

FCC15.247 Test Report

Applicant : AsiaRF Ltd.
Product : Top Catcher CC Tactical
Model No. : AWUHN2408, AW2405boat8
FCC ID : TKZAWUHN24O8
Standards : FCC CFR Title 47 Part 15 Subpart C: 2013
ANSI C63.4: 2009
ANSI C63.10: 2009
Test Date : October 14, 2013 ~ November 07, 2013

Reviewed By : 

(Engineer: Sunny Sun)

Approved By : 

(Manager: Marlin Chen)

The test results relate only to the samples tested.

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

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date
1310RSU00101	Rev. 01	Initial report	2013-11-07
1310RSU00101	Rev. 02	Add the Antenna Requirement	2013-11-08
1310RSU00101	Rev. 03	Add the Antenna Connector Description	2013-11-09

Test Summary

FCC Part Section(s)	Test Description	Test Result (Pass/Fail)	Reference
15.203 & 15.247(c)(1)(i)	Antenna Requirement	Pass	Section 3
15.207	Conducted Emission	Pass	Section 4
15.205 15.209	Radiated Emission	Pass	Section 5
15.247(d)	RF Antenna Conducted Spurious	Pass	Section 6
15.247(d)	Radiated Emission Band Edge	Pass	Section 7
15.215(c)	Operation Frequency Range of 20dB Bandwidth	Pass	Section 8
15.247(a)(2)	Occupied Bandwidth	Pass	Section 9
15.247(b)(3)	Power Output	Pass	Section 10
15.247(e)	Power Spectral Density	Pass	Section 11

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1. General Information

1.1. Applicant

AsiaRF Ltd.

3F., No.176, Yongzhen Road, Yonghe District, New Taipei City 234, Taiwan

1.2. Manufacturer

AsiaRF Ltd.

3F., No.176, Yongzhen Road, Yonghe District, New Taipei City 234, Taiwan

1.3. Feature of Product

Product Name	Top Catcher CC Tactical
Model No.	AWUHN2408, AW2405boat8
Frequency Range	802.11b/g/n(20MHz): 2412 ~ 2462 MHz 802.11n(40MHz): 2422 ~ 2452MHz
Channel Number	802.11b/g/n(20MHz): 11 802.11 n(40MHz): 7
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11b: 1/2/5.5/11 Mbps 802.11n: up to 135 Mbps
Channel Control	Auto
Antenna Gain	Reference to Antenna List

Note: The AWUHN2408 and AW2405boat8 was different of connect port.

Antenna List

Antenna	Brand Name	Model No.	Peak Gain
Grid Antenna	AsiaRF	AG-24015	15dBi
Omni Directional Antenna	AsiaRF	AO-24015	15dBi
Omni Directional Antenna	AsiaRF	AO-24008.1	8dBi

Note:

- 1:The antenna of AG-24015, AO-24015, AO-24008.1 match with AWUHN2408, and antenna of AO-24008.1 match with AW2405boat8.
- 2: This test report assessed AWUHN2408 with antenna AG-24015, AO-24015.

Channel List for 802.11b/g/n(20MHz)

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

Channel List for 802.11n(40MHz)

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	N/A	N/A

1.4. Testing Facility

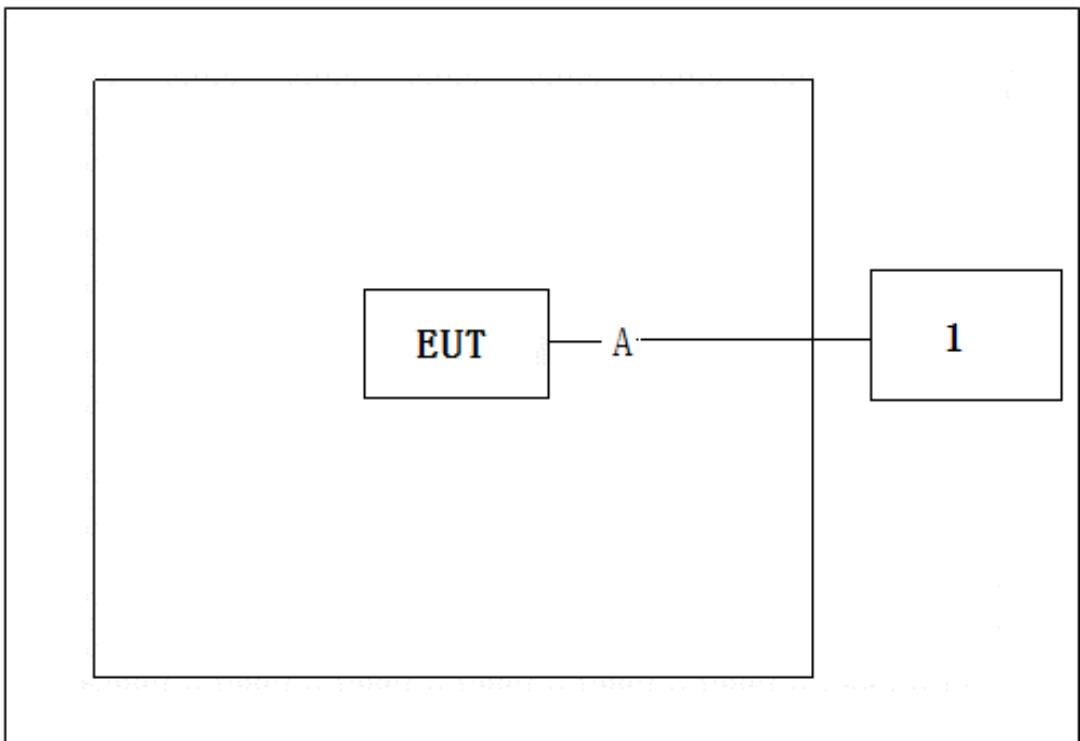
Test Site	MRT Technology (Suzhou) Co., Ltd
Test Site Location	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
Registration No.	809388

2. Test Configuration of Equipment Under Test

2.1. Test Mode

Test Mode
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11n(20MHz)
Mode 4: Transmit by 802.11n(40MHz)

2.2. Configuration of Tested System

Connection Diagram		
		
Signal Cable Type		Signal cable Description
A	USB Cable	4.5m; Shielding

2.3. Test 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	Notebook	HP	HP 520	CND7480N5S	Non-Shielded, 1.8m

2.4. Test Software

Turn on the power of all equipment, then run the RF test software “Ralink QA Tool” provided by applicant, and set the test mode and channel, then press OK to start continue transmit.

3. Antenna Requirement

3.1. Standard Applicable

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.2. Test Result

This product has a detachable and unique antenna (Reverse Whorl Connector), fulfill the requirement of this section.

4. Conducted Emission

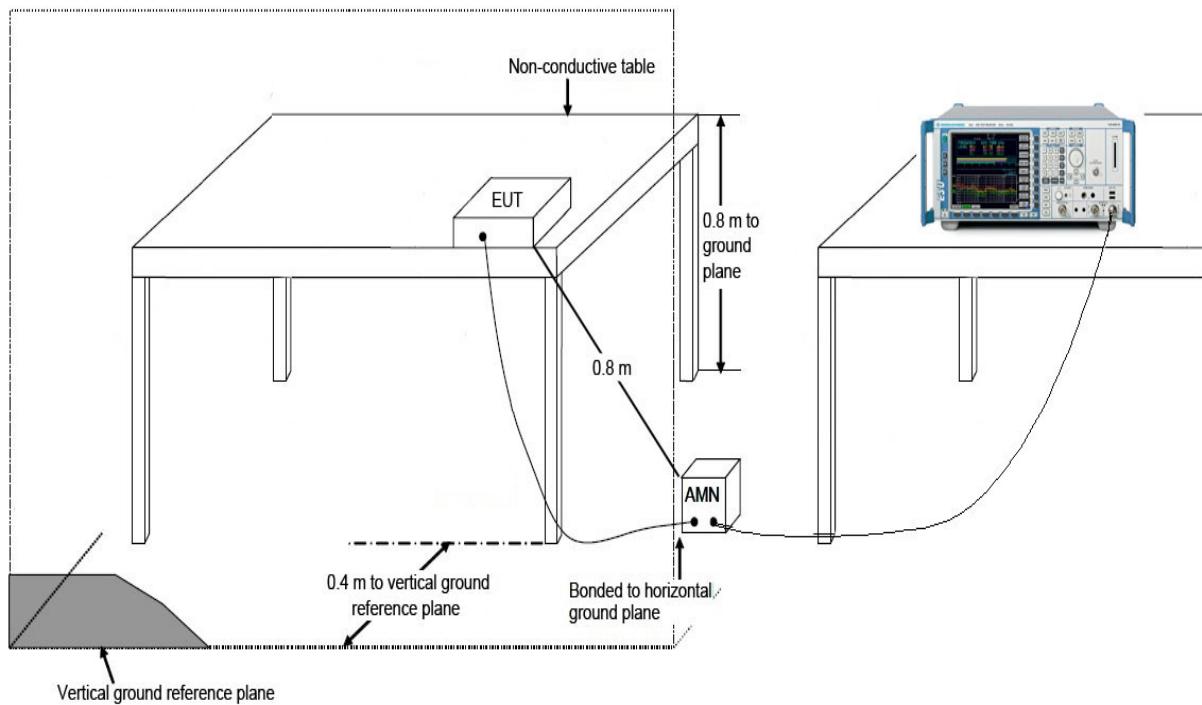
4.1. Limit of Conducted Emission

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

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

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

4.2. Test Setup



4.3. Test Procedure

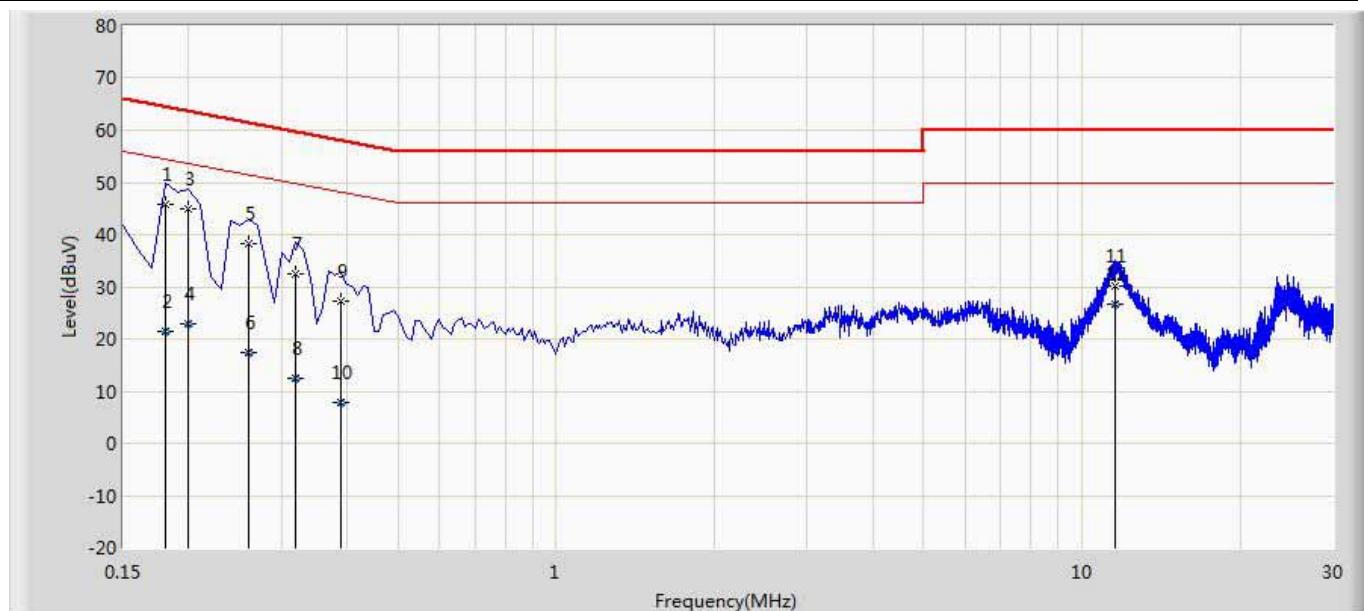
The EUT was setup according to ANSI C63.4, 2009 and tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

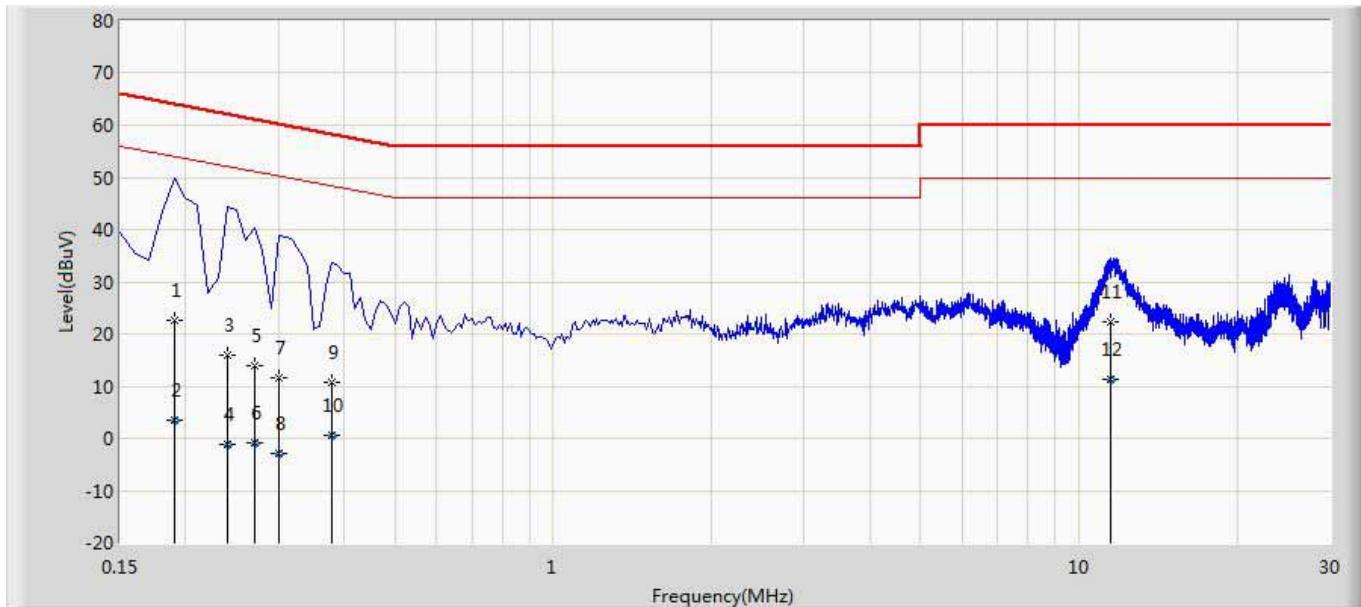
4.4. Test Result

Engineer: Roy	
Site: SR2	Time: 2013/11/05 - 20:25
Limit: FCC_Part15.207_Main_ClassB	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type
1			0.180	45.797	29.743	-18.689	64.486	16.053	QP
2			0.180	21.439	5.385	-33.047	54.486	16.053	AV
3	*		0.200	44.943	28.944	-18.667	63.611	15.999	QP
4			0.200	23.016	7.018	-30.594	53.611	15.999	AV
5			0.260	38.363	22.390	-23.069	61.431	15.972	QP
6			0.260	17.417	1.445	-34.014	51.431	15.972	AV
7			0.320	32.573	16.553	-27.133	59.707	16.020	QP
8			0.320	12.365	-3.655	-37.342	49.707	16.020	AV
9			0.390	27.304	11.227	-30.759	58.064	16.077	QP
10			0.390	7.837	-8.240	-40.227	48.064	16.077	AV
11			11.550	30.102	14.003	-29.898	60.000	16.100	QP
12			11.550	26.748	10.648	-23.252	50.000	16.100	AV

Engineer: Roy	
Site: SR2	Time: 2013/11/05 - 20:31
Limit: FCC_Part15.207_Main_ClassB	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type
1			0.190	22.550	6.522	-41.487	64.037	16.028	QP
2			0.190	3.385	-12.643	-50.652	54.037	16.028	AV
3			0.240	15.872	-0.121	-46.224	62.096	15.994	QP
4			0.240	-1.065	-17.059	-53.161	52.096	15.994	AV
5			0.270	13.875	-2.141	-47.243	61.118	16.016	QP
6			0.270	-0.999	-17.014	-52.117	51.118	16.016	AV
7			0.300	11.505	-4.533	-48.738	60.243	16.038	QP
8			0.300	-2.932	-18.970	-53.175	50.243	16.038	AV
9			0.380	10.644	-5.453	-47.635	58.279	16.097	QP
10			0.380	0.531	-15.566	-47.748	48.279	16.097	AV
11	*		11.510	22.435	6.307	-37.565	60.000	16.127	QP
12			11.510	11.363	-4.765	-38.637	50.000	16.127	AV

5. Radiated Emission

5.1. 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

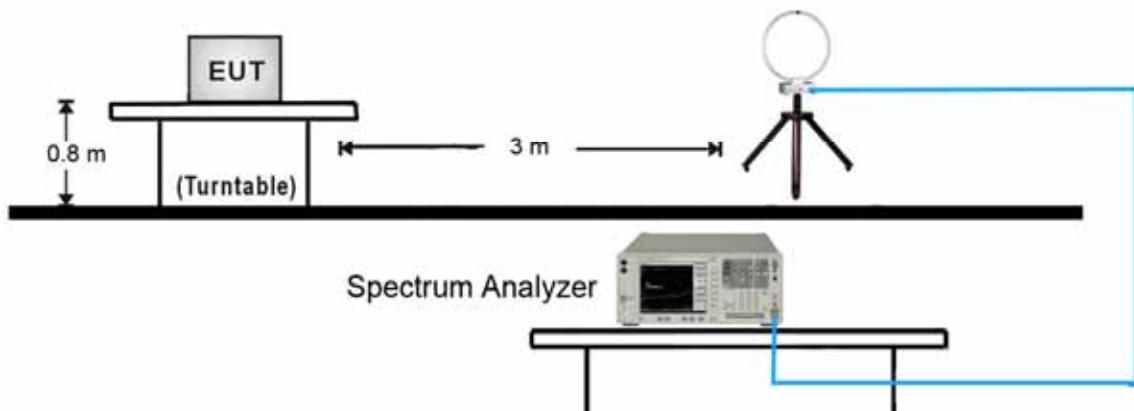
Note 1: The lower limit shall apply at the transition frequency.

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.

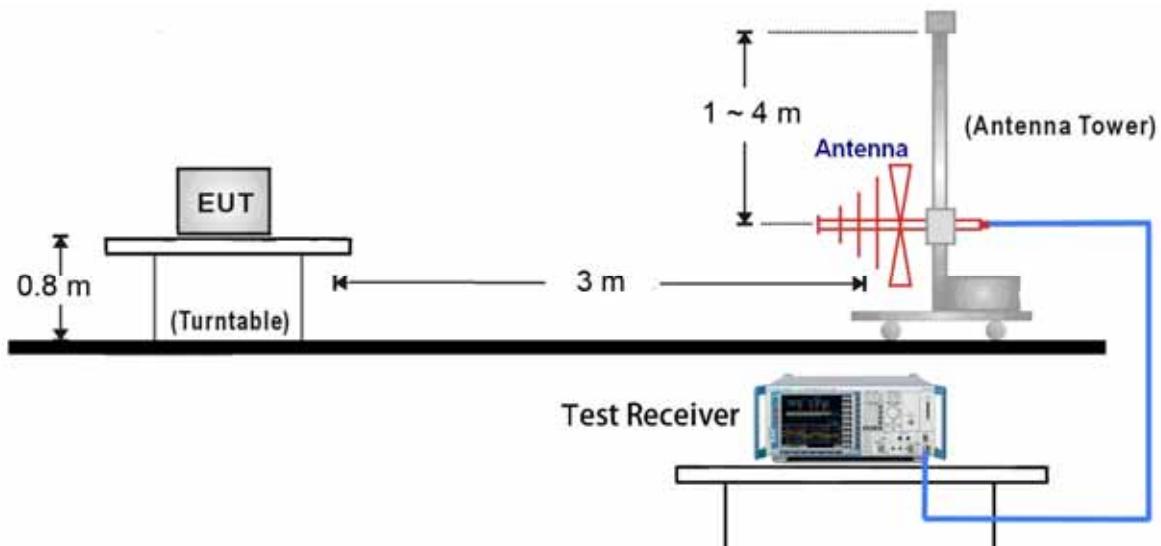
Note 3: E field strength (dBuV/m) = $20 \log E$ field strength (uV/m)

5.2. Test Setup

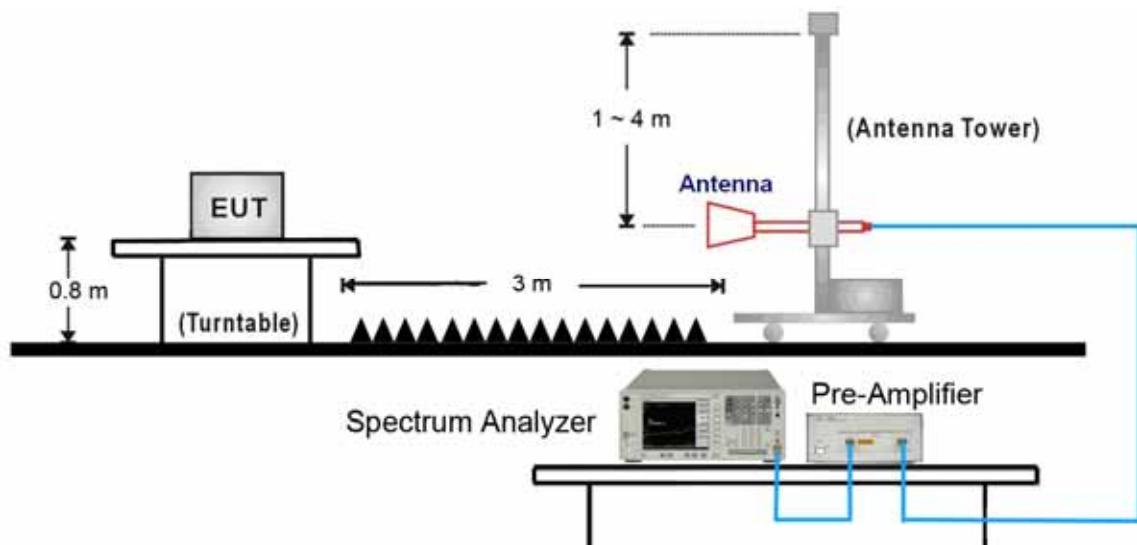
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.3. 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.

5.4. 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 for AWUHN2408 with antenna AG-24015

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	3278.0	36.0	3.3	39.3	54(Note3)	-14.7	PK
	V	3210.0	37.6	3.5	41.1	54(Note3)	-12.9	PK
	H	4825.0	45.6	6.4	52.0	54(Note3)	-2.0	PK
	V	4825.0	47.0	6.4	53.4	54(Note3)	-0.6	PK
	H	7236.0	32.9	13.8	46.7	54(Note3)	-7.3	PK
	V	7236.0	32.9	13.8	46.7	54(Note3)	-7.3	PK
	H	9648.0	34.4	15.5	49.9	54(Note3)	-4.1	PK
	V	9648.0	34.0	15.5	49.5	54(Note3)	-4.5	PK
6	H	3159.0	36.5	3.6	40.1	54(Note3)	-13.9	PK
	V	3108.0	37.9	3.5	41.4	54(Note3)	-12.6	PK
	H	4876.0	39.7	6.6	46.3	54(Note3)	-7.7	PK
	V	4876.0	41.5	6.6	48.1	54(Note3)	-5.9	PK
	H	7311.0	33.5	14.0	47.5	54(Note3)	-6.5	PK
	V	7311.0	34.4	14.0	48.4	54(Note3)	-5.6	PK
	H	9748.0	34.5	16.2	50.7	54(Note3)	-3.3	PK
	V	9748.0	34.7	16.2	50.9	54(Note3)	-3.1	PK
11	H	3278.0	41.3	3.3	44.6	54(Note3)	-9.4	PK
	V	3278.0	43.2	3.3	46.5	54(Note3)	-7.5	PK
	H	4927.0	42.2	6.7	48.9	54(Note3)	-5.1	PK
	V	4927.0	39.8	6.7	46.5	54(Note3)	-7.5	PK
	H	7386.0	35.1	14.1	49.2	54(Note3)	-4.8	PK
	V	7392.0	36.4	14.1	50.5	54(Note3)	-3.5	PK
	H	9848.0	34.9	16.4	51.3	54(Note3)	-2.7	PK
	V	9848.0	34.9	16.4	51.3	54(Note3)	-2.7	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 for AWUHN2408 with antenna AG-24015

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	3108.0	36.4	3.5	39.9	54(Note3)	-14.1	PK
	V	3210.0	38.8	3.5	42.3	54(Note3)	-11.7	PK
	H	4825.0	44.0	6.4	50.4	54(Note3)	-3.6	PK
	V	4825.0	40.5	6.4	46.9	54(Note3)	-7.1	PK
	H	7236.0	33.9	13.8	47.7	54(Note3)	-6.3	PK
	V	7236.0	33.9	13.8	47.7	54(Note3)	-6.3	PK
	H	9648.0	34.4	15.5	49.9	54(Note3)	-4.1	PK
	V	9648.0	34.7	15.5	50.2	54(Note3)	-3.8	PK
6	H	3244.0	38.2	3.4	41.6	54(Note3)	-12.4	PK
	V	3023.0	35.6	3.4	39.0	54(Note3)	-15.0	PK
	H	4876.0	37.6	6.6	44.2	54(Note3)	-9.8	PK
	V	4876.0	37.2	6.6	43.8	54(Note3)	-10.2	PK
	H	7311.0	34.6	14.0	48.6	54(Note3)	-5.4	PK
	V	7311.0	34.1	14.0	48.1	54(Note3)	-5.9	PK
	H	9748.0	35.2	16.2	51.4	54(Note3)	-2.6	PK
	V	9748.0	35.2	16.2	51.4	54(Note3)	-2.6	PK
11	H	3227.0	36.1	3.5	39.6	54(Note3)	-14.4	PK
	V	3397.0	36.2	3.3	39.5	54(Note3)	-14.5	PK
	H	4927.0	38.7	6.7	45.4	54(Note3)	-8.6	PK
	V	4876.0	36.4	6.6	43.0	54(Note3)	-11.0	PK
	H	7386.0	34.3	14.1	48.4	54(Note3)	-5.6	PK
	V	7386.0	33.9	14.1	48.0	54(Note3)	-6.0	PK
	H	9848.0	34.1	16.4	50.5	54(Note3)	-3.5	PK
	V	9848.0	34.7	16.4	51.1	54(Note3)	-2.9	PK

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

2. The test trace is same as the ambient noise (the test frequency range: 9kHz~30MHz, 18GHz~25GHz), therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode3: Transmit by 802.11n (20MHz) for AWUHN2408 with antenna AG-24015

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	3210.0	36.5	3.5	40.0	54(Note3)	-14.0	PK
	V	3074.0	36.6	3.5	40.1	54(Note3)	-13.9	PK
	H	4825.0	46.3	6.4	52.7	54(Note3)	-1.3	PK
	V	4825.0	43.8	6.4	50.2	54(Note3)	-3.8	PK
	H	7236.0	33.6	13.8	47.4	54(Note3)	-6.6	PK
	V	7236.0	33.5	13.8	47.3	54(Note3)	-6.7	PK
	H	9648.0	34.5	15.5	50.0	54(Note3)	-4.0	PK
	V	9648.0	34.8	15.5	50.3	54(Note3)	-3.7	PK
6	H	3244.0	38.3	3.4	41.7	54(Note3)	-12.3	PK
	V	3380.0	35.7	3.2	38.9	54(Note3)	-15.1	PK
	H	4876.0	38.0	6.6	44.6	54(Note3)	-9.4	PK
	V	4876.0	37.9	6.6	44.5	54(Note3)	-9.5	PK
	H	7311.0	34.3	14.0	48.3	54(Note3)	-5.7	PK
	V	7311.0	34.2	14.0	48.2	54(Note3)	-5.8	PK
	H	9748.0	35.3	16.2	51.5	54(Note3)	-2.5	PK
	V	9748.0	35.1	16.2	51.3	54(Note3)	-2.7	PK
11	H	3550.0	36.4	4.1	40.5	54(Note3)	-13.5	PK
	V	3210.0	37.4	3.5	40.9	54(Note3)	-13.1	PK
	H	4927.0	37.7	6.7	44.4	54(Note3)	-9.6	PK
	V	4927.0	39.3	6.7	46.0	54(Note3)	-8.0	PK
	H	7386.0	34.7	14.1	48.8	54(Note3)	-5.2	PK
	V	7386.0	35.2	14.1	49.3	54(Note3)	-4.7	PK
	H	9848.0	35.8	16.4	52.2	54(Note3)	-1.8	PK
	V	9848.0	35.0	16.4	51.4	54(Note3)	-2.6	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 (40MHz) for AWUHN2408 with antenna AG-24015

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
3	H	3193.0	37.9	3.6	41.5	54(Note3)	-12.5	PK
	V	3448.0	36.9	3.5	40.4	54(Note3)	-13.6	PK
	H	4842.0	39.1	6.5	45.6	54(Note3)	-8.4	PK
	V	4842.0	37.3	6.5	43.8	54(Note3)	-10.2	PK
	H	7266.0	34.3	13.9	48.2	54(Note3)	-5.8	PK
	V	7266.0	33.8	13.9	47.7	54(Note3)	-6.3	PK
	H	9688.0	35.1	15.6	50.7	54(Note3)	-3.3	PK
	V	9688.0	35.5	15.6	51.1	54(Note3)	-2.9	PK
6	H	3244.0	36.8	3.4	40.2	54(Note3)	-13.8	PK
	V	3244.0	37.5	3.4	40.9	54(Note3)	-13.1	PK
	H	4874.0	35.8	6.6	42.4	54(Note3)	-11.6	PK
	V	4874.0	35.9	6.6	42.5	54(Note3)	-11.5	PK
	H	7311.0	34.4	14.0	48.4	54(Note3)	-5.6	PK
	V	7311.0	32.9	14.0	46.9	54(Note3)	-7.1	PK
	H	9748.0	35.0	16.2	51.2	54(Note3)	-2.8	PK
	V	9748.0	34.6	16.2	50.8	54(Note3)	-3.2	PK
9	H	3210.0	37.0	3.5	40.5	54(Note3)	-13.5	PK
	V	3278.0	37.9	3.3	41.2	54(Note3)	-12.8	PK
	H	4904.0	36.0	6.7	42.7	54(Note3)	-11.3	PK
	V	4904.0	34.8	6.7	41.5	54(Note3)	-12.5	PK
	H	7356.0	34.1	14.0	48.1	54(Note3)	-5.9	PK
	V	7356.0	34.0	14.0	48.0	54(Note3)	-6.0	PK
	H	9808.0	34.9	16.4	51.3	54(Note3)	-2.7	PK
	V	9808.0	33.8	16.4	50.2	54(Note3)	-3.8	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.

Mode1: Transmit by 802.11b for AWUHN2408 with antenna AO-24015

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	3210.0	36.2	3.5	39.7	54(Note3)	-14.3	PK
	V	3210.0	38.7	3.5	42.2	54(Note3)	-11.8	PK
	H	4825.0	45.3	6.4	51.7	54(Note3)	-2.3	PK
	V	4825.0	50.7	6.4	57.1	74.0	-16.9	PK
	V	4824.9	45.2	6.4	51.6	54.0	-2.4	AV
	H	7236.0	34.5	13.8	48.3	54(Note3)	-5.7	PK
	V	7236.0	34.3	13.8	48.1	54(Note3)	-5.9	PK
	H	9648.0	35.8	15.5	51.3	54(Note3)	-2.7	PK
	V	9648.0	35.8	15.5	51.3	54(Note3)	-2.7	PK
6	H	3244.0	36.7	3.4	40.1	54(Note3)	-13.9	PK
	V	3448.0	36.0	3.5	39.5	54(Note3)	-14.5	PK
	H	4876.0	39.5	6.6	46.1	54(Note3)	-7.9	PK
	V	4876.0	49.2	6.6	55.8	74.0	-18.2	PK
	V	4874.6	46.2	6.6	52.8	54.0	-1.2	AV
	H	7311.0	33.1	14.0	47.1	54(Note3)	-6.9	PK
	V	7311.0	33.5	14.0	47.5	54(Note3)	-6.5	PK
	H	9748.0	34.2	16.2	50.4	54(Note3)	-3.6	PK
	V	9748.0	34.3	16.2	50.5	54(Note3)	-3.5	PK
11	H	3278.0	38.6	3.3	41.9	54(Note3)	-12.1	PK
	V	3278.0	38.9	3.3	42.2	54(Note3)	-11.8	PK
	H	4927.0	39.9	6.7	46.6	54(Note3)	-7.4	PK
	V	4927.0	49.1	6.7	55.8	74.0	-18.2	PK
	V	4924.5	45.8	6.7	52.5	54.0	-1.5	AV
	H	7386.0	33.7	14.1	47.8	54(Note3)	-6.2	PK
	V	7386.0	33.7	14.1	47.8	54(Note3)	-6.2	PK
	H	9848.0	34.3	16.4	50.7	54(Note3)	-3.3	PK
	V	9848.0	34.4	16.4	50.8	54(Note3)	-3.2	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.

