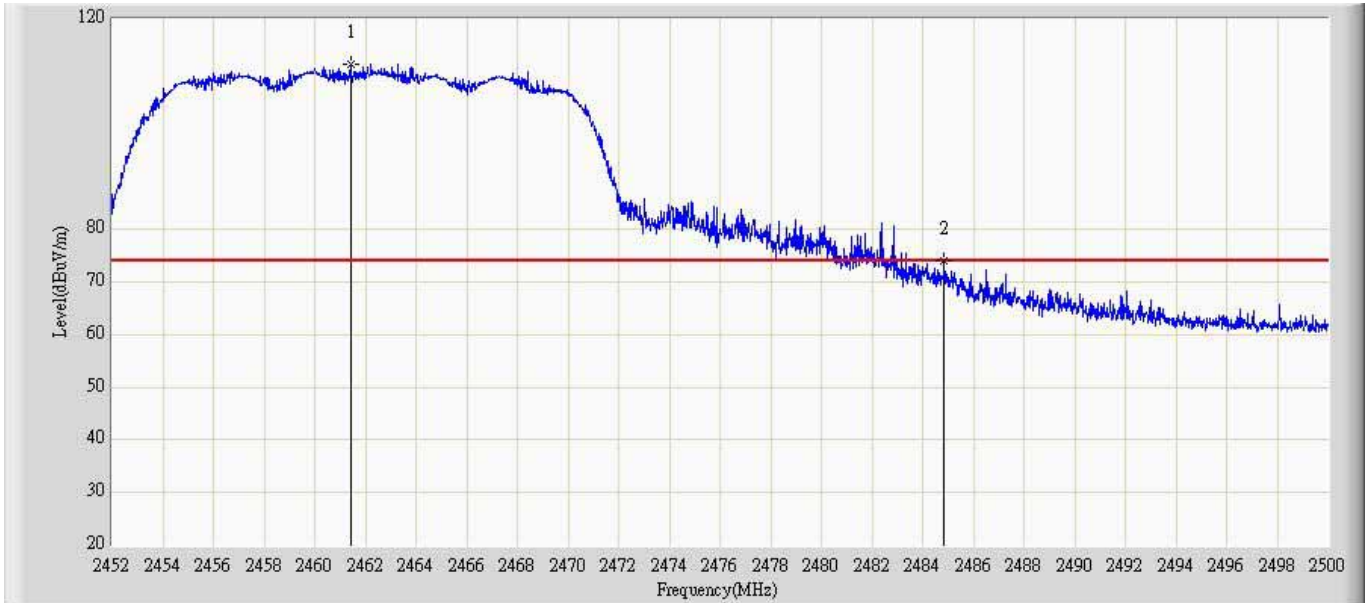
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.056	69.101	32.117	-4.899	74.000	36.984	PK
2		*	2412.652	106.225	69.125	N/A	N/A	37.100	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 20:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH1 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			2390.000	49.571	12.583	-4.429	54.000	36.988	AV
2		*	2412.625	94.765	57.665	N/A	N/A	37.100	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 20:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0+1	



