

Application for FCC Certification
On behalf of

Sipod Inc.

Product Name: Sipod IP WALKIE TALKIE

Model No.: C200

Serial No.: E2010011809

FCC ID: X64-C200

Prepared For : Sipod Inc.
4633 Old Ironsides Drive, #400 Santa Clara, CA 95054

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Report No. : ACI-F10021
Date of Test : Feb. 10 - 23, 2010
Date of Report : Feb. 26, 2010

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Sipod Inc.
Manufacturer : Alane Technology (Suzhou) Co., Ltd.
Alane International Co., Ltd.
EUT Description : Sipod IP WALKIE TALKIE
(A) Model No. : C200
(B) Serial No. : E2010011809
(C) Power Supply : DC 4.2V (Li-ion Battery)
(D) Test Voltage : AC 120V/60Hz via switching adapter

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART C OCTOBER 2008
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: C200, S/N: E2010011809), which was tested on Feb. 10 - 23, 2010 is technically compliance with the FCC limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

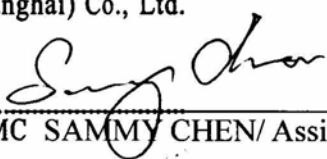
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Feb. 10 – 23, 2010 Date of Report : Feb. 26, 2010

Producer : 
ALAN HE / Assistant

Review : 
DIO YANG / Deputy Assistant Manager

AUDIX[®] For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : 
Authorized Signature EMC SAMMY CHEN/ Assistant Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Conducted Emission	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2008 AND ANSI C63.4:2003 AND KDB558074	Pass	15.207
Radiated Emission	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2008 AND ANSI C63.4:2003 AND KDB558074	Pass	15.209(a) 15.205(a)(c)
6 dB Bandwidth Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2008 AND ANSI C63.4:2003 AND KDB558074	Pass	15.247(a)(2)
Maximum Peak Output Power Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2008 AND ANSI C63.4:2003 AND KDB558074	Pass	15.247(b)(3)
Emission Limitations Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2008 AND ANSI C63.4:2003 AND KDB558074	Pass	15.247(d)
Band Edge Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2008 AND ANSI C63.4:2003 AND KDB558074	Pass	15.247(d)
Power Spectral Density Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2008 AND ANSI C63.4:2003 AND KDB558074	Pass	15.247(e)

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : Sipod IP WALKIE TALKIE

Type of EUT ☒ Production ☐ Pre-product ☐ Pro-type

Model Number : C200

Serial Number : E2010011809

Note : The EUT has 8 different color models:
See APPENDIX II - PHOTOGRAPHS OF EUT.

Applicant : Sipod Inc.
4633 Old Ironsides Drive, #400 Santa Clara, CA 95054

Manufacturer : Alane Technology (Suzhou) Co., Ltd.
Alane International Co., Ltd.
#49, 9 Dongfu Road, DongJing Industrial Part, East
LouFeng, Suzhou Industrial Part, Suzhou, Jiangsu,
215123, China

Power Supply : DC 4.2V (Li-ion Battery)

Li-ion Battery : Manufacturer : Shenzhen Desay Battery Technology
Co., Ltd.
P/N No : 99-26-050013
Rating : 4.2V

Switching Adapter : Manufacturer : Shenzhen Tongke Electronic Co., Ltd.
M/N : SAP-3W01C 05003
I/P : AC 100-240V 50/60Hz 0.2A
O/P : DC 5V 500mA

Radio Tech : IEEE 802.11b/g

Freq. Band : 2412 MHz - 2462 MHz
Total 11 Channels in 5 MHz Separation

Tested Freq. : 2412 MHz (Channel 01)
2437 MHz (Channel 06)
2462 MHz (Channel 11)

Modulation : DSSS for 802.11b
OFDM for 802.11g

Transmit data rate: 802.11b: 1, 2, 5.5, 11, 22 Mbps
802.11g: 6, 9, 12, 18, 24, 36, 48, 54, 72 Mbps
After testing, the highest peak output power of the EUT was at 2 Mbps in 802.11b mode and 12 Mbps in 802.11g mode.
So 2 Mbps and 12 Mbps mode were representative selected to test in this report.