Mode2: Transmit by 802.11g for AWUHN2408 with antenna AO-24015

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	3227.0	36.1	3.5	39.6	54(Note3)	-14.4	PK
	V	3057.0	36.7	3.5	40.2	54(Note3)	-13.8	PK
	H	4825.0	38.9	6.4	45.3	54(Note3)	-8.7	PK
	V	4825.0	45.3	6.4	51.7	54(Note3)	-2.3	PK
	H	7236.0	34.9	13.8	48.7	54(Note3)	-5.3	PK
	V	7311.0	33.0	14.0	47.0	54(Note3)	-7.0	PK
	H	9648.0	35.2	15.5	50.7	54(Note3)	-3.3	PK
	V	9648.0	35.6	15.5	51.1	54(Note3)	-2.9	PK
6	H	3159.0	37.4	3.6	41.0	54(Note3)	-13.0	PK
	V	3346.0	37.0	3.1	40.1	54(Note3)	-13.9	PK
	H	4874.0	36.8	6.6	43.4	54(Note3)	-10.6	PK
	V	4876.0	46.0	6.6	52.6	54(Note3)	-1.4	PK
	H	7311.0	33.8	14.0	47.8	54(Note3)	-6.2	PK
	V	7311.0	33.0	14.0	47.0	54(Note3)	-7.0	PK
	H	9748.0	35.0	16.2	51.2	54(Note3)	-2.8	PK
	V	9748.0	34.0	16.2	50.2	54(Note3)	-3.8	PK
11	H	3380.0	37.1	3.2	40.3	54(Note3)	-13.7	PK
	V	3312.0	37.3	3.2	40.5	54(Note3)	-13.5	PK
	H	4924.0	35.9	6.7	42.6	54(Note3)	-11.4	PK
	V	4927.0	44.7	6.7	51.4	54(Note3)	-2.6	PK
	H	7386.0	34.3	14.1	48.4	54(Note3)	-5.6	PK
	V	7386.0	33.7	14.1	47.8	54(Note3)	-6.2	PK
	H	9848.0	34.8	16.4	51.2	54(Note3)	-2.8	PK
	V	9848.0	34.1	16.4	50.5	54(Note3)	-3.5	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 802.11n (20MHz) for AWUHN2408 with antenna AO-24015

CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	H	3210.0	37.4	3.5	40.9	54(Note3)	-13.1	PK
	V	3159.0	36.6	3.6	40.2	54(Note3)	-13.8	PK
	H	4825.0	40.0	6.4	46.4	54(Note3)	-7.6	PK
	V	4825.0	48.2	6.4	54.6	74.0	-19.4	PK
	V	4824.6	43.7	6.4	50.1	54.0	-3.9	AV
	H	7236.0	33.7	13.8	47.5	54(Note3)	-6.5	PK
	V	7236.0	34.1	13.8	47.9	54(Note3)	-6.1	PK
	H	9648.0	35.4	15.5	50.9	54(Note3)	-3.1	PK
	V	9648.0	35.7	15.5	51.2	54(Note3)	-2.8	PK
6	H	3244.0	37.5	3.4	40.9	54(Note3)	-13.1	PK
	V	3074.0	35.8	3.5	39.3	54(Note3)	-14.7	PK
	H	4876.0	38.1	6.6	44.7	54(Note3)	-9.3	PK
	V	4876.0	44.8	6.6	51.4	54(Note3)	-2.6	PK
	H	7311.0	34.4	14.0	48.4	54(Note3)	-25.6	PK
	V	7311.0	33.3	14.0	47.3	54(Note3)	-6.7	PK
	H	9748.0	35.2	16.2	51.4	54(Note3)	-2.6	PK
	V	9748.0	34.3	16.2	50.5	54(Note3)	-3.5	PK
11	H	3108.0	36.4	3.5	39.9	54(Note3)	-14.1	PK
	V	3397.0	36.0	3.3	39.3	54(Note3)	-14.7	PK
	H	4924.0	36.0	6.7	42.7	54(Note3)	-11.3	PK
	V	4927.0	45.7	6.7	52.4	54(Note3)	-1.6	PK
	H	7386.0	35.2	14.1	49.3	54(Note3)	-4.7	PK
	V	7386.0	33.6	14.1	47.7	54(Note3)	-26.3	PK
	H	9848.0	34.4	16.4	50.8	54(Note3)	-3.2	PK
	V	9848.0	34.5	16.4	50.9	54(Note3)	-3.1	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 (40MHz) for AWUHN2408 with antenna AO-24015

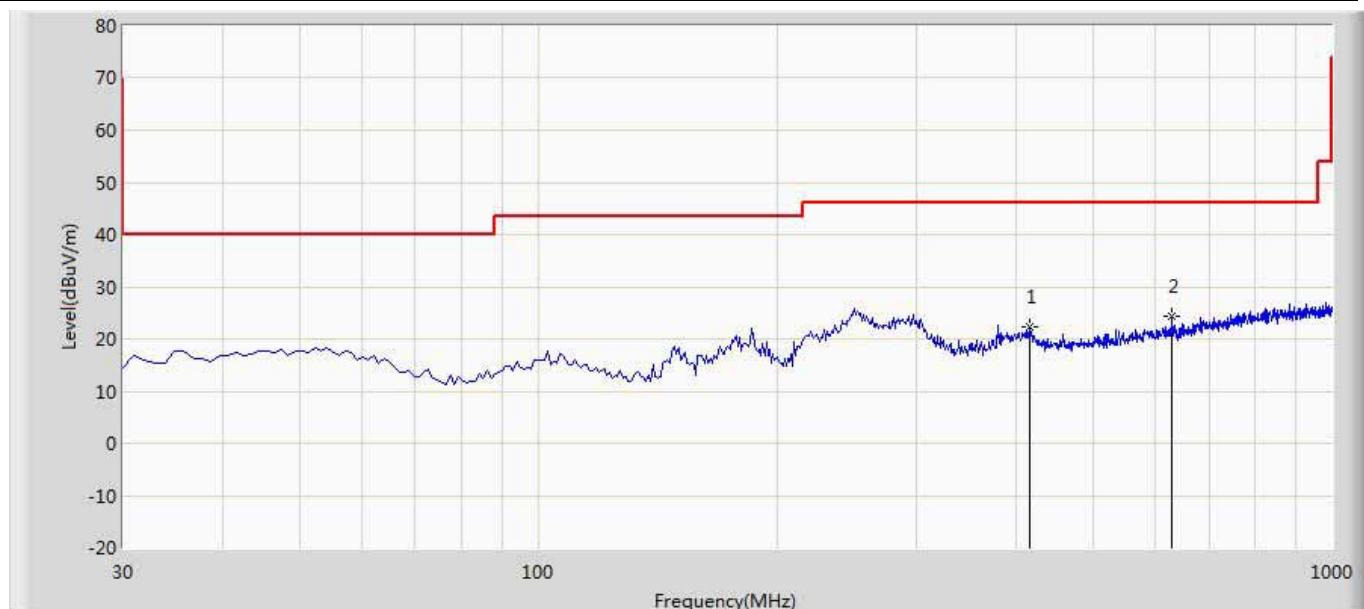
CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
3	H	3227.0	37.6	3.5	41.1	54(note3)	-12.9	PK
	V	3023.0	35.8	3.4	39.2	54(note3)	-14.8	PK
	H	4844.0	35.7	6.5	42.2	54(note3)	-11.8	PK
	V	4844.0	36.1	6.5	42.4	54(note3)	-11.6	PK
	H	7266.0	33.9	13.9	47.8	54(note3)	-6.2	PK
	V	7266.0	33.3	13.9	47.2	54(note3)	-6.8	PK
	H	9688.0	35.5	15.6	51.1	54(note3)	-2.9	PK
	V	9688.0	34.9	15.6	50.5	54(note3)	-3.5	PK
6	H	3159.0	36.8	3.6	40.4	54(note3)	-13.6	PK
	V	3108.0	37.4	3.5	40.9	54(note3)	-13.1	PK
	H	4874.0	35.2	6.6	41.8	54(note3)	-12.2	PK
	V	4876.0	39.5	6.6	46.1	54(note3)	-7.9	PK
	H	7311.0	33.3	14.0	47.3	54(note3)	-6.7	PK
	V	7311.0	34.5	14.0	48.5	54(note3)	-5.5	PK
	H	9748.0	34.4	16.2	50.6	54(note3)	-3.4	PK
	V	9748.0	35.1	16.2	51.3	54(note3)	-2.7	PK
9	H	3177.7	36.5	8.4	44.9	54(note3)	-9.1	PK
	V	3123.0	39.9	8.2	48.1	54(note3)	-5.9	PK
	H	4904.0	35.9	9.6	45.5	54(note3)	-8.5	PK
	V	4904.0	42.0	9.6	51.6	54(note3)	-2.4	PK
	H	7356.0	34.1	13.5	47.6	54(note3)	-6.4	PK
	V	7356.0	33.6	13.5	47.1	54(note3)	-6.9	PK
	H	9808.0	36.4	16.4	52.8	54(note3)	-1.2	PK
	V	9808.0	36.6	16.4	53.0	54(note3)	-1.0	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.

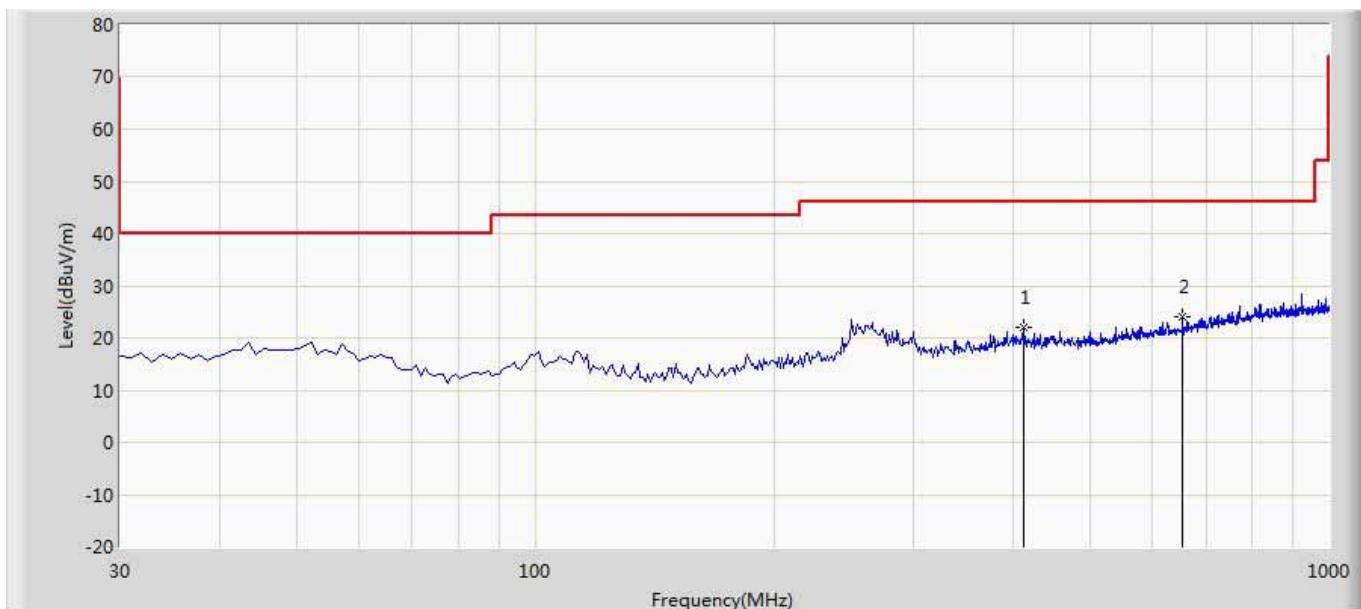
The worst case of Radiated Emission below 1GHz:

Engineer: Roy	
Site: AC1	Time: 2013/11/06 - 09:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1:Transmit at Channel 2412MHz by 802.11b with AG24015	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			416.060	22.417	5.255	-23.583	46.000	17.162	PK
2		*	629.460	24.367	4.181	-21.633	46.000	20.186	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/06 - 09:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1:Transmit at Channel 2412MHz by 802.11b with AG24015	



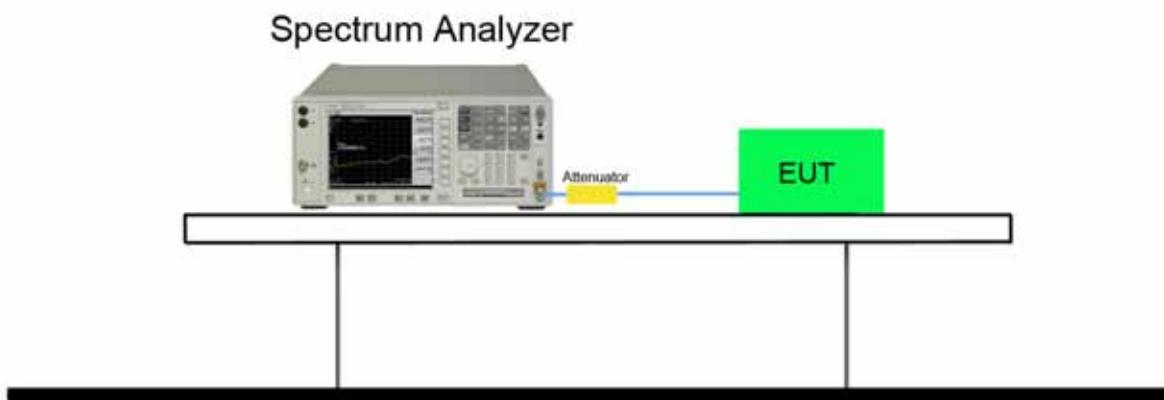
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			412.180	22.057	4.941	-23.943	46.000	17.116	PK
2		*	653.710	23.989	3.506	-22.011	46.000	20.483	PK

6. RF Antenna Conducted Spurious

6.1. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

6.2. Test Setup



6.3. Test Procedure

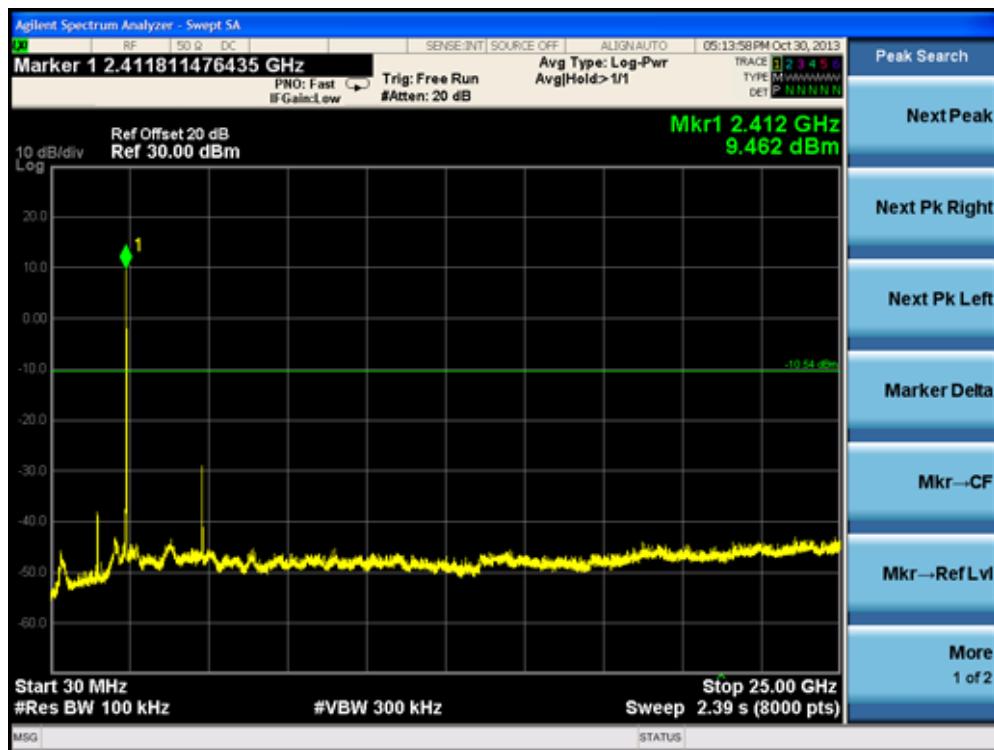
The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

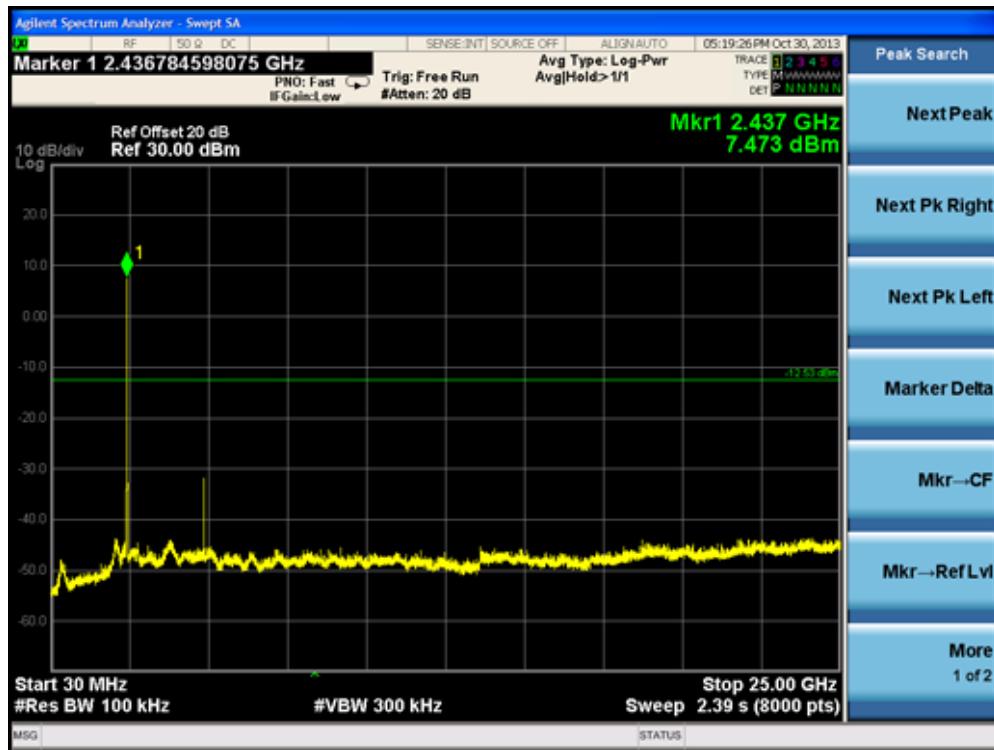
6.4. Test Result

Product	:	Top Catcher CC Tactical
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR3
Test Mode	:	Mode 1: Transmit by 802.11b

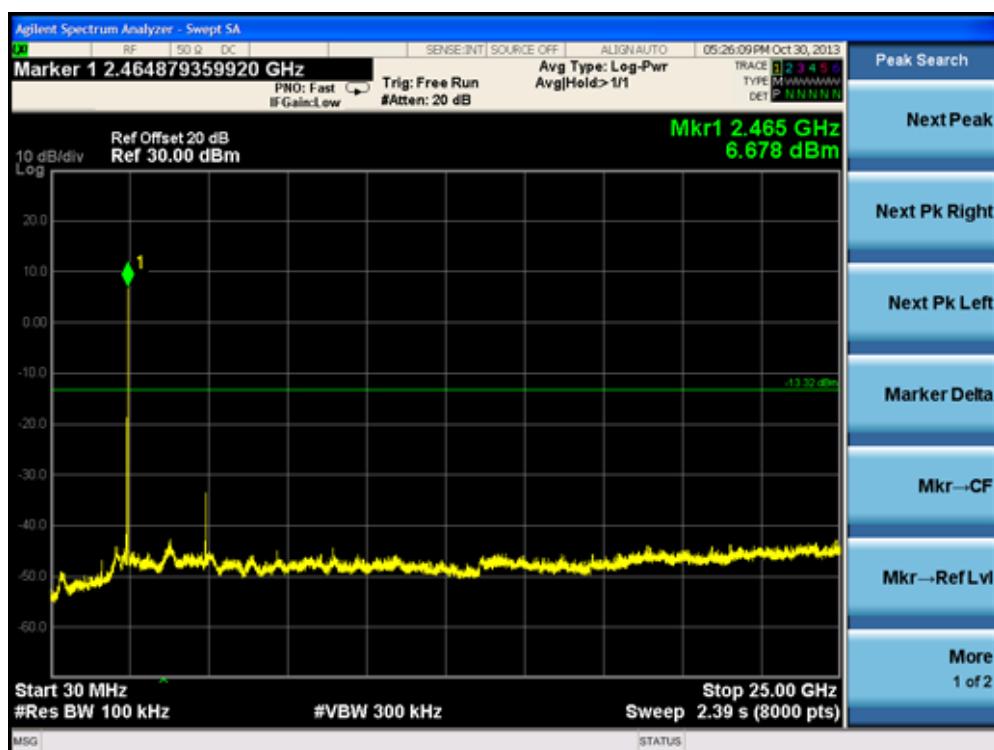
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)

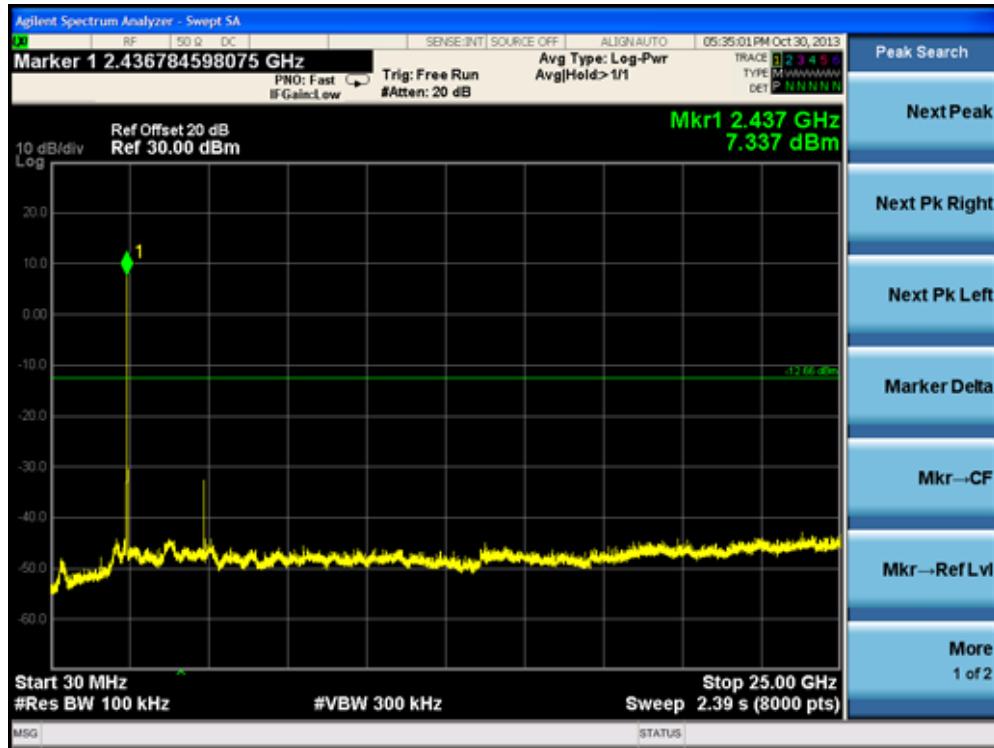


Product	:	Top Catcher CC Tactical
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR3
Test Mode	:	Mode 2: Transmit by 802.11g

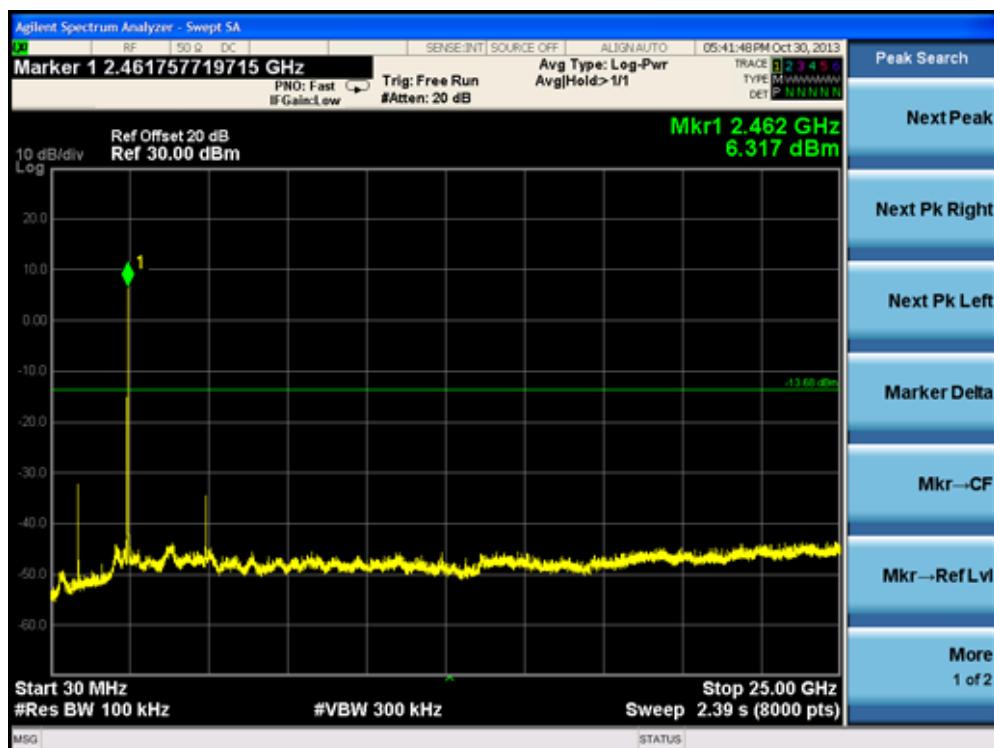
Channel 01 (2412MHz)



Channel 06 (2437MHz)

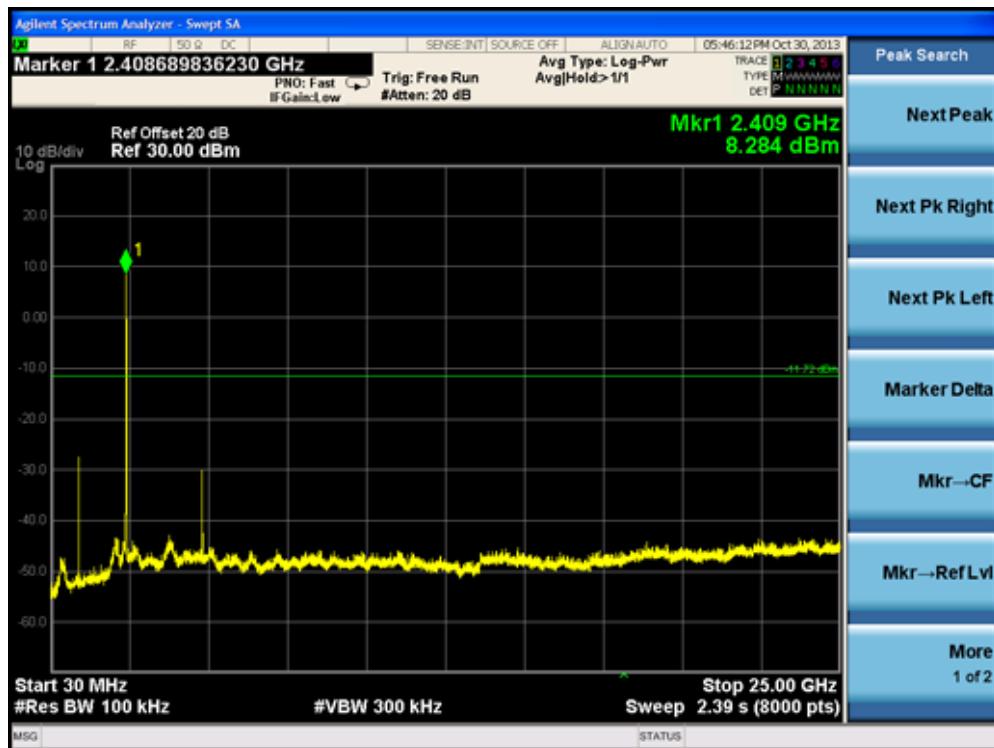


Channel 11 (2462MHz)

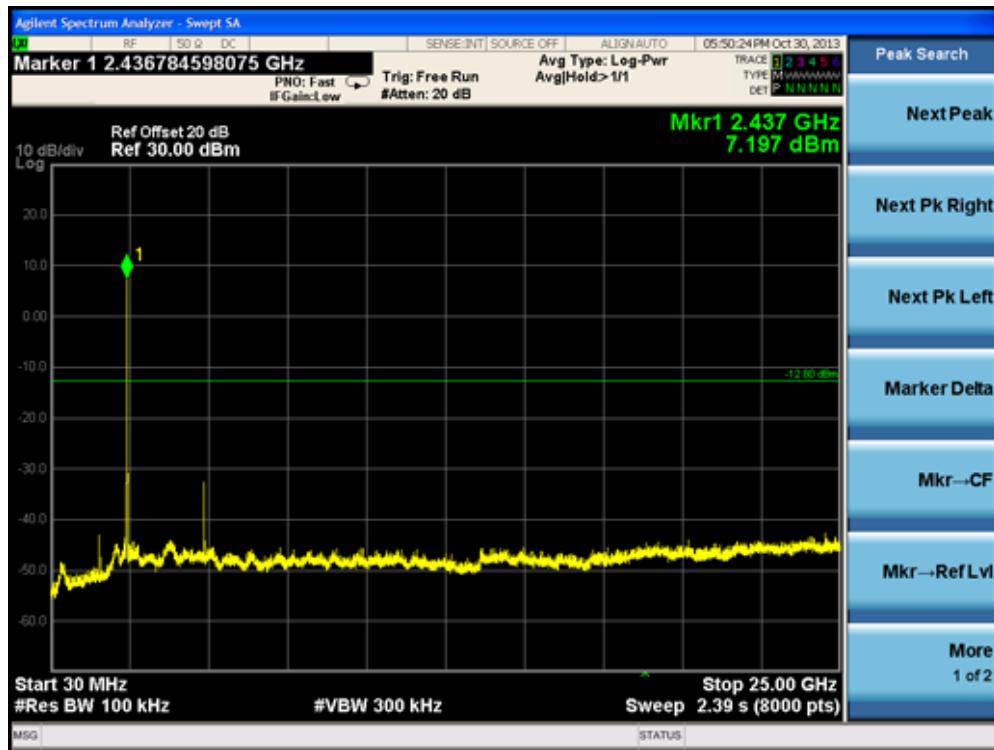


Product	:	Top Catcher CC Tactical
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR3
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz)

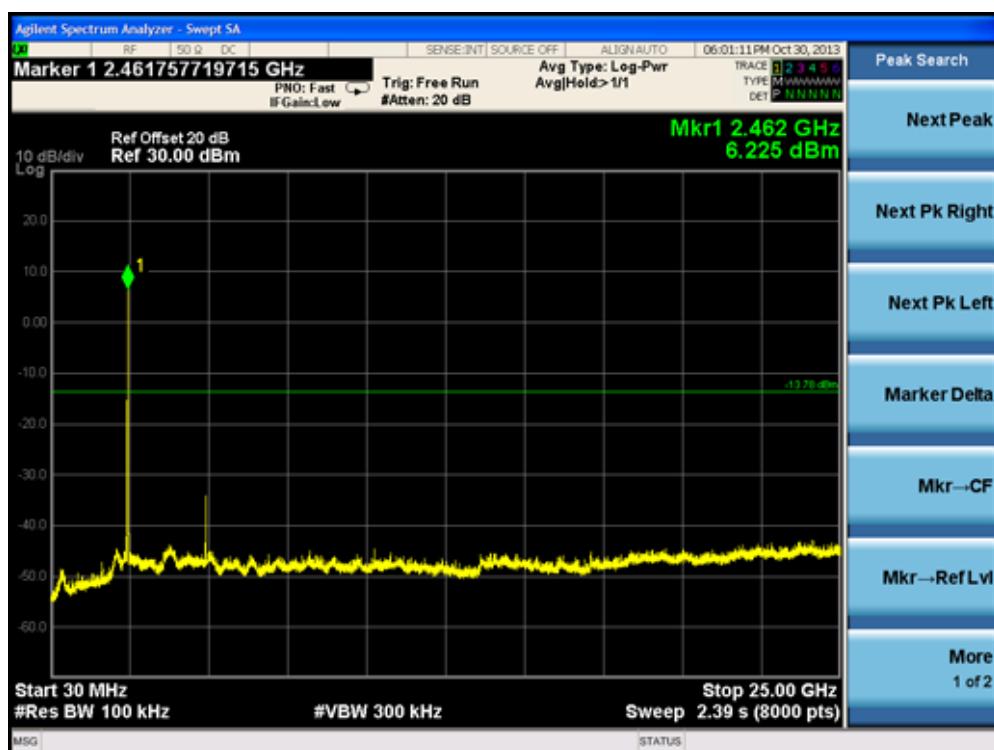
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)

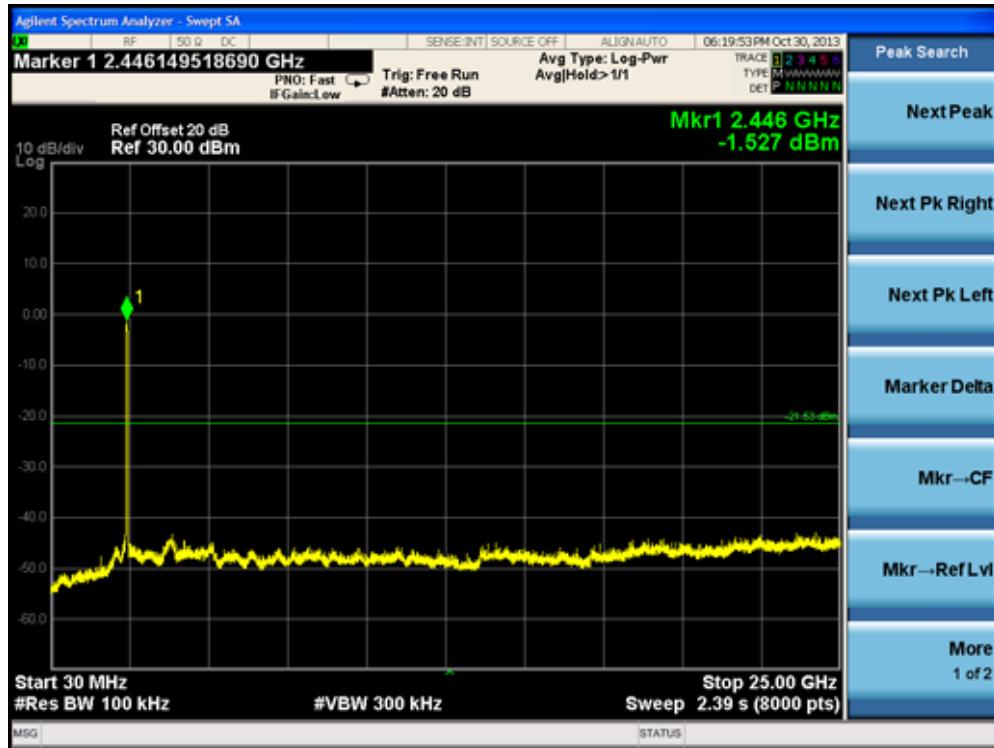


Product	:	Top Catcher CC Tactical
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	TR3
Test Mode	:	Mode 4: Transmit by 802.11n(40MHz)

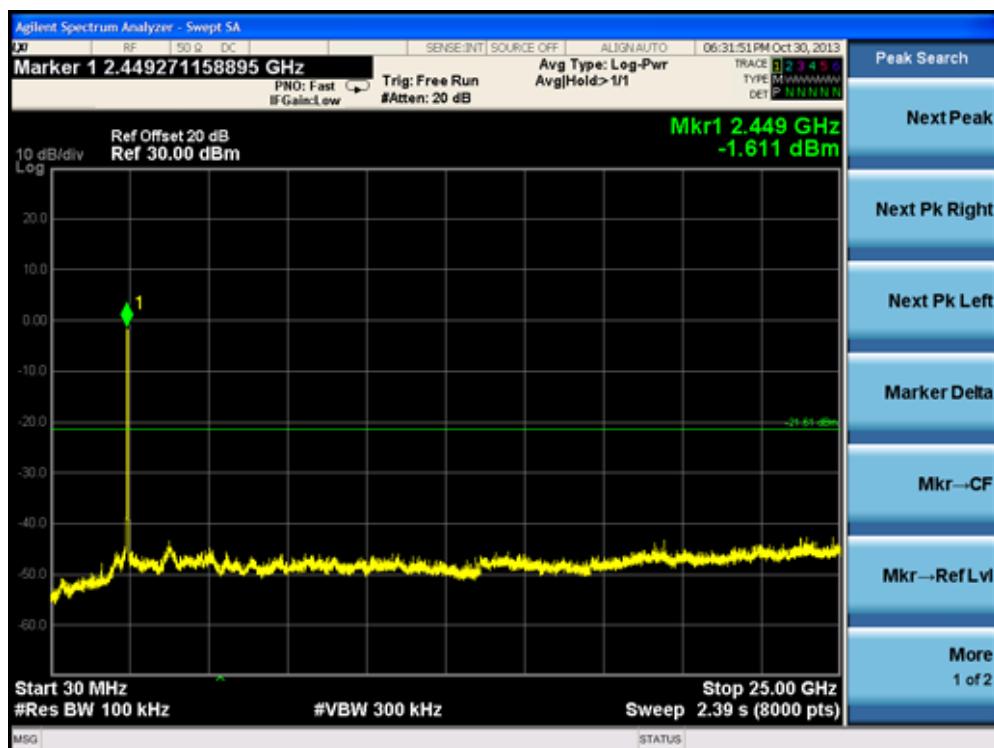
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)

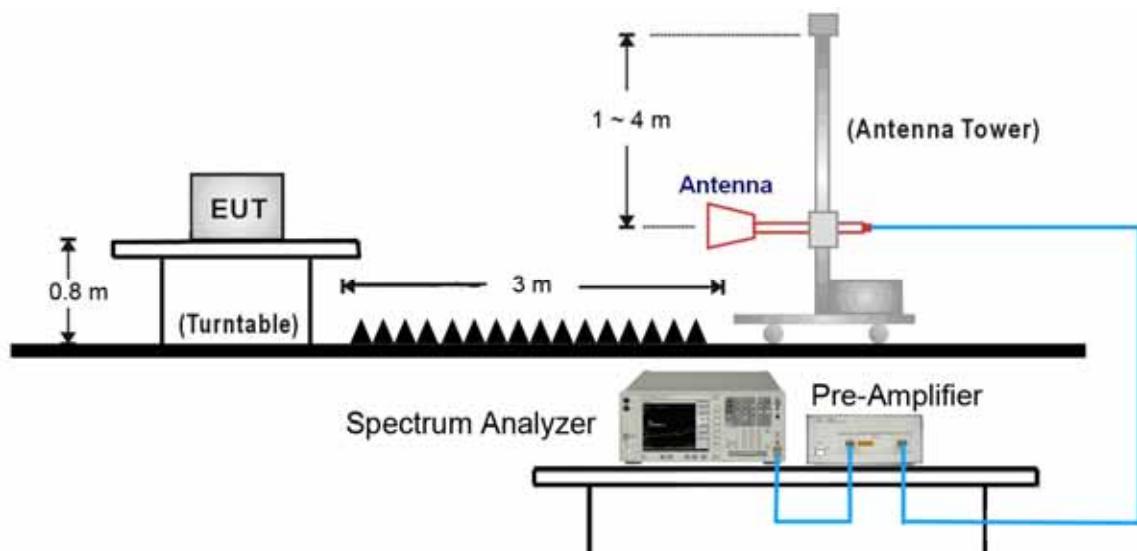


7. Radiated Emission Band Edge

7.1. 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)).