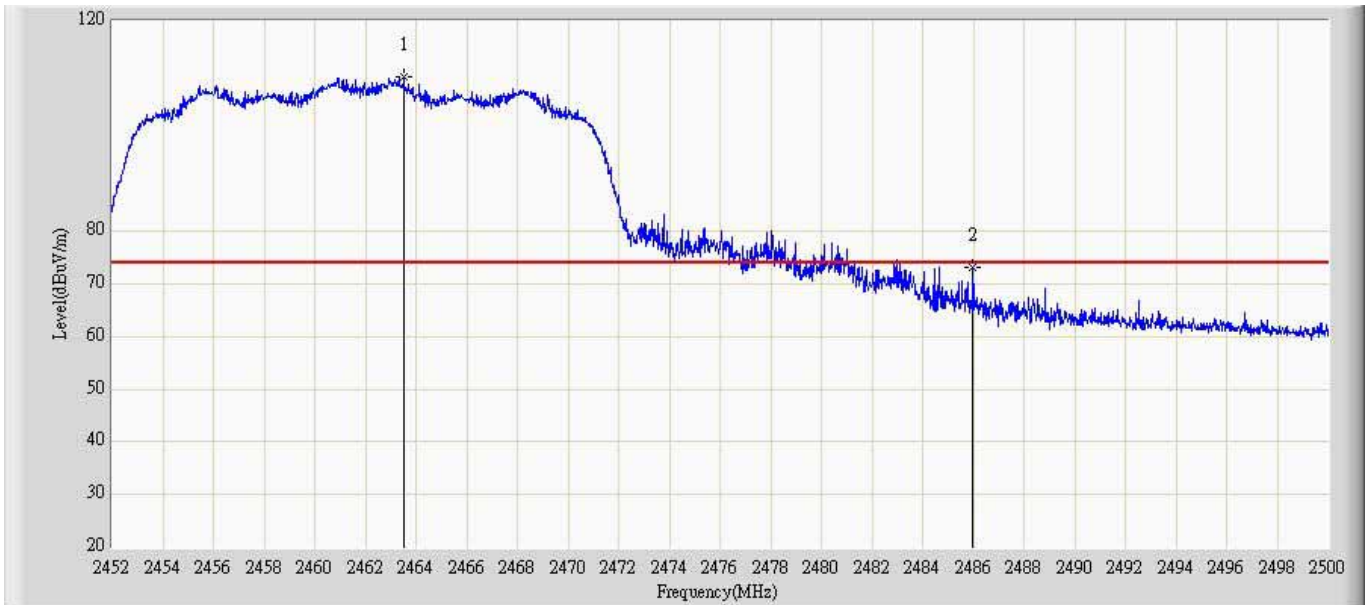
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.114	111.392	73.112	N/A	N/A	38.280	PK
2			2484.364	73.808	35.321	-0.192	74.000	38.487	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 20:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0+1	



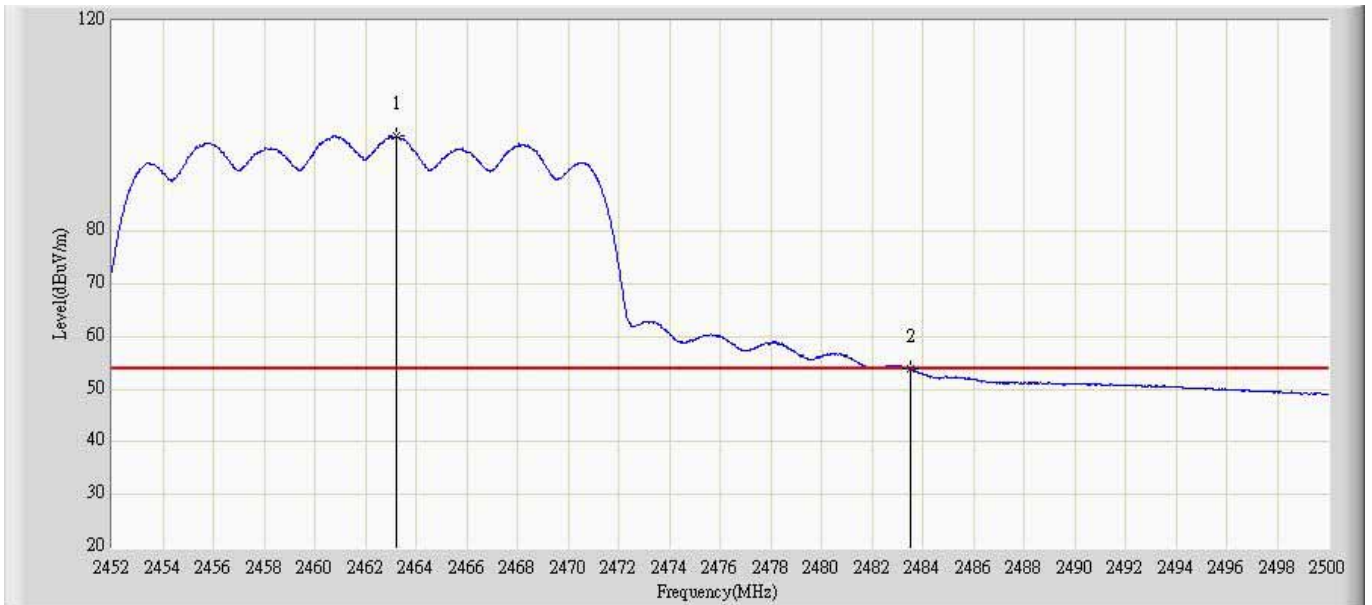
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.114	99.368	61.079	N/A	N/A	38.289	AV