Antenna Gain : 2.5dBi

2.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber) : Sept. 17, 1998 file on
Apr 29, 2009 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3 F 34 Bldg 680 Guiping Rd.,
Caohejing Hi-Tech Park,
Shanghai 200233, China

FCC registration Number : 91789

Accredited by NVLAP, Lab Code : 200371-0

2.3 Measurement Uncertainty

Conducted Emission Expanded Uncertainty : U = 1.26 dB
Radiated Emission Expanded Uncertainty : U = 3.02 dB
6 dB Bandwidth Expanded Uncertainty : U = 0.05 kHz
Maximum Peak Output Power Expanded Uncertainty : U = 0.30 dBm
Emission Limitations Expanded Uncertainty : U = 0.15 dB
Band Edge Expanded Uncertainty : U = 0.15 dB
Power Spectral Density Expanded Uncertainty : U = 0.15 dB

3 CONDUCTED EMISSION TEST

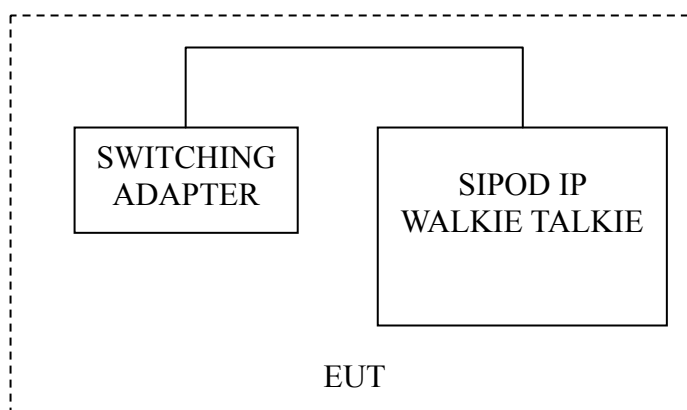
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

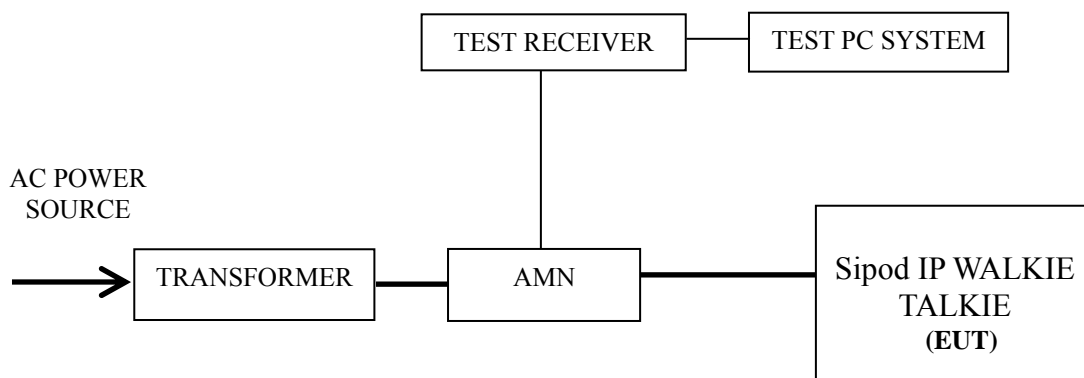
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Nov 21, 2009	Nov 21, 2010
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep19, 2009	Mar 19, 2010
4.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2009	Apr 02, 2010
5.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



3.2.2 Conducted Disturbance Test Setup



— : Signal Line
 — : Power Line
 ■ : 50 ohm Terminator

3.3 Conducted Emission Limits [FCC Part 15 Subpart C 15.207]

Frequency Range (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56*	56~46*
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE – *Decreases with the logarithm of the frequency.		

3.4 Test Configuration

The EUT (listed in Sec.2.1) was installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the EUT on the test mode (Transmitting), and then test.