7.2. Test Setup



7.3. Test Procedure

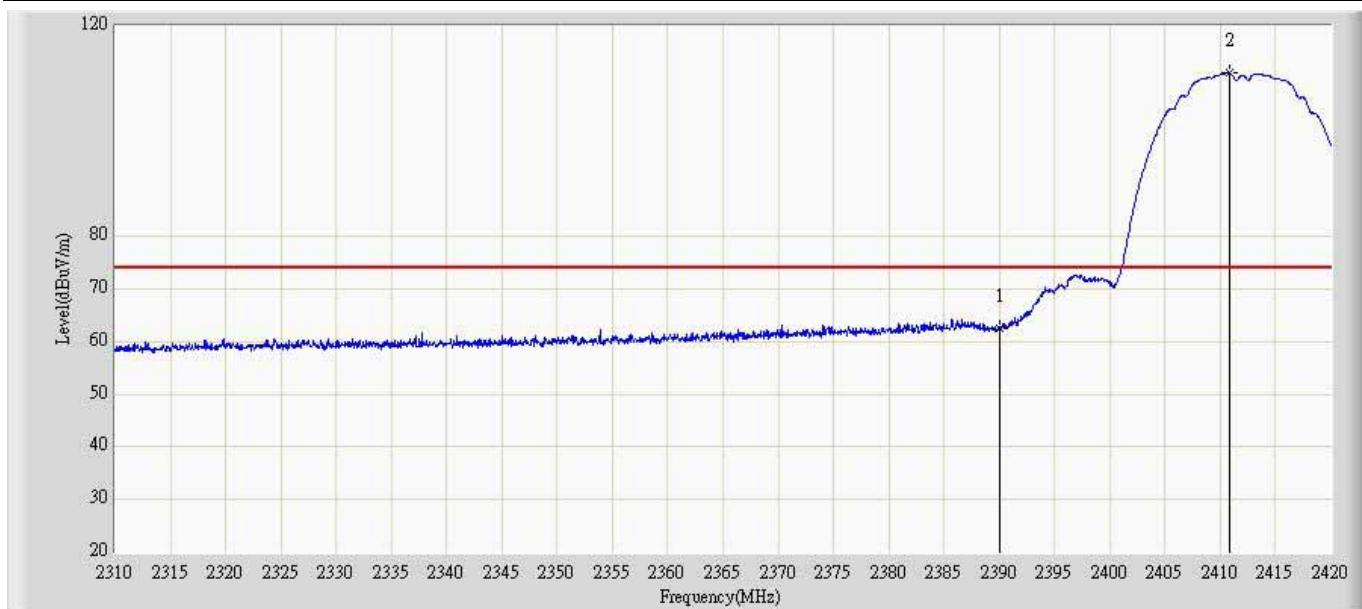
The EUT was setup according to ANSI C63.4, 2009 and tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

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.

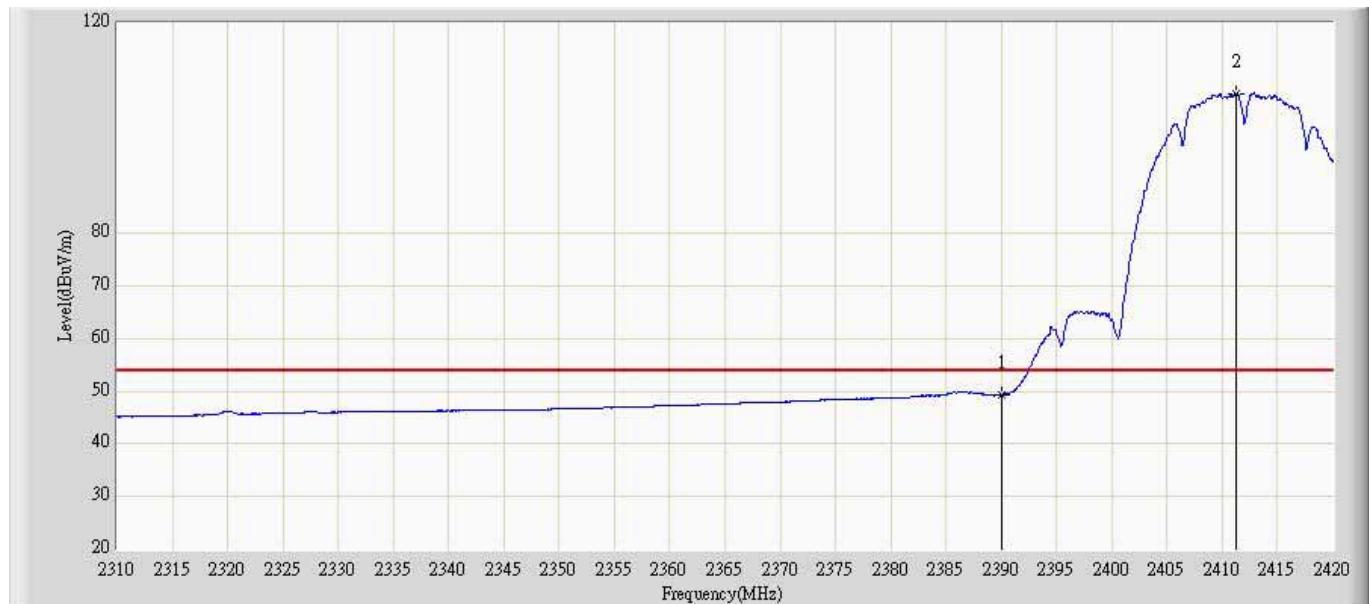
7.4. Test Result

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 09:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AG-24015)	



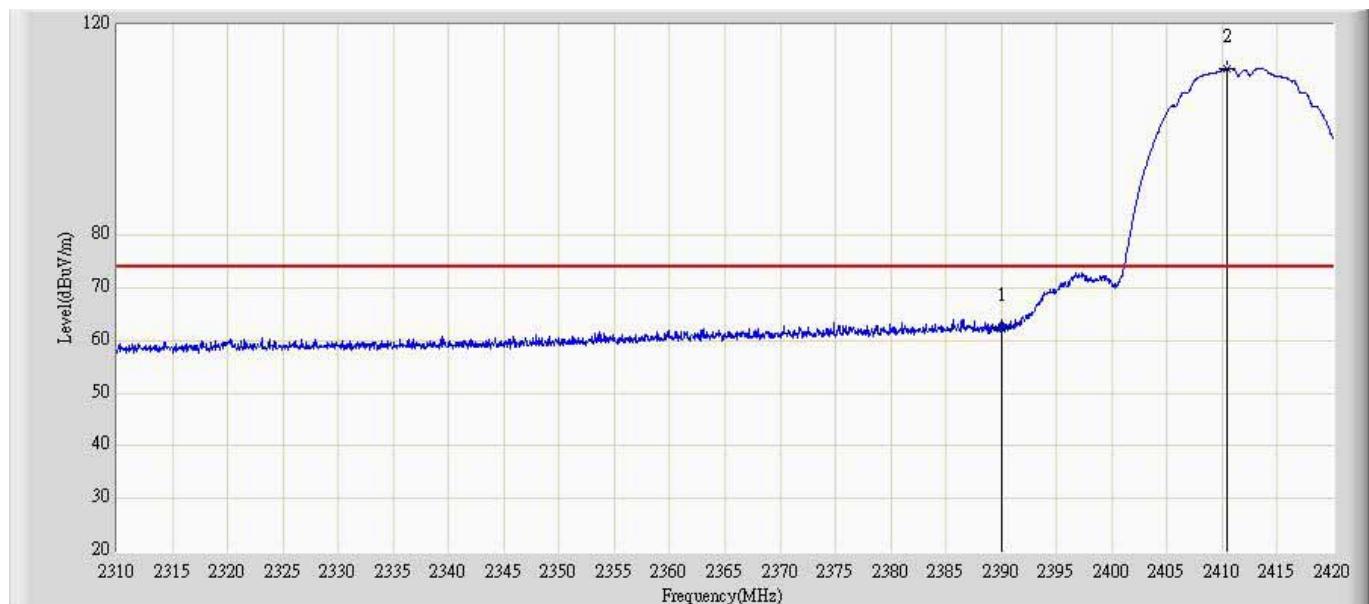
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	62.591	69.092	-11.409	74.000	-6.501	PK
2	*	2410.815	110.977	117.527	N/A	N/A	-6.550	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AG-24015)	



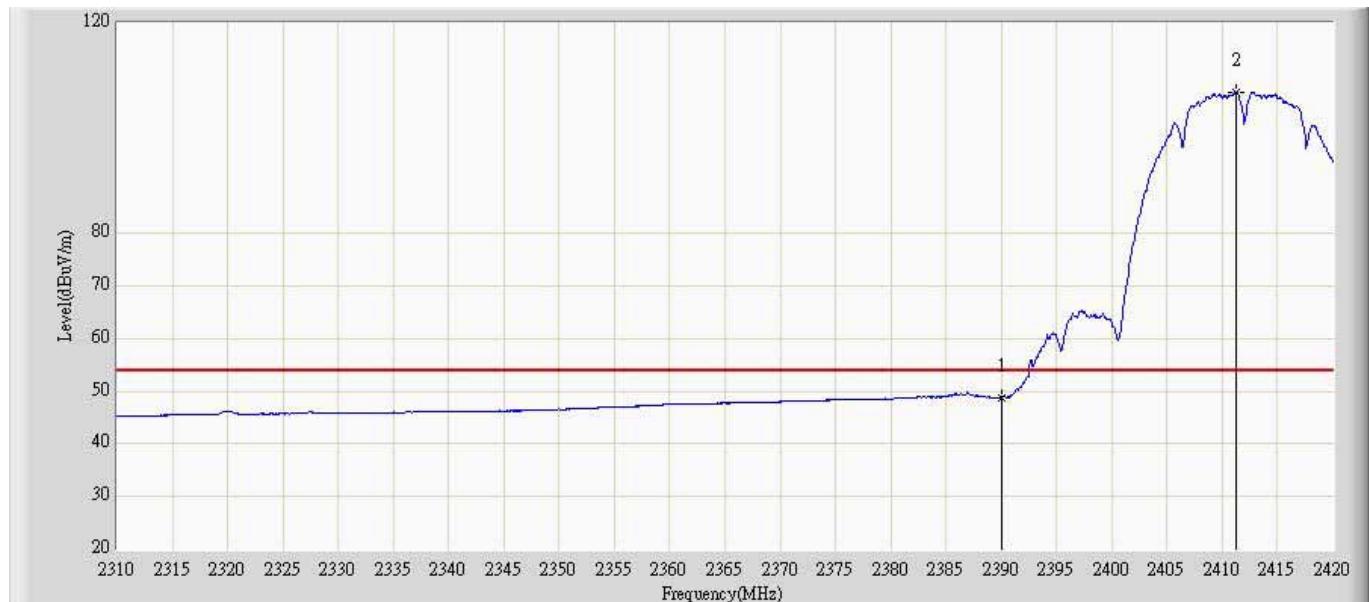
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.396	55.897	-4.604	54.000	-6.501	AV
2	*	2411.310	106.587	113.136	N/A	N/A	-6.548	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AG-24015)	



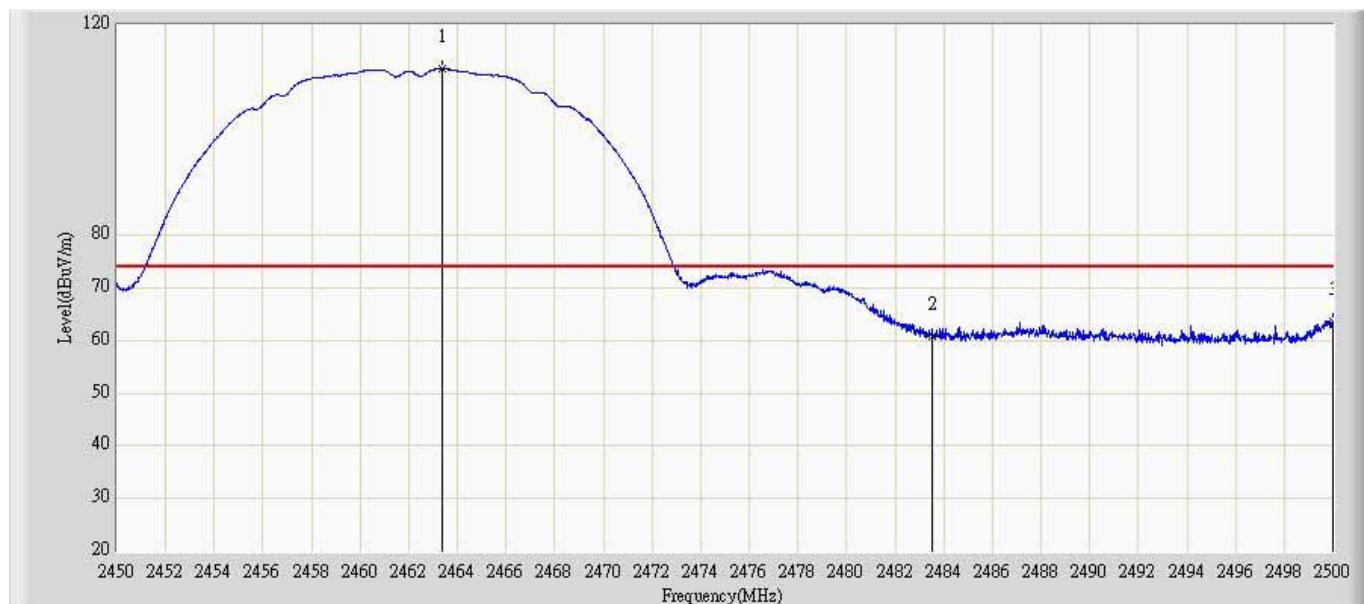
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	62.413	68.914	-11.587	74.000	-6.501	PK
2	*	2410.485	111.646	118.195	N/A	N/A	-6.549	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AG-24015)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.875	55.376	-5.125	54.000	-6.501	AV
2	*	2411.200	106.807	113.356	N/A	N/A	-6.550	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AG-24015)	



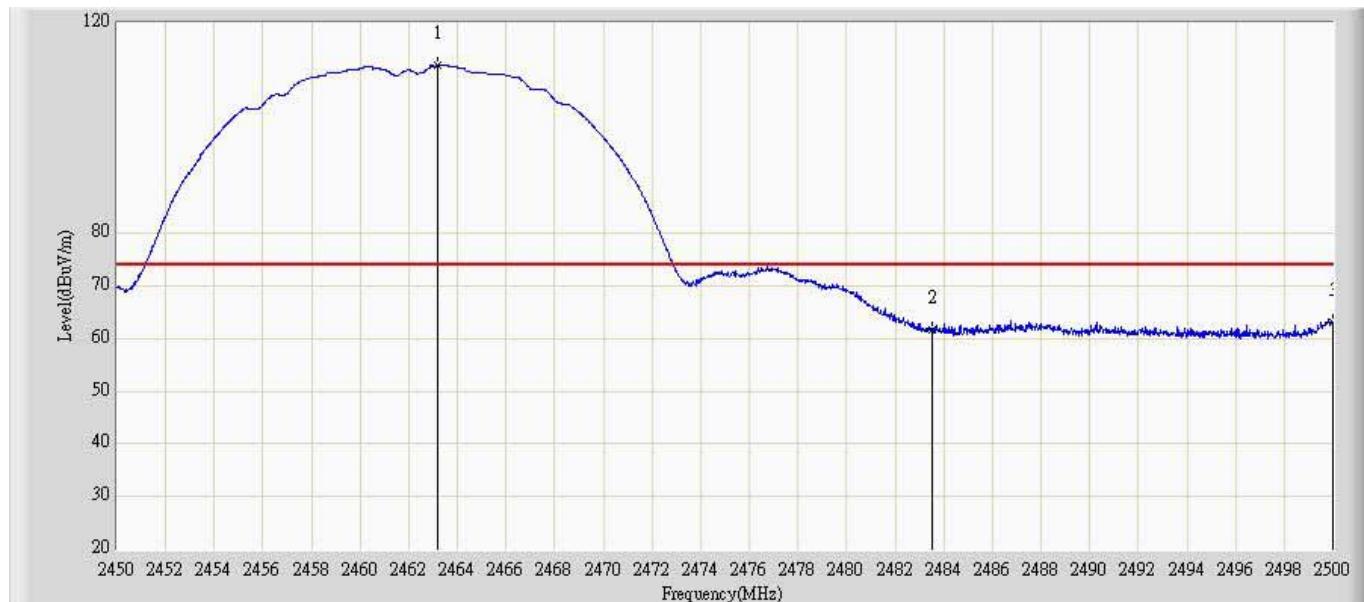
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.350	111.577	117.985	N/A	N/A	-6.409	PK
2		2483.500	60.864	67.270	-13.136	74.000	-6.406	PK
3		2500.000	63.689	70.134	-10.311	74.000	-6.445	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AG-24015)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.325	106.817	113.231	N/A	N/A	-6.414	AV
2		2483.500	48.031	54.437	-5.969	54.000	-6.406	AV
3		2500.000	52.715	59.160	-1.285	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AG-24015)	



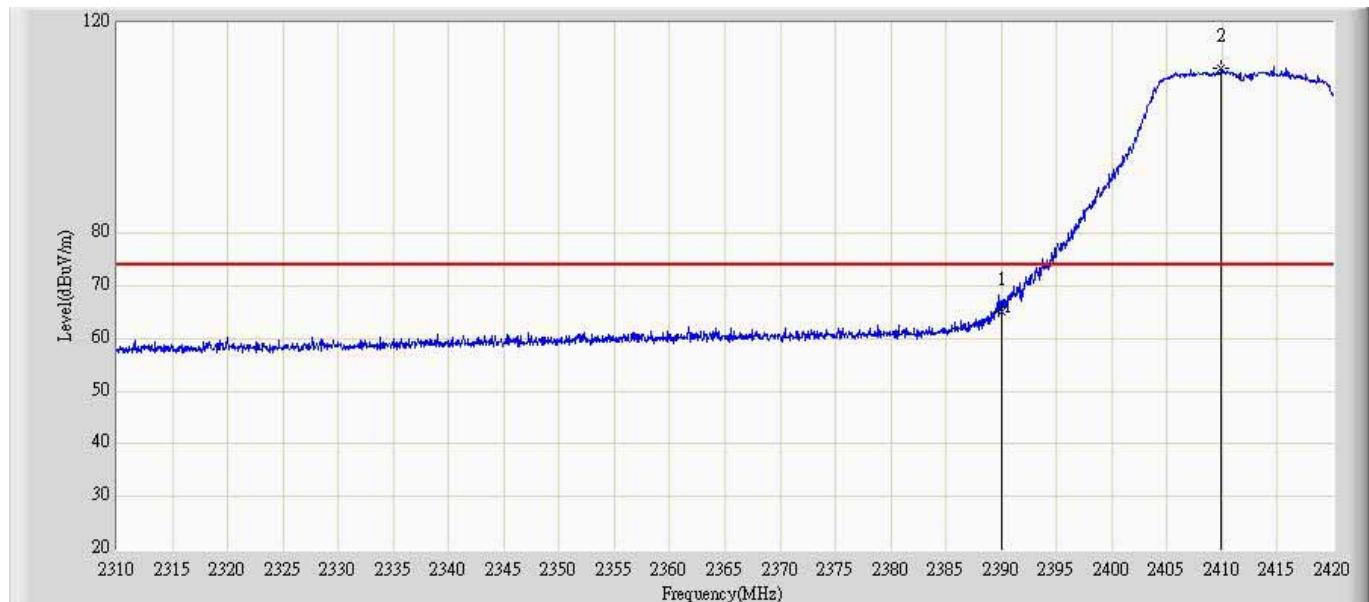
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.200	111.840	118.249	N/A	N/A	-6.409	PK
2		2483.500	61.620	68.026	-12.380	74.000	-6.406	PK
3		2500.000	63.183	69.628	-10.817	74.000	-6.445	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AG-24015)	



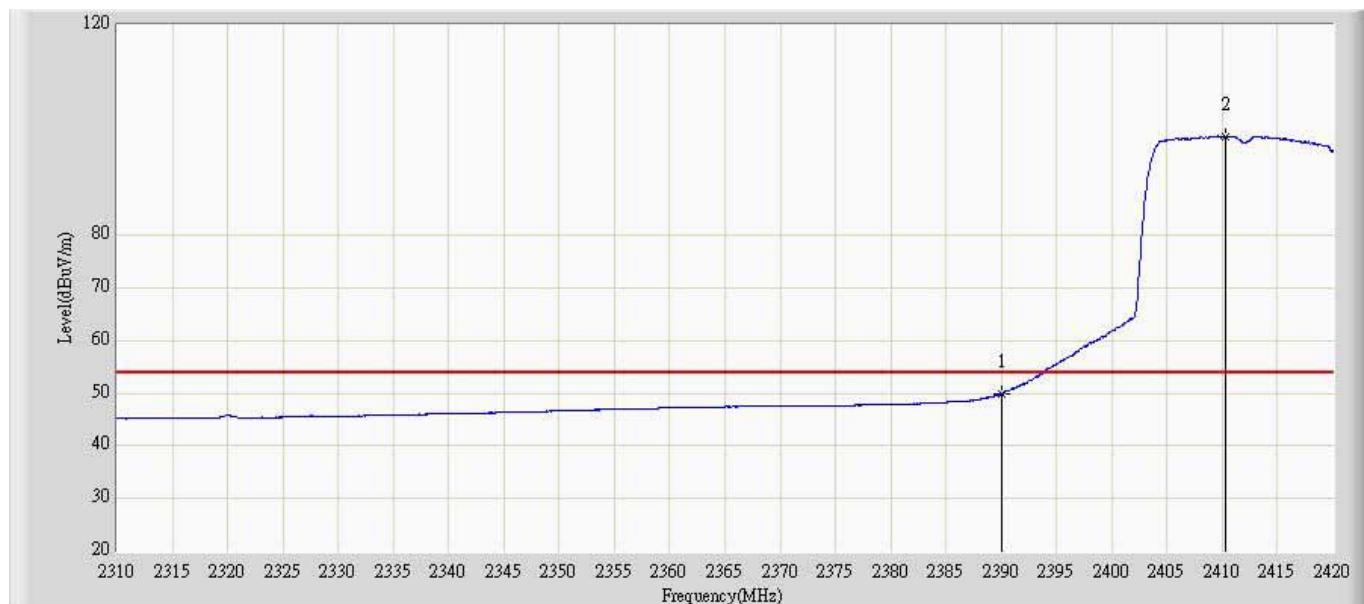
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.225	107.431	113.845	N/A	N/A	-6.414	AV
2		2483.500	48.180	54.586	-5.820	54.000	-6.406	AV
3		2500.000	52.718	59.163	-1.282	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AG-24015)	



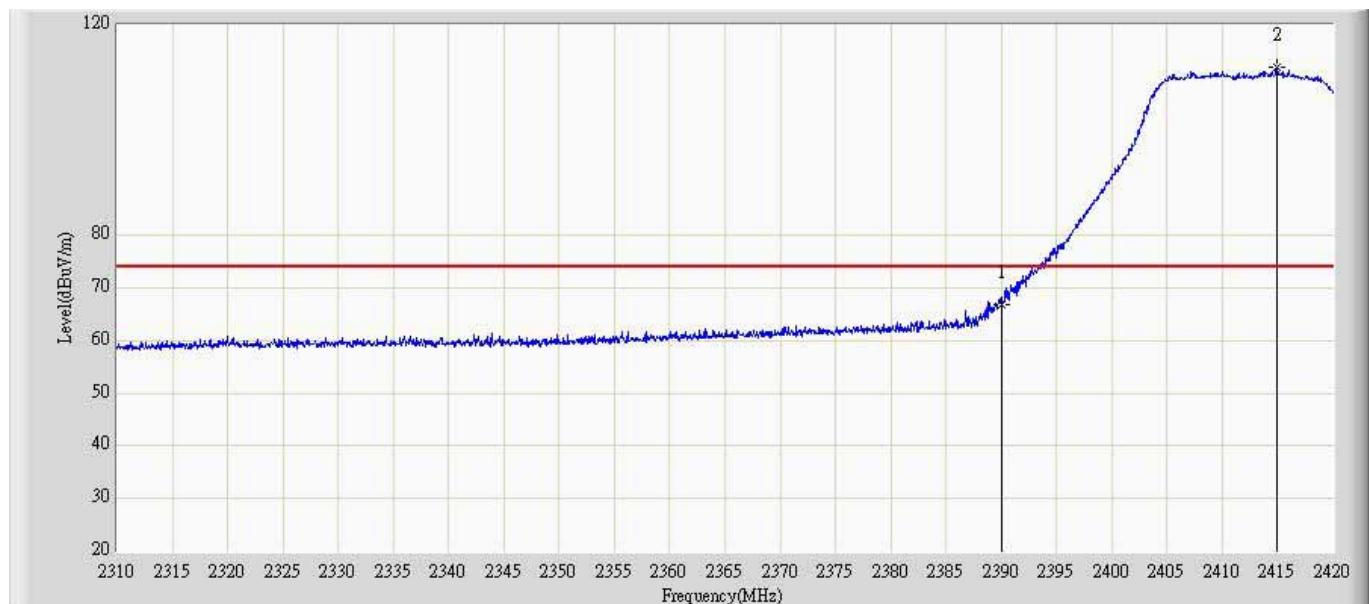
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	65.005	71.506	-8.995	74.000	-6.501	PK
2	*	2409.935	111.454	118.002	N/A	N/A	-6.548	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AG-24015)	



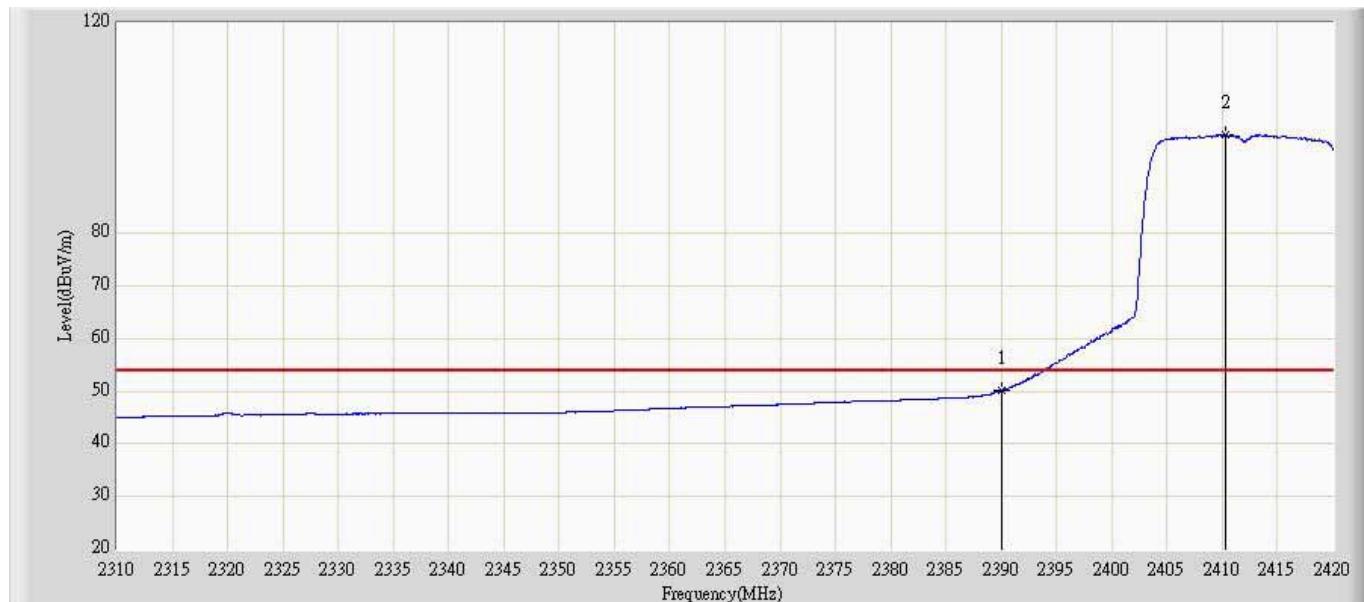
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.875	56.376	-4.125	54.000	-6.501	AV
2	*	2410.320	98.794	105.343	N/A	N/A	-6.549	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AG-24015)	



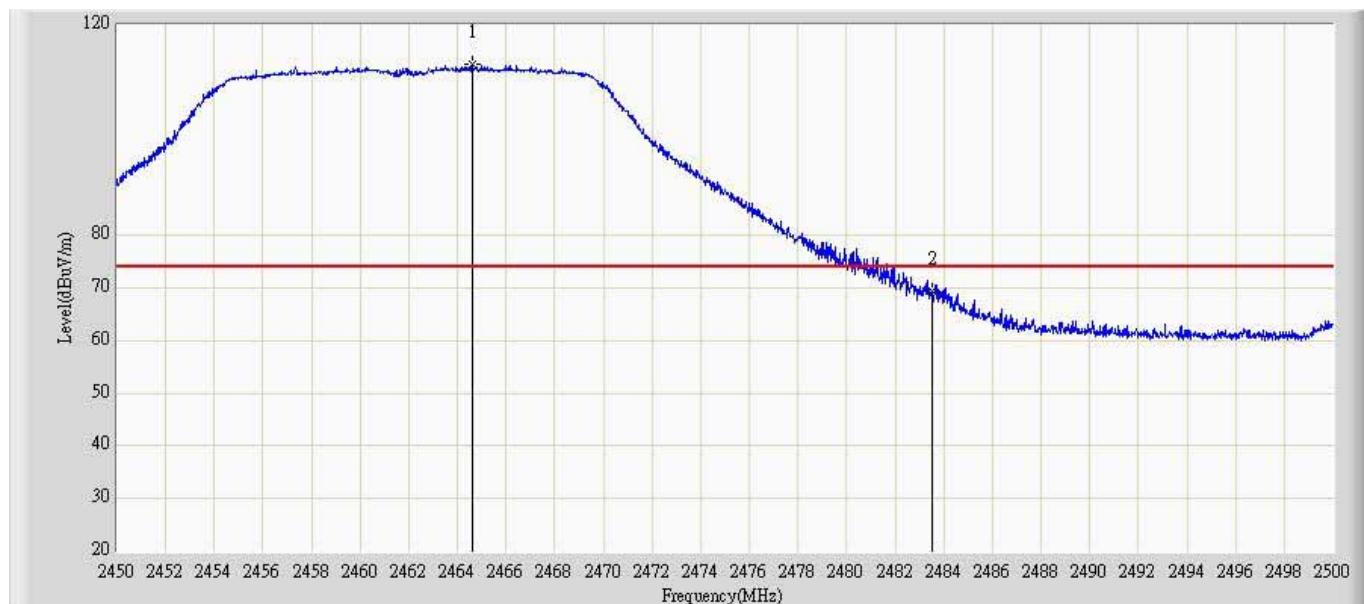
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	66.918	73.419	-7.082	74.000	-6.501	PK
2	*	2414.885	111.980	118.516	N/A	N/A	-6.536	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 13:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AG-24015)	



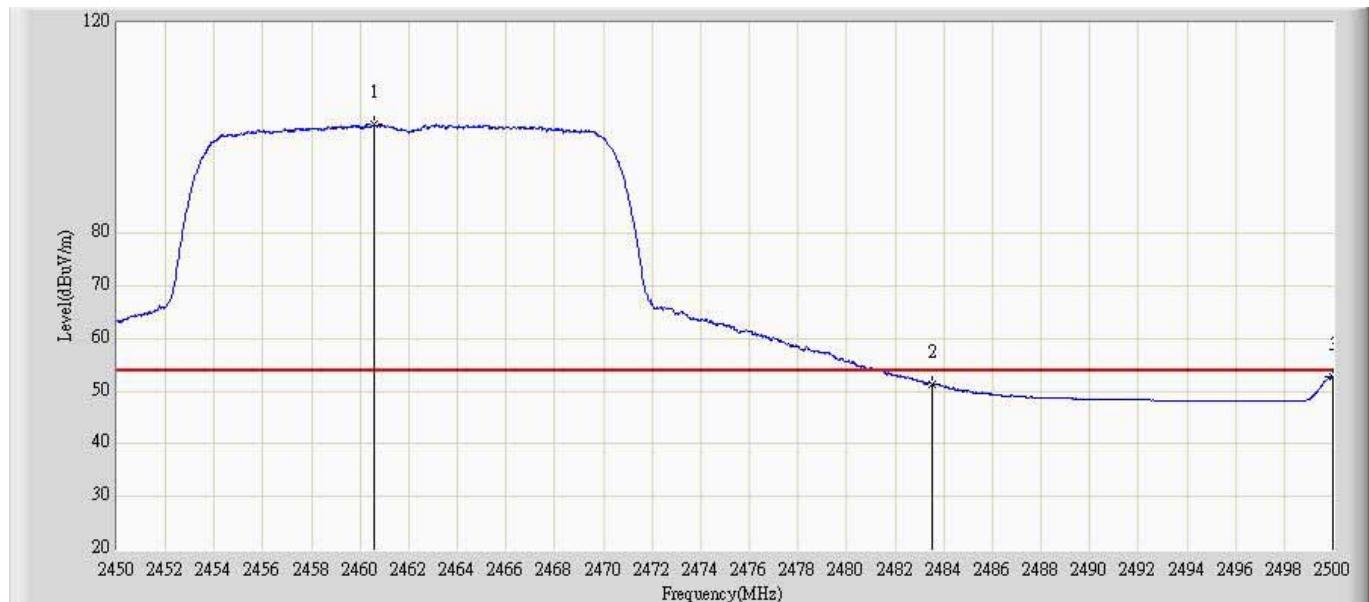
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.138	56.639	-3.862	54.000	-6.501	AV
2	*	2410.320	98.758	105.307	N/A	N/A	-6.549	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AG-24015)	