2			2483.500	53.613	15.138	-0.387	54.000	38.475	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 21:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0+1	



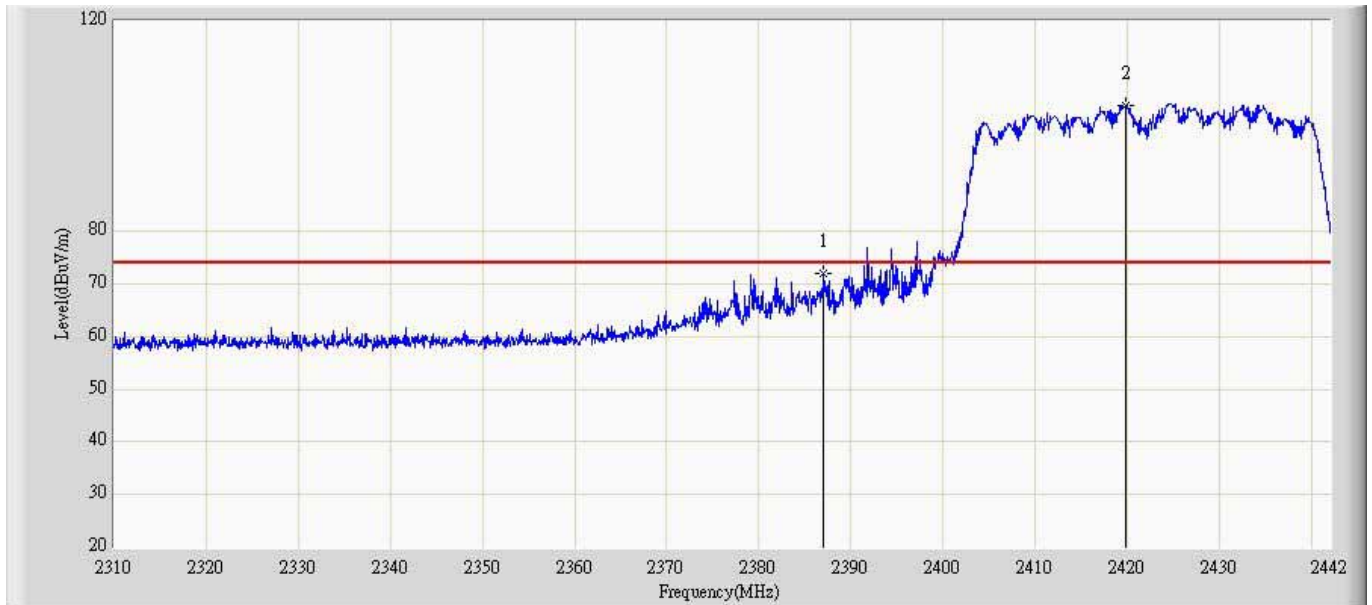
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.769	109.178	71.834	N/A	N/A	37.344	PK
2			2485.881	73.148	35.695	-0.825	74.000	37.453	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 21:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 3: Transmit at CH11 by 802.11n(20MHz) ant0+1	



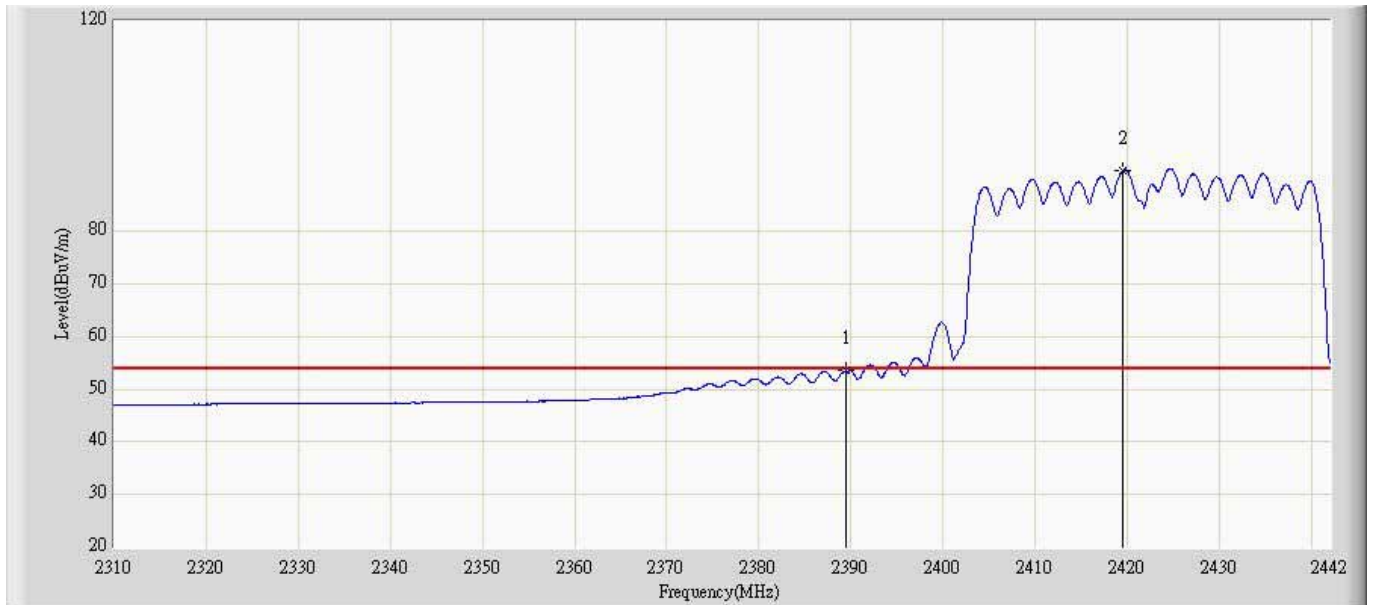
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.135	97.495	60.152	N/A	N/A	37.343	AV