3.6 Test Procedures

The EUT was connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst emission is detected at 0.206 MHz (Quasi-Peak Value) with corrected signal level of 47.95 dB (μV) (limit is 63.36 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : Sipod IP WALKIE TALKIE Temperature : 22°C

Model No. : C200 Humidity : 48%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : Transmitting

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.157	47.62	0.23	47.85	65.60	17.75	QP
	0.206	46.90	0.22	47.12	63.36	16.24	
	0.259	44.08	0.24	44.32	61.47	17.15	
	0.310	41.87	0.25	42.12	59.97	17.85	
	0.360	39.46	0.26	39.72	58.74	19.02	
	0.627	29.62	0.28	29.90	56.00	26.10	
	0.157	36.00	0.23	36.23	55.60	19.37	AV
	0.206	32.51	0.22	32.73	53.36	20.63	
	0.259	28.60	0.24	28.84	51.47	22.63	
	0.310	30.00	0.25	30.25	49.97	19.72	
	0.360	28.51	0.26	28.77	48.74	19.97	
	0.627	18.60	0.28	18.88	46.00	27.12	
Neutral	0.156	49.56	0.20	49.76	65.65	15.89	QP
	0.206	47.75	0.20	47.95	63.36	15.41	
	0.259	45.01	0.22	45.23	61.47	16.24	
	0.313	39.93	0.23	40.16	59.88	19.72	
	0.408	39.03	0.25	39.28	57.68	18.40	
	0.716	30.00	0.28	30.28	56.00	25.72	
	0.156	35.20	0.20	35.40	55.65	20.25	AV
	0.206	33.51	0.20	33.71	53.36	19.65	
	0.259	26.50	0.22	26.72	51.47	24.75	
	0.313	28.63	0.23	28.86	49.88	21.02	
	0.408	28.60	0.25	28.85	47.68	18.83	
	0.716	19.50	0.28	19.78	46.00	26.22	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

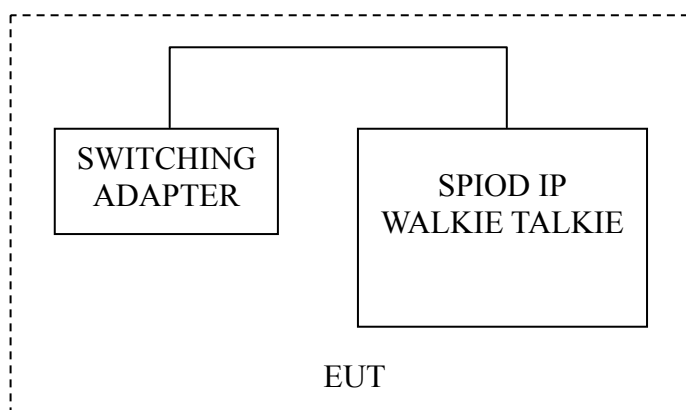
4.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