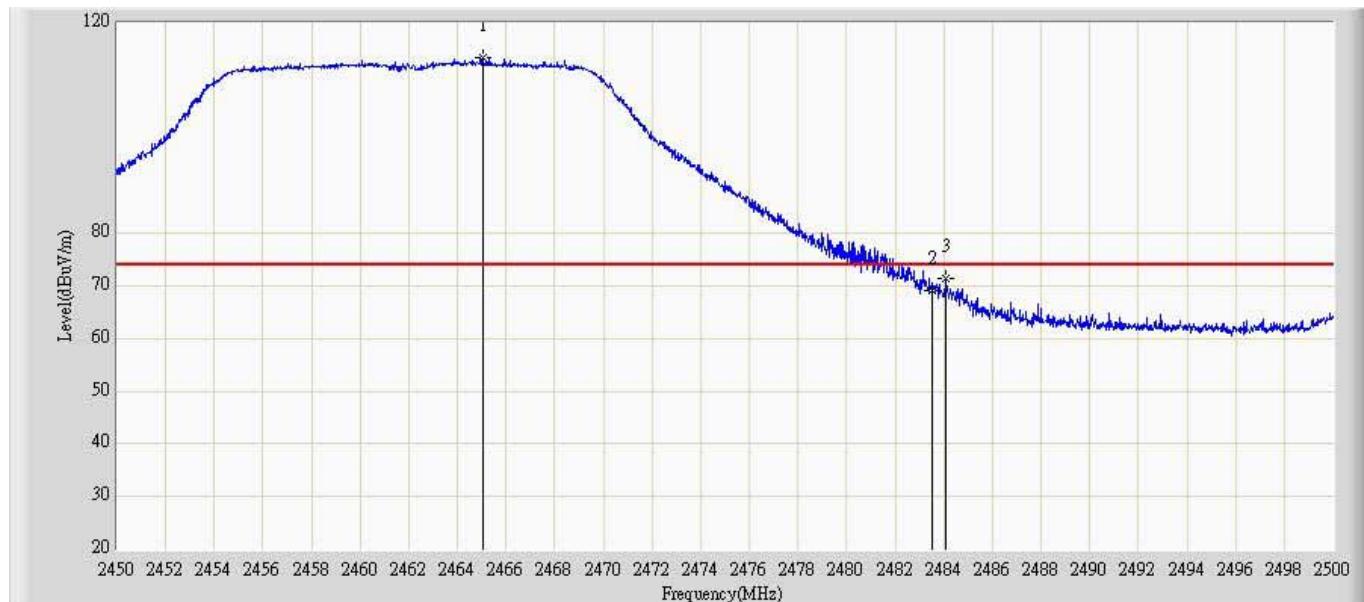
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.625	112.671	119.078	N/A	N/A	-6.408	PK
2		2483.500	69.423	75.829	-4.577	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AG-24015)	



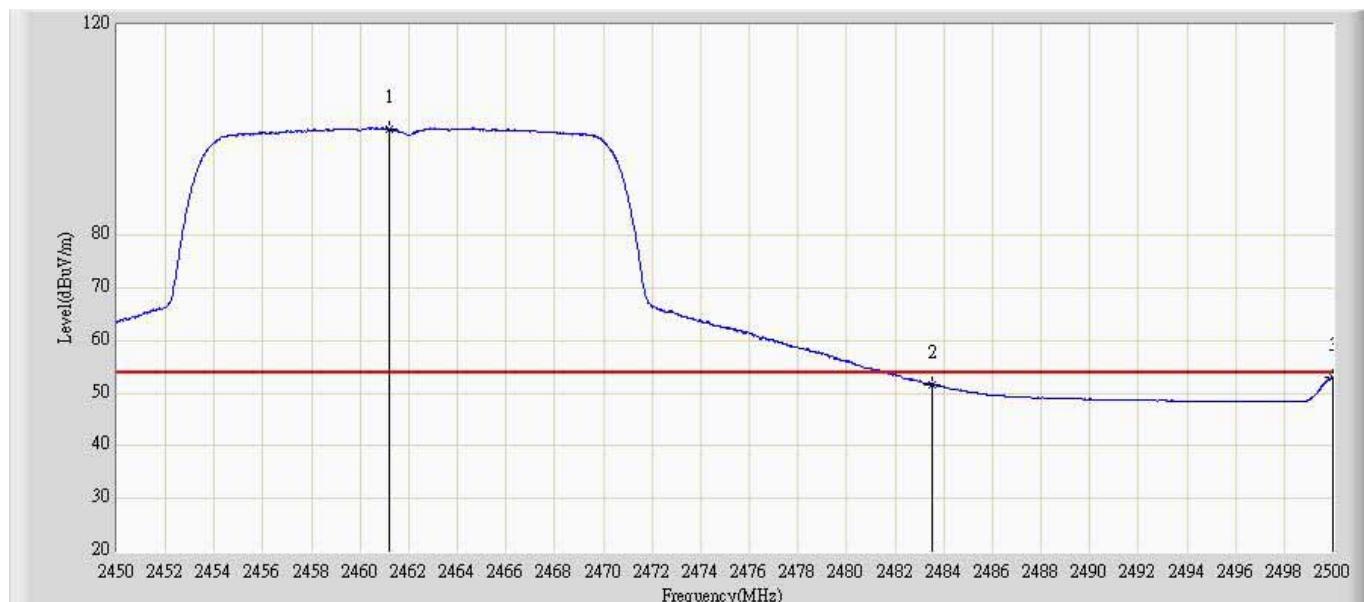
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.600	100.605	107.022	N/A	N/A	-6.418	AV
2		2483.500	51.362	57.768	-2.638	54.000	-6.406	AV
3		2500.000	52.768	59.213	-1.232	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AG-24015)	



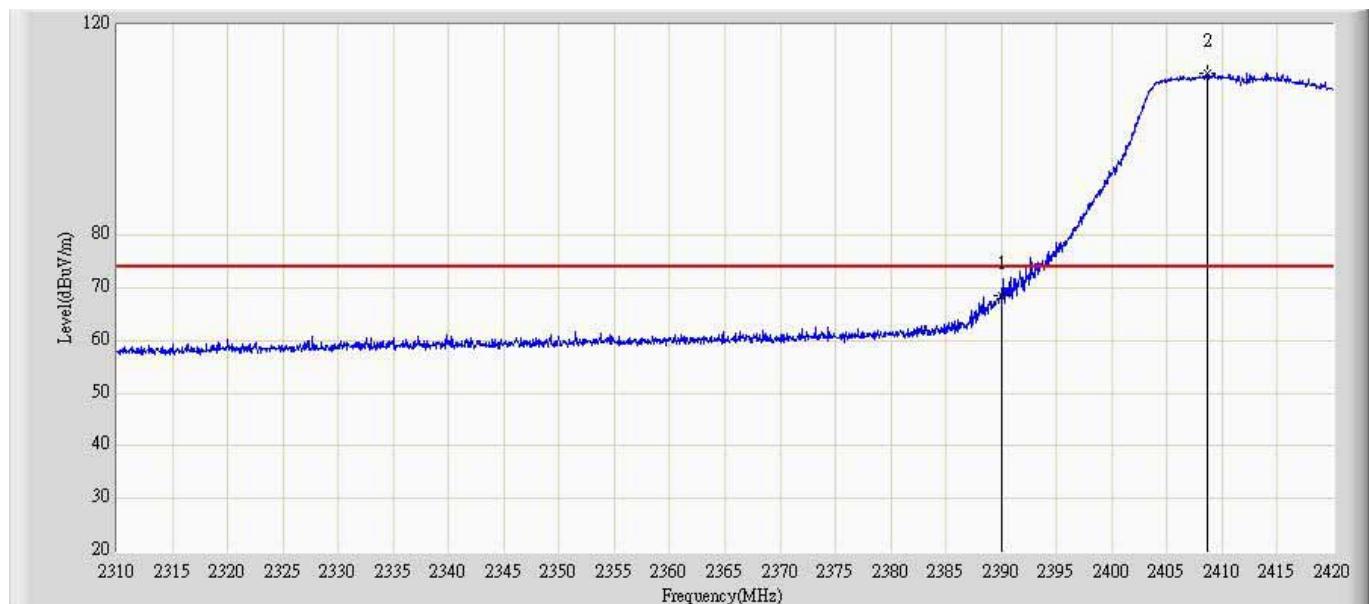
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2465.025	113.372	119.778	N/A	N/A	-6.407	PK
2		2483.500	69.253	75.659	-4.747	74.000	-6.406	PK
3		2484.100	71.302	77.710	-2.698	74.000	-6.408	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AG-24015)	



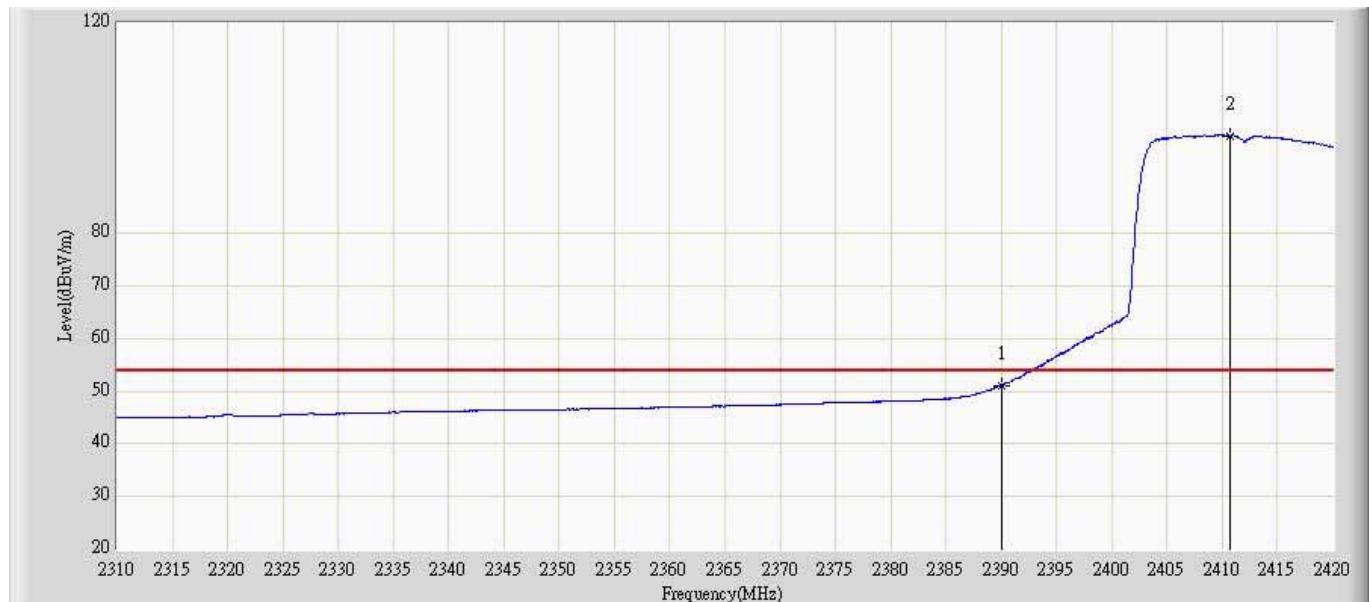
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.225	100.282	106.696	N/A	N/A	-6.414	AV
2		2483.500	51.705	58.111	-2.295	54.000	-6.406	AV
3		2500.000	52.948	59.393	-1.052	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AG-24015)	



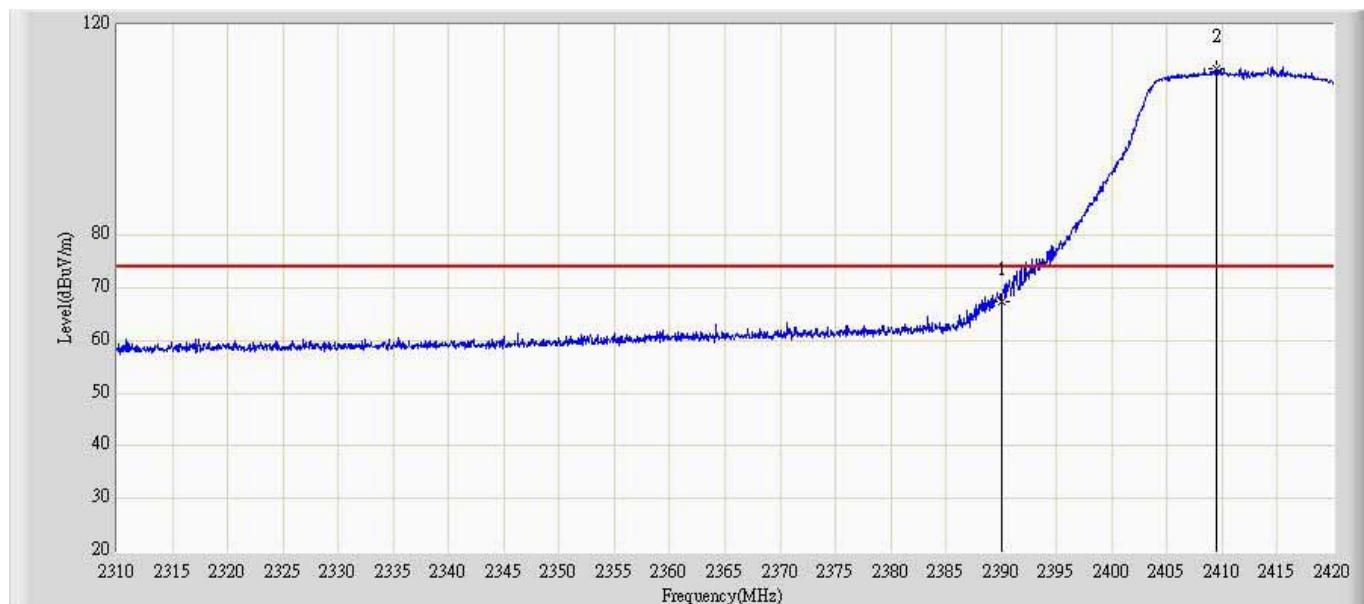
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	68.618	75.119	-5.382	74.000	-6.501	PK
2	*	2408.615	110.938	117.484	N/A	N/A	-6.546	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AG-24015)	



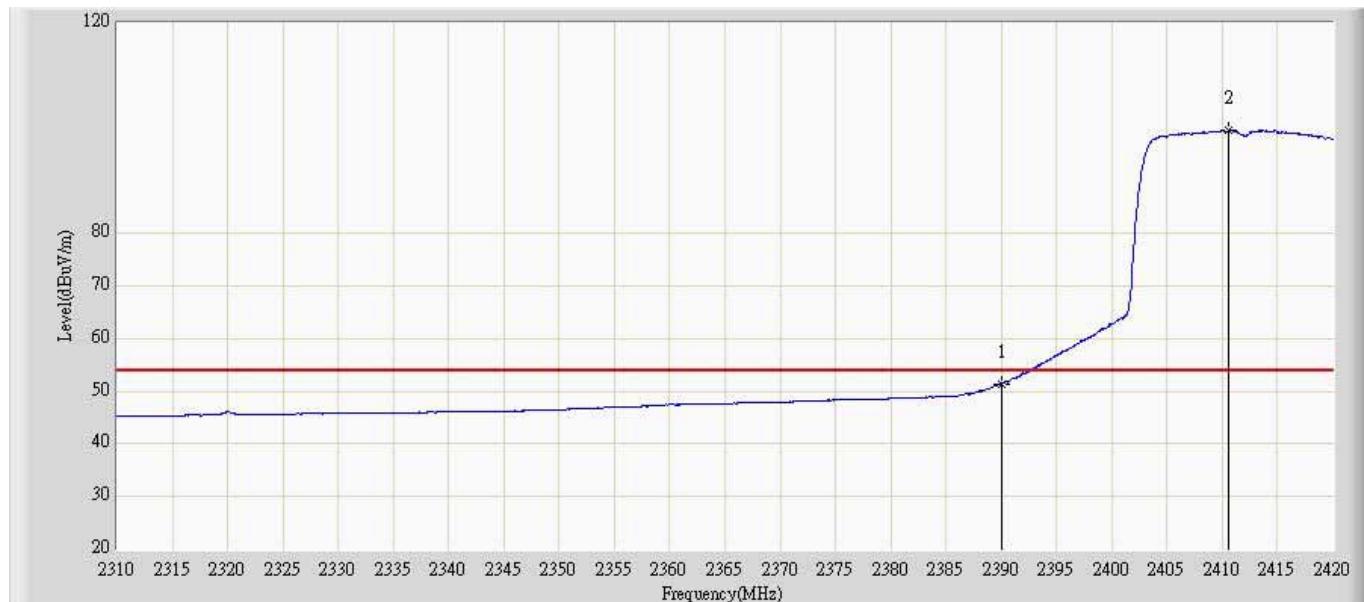
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.172	57.673	-2.828	54.000	-6.501	AV
2	*	2410.650	98.500	105.049	N/A	N/A	-6.550	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AG-24015)	



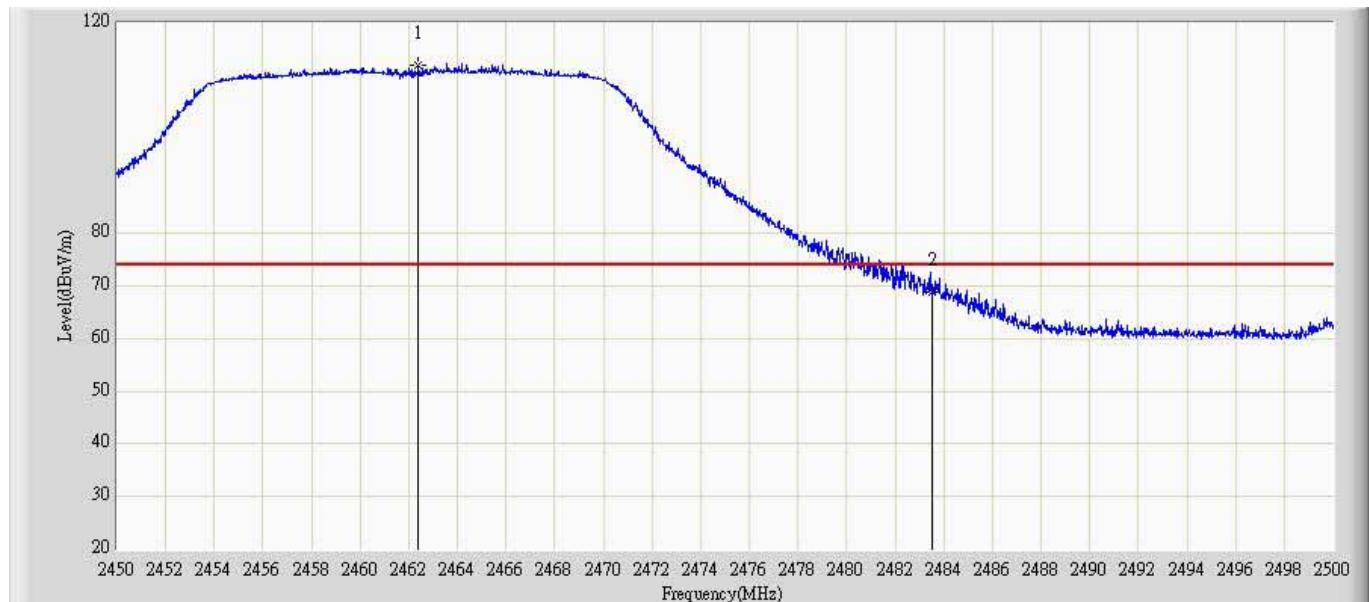
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	67.363	73.864	-6.637	74.000	-6.501	PK
2	*	2409.440	111.773	118.320	N/A	N/A	-6.547	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AG-24015)	



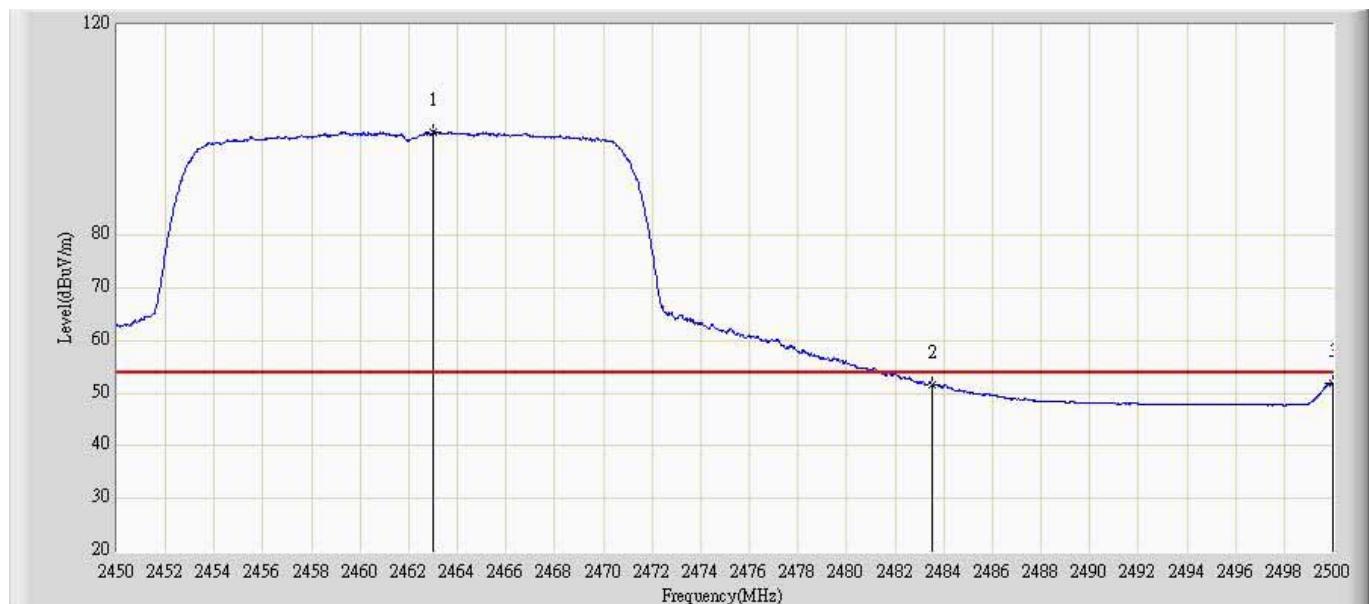
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.359	57.860	-2.641	54.000	-6.501	AV
2	*	2410.540	99.472	106.021	N/A	N/A	-6.549	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AG-24015)	



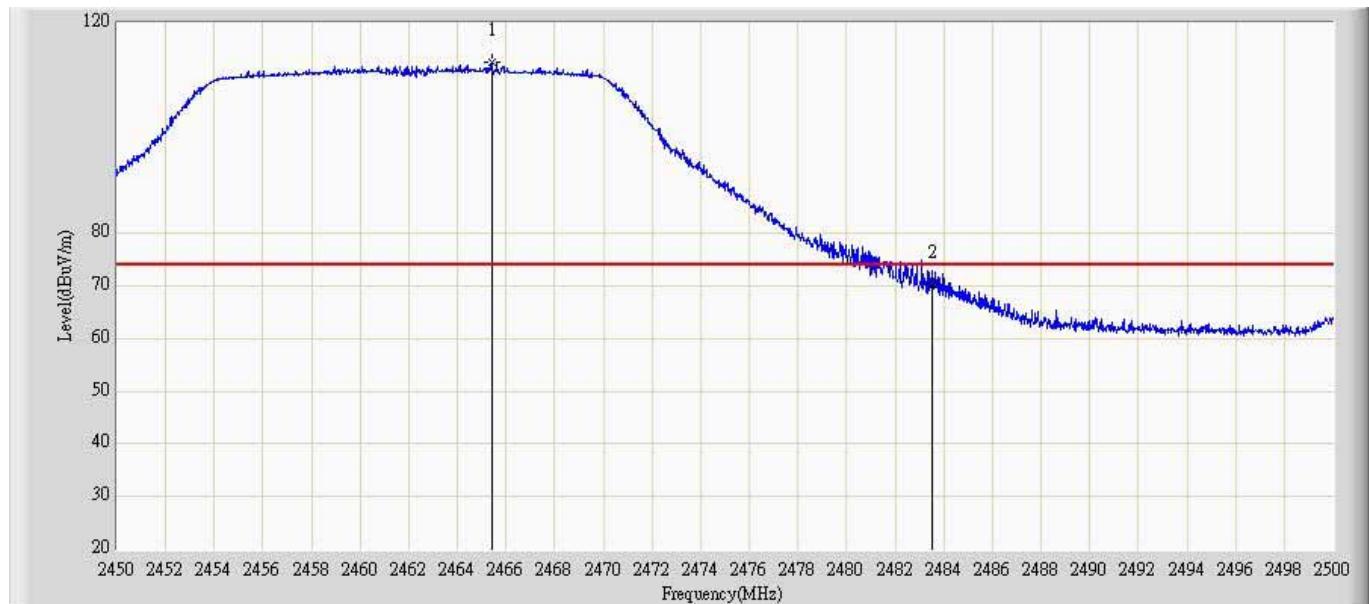
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.400	111.878	118.288	N/A	N/A	-6.409	PK
2		2483.500	68.938	75.344	-5.062	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AG-24015)	



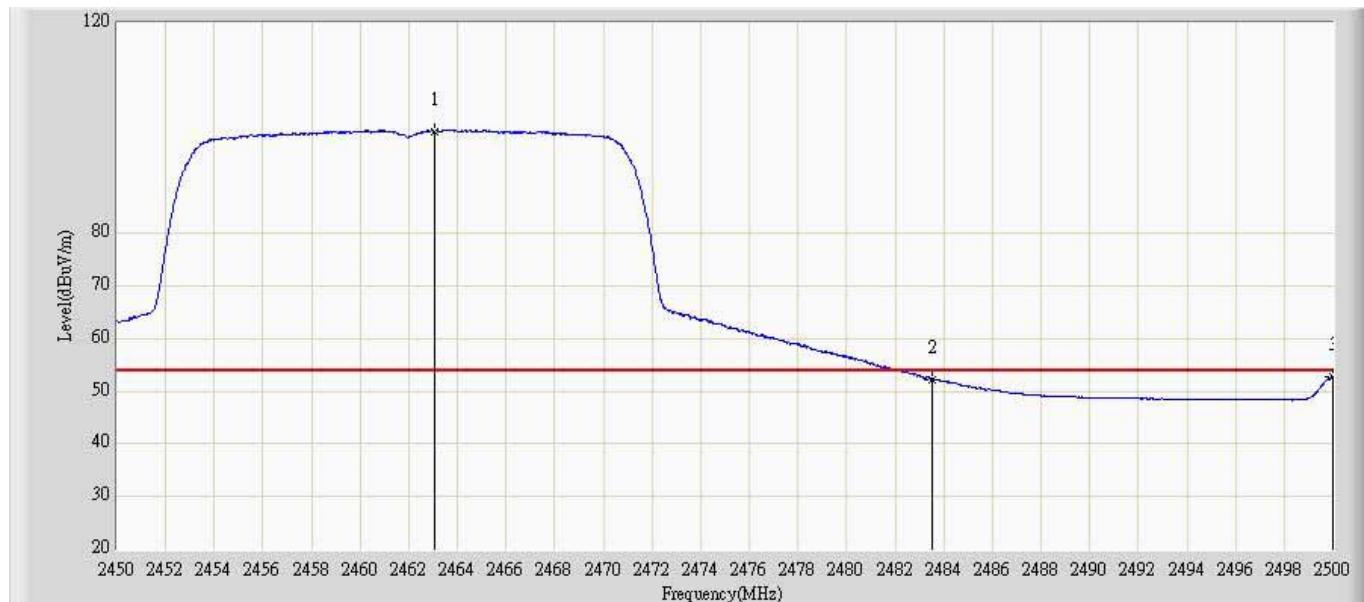
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.000	99.667	106.076	N/A	N/A	-6.410	AV
2		2483.500	51.724	58.130	-2.276	54.000	-6.406	AV
3		2500.000	51.907	58.352	-2.093	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AG-24015)	



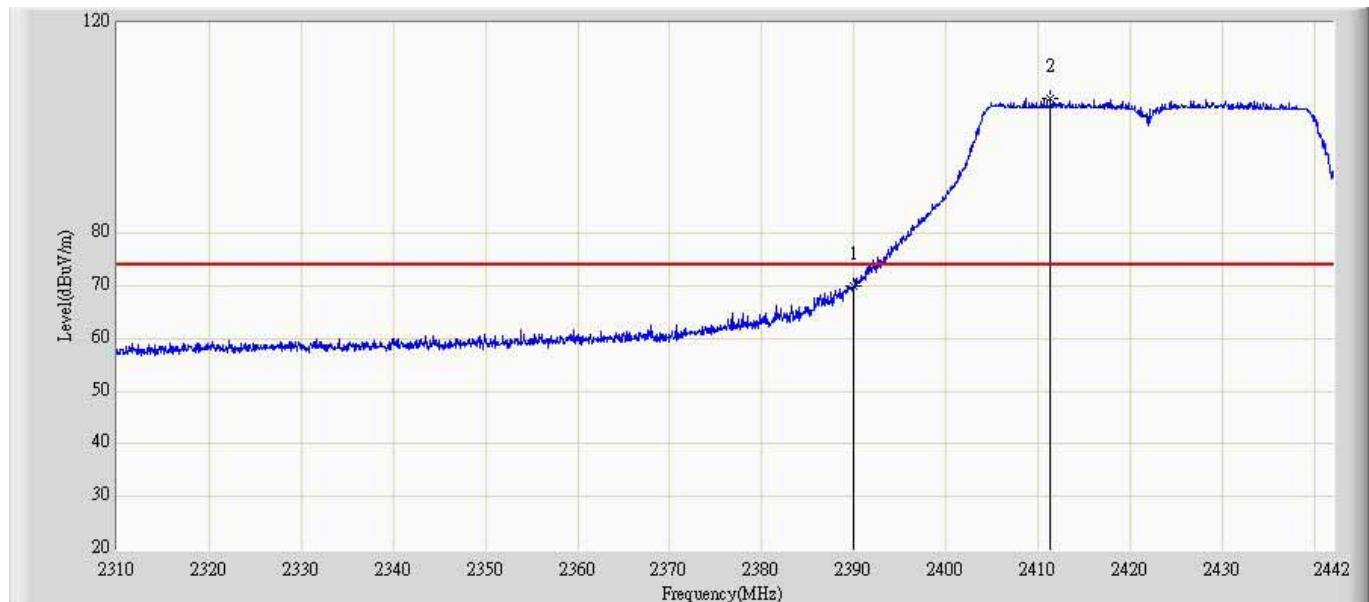
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2465.400	112.581	118.987	N/A	N/A	-6.406	PK
2		2483.500	70.161	76.567	-3.839	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AG-24015)	



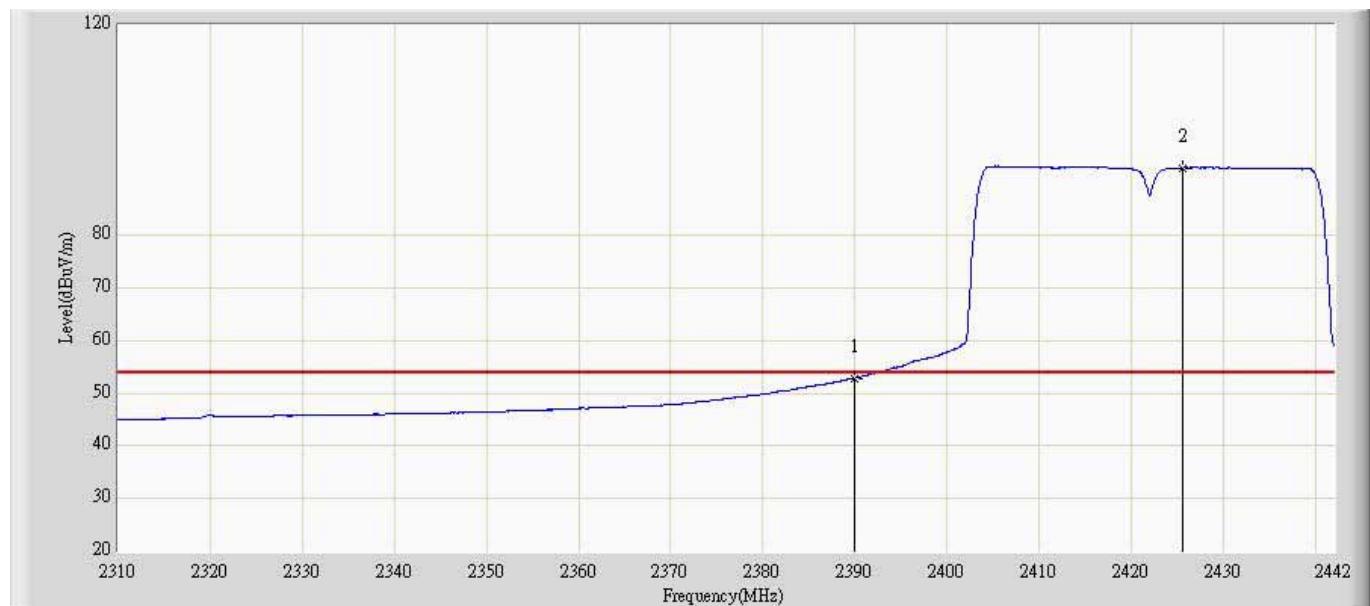
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.050	99.444	105.853	N/A	N/A	-6.410	AV
2		2483.500	52.200	58.606	-1.800	54.000	-6.406	AV
3		2500.000	52.676	59.121	-1.324	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AG-24015)	



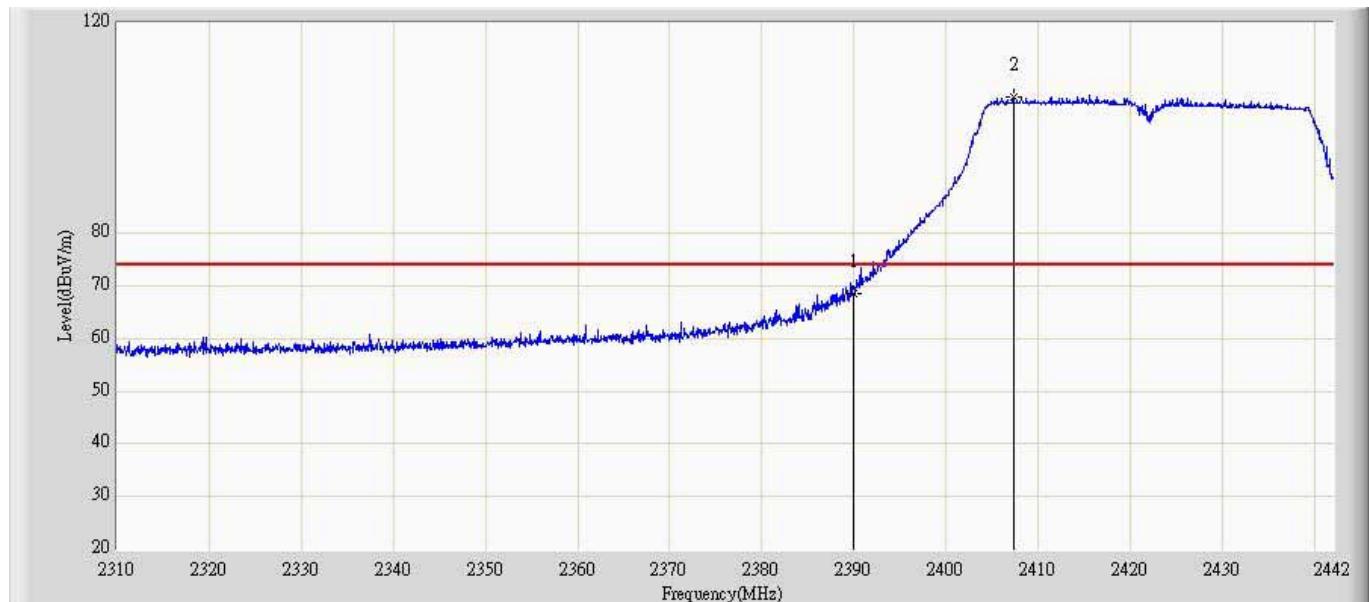
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	69.884	76.385	-4.116	74.000	-6.501	PK
2	*	2411.376	105.674	112.223	N/A	N/A	-6.548	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AG-24015)	