2			2483.500	53.766	16.325	-0.234	54.000	37.441	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 21:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0+1	



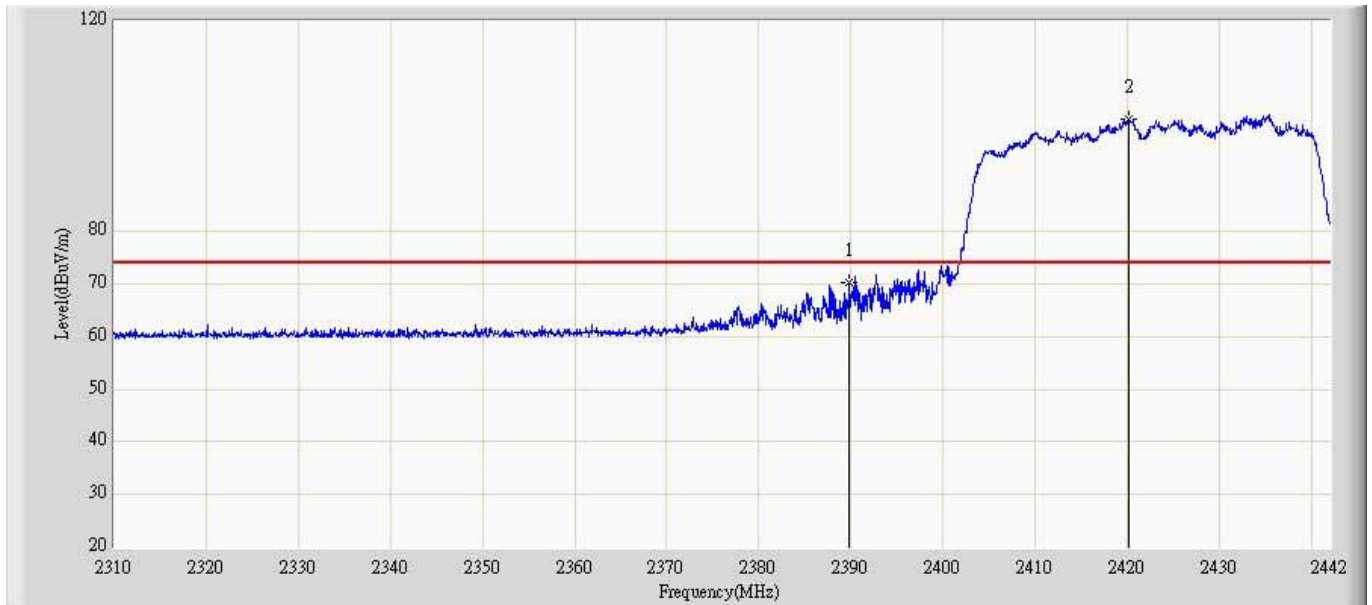
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2387.022	71.835	34.214	-2.165	74.000	37.621	PK
2		*	2419.625	104.038	66.125	N/A	N/A	37.913	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 21:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0+1	



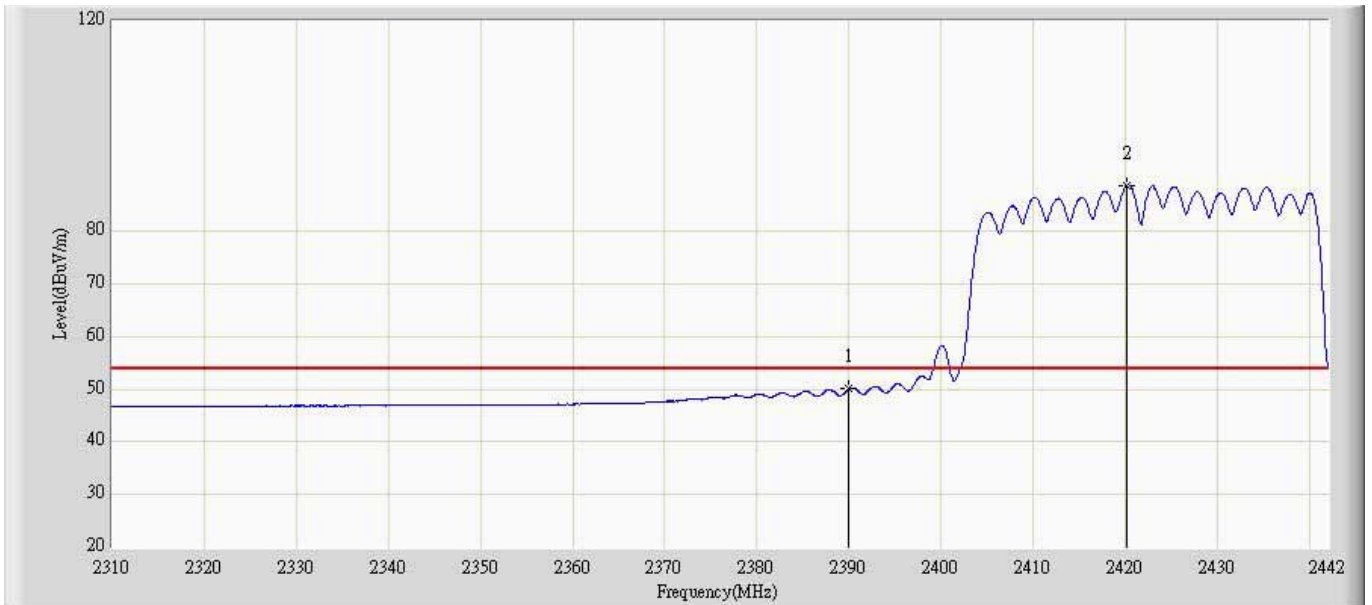