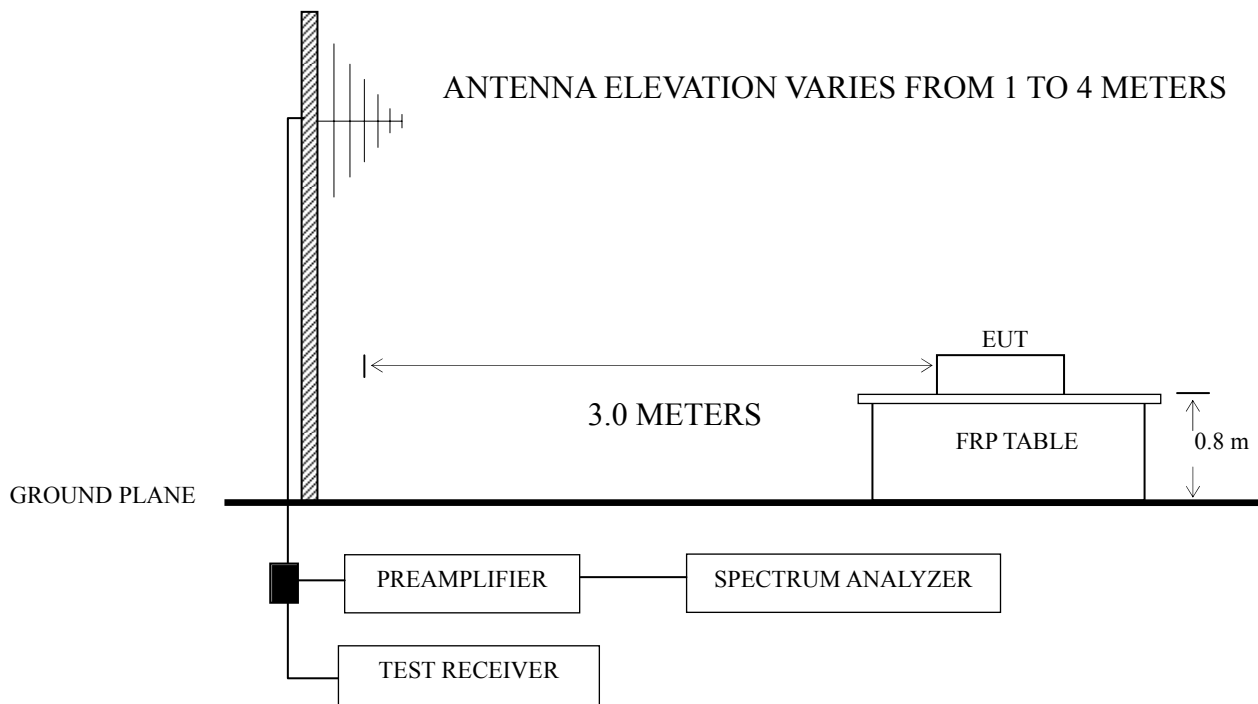
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8447D	2944A10548	Sep 19, 2009	Mar 19, 2010
2.	Preamplifier	HP	8449B	3008A00864	May 19, 2009	May 19, 2010
3.	Spectrum Analyzer	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010
4.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2009	Mar 07, 2010
5.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2009	May 14, 2010
6.	Horn Antenna	EMCO	3115	9607-4878	Oct 26, 2009	Oct 26, 2010
7.	Horn Antenna	EMCO	3116	00062643	Oct 26, 2009	Oct 26, 2010
8.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 19, 2009	Mar 19, 2010
9.	Software	Audix	E3	SET00200 9912M295-2	-	-

4.2 Block Diagram of Test Setup

4.2.1 EUT & Peripherals



4.2.2 Test Setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart C 15.209]

Frequency (MHz)	Distance (m)	Field strength limits ($\mu\text{V/m}$)	
		($\mu\text{V/m}$)	$\text{dB}(\mu\text{V/m})$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level $\text{dB}(\mu\text{V/m}) = 20 \log \text{Emission Level}(\mu\text{V/m})$

NOTE 2 - The tighter limit applies at the band edges.

NOTE 3 - 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 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.

NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The EUT (listed in Sec.2.1) and the simulators (listed in Sec.2.2) were installed as shown on Sec.3.2 to meet FCC requirements and operating in a manner that tends to maximize its emission level in a normal application.

4.5 Operating Condition of EUT

4.5.1 Setup the EUT as shown in Sec. 3.2.

4.5.2 Turn on the power of all equipment.

4.5.3 Turn the EUT on the test mode, and then test.

4.5.4 Configured the EUT in three axis: Lying, Side, Stand, and test separately.

4.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a turntable that is 0.8 meter above ground. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or Horn antenna was used as receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of the VBW was set at 1MHz and RBW was set at 1MHz for peak emission measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emission above 1GHz for Spectrum Agilent E7405A.

The frequency range from 30 MHz to 25 GHz (Up to 10th harmonics from fundamental frequency) was checked.

The EUT was tested under the following test modes:

Mode	Operation	Channel	Frequency
1.	Transmitting	01	2412 MHz
2.		06	2437 MHz
3.		11	2462 MHz
4.	Receiving	06	2437 MHz
5.	Transmitting Band-Edge	01	2412 MHz
6.		11	2462 MHz

All the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

No.	Operation	Modulation	Channel	Frequency	Data Page
1.	Transmitting	802.11b	01	2412 MHz	P18
2.			06	2437 MHz	P19
3.			11	2462 MHz	P20
4.		802.11g	01	2412 MHz	P21
5.			06	2437 MHz	P22
6.			11	2462 MHz	P23
7.	Receiving	802.11b	06	2437 MHz	P24
9.		802.11g	06	2437 MHz	P25
10.	Transmitting	802.11b	01	2412 MHz	Band Edge P26-P29 P30-P33 P34-P37 P38-P41
11.			11	2462 MHz	
12.		802.11g	01	2412 MHz	
13.			11	2462 MHz	

NOTE 1 - All reading are Quasi-Peak values below or equal to 1GHz and Peak values above 1GHz. For measurements above 1 GHz, the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

For Band-Edge measurements, both peak and average value were measured.