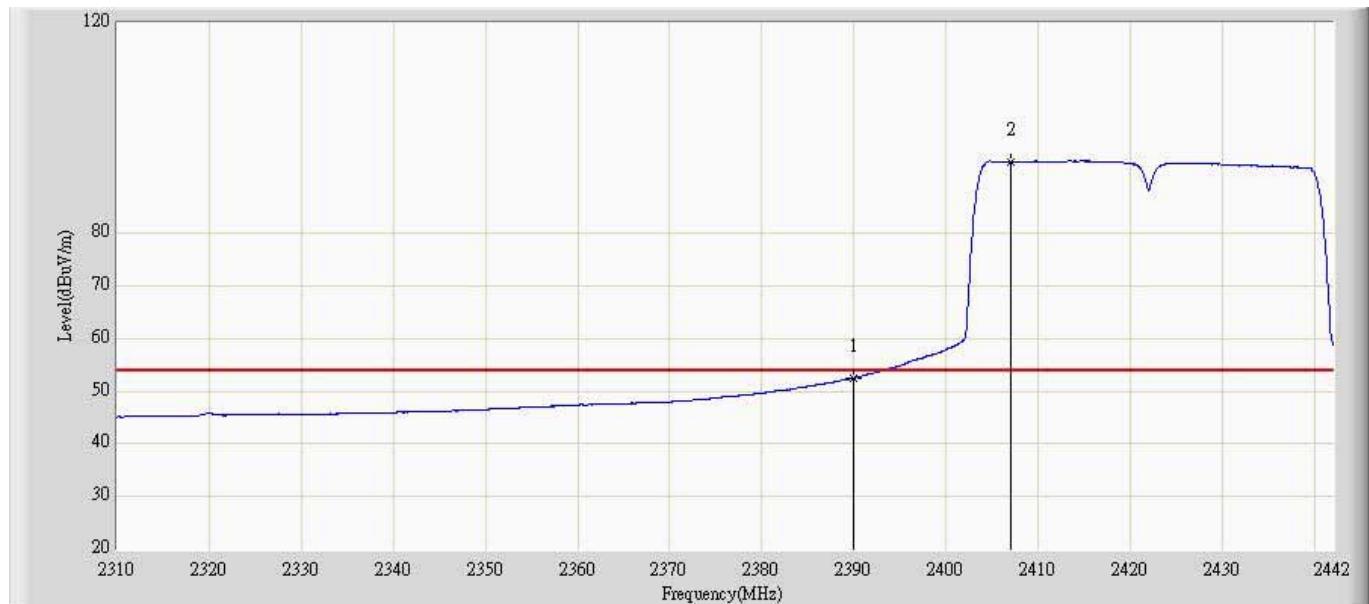
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.883	59.384	-1.117	54.000	-6.501	AV
2	*	2425.632	92.836	99.334	N/A	N/A	-6.499	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AG-24015)	



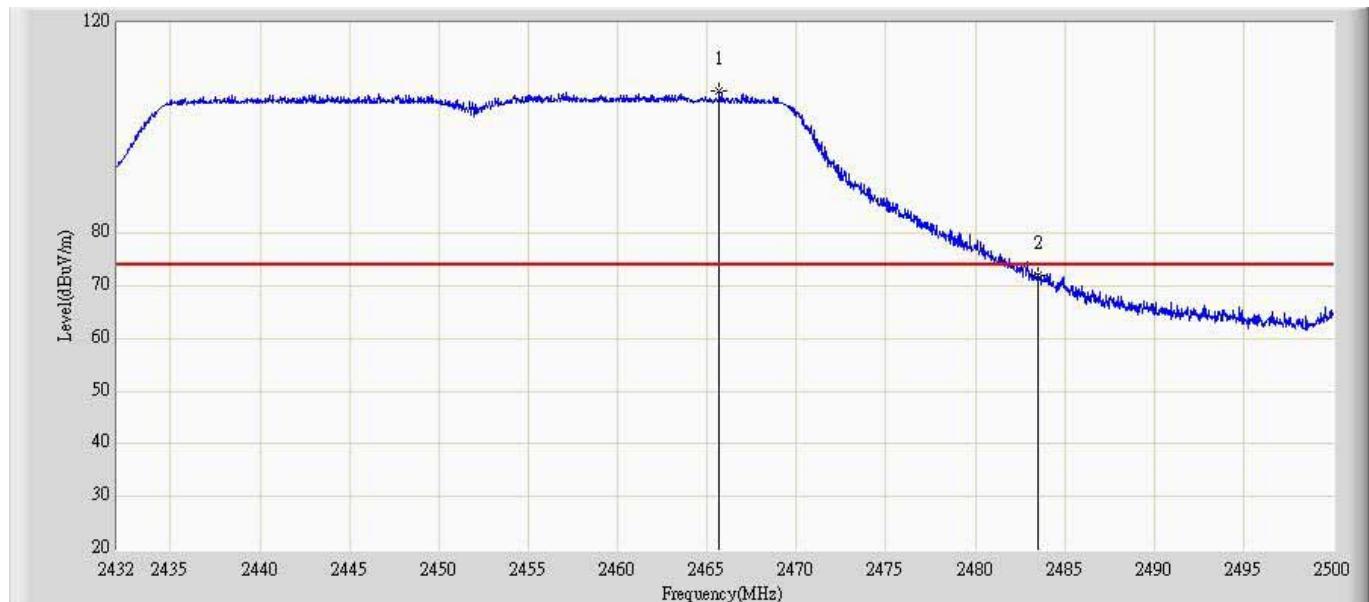
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	68.451	74.952	-5.549	74.000	-6.501	PK
2	*	2407.284	105.947	112.490	N/A	N/A	-6.544	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AG-24015)	



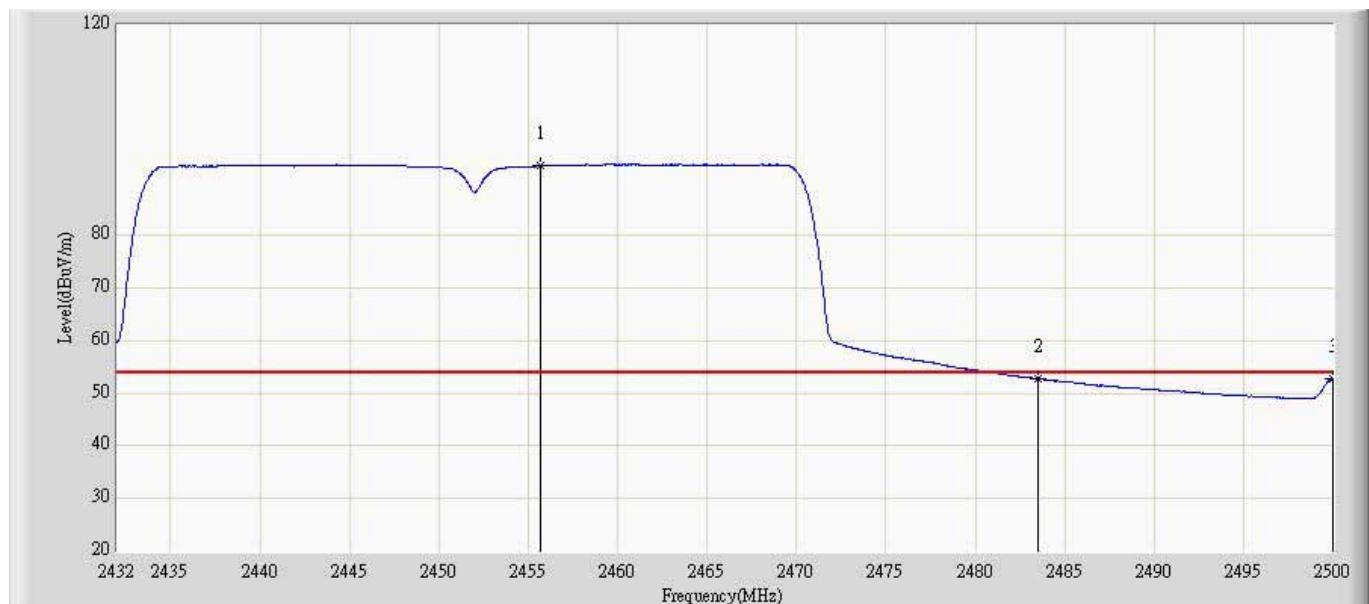
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.531	59.032	-1.469	54.000	-6.501	AV
2	*	2407.020	93.628	100.171	N/A	N/A	-6.543	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AG-24015)	



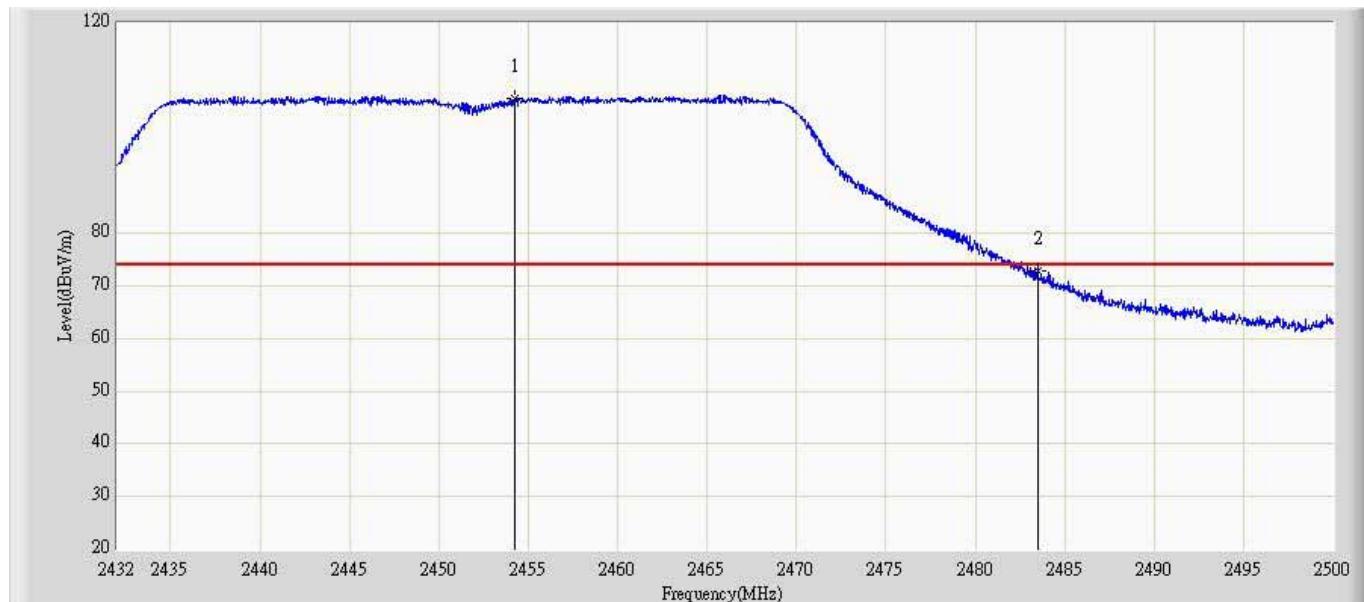
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2465.660	107.162	113.568	N/A	N/A	-6.405	PK
2		2483.500	72.073	78.479	-1.927	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AG-24015)	



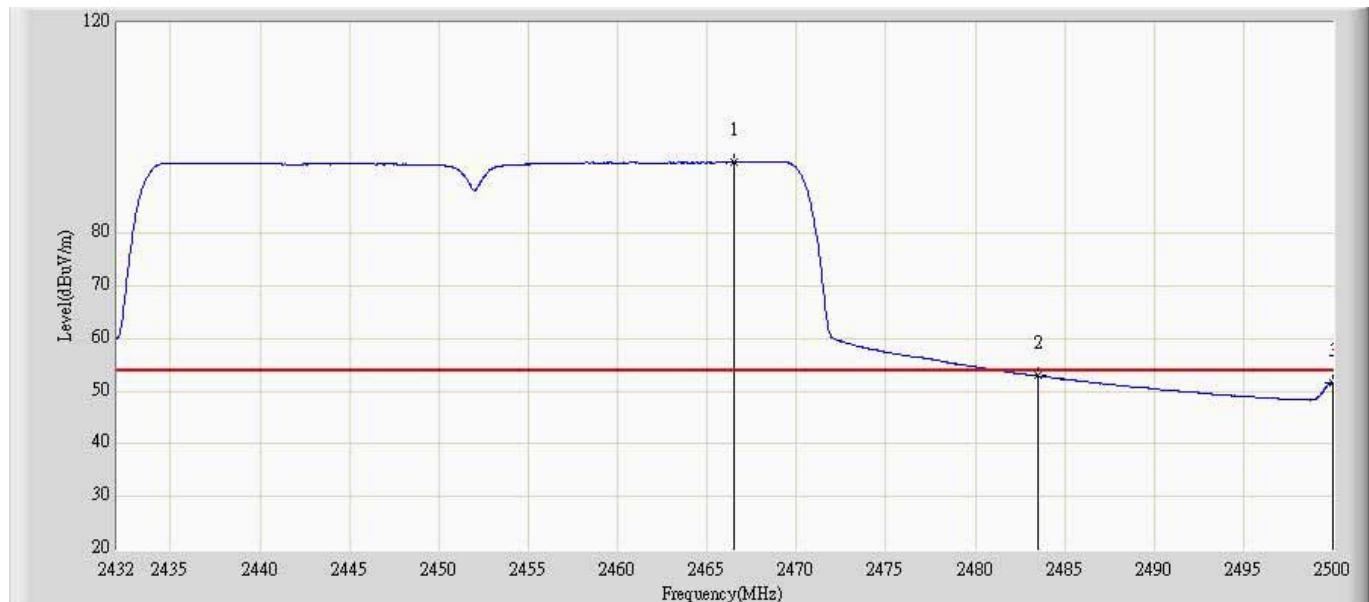
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.698	93.212	99.655	N/A	N/A	-6.443	AV
2		2483.500	52.815	59.221	-1.185	54.000	-6.406	AV
3		2500.000	52.779	59.224	-1.221	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AG-24015)	



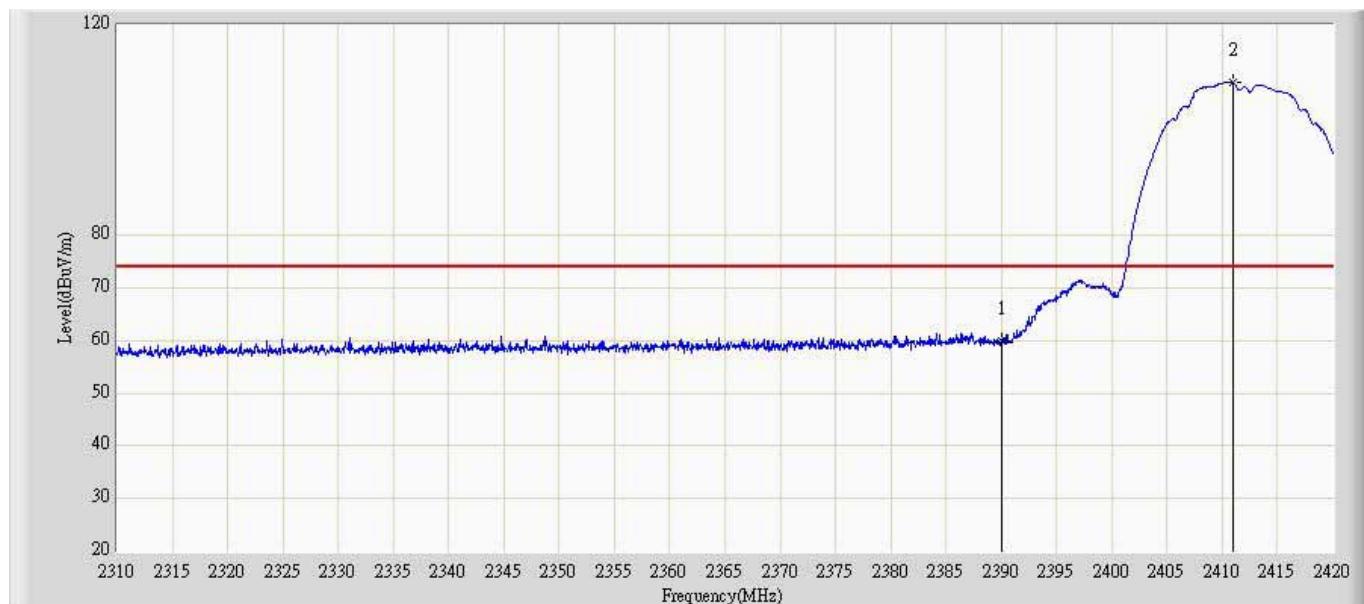
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.270	105.561	112.012	N/A	N/A	-6.451	PK
2		2483.500	72.797	79.203	-1.203	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AG-24015)	



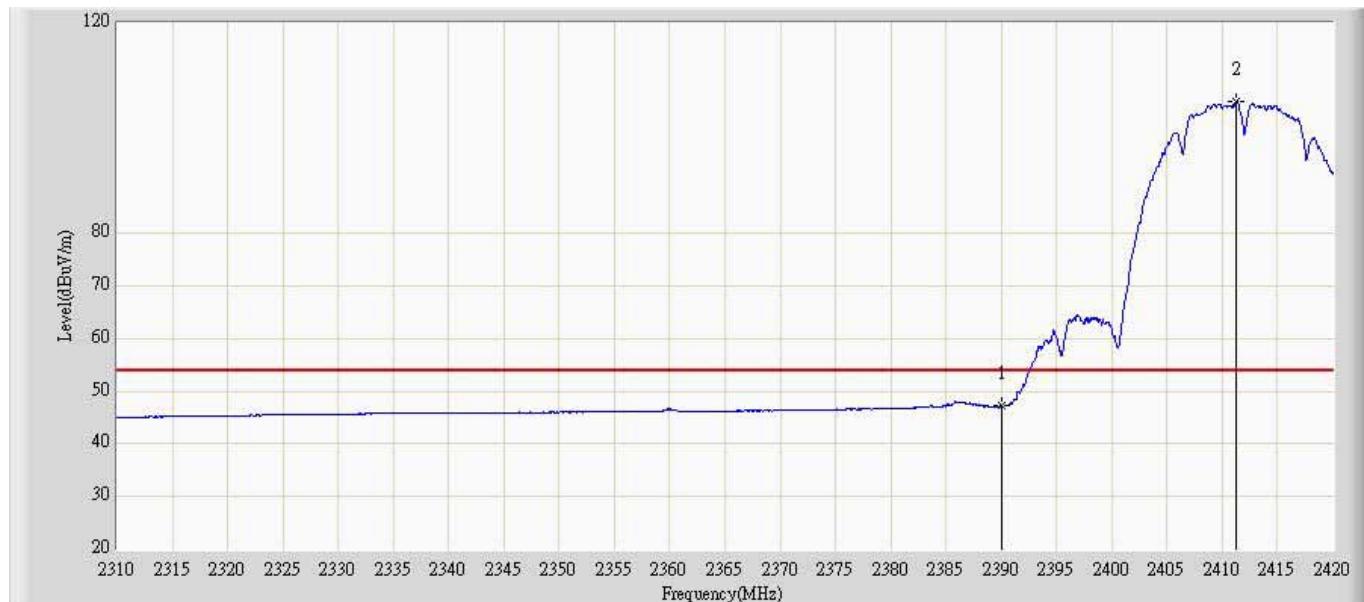
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2466.544	93.487	99.892	N/A	N/A	-6.405	AV
2		2483.500	52.961	59.367	-1.039	54.000	-6.406	AV
3		2500.000	51.669	58.114	-2.331	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AO-24015)	



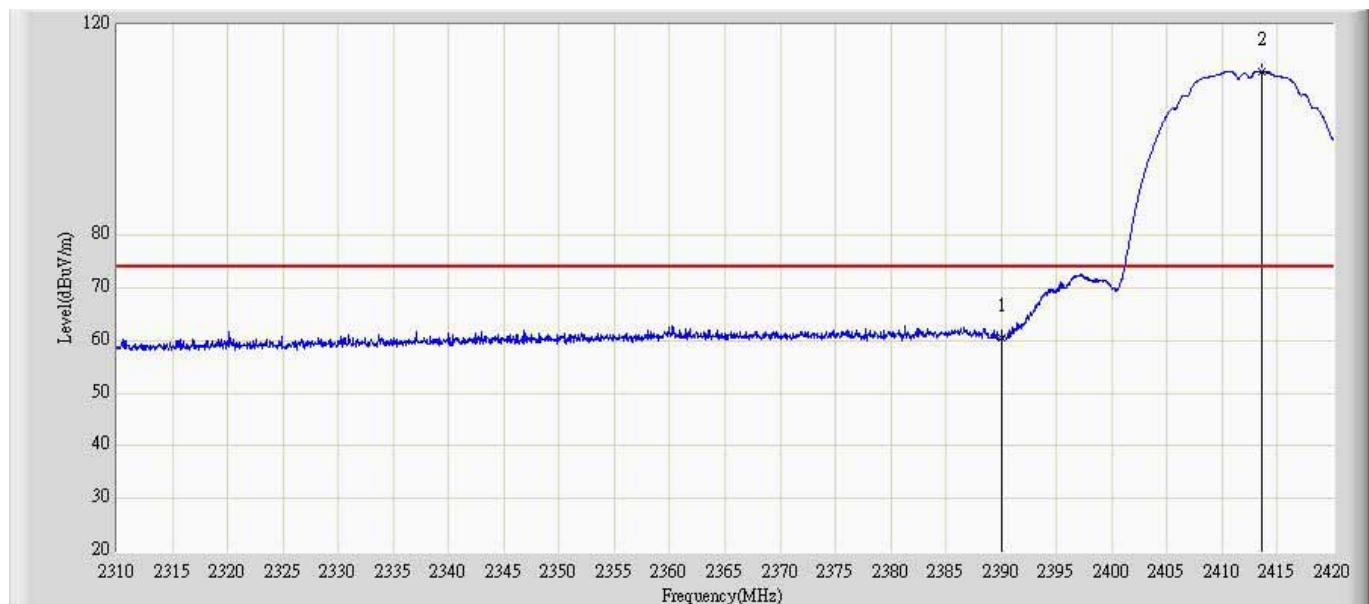
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	60.017	66.518	-13.983	74.000	-6.501	PK
2	*	2410.980	108.979	115.529	N/A	N/A	-6.550	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AO-24015)	



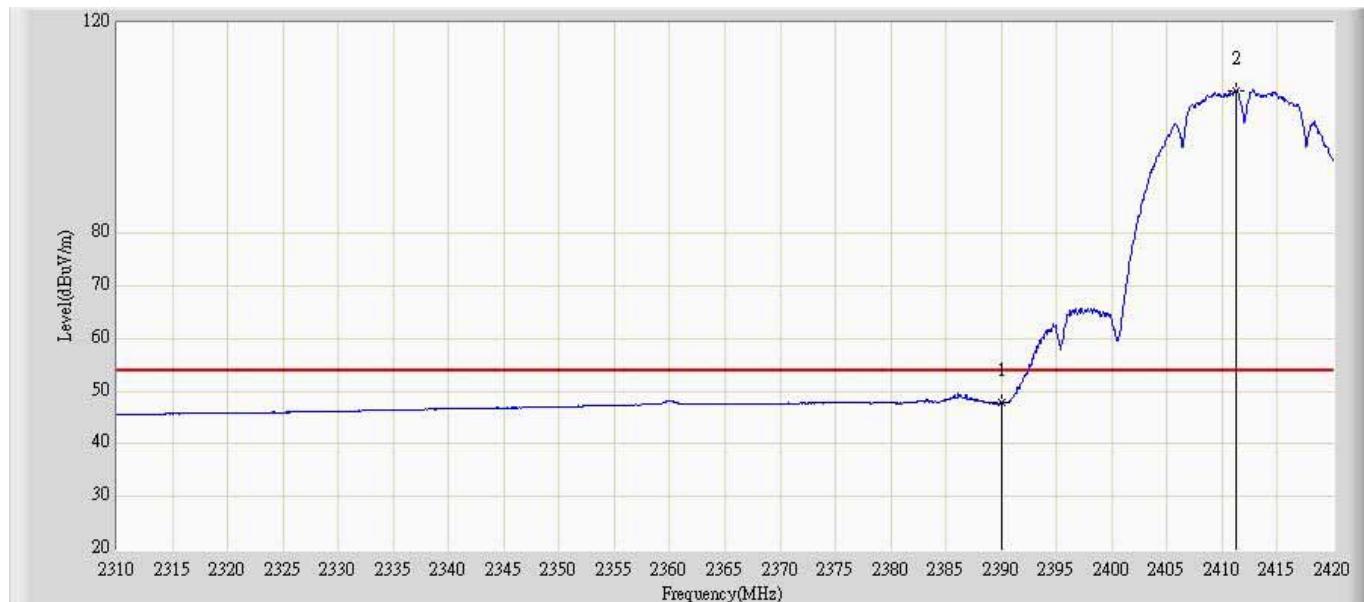
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.198	53.699	-6.802	54.000	-6.501	AV
2	*	2411.310	104.920	111.469	N/A	N/A	-6.548	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AO-24015)	



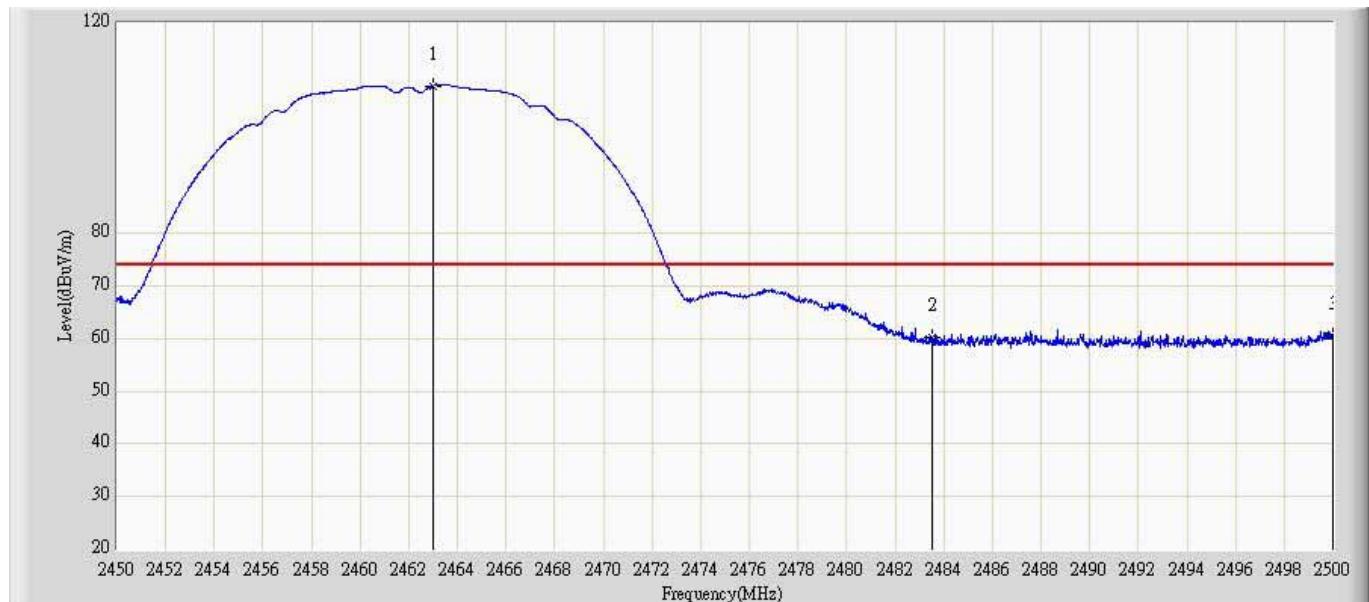
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	60.626	67.127	-13.374	74.000	-6.501	PK
2	*	2413.565	111.180	117.721	N/A	N/A	-6.541	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz By 802.11b (With antenna AO-24015)	



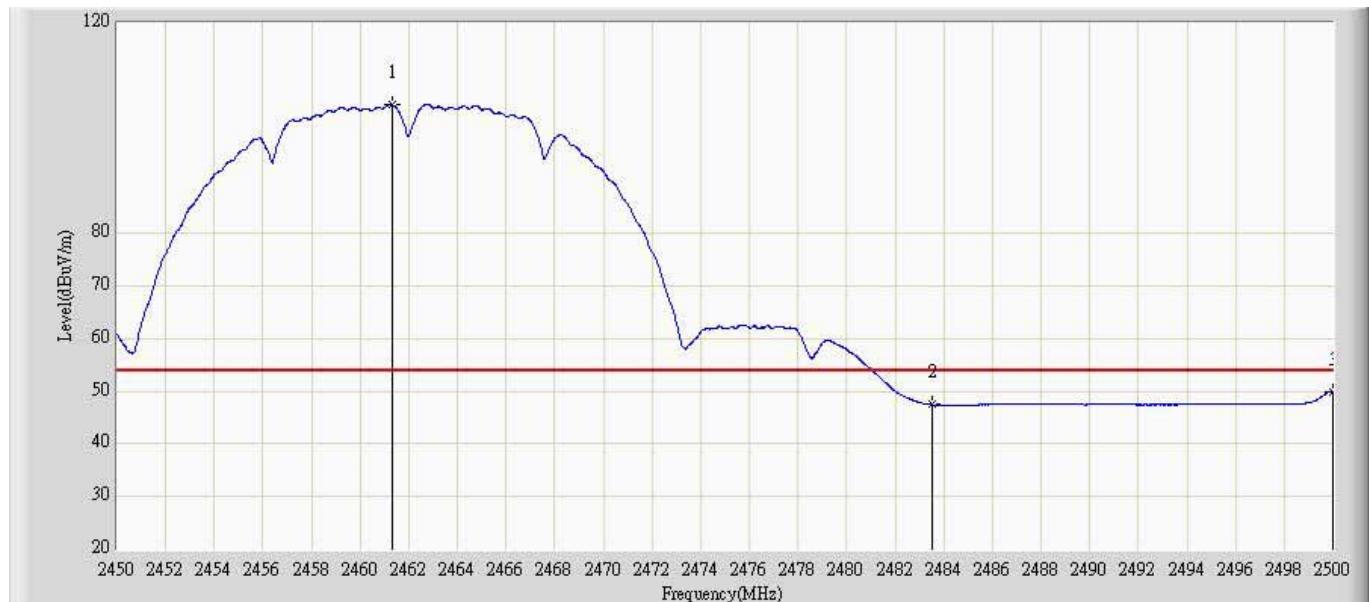
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.806	54.307	-6.194	54.000	-6.501	AV
2	*	2411.310	107.181	113.730	N/A	N/A	-6.548	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 14:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AO-24015)	



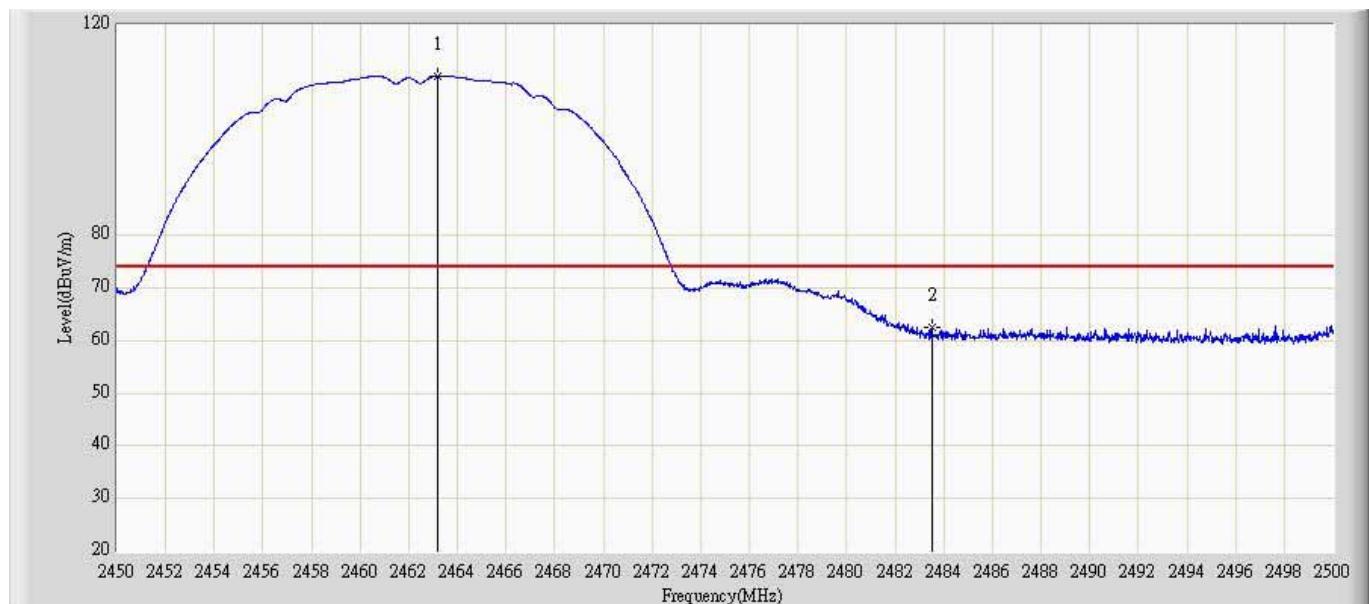
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.000	108.047	114.456	N/A	N/A	-6.410	PK
2		2483.500	60.199	66.605	-13.801	74.000	-6.406	PK
3		2500.000	60.462	66.907	-13.538	74.000	-6.445	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AO-24015)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.325	104.359	110.773	N/A	N/A	-6.414	AV
2		2483.500	47.462	53.868	-6.538	54.000	-6.406	AV
3		2500.000	49.919	56.364	-4.081	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AO-24015)	