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.336	53.767	16.124	-0.233	54.000	37.643	AV
2		*	2419.367	91.348	53.436	N/A	N/A	37.912	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/22 - 21:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0+1	



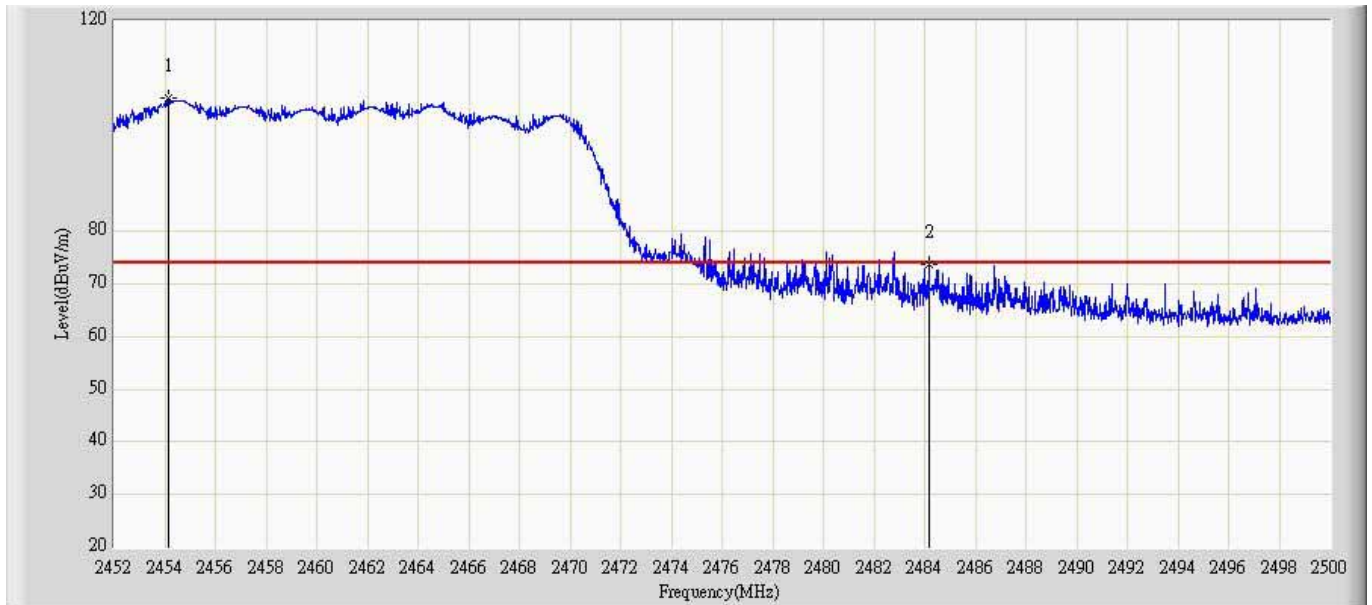
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.125	70.141	33.154	-3.859	74.000	36.987	PK
2		*	2420.127	101.492	64.356	N/A	N/A	37.136	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 20:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH3 by 802.11n(40MHz) ant0+1	