NOTE 2 - The emission levels recorded below is data of EUT configured in Lying direction, for Lying direction was the maximum emission direction during the test. The data of Side & Stand direction are too low against the official limit to be reported.

NOTE 3 - Measurement was up to 25GHz, only data of 30MHz to 8GHz were recorded in the report, because the emission levels of 8GHz to 25GHz were too low against the official limit and not reported.

NOTE 4 - 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

EUT : Sipod IP Temperature : 22°C
WALKIE TALKIE

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : 802.11b Transmitting
Ch01

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	30.970	0.23	19.03	0.63	--	19.89	40.00	20.11	QP
	124.090	0.85	12.81	1.15	--	14.81	43.50	28.69	
	255.040	1.92	13.01	1.63	--	16.56	46.00	29.44	
	364.650	2.96	15.73	1.91	--	20.60	46.00	25.40	
	536.340	1.59	18.39	2.34	--	22.32	46.00	23.68	
	882.630	1.06	21.53	2.99	--	25.58	46.00	20.42	
	1483.000	47.47	26.08	3.76	34.15	43.16	74.00	30.84	PK
	3114.000	45.65	30.77	5.55	34.20	47.77	74.00	26.23	
	4824.000	47.75	33.26	7.09	34.28	53.82	74.00	20.18	
	7236.000	42.83	35.51	8.83	35.15	52.02	74.00	21.98	
Vertical	36.790	12.98	15.80	0.68	--	29.46	40.00	10.54	QP
	48.430	15.14	9.62	0.75	--	25.51	40.00	14.49	
	78.500	8.26	7.61	0.93	--	16.80	40.00	23.20	
	200.720	4.33	10.74	1.43	--	16.50	43.50	27.00	
	480.080	2.13	17.65	2.21	--	21.99	46.00	24.01	
	806.000	1.15	20.77	2.89	--	24.81	46.00	21.19	
	1427.000	53.74	25.89	3.63	34.14	49.12	74.00	24.88	PK
	3646.000	45.35	31.93	6.11	34.20	49.19	74.00	24.81	
	4824.000	46.75	33.26	7.09	34.28	52.82	74.00	21.18	
	7236.000	42.83	35.51	8.83	35.15	52.02	74.00	21.98	

TEST ENGINEER: RAVEN JIN

EUT : Sipod IP Temperature : 22°C
WALKIE TALKIE

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : 802.11b Transmitting
Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	34.850	1.46	16.97	0.66	--	19.09	40.00	20.91	QP
	119.240	1.07	12.97	1.13	--	15.17	43.50	28.33	
	252.130	2.37	12.94	1.62	--	16.93	46.00	29.07	
	432.550	1.99	16.95	2.08	--	21.02	46.00	24.98	
	540.220	1.68	18.42	2.34	--	22.44	46.00	23.56	
	960.230	3.50	22.13	3.12	--	28.75	54.00	25.25	
	2071.000	44.83	27.85	4.52	34.20	43.00	74.00	31.00	PK
	3583.000	45.69	31.80	6.06	34.20	49.35	74.00	24.65	
	4874.000	41.92	33.31	7.14	34.29	48.08	74.00	25.92	
	7311.000	43.75	35.56	8.91	35.20	53.02	74.00	20.98	
Vertical	36.790	12.64	15.80	0.68	--	29.12	40.00	10.88	QP
	48.430	16.15	9.62	0.75	--	26.52	40.00	13.48	
	78.500	8.76	7.61	0.93	--	17.30	40.00	22.70	
	129.910	2.93	12.52	1.17	--	16.62	43.50	26.88	
	482.990	1.45	17.70	2.23	--	21.38	46.00	24.62	
	793.390	1.84	20.64	2.88	--	25.36	46.00	20.64	
	1420.000	52.81	25.86	3.63	34.14	48.16	74.00	25.84	PK
	2869.000	46.14	30.19	5.32	34.20	47.45	74.00	26.55	
	4874.000	41.42	33.31	7.14	34.29	47.58	74.00	26.42	
	7311.000	43.33	35.56	8.91	35.20	52.60	74.00	21.40	