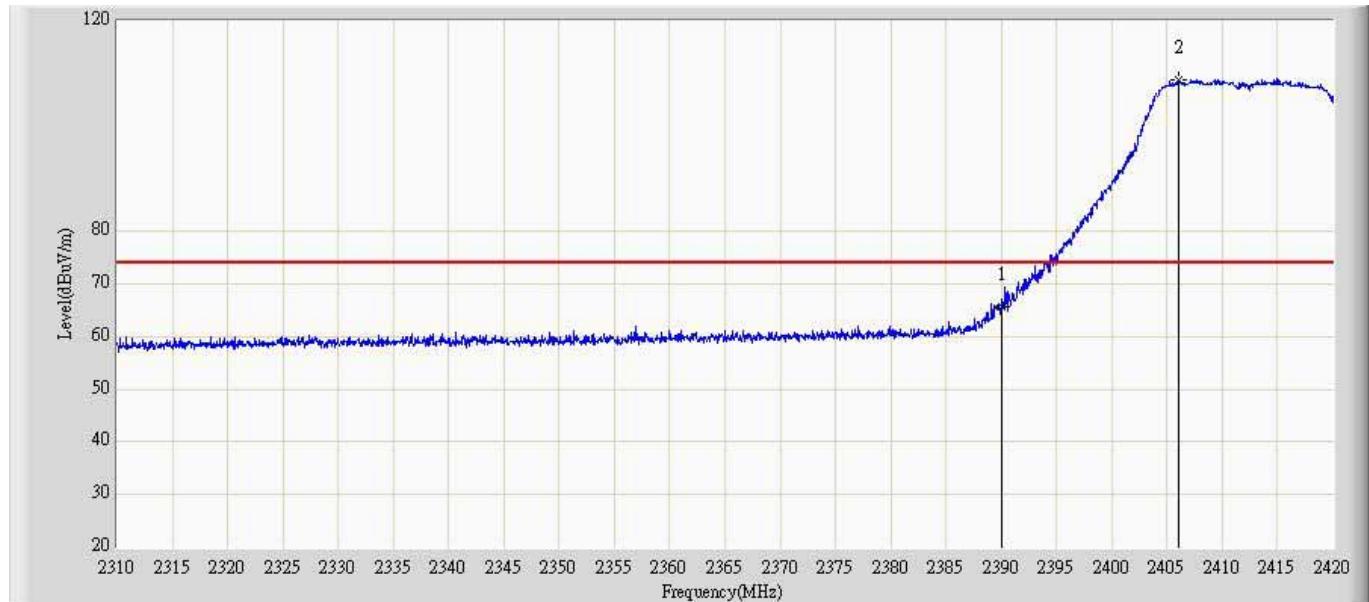
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.200	110.306	116.715	N/A	N/A	-6.409	PK
2		2483.500	62.395	68.801	-11.605	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2462MHz By 802.11b (With antenna AO-24015)	



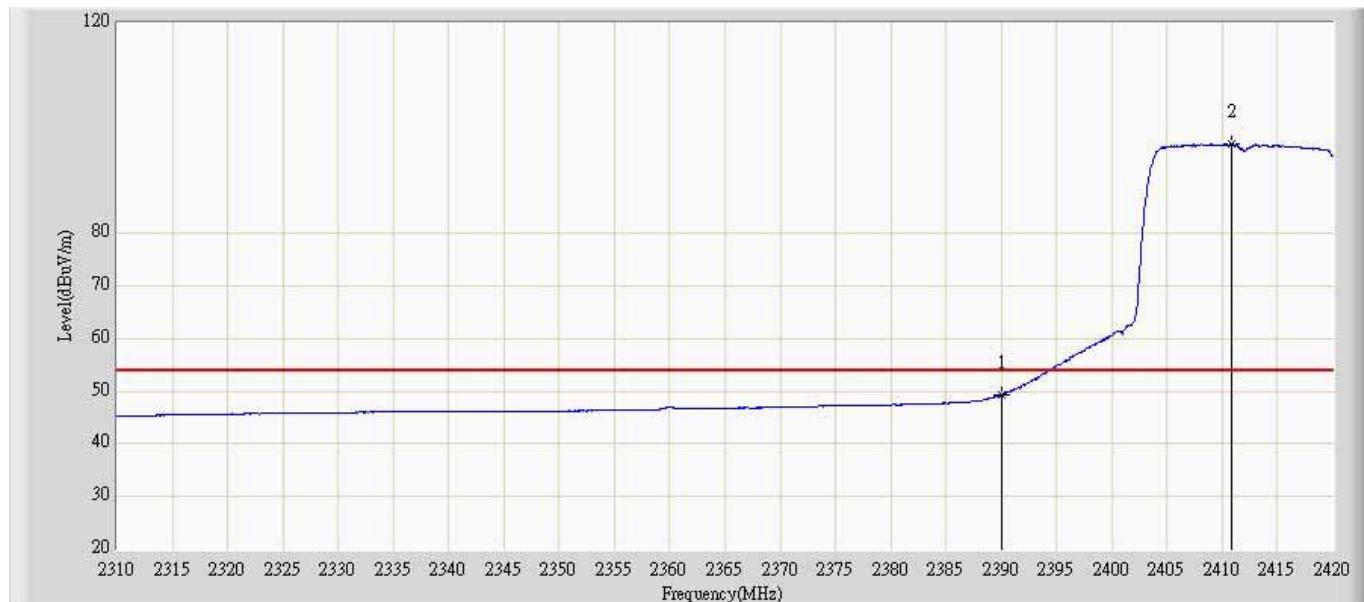
No	Mark	Frequency (MHz)	Measure Level (dBmV/m)	Reading Level (dBmV)	Over Limit (dB)	Limit (dBmV/m)	Factor (dB)	Type
1	*	2462.650	106.544	112.953	N/A	N/A	-6.408	AV
2		2483.500	48.129	54.535	-5.871	54.000	-6.406	AV
3		2500.000	49.671	56.116	-4.329	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AO-24015)	



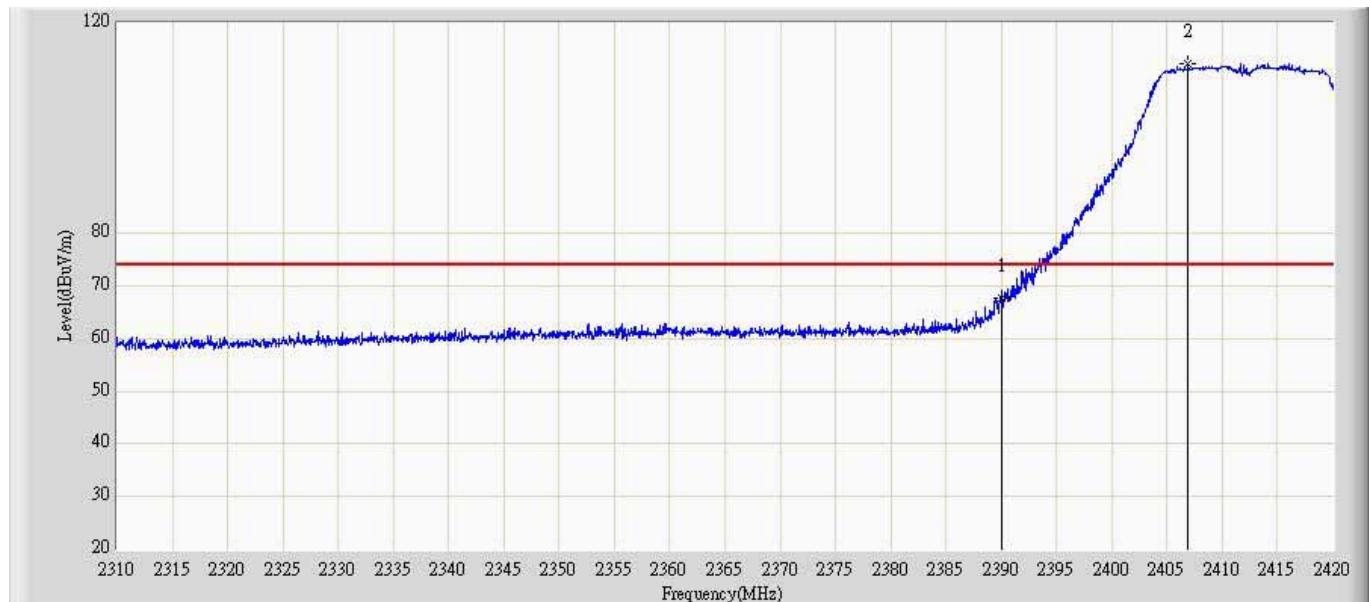
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	65.693	72.194	-8.307	74.000	-6.501	PK
2	*	2406.030	108.719	115.260	N/A	N/A	-6.541	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AO-24015)	



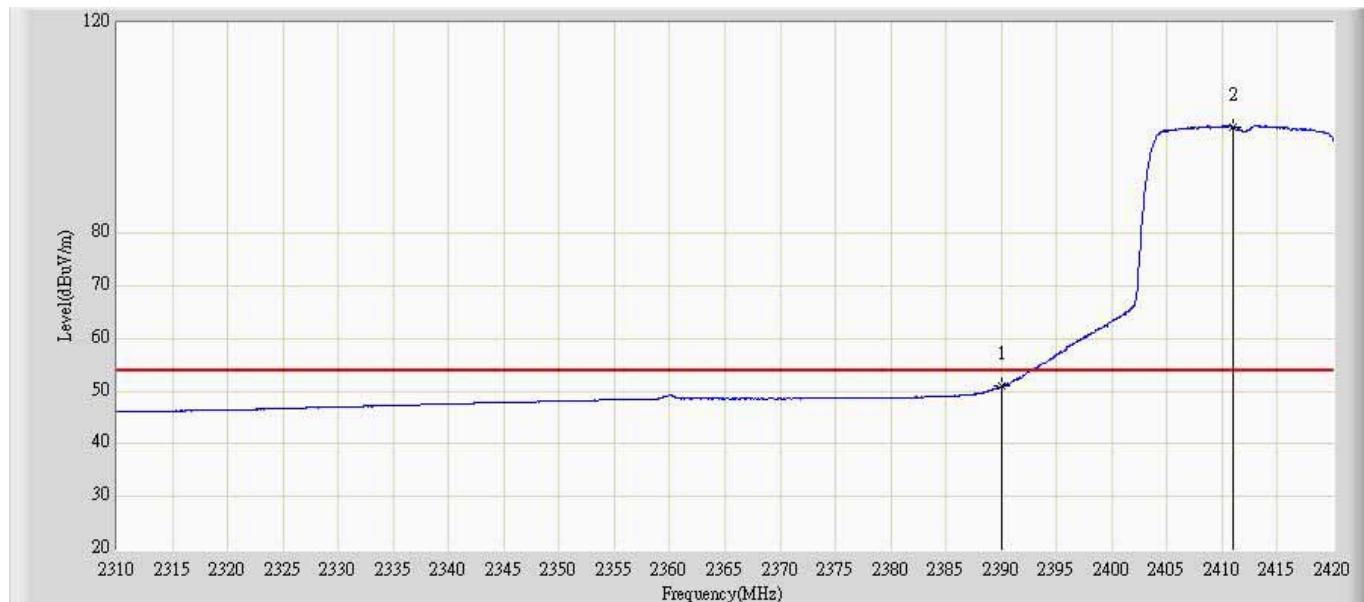
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.314	55.815	-4.686	54.000	-6.501	AV
2	*	2410.815	96.905	103.455	N/A	N/A	-6.550	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AO-24015)	



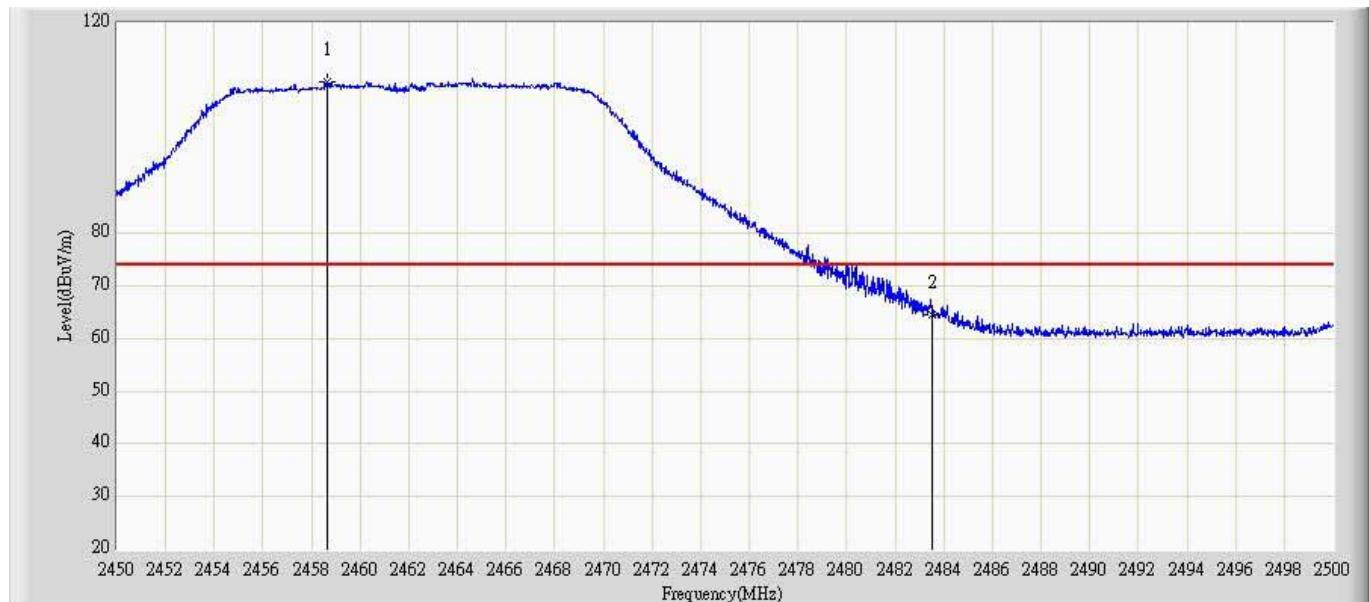
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	67.639	74.140	-6.361	74.000	-6.501	PK
2	*	2406.910	112.143	118.686	N/A	N/A	-6.543	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2412MHz By 802.11g (With antenna AO-24015)	



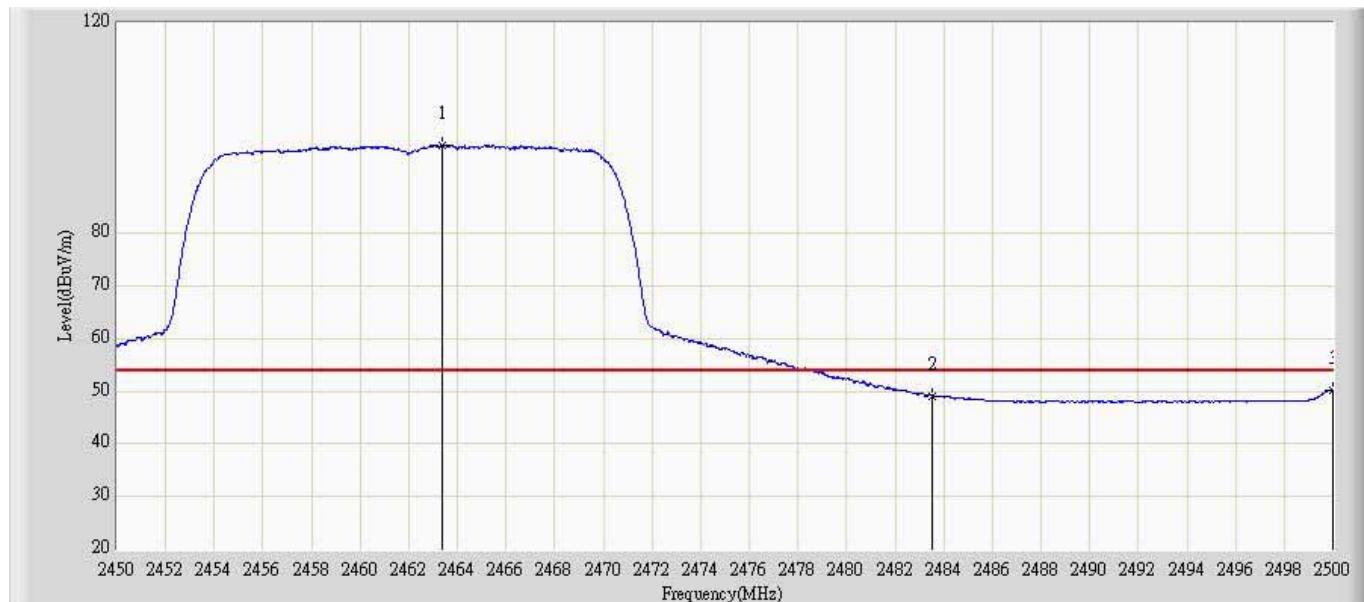
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.963	57.464	-3.037	54.000	-6.501	AV
2	*	2410.980	100.299	106.849	N/A	N/A	-6.550	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AO-24015)	



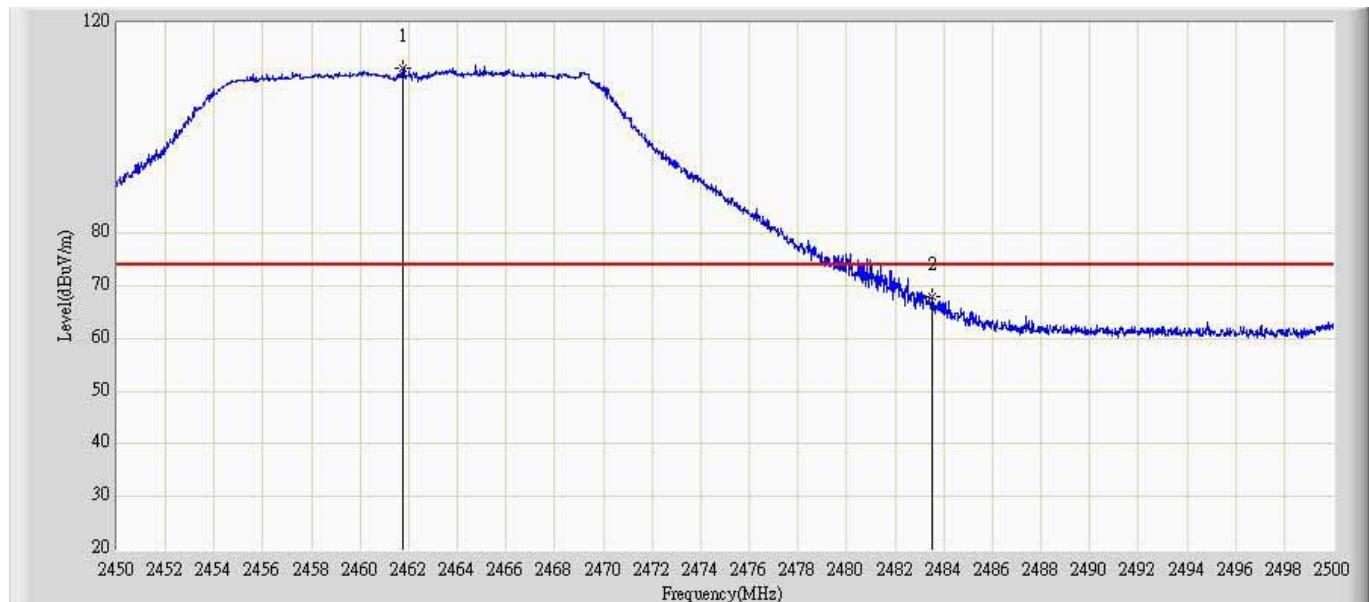
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.625	108.674	115.102	34.674	74.000	-6.428	PK
2		2483.500	64.646	71.052	N/A	N/A	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AO-24015)	



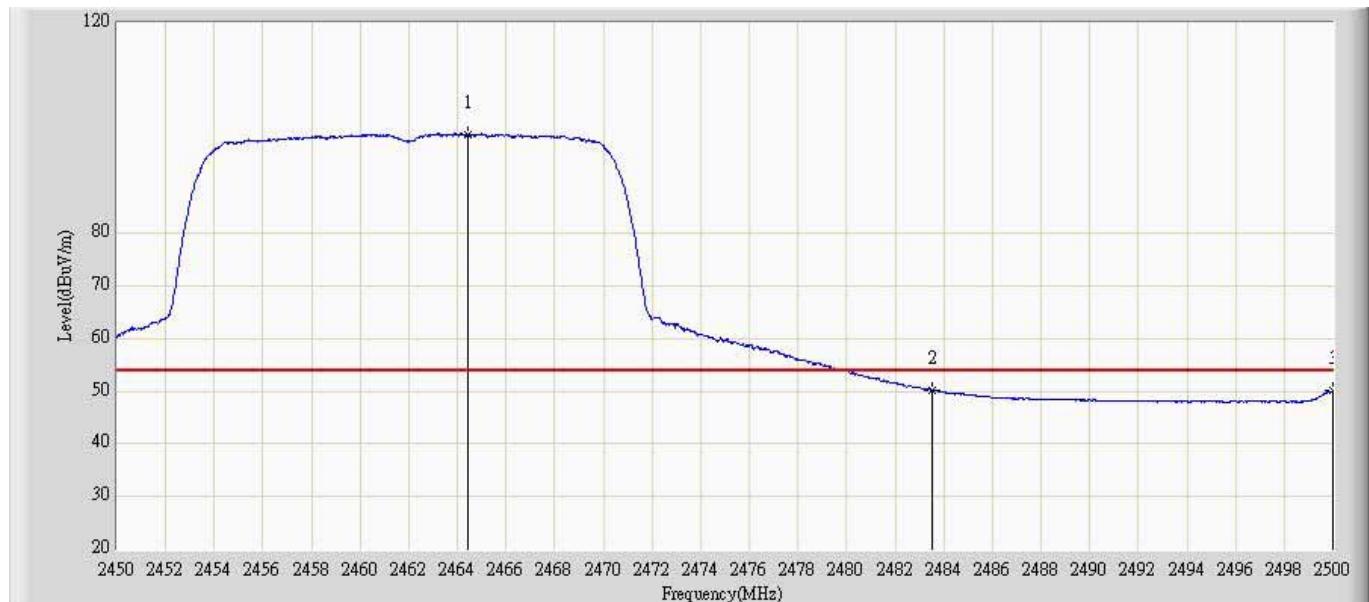
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.350	96.597	103.005	N/A	N/A	-6.409	AV
2		2483.500	49.157	55.563	-4.843	54.000	-6.406	AV
3		2500.000	50.263	56.708	-3.737	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AO-24015)	



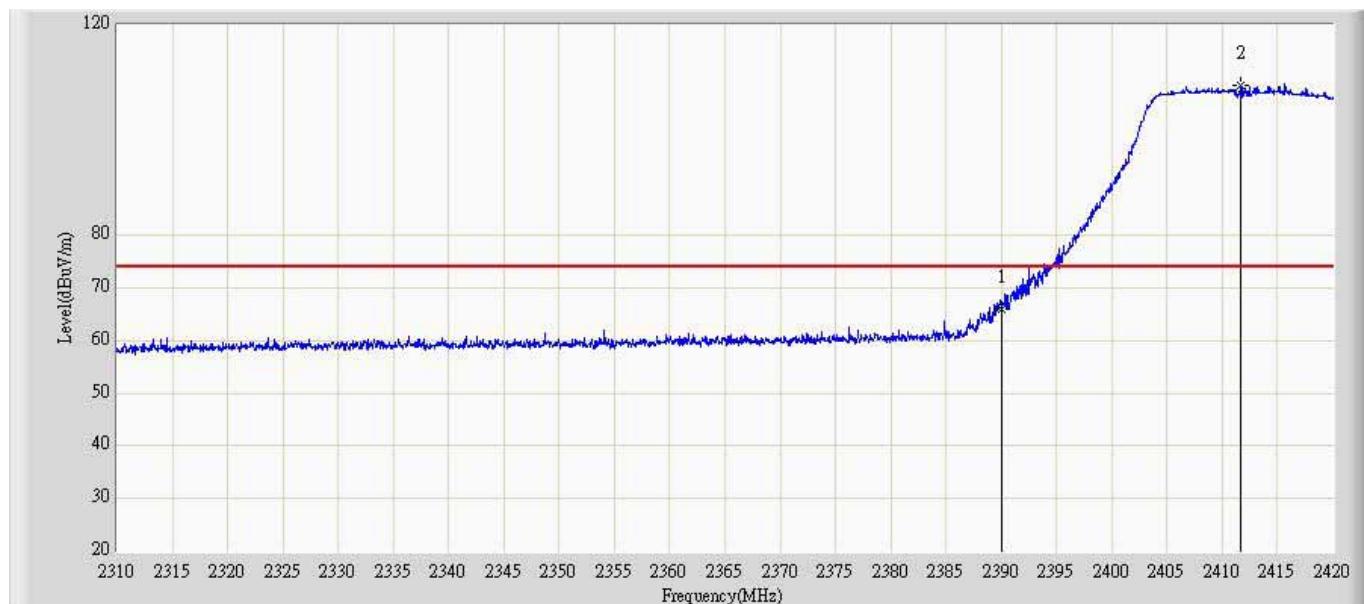
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.750	111.330	117.741	N/A	N/A	-6.411	PK
2		2483.500	68.121	74.527	-5.879	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 2: Transmit at channel 2462MHz By 802.11g (With antenna AO-24015)	



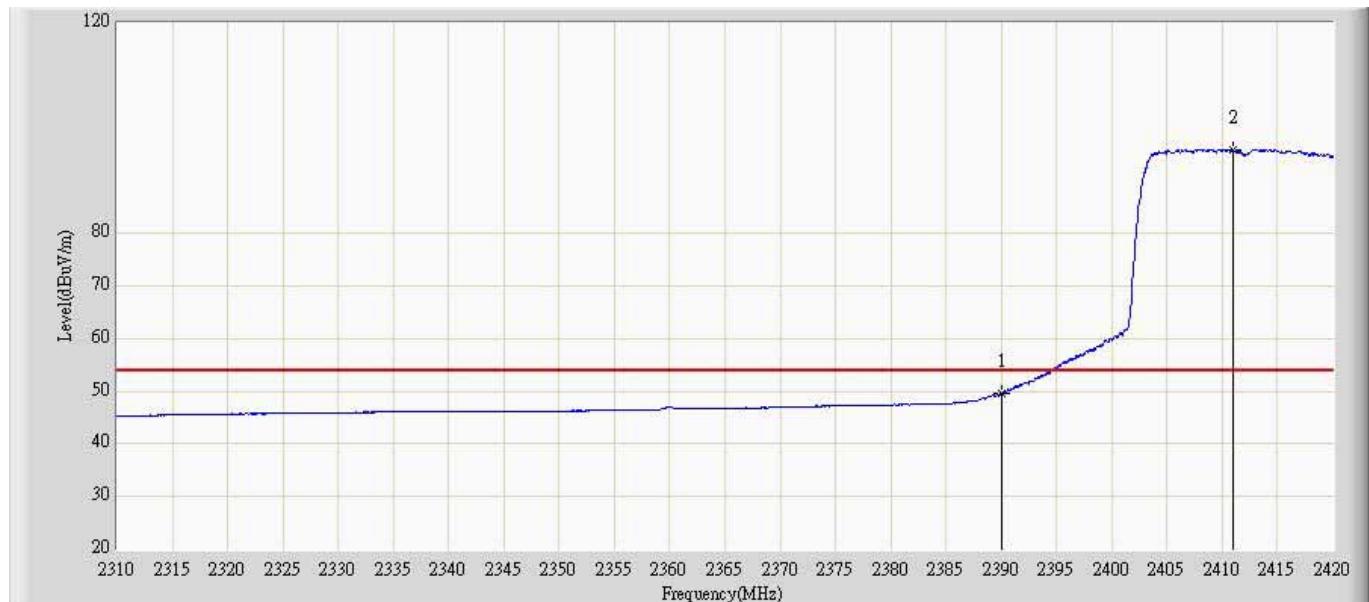
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.450	98.852	105.259	N/A	N/A	-6.406	AV
2		2483.500	50.176	56.582	-3.824	54.000	-6.406	AV
3		2500.000	50.041	56.486	-3.959	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AO-24015)	



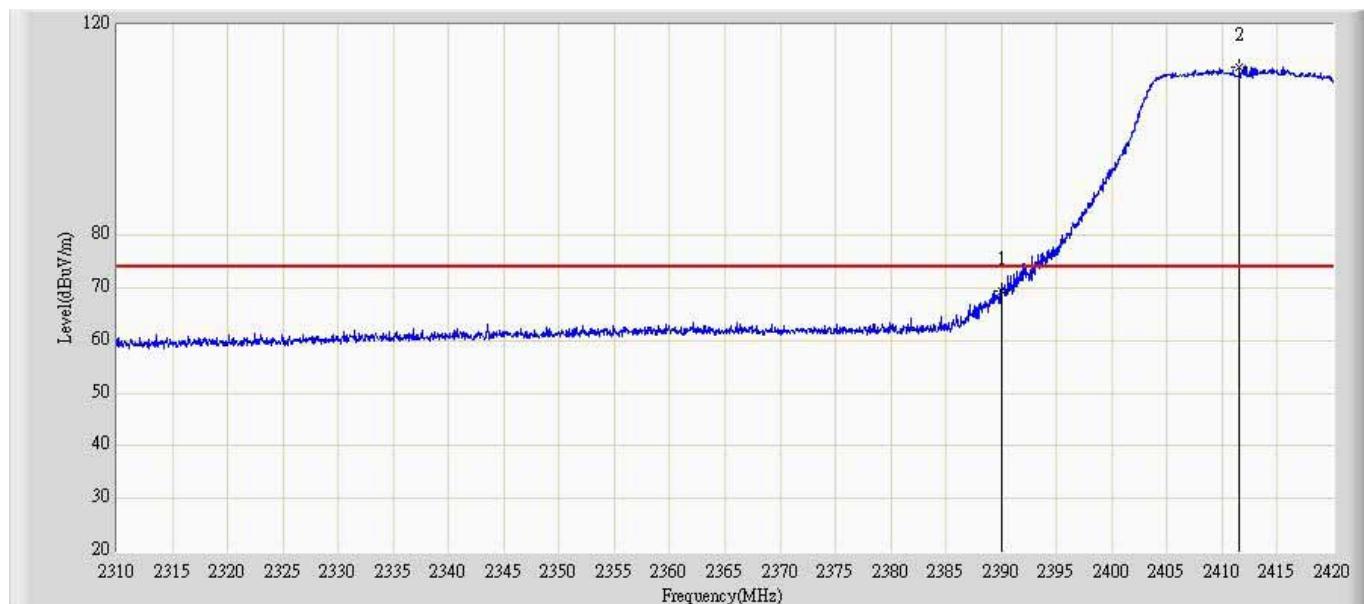
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	66.109	72.610	-7.891	74.000	-6.501	PK
2	*	2411.695	108.631	115.179	N/A	N/A	-6.547	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AO-24015)	



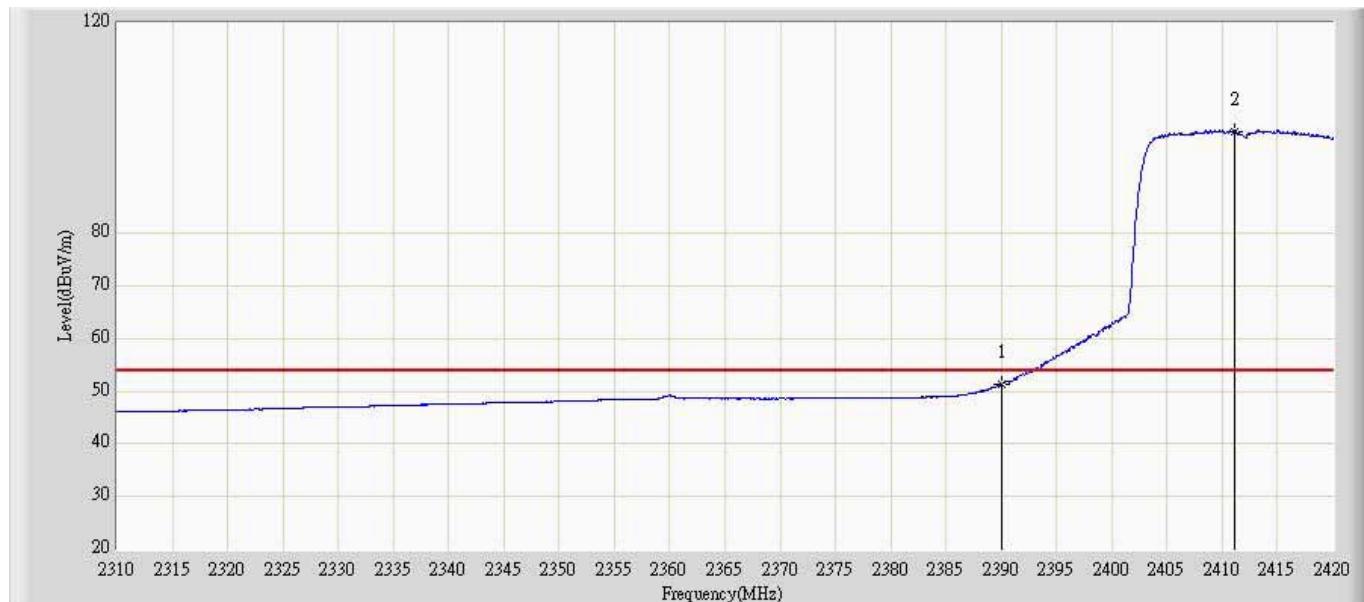
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.613	56.114	-4.387	54.000	-6.501	AV
2	*	2410.925	95.971	102.521	N/A	N/A	-6.550	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AO-24015)	



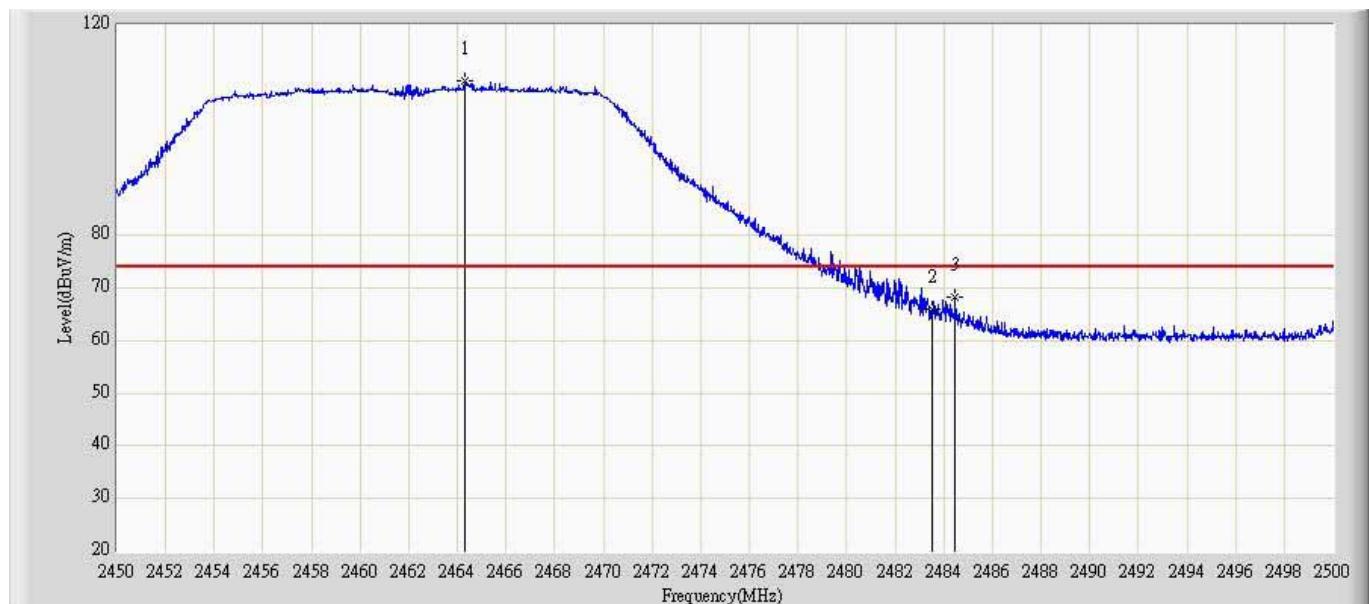
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	69.349	75.850	-4.651	74.000	-6.501	PK
2	*	2411.585	111.954	118.502	N/A	N/A	-6.548	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2412MHz By 802.11n(20MHz) (With antenna AO-24015)	