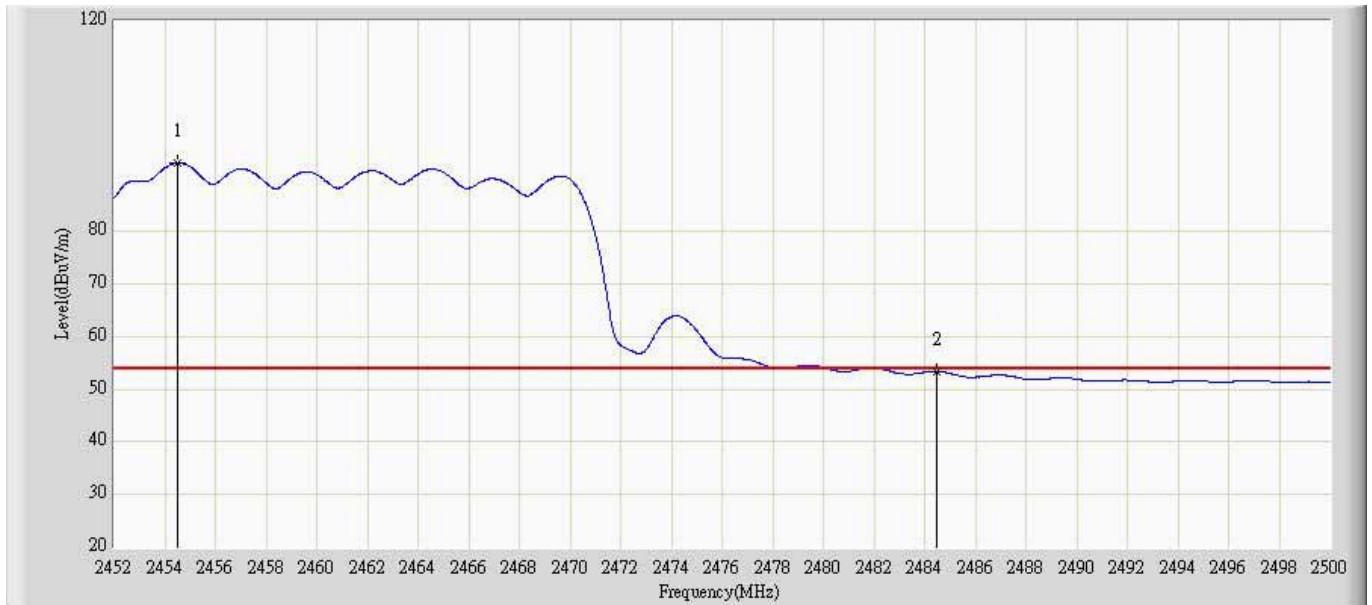
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	50.113	13.125	-3.887	54.000	36.988	AV
2		*	2420.253	88.605	51.469	N/A	N/A	37.136	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 20:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant0+1	



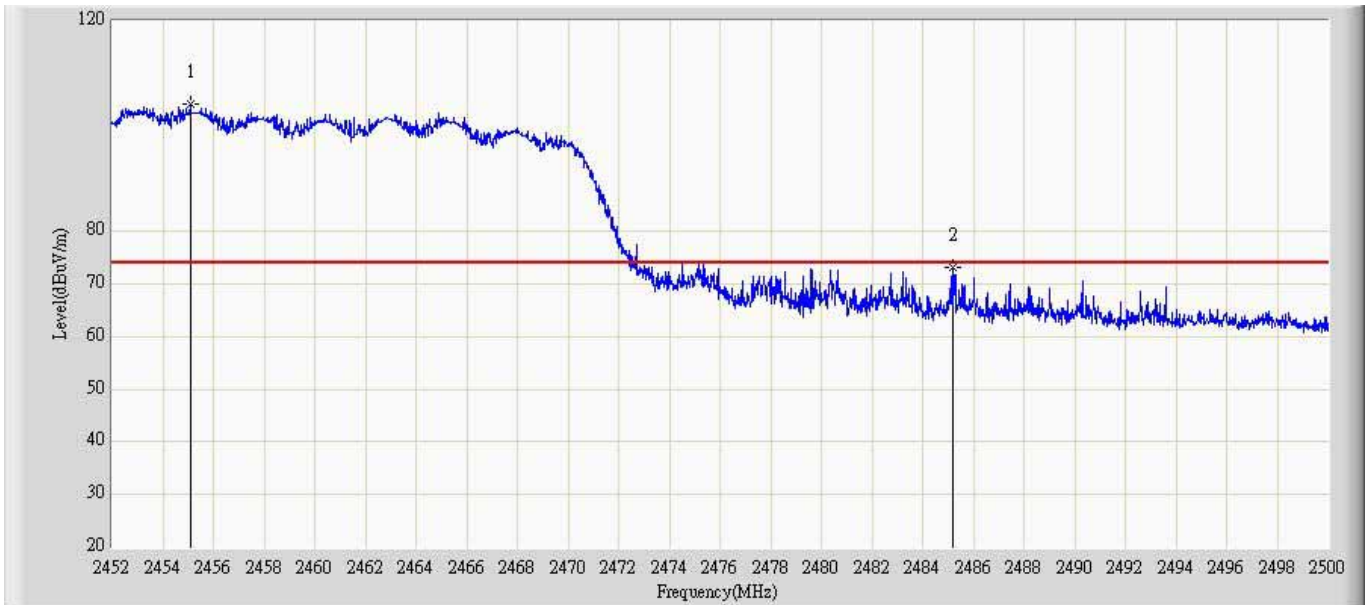
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2454.085	105.354	67.139	N/A	N/A	38.215	PK