TEST ENGINEER: RAVEN JIN

EUT : Sipod IP Temperature : 22°C
WALKIE TALKIE

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : 802.11b Transmitting
Ch11

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	31.940	0.59	18.49	0.63	--	19.71	40.00	20.29	QP
	122.150	0.83	12.91	1.14	--	14.88	43.50	28.62	
	200.720	6.12	10.74	1.43	--	18.29	43.50	25.21	
	280.260	6.41	13.55	1.70	--	21.66	46.00	24.34	
	431.580	1.68	16.95	2.08	--	20.71	46.00	25.29	
	703.180	1.22	19.73	2.70	--	23.65	46.00	22.35	
	1378.000	48.09	25.72	3.57	34.14	43.24	74.00	30.76	PK
	3163.000	46.66	30.88	5.61	34.20	48.95	74.00	25.05	
	4924.000	46.63	33.35	7.20	34.29	52.89	74.00	21.11	
	7386.000	43.23	35.63	9.02	35.25	52.63	74.00	21.37	
Vertical	34.850	11.73	16.97	0.66	--	29.36	40.00	10.64	QP
	48.430	15.67	9.62	0.75	--	26.04	40.00	13.96	
	134.760	3.05	12.30	1.19	--	16.54	43.50	26.96	
	239.520	5.40	12.52	1.57	--	19.49	46.00	26.51	
	458.740	1.85	17.35	2.15	--	21.35	46.00	24.65	
	719.670	2.06	19.91	2.73	--	24.70	46.00	21.30	
	1322.000	53.10	25.51	3.51	34.13	47.99	74.00	26.01	PK
	1875.000	47.47	27.26	4.29	34.19	44.83	74.00	29.17	
	4924.000	45.73	33.35	7.20	34.29	51.99	74.00	22.01	
	7386.000	43.61	35.63	9.02	35.25	53.01	74.00	20.99	

TEST ENGINEER: RAVEN JIN

EUT : Sipod IP Temperature : 22°C
WALKIE TALKIE

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : 802.11g Transmitting
Ch01

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	30.970	0.40	19.03	0.63	--	20.06	40.00	19.94	QP
	121.180	0.38	12.95	1.13	--	14.46	43.50	29.04	
	227.880	1.64	12.02	1.53	--	15.19	46.00	30.81	
	370.470	1.60	15.88	1.92	--	19.40	46.00	26.60	
	535.370	1.48	18.36	2.34	--	22.18	46.00	23.82	
	859.350	3.72	21.31	2.95	--	27.98	46.00	18.02	
	1322.000	56.13	25.51	3.51	34.13	51.02	74.00	22.98	PK
	2981.000	46.28	30.46	5.42	34.20	47.96	74.00	26.04	
	4824.000	42.56	33.26	7.09	34.28	48.63	74.00	25.37	
	7236.000	43.41	35.51	8.83	35.15	52.60	74.00	21.40	
Vertical	34.850	11.92	16.97	0.66	--	29.55	40.00	10.45	QP
	48.430	14.87	9.62	0.75	--	25.24	40.00	14.76	
	128.940	1.10	12.58	1.17	--	14.85	43.50	28.65	
	239.520	5.26	12.52	1.57	--	19.35	46.00	26.65	
	489.780	2.20	17.78	2.25	--	22.23	46.00	23.77	
	778.840	0.96	20.49	2.86	--	24.31	46.00	21.69	
	1595.000	49.09	26.46	3.93	34.16	45.32	74.00	28.68	PK
	2967.000	46.31	30.42	5.42	34.20	47.95	74.00	26.05	
	4824.000	43.42	33.26	7.09	34.28	49.49	74.00	24.51	
	7236.000	43.34	35.51	8.83	35.15	52.53	74.00	21.47	