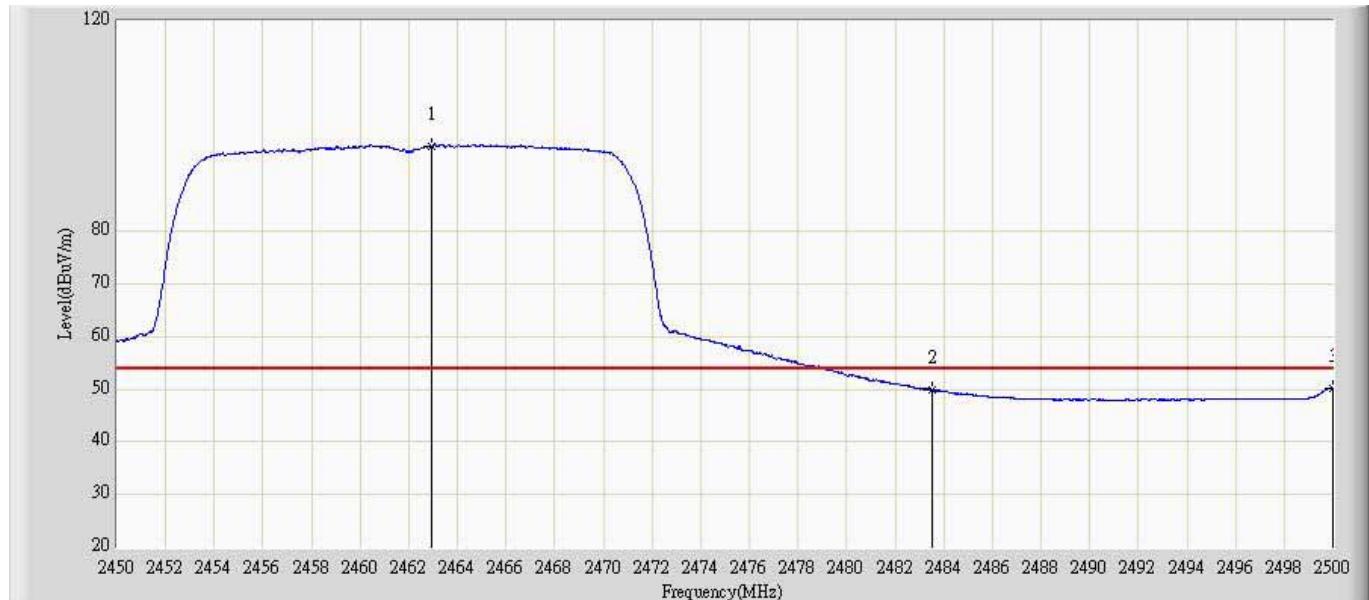
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.246	57.747	-2.754	54.000	-6.501	AV
2	*	2411.145	99.417	105.966	N/A	N/A	-6.550	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AO-24015)	



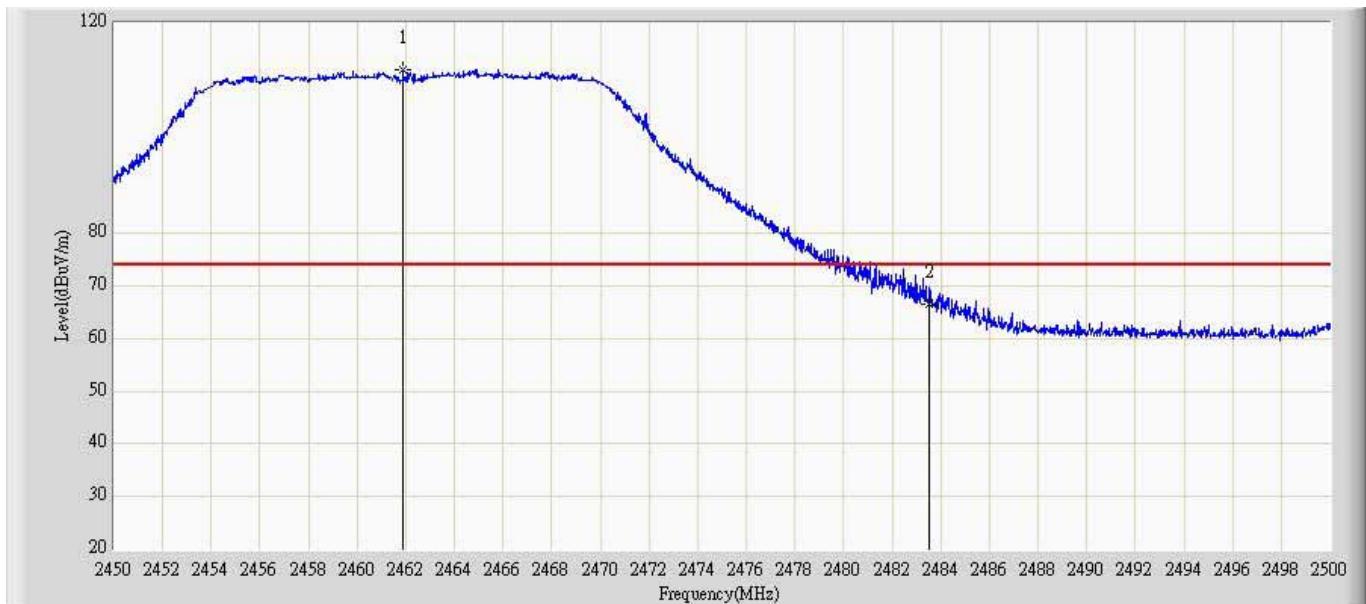
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.275	109.413	115.820	N/A	N/A	-6.407	PK
2		2483.500	65.865	72.271	-8.135	74.000	-6.406	PK
3		2484.475	68.187	74.596	-5.813	74.000	-6.409	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AO-24015)	



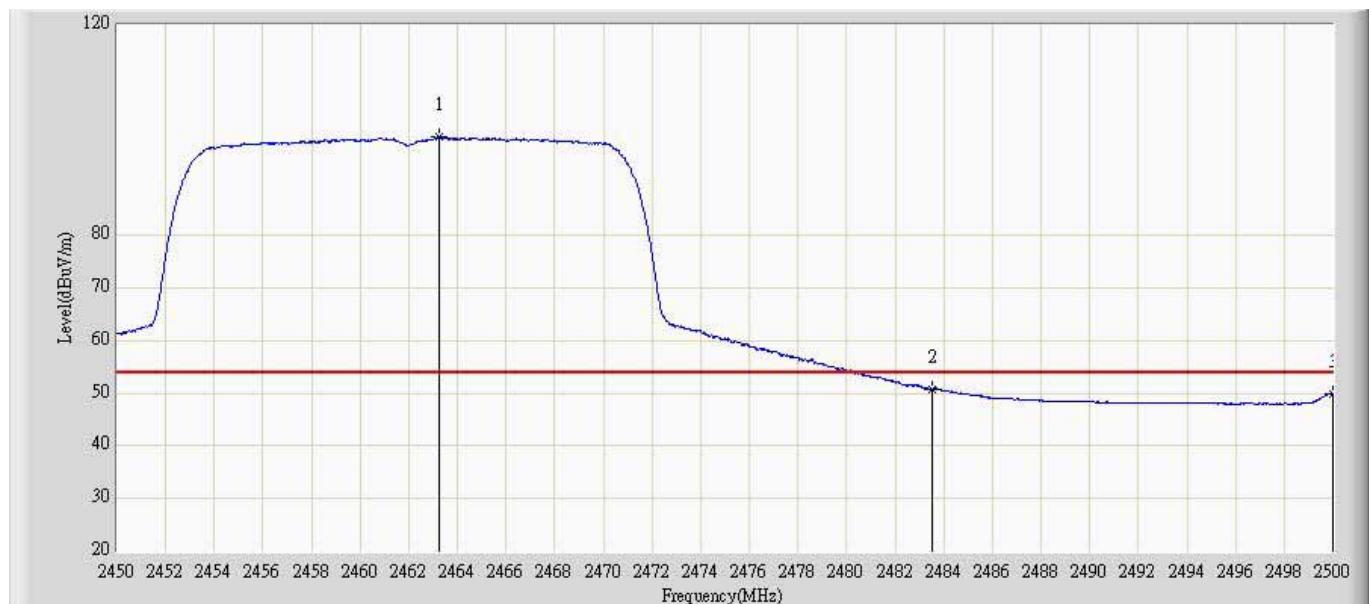
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.925	96.246	102.655	N/A	N/A	-6.410	AV
2		2483.500	49.936	56.342	-4.064	54.000	-6.406	AV
3		2500.000	50.204	56.649	-3.796	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AO-24015)	



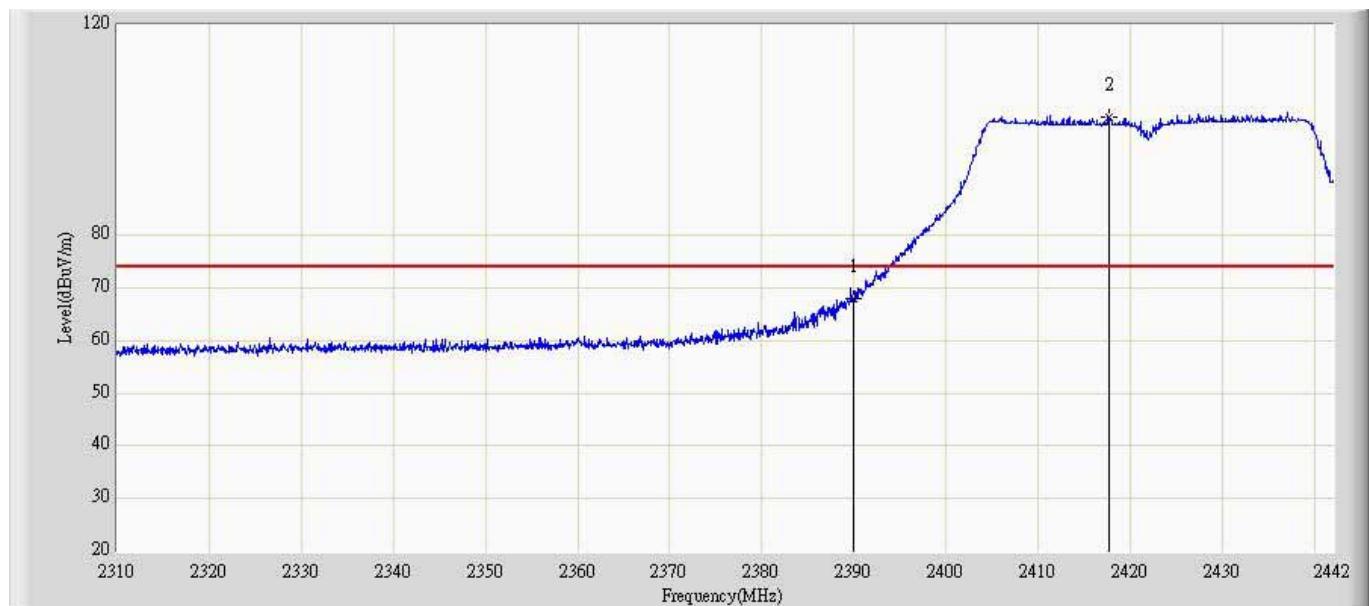
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.875	111.003	117.414	N/A	N/A	-6.411	PK
2		2483.500	66.685	73.091	-7.315	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 3: Transmit at channel 2462MHz By 802.11n(20MHz) (With antenna AO-24015)	



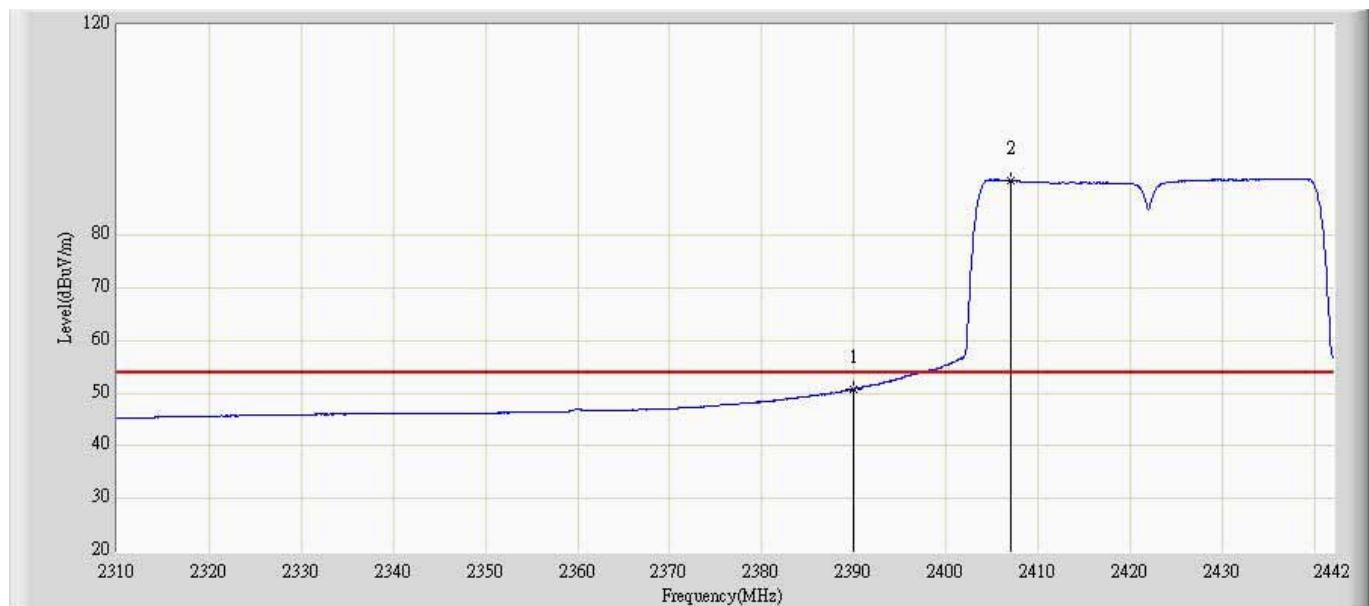
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.225	98.791	105.200	N/A	N/A	-6.409	AV
2		2483.500	50.788	57.194	-3.212	54.000	-6.406	AV
3		2500.000	49.957	56.402	-4.043	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AO-24015)	



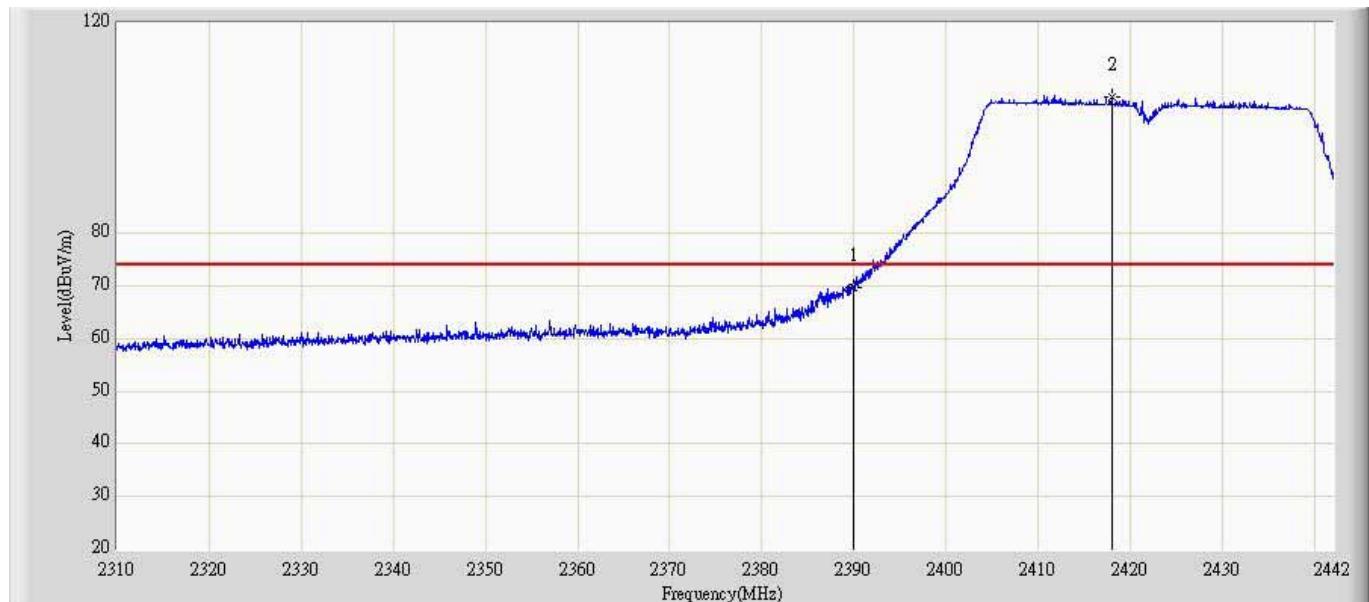
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	68.063	74.564	-5.937	74.000	-6.501	PK
2	*	2417.712	102.567	109.093	N/A	N/A	-6.526	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AO-24015)	



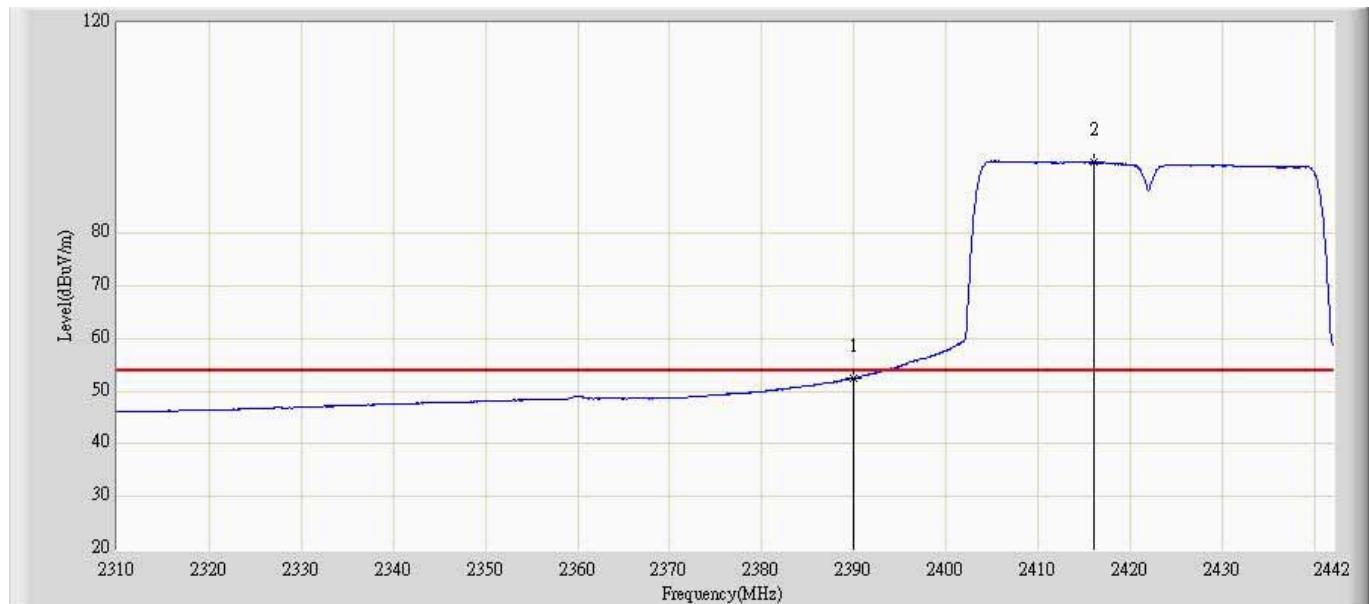
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.805	57.306	-3.195	54.000	-6.501	AV
2	*	2407.020	90.350	96.893	N/A	N/A	-6.543	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AO-24015)	



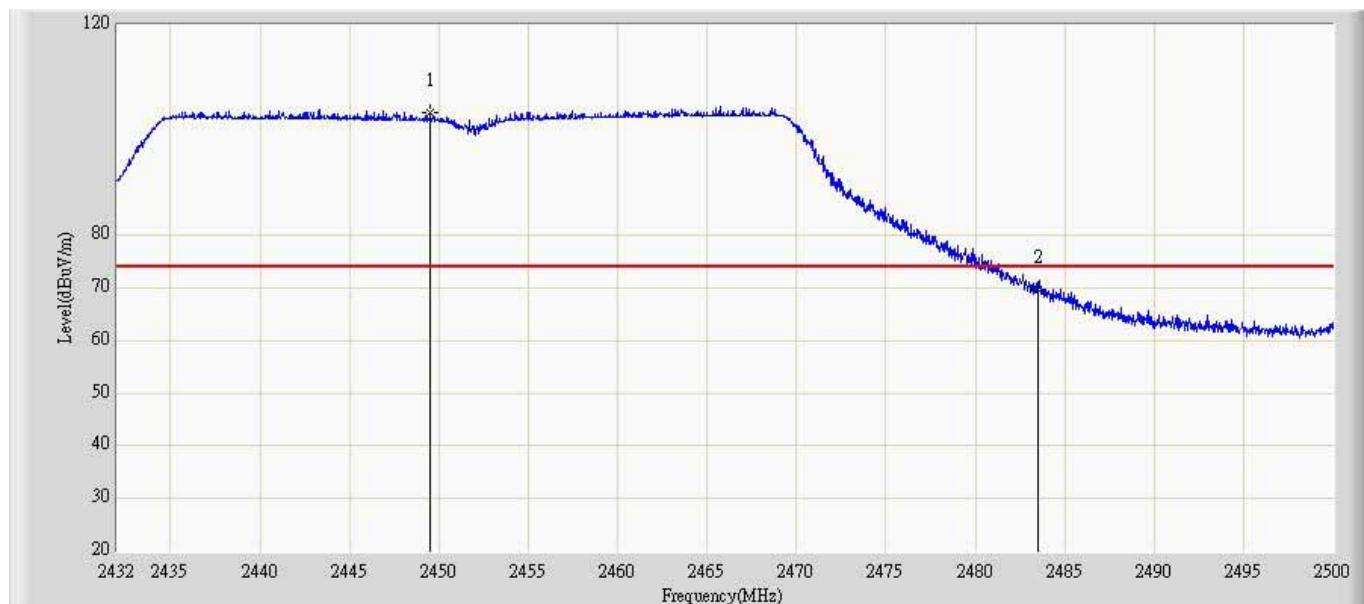
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	69.602	76.103	-4.398	74.000	-6.501	PK
2	*	2417.976	106.061	112.586	N/A	N/A	-6.526	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2422MHz By 802.11n(40MHz) (With antenna AO-24015)	



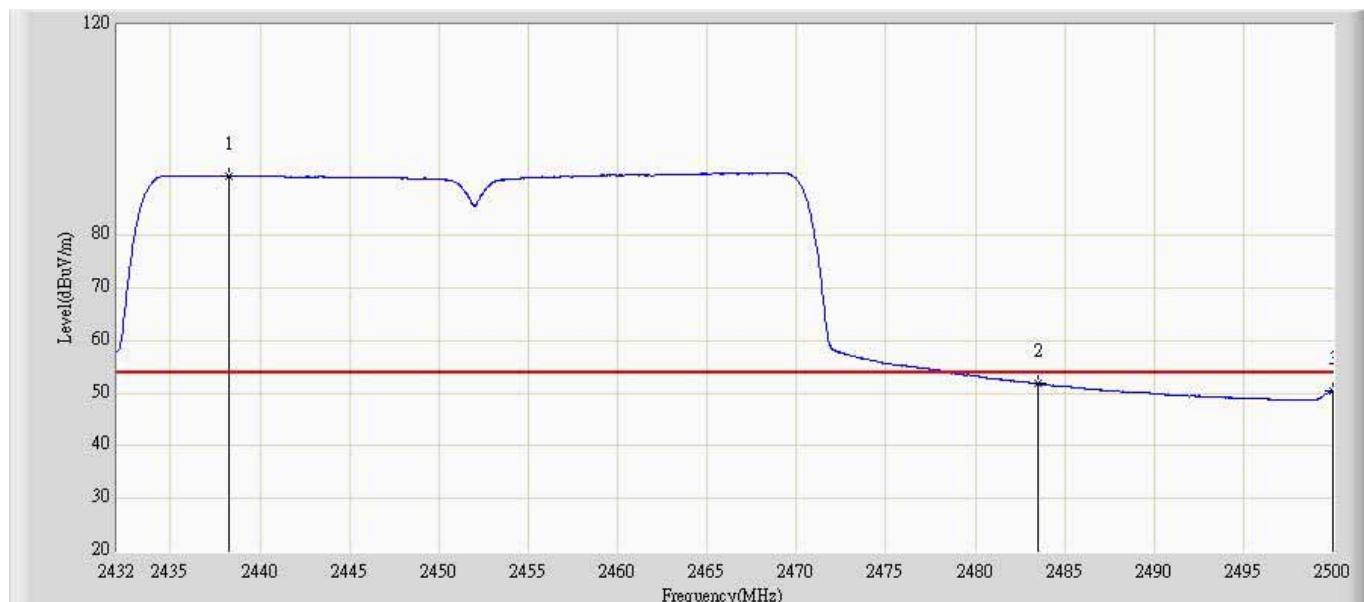
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.547	59.048	-1.453	54.000	-6.501	AV
2	*	2416.128	93.524	100.056	N/A	N/A	-6.532	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AO-24015)	



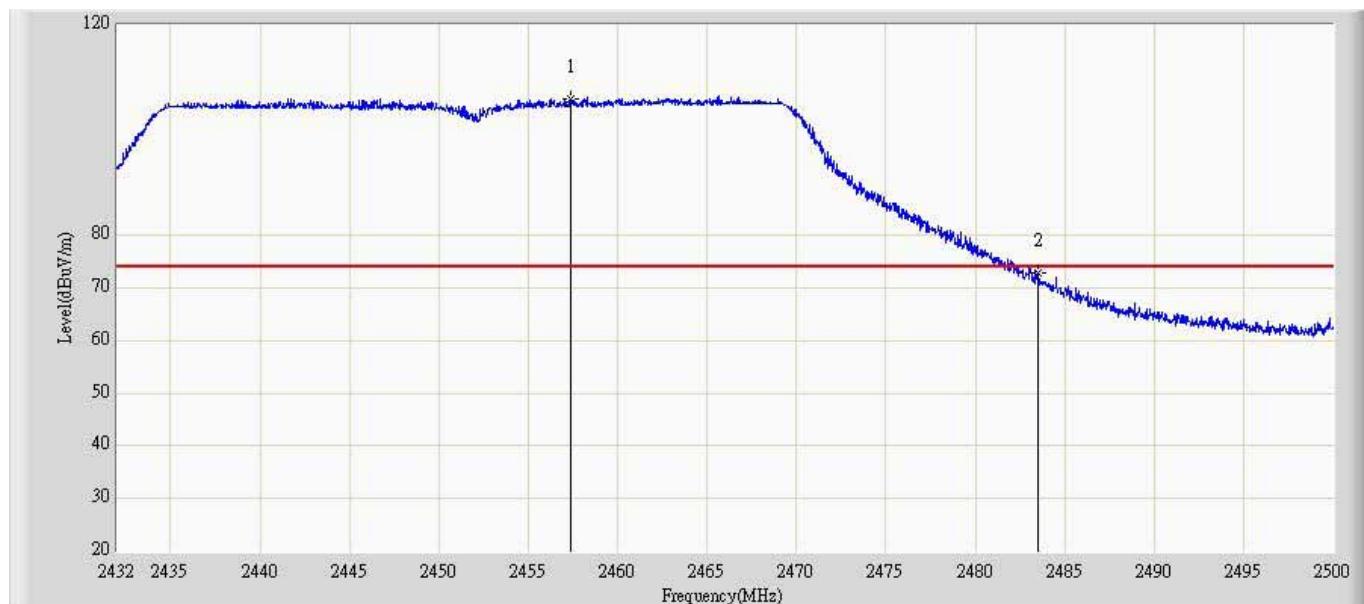
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2449.544	103.245	109.721	N/A	N/A	-6.476	PK
2		2483.500	69.646	76.052	-4.354	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AO-24015)	



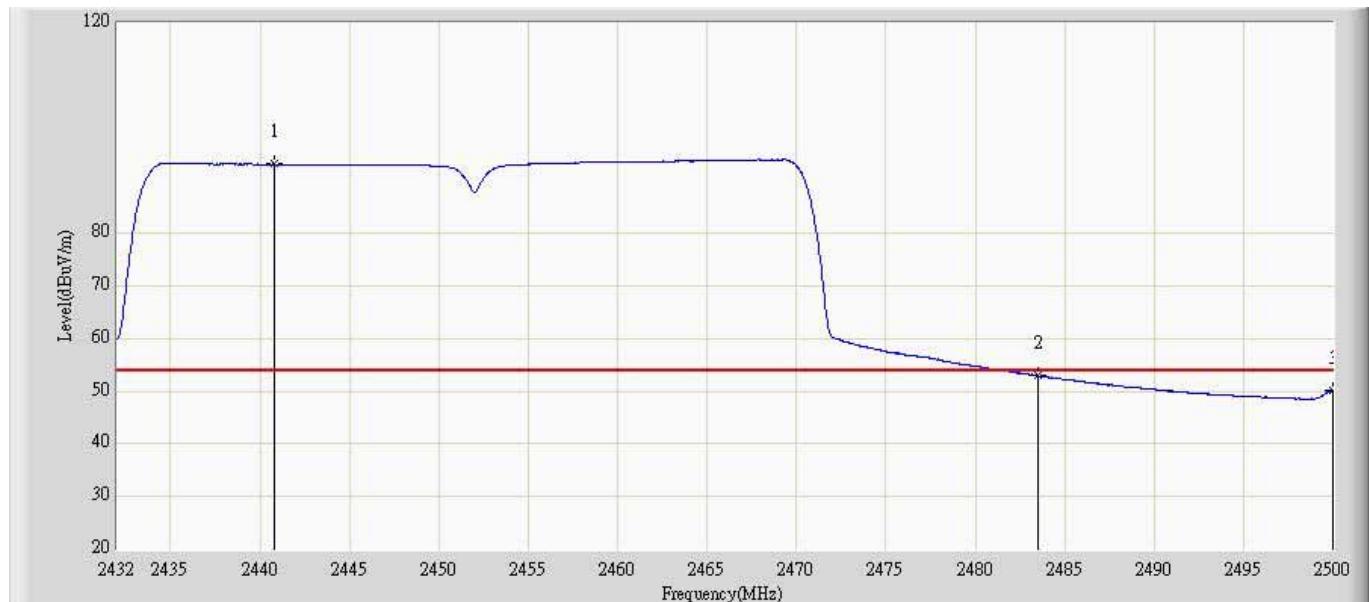
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2438.256	91.314	97.810	N/A	N/A	-6.496	AV
2		2483.500	51.806	58.212	-2.194	54.000	-6.406	AV
3		2500.000	50.388	56.833	-3.612	54.000	-6.445	AV

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AO-24015)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.398	105.929	112.363	N/A	N/A	-6.434	PK
2		2483.500	72.748	79.154	-1.252	74.000	-6.406	PK

Engineer: Roy	
Site: AC1	Time: 2013/11/02 - 15:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Top Catcher CC Tactical	Power: AC 120V/60Hz
Note: Mode 4: Transmit at channel 2452MHz By 802.11n(40MHz) (With antenna AO-24015)	



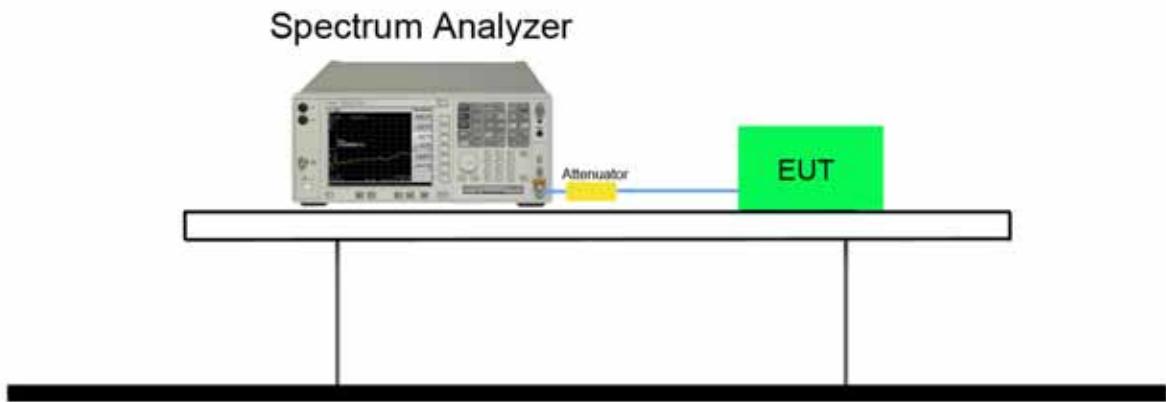
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2440.772	93.137	99.635	N/A	N/A	-6.498	AV
2		2483.500	52.963	59.369	-1.037	54.000	-6.406	AV
3		2500.000	50.169	56.614	-3.831	54.000	-6.445	AV

8. Operation Frequency Range of 20dB Bandwidth

8.1. Limit

20 dB bandwidth of the emission is contained within the operation frequency band.

8.2. Test Setup



8.3. Test Procedure

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

Set RBW = 100 kHz, Span greater than RBW.