2			2484.056	73.734	35.254	-0.266	74.000	38.480	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 20:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Horizontal
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 by 802.11n(40MHz) ant0+1	



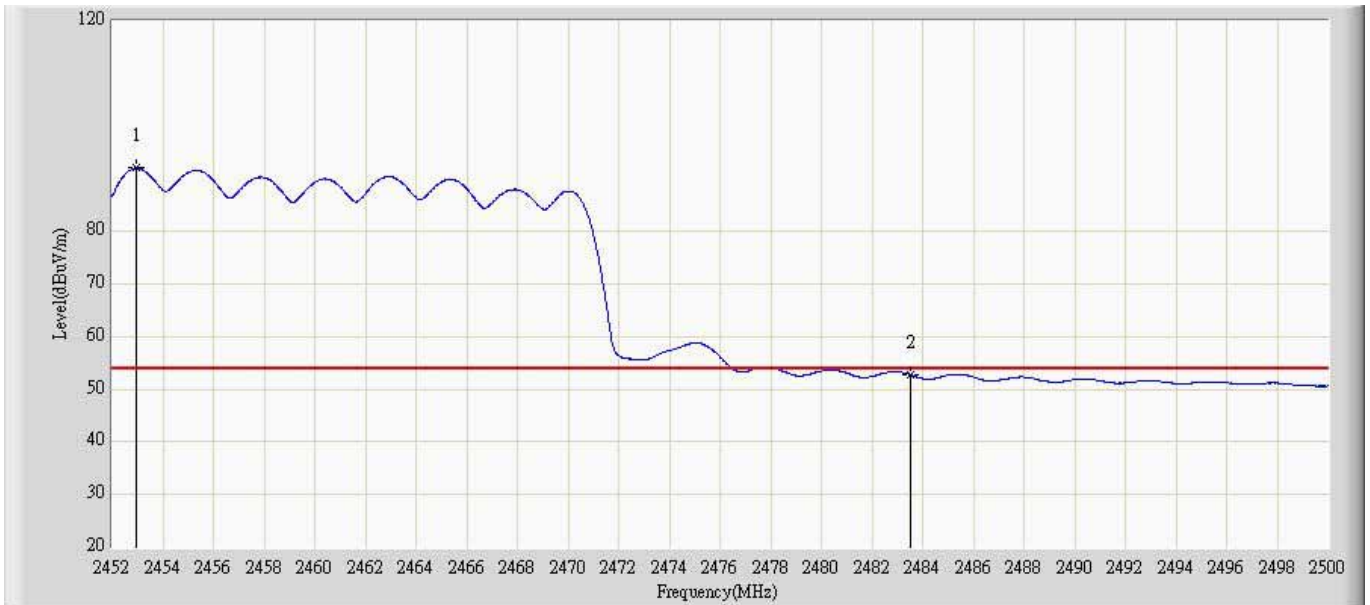
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2454.158	93.184	54.965	N/A	N/A	38.219	AV
2			2484.448	53.258	14.774	-0.742	54.000	38.484	AV

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 20:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 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		*	2455.096	104.174	66.871	N/A	N/A	37.303	PK
2			2485.216	73.148	35.698	-0.852	74.000	37.450	PK

Engineer: Cloud	
Site: AC5	Time: 2014/12/21 - 20:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_988(1-18GHz)	Polarity: Vertical
EUT: IP-STB	Power: 120V/60Hz
Note: Mode 4: Transmit at CH9 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		*	2452.887	91.860	54.567	N/A	N/A	37.293	AV
2			2483.500	52.587	15.146	-1.413	54.000	37.441	AV

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