TEST ENGINEER: RAVEN JIN

EUT : Sipod IP Temperature : 22°C
WALKIE TALKIE

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : 802.11g Transmitting
Ch06

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	34.850	0.34	16.97	0.66	--	17.97	40.00	22.03	QP
	121.180	-0.31	12.95	1.13	--	13.77	43.50	29.73	
	257.950	1.05	13.06	1.63	--	15.74	46.00	30.26	
	365.620	1.51	15.73	1.91	--	19.15	46.00	26.85	
	557.680	0.61	18.68	2.39	--	21.68	46.00	24.32	
	884.570	1.32	21.56	2.99	--	25.87	46.00	20.13	
	1063.000	48.71	24.41	3.26	34.11	42.27	74.00	31.73	PK
	2995.000	46.56	30.50	5.42	34.20	48.28	74.00	25.72	
	4874.000	42.47	33.31	7.14	34.29	48.63	74.00	25.37	
	7311.000	44.49	35.56	8.91	35.20	53.76	74.00	20.24	
Vertical	36.790	12.33	15.80	0.68	--	28.81	40.00	11.19	QP
	48.430	15.38	9.62	0.75	--	25.75	40.00	14.25	
	82.380	9.89	8.19	0.96	--	19.04	40.00	20.96	
	165.800	4.45	10.33	1.30	--	16.08	43.50	27.42	
	458.740	1.97	17.35	2.15	--	21.47	46.00	24.53	
	786.600	0.00	20.58	2.86	--	23.44	46.00	22.56	
	1329.000	53.25	25.53	3.51	34.13	48.16	74.00	25.84	PK
	3282.000	45.04	31.15	5.77	34.20	47.76	74.00	26.24	
	4874.000	42.01	33.31	7.14	34.29	48.17	74.00	25.83	
	7311.000	43.39	35.56	8.91	35.20	52.66	74.00	21.34	

TEST ENGINEER: RAVEN JIN

EUT : Sipod IP Temperature : 22°C
WALKIE TALKIE

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : 802.11g Transmitting
Ch11

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	30.970	-0.65	19.03	0.63	--	19.01	40.00	20.99	QP
	121.180	1.44	12.95	1.13	--	15.52	43.50	27.98	
	256.010	1.61	13.03	1.63	--	16.27	46.00	29.73	
	413.150	0.93	16.67	2.02	--	19.62	46.00	26.38	
	620.730	1.13	19.30	2.51	--	22.94	46.00	23.06	
	936.950	1.49	21.96	3.07	--	26.52	46.00	19.48	
	1063.000	47.67	24.41	3.26	34.11	41.23	74.00	32.77	PK
	2939.000	46.03	30.35	5.39	34.20	47.57	74.00	26.43	
	4924.000	46.61	33.35	7.20	34.29	52.87	74.00	21.13	
	7386.000	43.57	35.63	9.02	35.25	52.97	74.00	21.03	
Vertical	36.790	12.53	15.80	0.68	--	29.01	40.00	10.99	QP
	48.430	14.79	9.62	0.75	--	25.16	40.00	14.84	
	78.500	8.46	7.61	0.93	--	17.00	40.00	23.00	
	146.400	1.13	11.61	1.22	--	13.96	43.50	29.54	
	390.840	5.87	16.30	1.97	--	24.14	46.00	21.86	
	672.140	2.79	19.57	2.62	--	24.98	46.00	21.02	
	1329.000	55.86	25.53	3.51	34.13	50.77	74.00	23.23	PK
	1861.000	51.12	27.24	4.29	34.19	48.46	74.00	25.54	
	4924.000	44.87	33.35	7.20	34.29	51.13	74.00	22.87	
	7386.000	43.81	35.63	9.02	35.25	53.21	74.00	20.79	