8.4. Test Result

Product	: Top Catcher CC Tactical
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR3
Test Mode	: Mode 1: Transmit by 802.11b

Channel 01 (2412MHz)



Channel 11 (2462MHz)

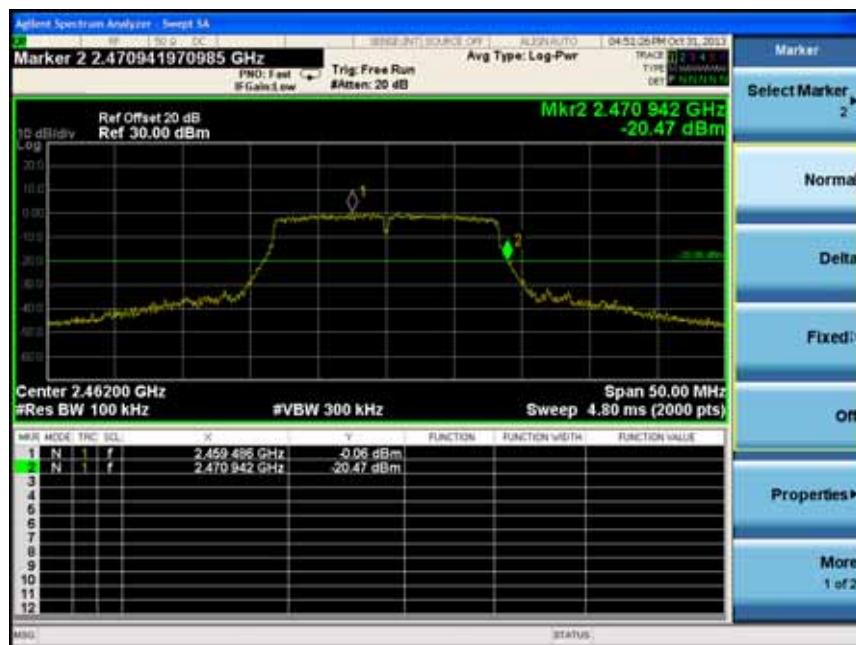


Product	: Top Catcher CC Tactical
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR3
Test Mode	: Mode 2: Transmit by 802.11g

Channel 01 (2412MHz)



Channel 11 (2462MHz)



Product	: Top Catcher CC Tactical
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR3
Test Mode	: Mode 3: Transmit by 802.11n(20MHz)

Channel 01 (2412MHz)



Channel 11 (2462MHz)

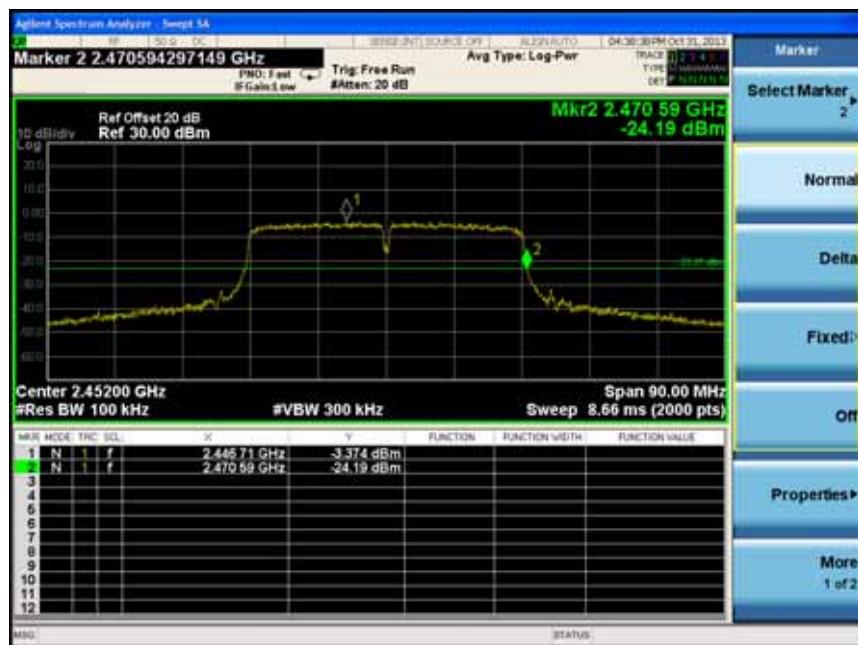


Product	: Top Catcher CC Tactical
Test Item	: Operation Frequency Range of 20dB Bandwidth
Test Site	: TR3
Test Mode	: Mode 4: Transmit by 802.11n(40MHz)

Channel 03 (2422MHz)



Channel 09 (2452MHz)

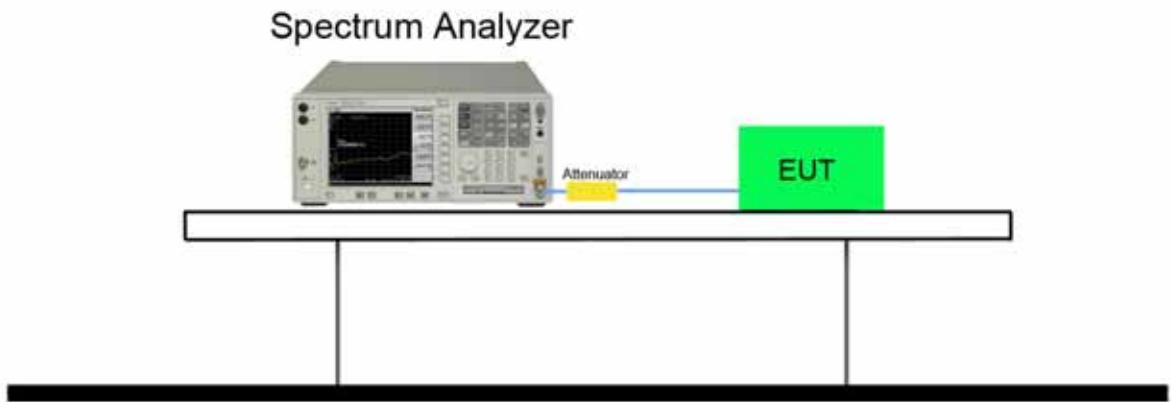


9. Occupied Bandwidth

9.1. Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

9.2. Test Setup



9.3. Test Procedure

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

DTS bandwidth OPTION 2:

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW \geq 3 * RBW, peak detector with maximum hold) is implemented by the instrumentation function.

9.4. Test Result

Product	:	Top Catcher CC Tactical
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR3
Test Mode	:	Mode 1: Transmit by 802.11b

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	12031	500	Pass
06	2437	12031	500	Pass
11	2462	12006	500	Pass

Channel 01 (2412MHz)



Channel 06 (2437MHz)



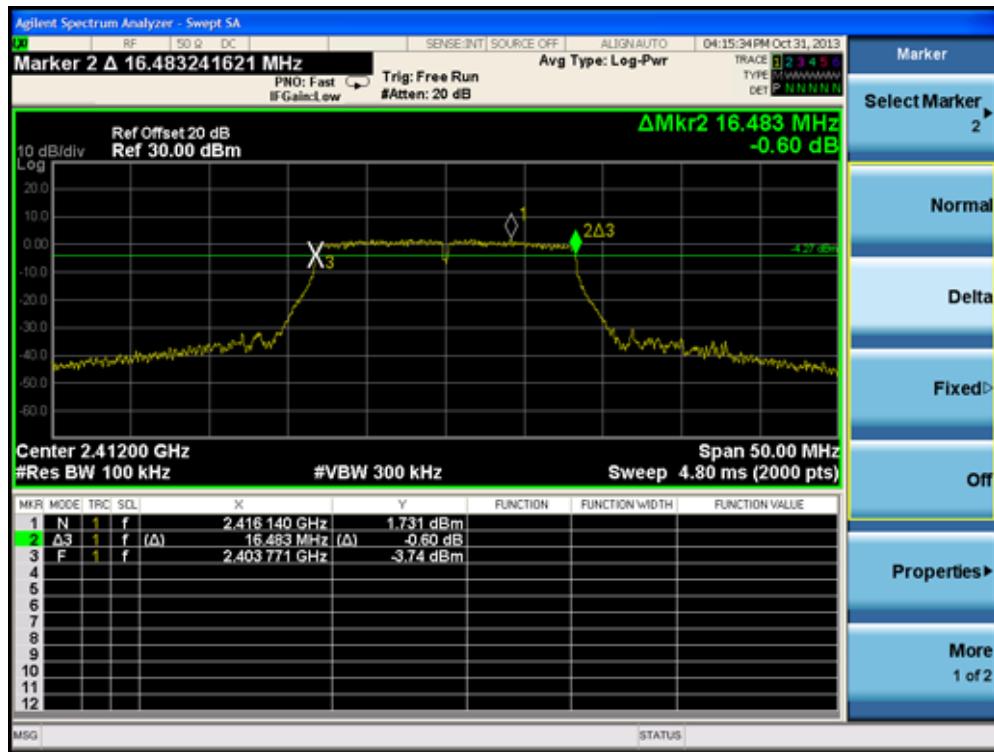
Channel 11 (2462MHz)



Product	:	Top Catcher CC Tactical
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR3
Test Mode	:	Mode 2: Transmit by 802.11g

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	16483	500	Pass
06	2437	16508	500	Pass
11	2462	16458	500	Pass

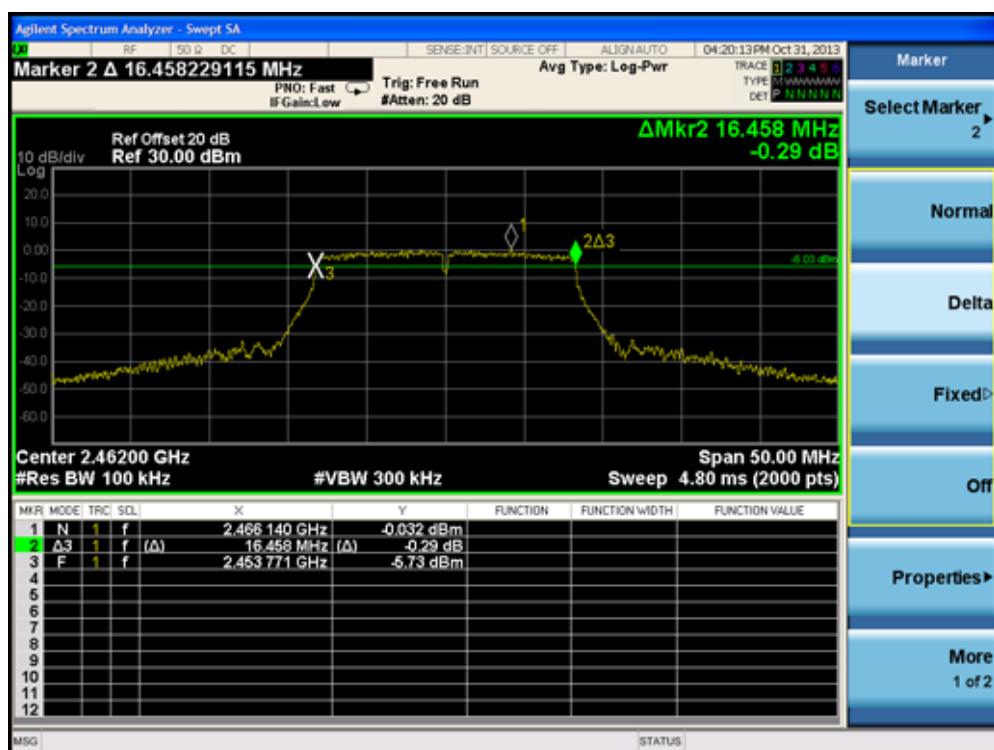
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



Product	:	Top Catcher CC Tactical
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR3
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	17634	500	Pass
06	2437	17609	500	Pass
11	2462	17634	500	Pass

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



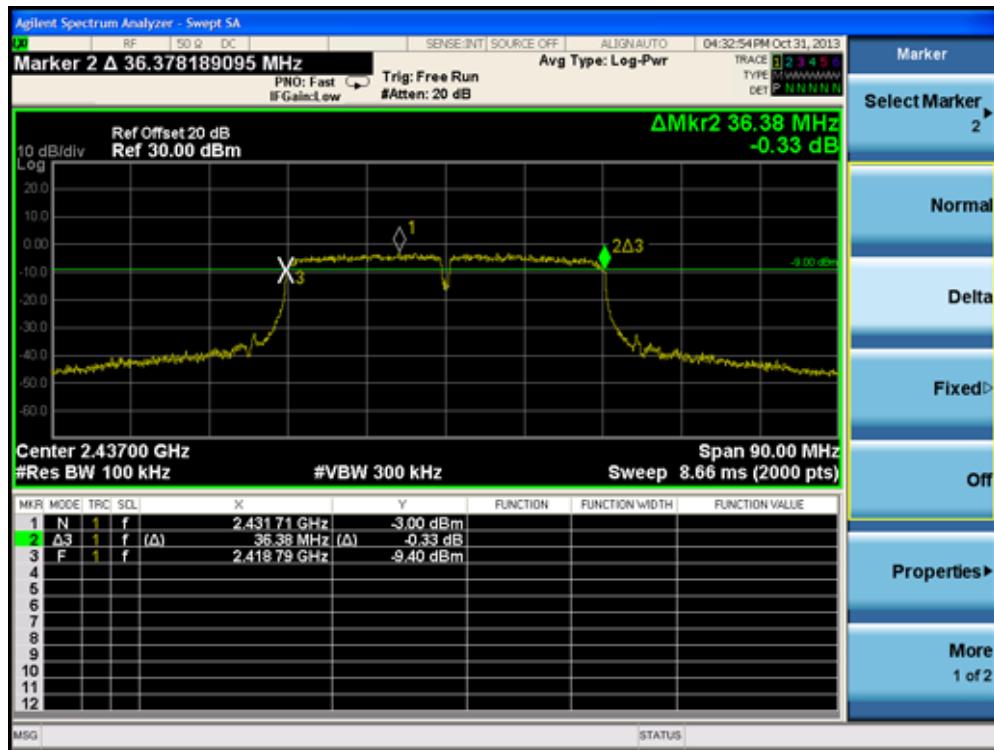
Product	:	Top Catcher CC Tactical
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR3
Test Mode	:	Mode 4: Transmit by 802.11n(40MHz)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
03	2422	36240.0	500	Pass
06	2437	36380.0	500	Pass
09	2452	36020.0	500	Pass

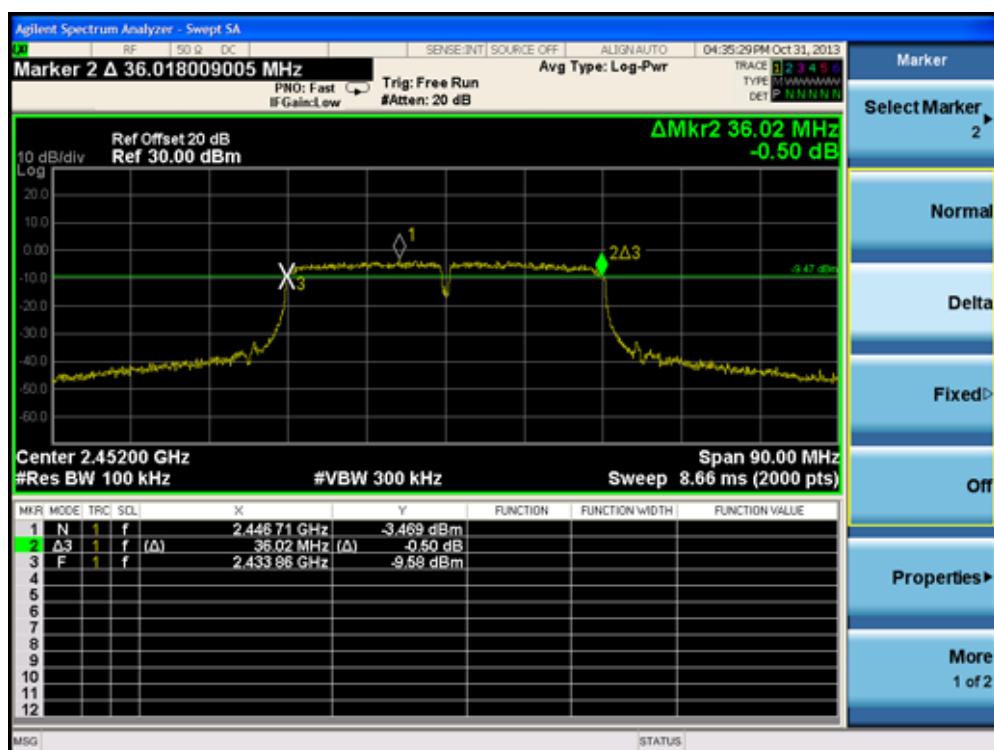
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



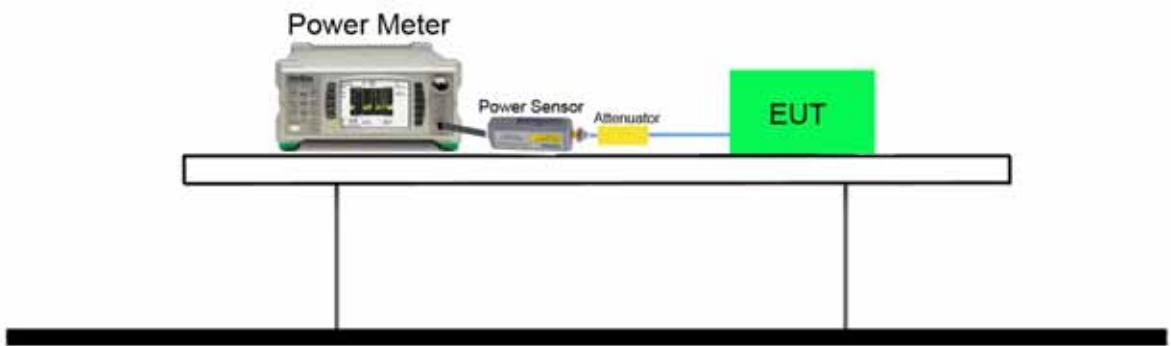
10. Power Output

10.1. 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.

10.2. Test Setup



10.3. 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.

10.4. 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	20MHz Bandwidth		40MHz Bandwidth	
				800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	6.5	7.2	13.5	15.0
1	1	2	9	13.0	14.4	27.0	30.0
2	1	5.5	12	19.5	21.7	40.5	45.0
3	1	11	18	26.0	28.9	54.0	60.0
4	1	---	24	39.0	43.3	81.0	90.0
5	1	---	36	52.0	57.8	108.0	120.0
6	1	---	48	58.5	65.0	121.5	135.0
7	1	---	54	65.0	72.2	135.0	150.0

Power output at various data rates:

Test Mode	Bandwidth	Frequency (MHz)	Channel	Data Rate	Peak Power (dBm)
802.11b	20	2437	6	1	19.14
				5.5	18.97
				11	18.74
802.11g	20	2437	6	6	20.77
				24	20.44
				54	20.29
802.11n	20	2437	6	MCS0	20.48
				MCS4	20.09
				MCS7	19.88
802.11n	40	2437	6	MCS0	19.86
				MCS4	19.74
				MCS7	19.32

Product	:	Top Catcher CC Tactical
Test Item	:	Power Output
Test Site	:	TR3
Test Mode	:	Mode 1: Transmit by 802.11b

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	2412	20.06	27.00	Pass
6	2437	19.14	27.00	Pass
11	2462	18.38	27.00	Pass

Product	:	Top Catcher CC Tactical
Test Item	:	Power Output
Test Site	:	TR3
Test Mode	:	Mode 2: Transmit by 802.11g

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	2412	21.82	27.00	Pass
6	2437	20.77	27.00	Pass
11	2462	19.95	27.00	Pass

Product	:	Top Catcher CC Tactical
Test Item	:	Power Output
Test Site	:	TR3
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	2412	21.67	27.00	Pass
6	2437	20.48	27.00	Pass
11	2462	19.62	27.00	Pass

Product	:	Top Catcher CC Tactical
Test Item	:	Power Output
Test Site	:	TR3
Test Mode	:	Mode 4: Transmit by 802.11n(40MHz)

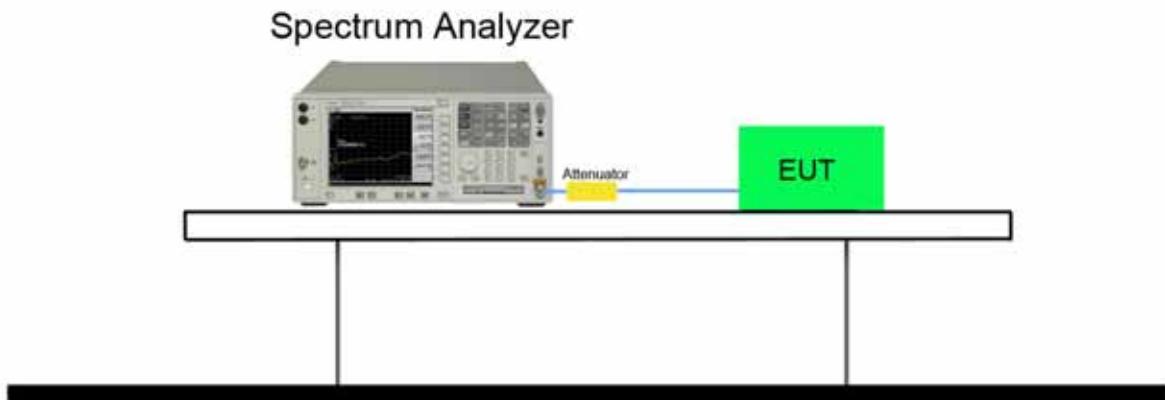
Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
3	2422	21.25	27.00	Pass
6	2437	19.86	27.00	Pass
9	2452	19.19	27.00	Pass

11. Power Spectral Density

11.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiated to the Antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

11.2. Test Setup



11.3. Test Procedure

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

Set analyzer center frequency to DTS channel center frequency, the span to 1.5 times the DTS channel bandwidth, RBW 3 kHz, Set VBW 3 * RBW, Sweep time = auto couple, Detector = peak, Trace mode = max hold, Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level. If measured value exceed limit reduce RBW (no less than 3kHz) and repeat.

11.4. Test Result

Product	:	Top Catcher CC Tactical
Test Item	:	Power Spectral Density
Test Site	:	TR3
Test Mode	:	Mode 1: Transmit by 802.11b

Channel No.	Frequency (MHz)	Measurement PSD (dBm)	Limit (dBm)	Result
01	2412	-10.317	5	Pass
06	2437	-11.374	5	Pass
11	2462	-12.103	5	Pass

Channel 01 (2412MHz)



Channel 06 (2437MHz)



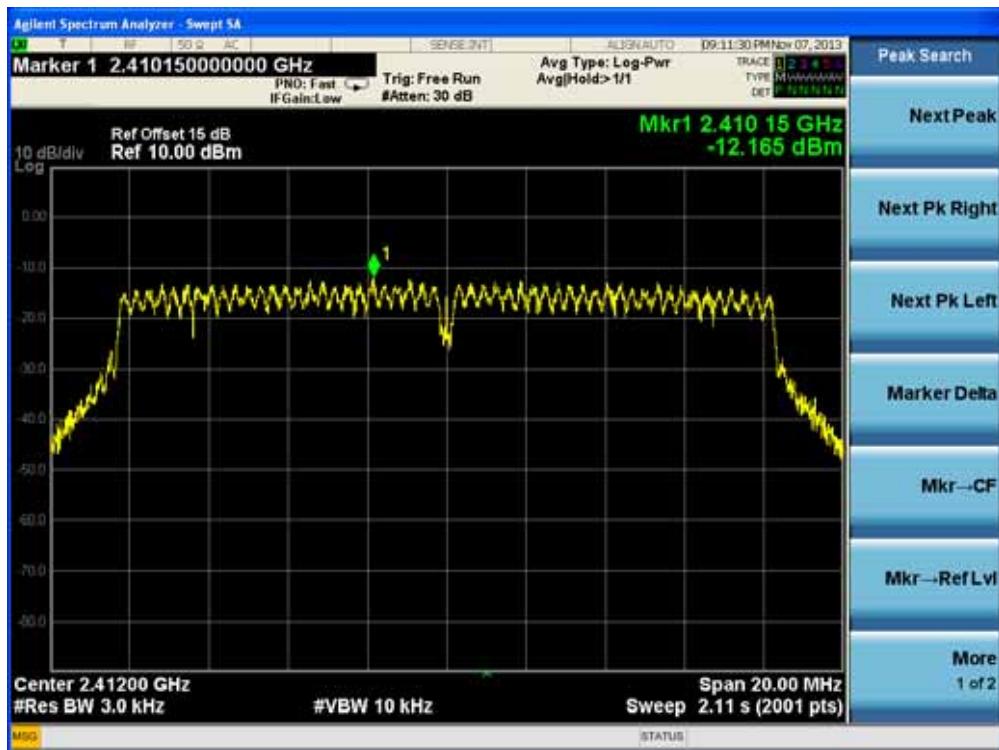
Channel 11 (2462MHz)



Product	:	Top Catcher CC Tactical
Test Item	:	Power Spectral Density
Test Site	:	TR3
Test Mode	:	Mode 2: Transmit by 802.11g

Channel No.	Frequency (MHz)	Measurement PSD (dBm)	Limit (dBm)	Result
01	2412	-12.165	5	Pass
06	2437	-13.218	5	Pass
11	2462	-14.032	5	Pass

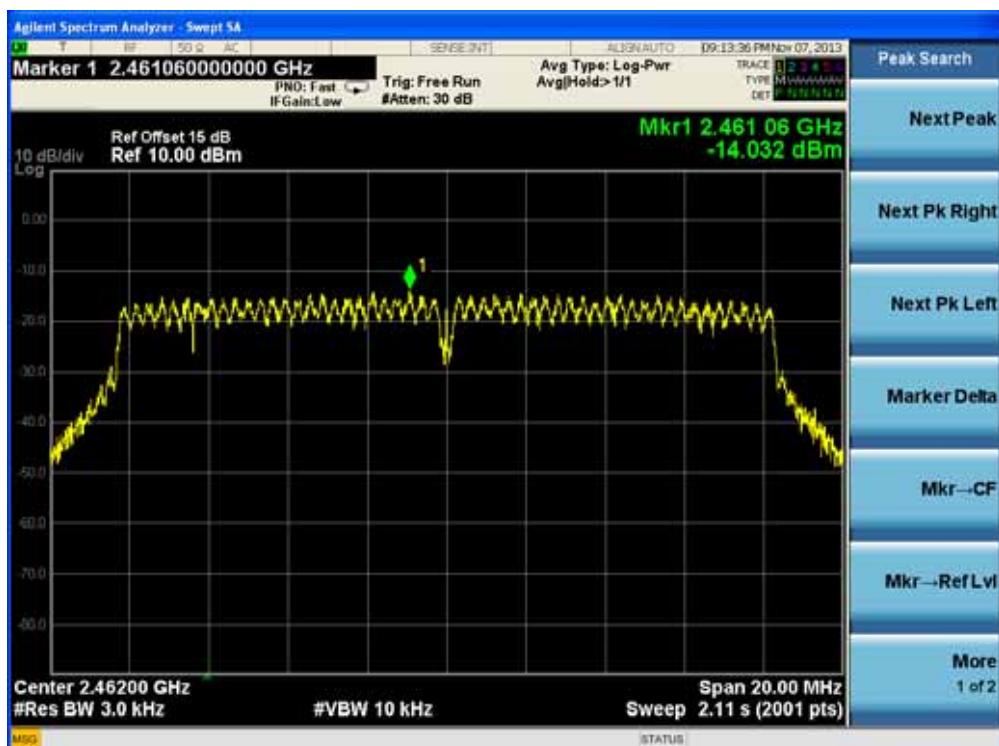
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



Product	: Top Catcher CC Tactical
Test Item	: Power Spectral Density
Test Site	: TR3
Test Mode	: Mode 3: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	Measurement PSD (dBm)	Limit (dBm)	Result
01	2412	-11.654	5	Pass
06	2437	-12.887	5	Pass
11	2462	-13.853	5	Pass

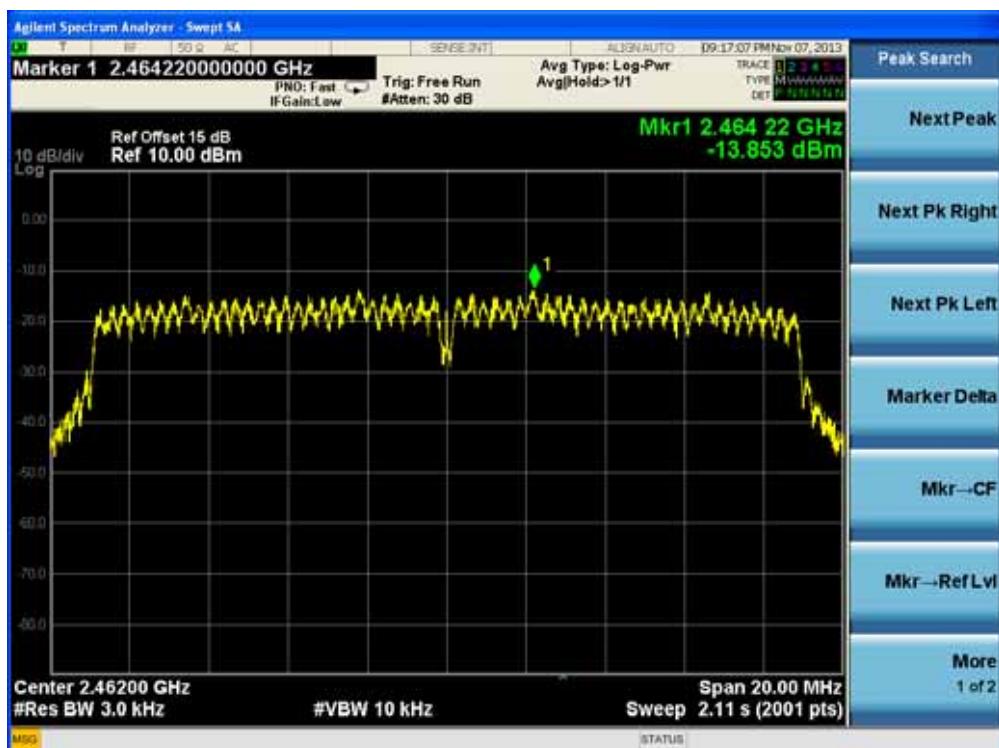
Channel 01 (2412MHz)



Channel 06 (2437MHz)



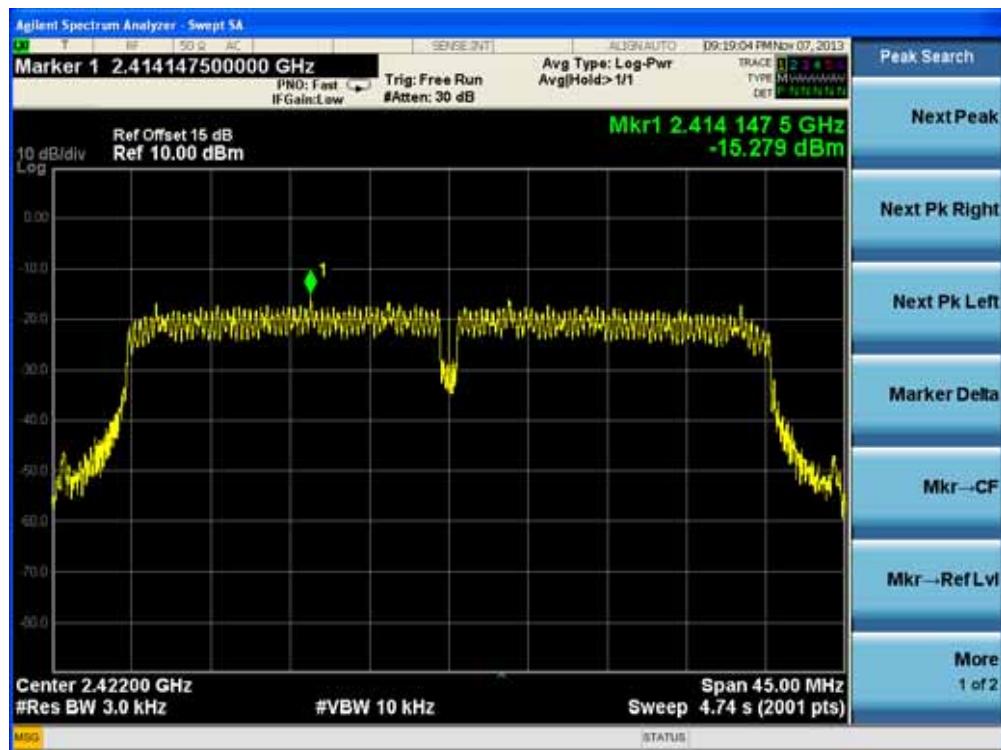
Channel 11 (2462MHz)



Product	: Top Catcher CC Tactical
Test Item	: Power Spectral Density
Test Site	: TR3
Test Mode	: Mode 4: Transmit by 802.11n(40MHz)

Channel No.	Frequency (MHz)	Measurement PSD (dBm)	Limit (dBm)	Result
03	2422	-15.279	5	Pass
06	2437	-16.416	5	Pass
09	2452	-16.307	5	Pass

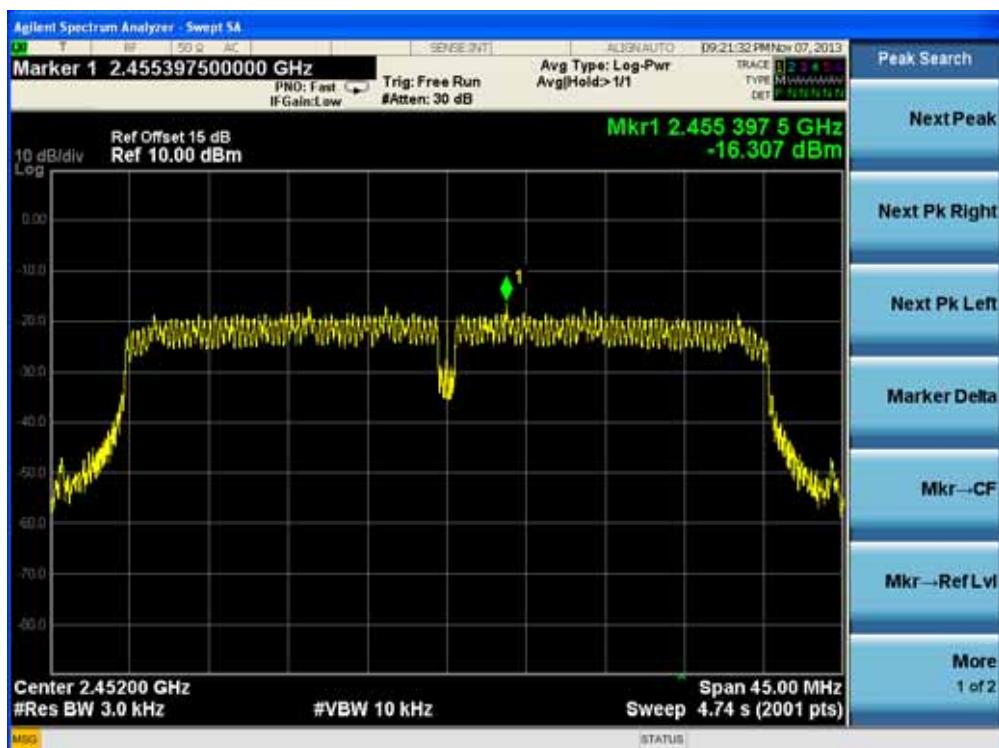
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



12. Measurement Uncertainty

Conducted Emission
The maximum measurement uncertainty is defined as: 9kHz~30MHz: ±2.02dB
Radiated disturbance
The maximum measurement uncertainty is defined as: Below 1GHz: ±3.8dB Above 1GHz: ±3.9dB
RF Antenna Conducted Spurious
The maximum measurement uncertainty is defined as: ±1.27 dB.
Radiated Emission Band Edge
The maximum measurement uncertainty is defined as: Above 1GHz: ±3.9dB
Operation Frequency Range of 20dB Bandwidth
The maximum measurement uncertainty is defined as: ±1 kHz.
Occupied Bandwidth
The maximum measurement uncertainty is defined as: ±1 kHz.
Power Output
The maximum measurement uncertainty is evaluated as ±1.27 dB.
Power Spectral Density
The maximum measurement uncertainty is evaluated as ±1.27 dB.

13. List of Measuring Instrument

Conducted Emission

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
EMI Test Receiver	R&S	ESR7	101209	2014/07/17
Two-Line V-Network	R&S	ENV216	101683	2014/07/17
Two-Line V-Network	R&S	ENV216	101684	2014/07/17
Temperature/ Meter Humidity	Anymetre	TH101B	SR2-01	2014/08/15

Radiated Emission

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9038A	MY51210155	2014/08/15
Preamplifier	MRT	AP01G18	1310002	2014/10/08
Preamplifier	MRT	AP18G40	1310003	2014/10/08
Loop Antenna	Schwarzbeck	FMZB1519	1519-041	2014/09/13
TRILOG Antenna	Schwarzbeck	VULB9162	9162-047	2014/09.13
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1167	2014/09/13
Broadband Horn Antenna	Schwarzbeck	BBHA9170	9170-549	2014/09/13
Temperature/Humidity Meter	Anymetre	TH101B	AC1-01	2014/08/15

Operation Frequency Range of 20dB Bandwidth

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY5144016A	2014/08/15
Temperature/Humidity Meter	Anymetre	TH101B	TR3-01	2014/08/15

Occupied Channel Bandwidth

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY5144016A	2014/08/15
Temperature/Humidity Meter	Anymetre	TH101B	TR3-01	2014/08/15

Power Output

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Power Meter	Anritsu	ML2495A	0905006	2013/11/10
Power Sensor	Anritsu	MA2411B	0846014	2013/11/10
Temperature/Humidity Meter	Anymetre	TH101B	TR3-01	2014/08/15

Power Spectral Density

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY5144016A	2014/08/15
Temperature/Humidity Meter	Anymetre	TH101B	TR3-01	2014/08/15

The End