TEST ENGINEER: RAVEN JIN

EUT : Sipod IP WALKIE TALKIE Temperature : 22°C

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

Test Mode : 802.11b Receiving

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	31.940	-0.10	18.49	0.63	--	19.02	40.00	20.98	QP
	110.510	-0.18	12.32	1.09	--	13.23	43.50	30.27	
	252.130	1.70	12.94	1.62	--	16.26	46.00	29.74	
	367.560	1.37	15.81	1.92	--	19.10	46.00	26.90	
	578.050	0.59	18.94	2.42	--	21.95	46.00	24.05	
	960.230	2.49	22.13	3.12	--	27.74	54.00	26.26	
	1399.000	46.27	25.79	3.59	34.14	41.51	74.00	32.49	PK
	2491.000	45.67	29.17	4.99	34.20	45.63	74.00	28.37	
	4874.000	42.70	33.31	7.14	34.29	48.86	74.00	25.14	
	7311.000	42.65	35.56	8.91	35.20	51.92	74.00	22.08	
Vertical	36.790	11.69	15.80	0.68	--	28.17	40.00	11.83	QP
	48.430	15.87	9.62	0.75	--	26.24	40.00	13.76	
	165.800	6.19	10.33	1.30	--	17.82	43.50	25.68	
	390.840	6.02	16.30	1.97	--	24.29	46.00	21.71	
	614.910	5.93	19.27	2.49	--	27.69	46.00	18.31	
	927.250	0.23	21.90	3.07	--	25.20	46.00	20.80	
	1728.000	45.91	26.86	4.10	34.17	42.70	74.00	31.30	PK
	2883.000	48.97	30.21	5.35	34.20	50.33	74.00	23.67	
	4874.000	42.78	33.31	7.14	34.29	48.94	74.00	25.06	
	7311.000	41.91	35.56	8.91	35.20	51.18	74.00	22.82	

TEST ENGINEER: RAVEN JIN

EUT : Sipod IP WALKIE TALKIE Temperature : 22°C

Model No. : C200 Humidity : 60%RH

Serial No. : E2010011809 Date of Test : Feb. 11, 2010

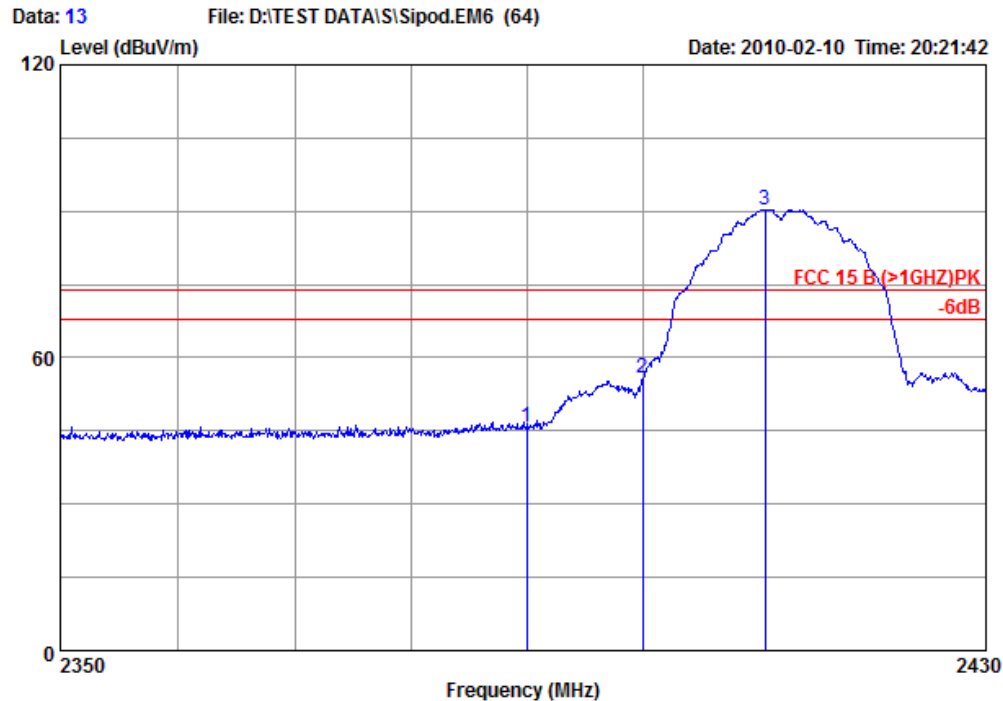
Test Mode : 802.11g Receiving

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	32.910	-0.35	17.95	0.64	--	18.24	40.00	21.76	QP
	133.790	0.95	12.35	1.18	--	14.48	43.50	29.02	
	247.280	0.70	12.79	1.60	--	15.09	46.00	30.91	
	426.730	1.26	16.87	2.06	--	20.19	46.00	25.81	
	595.510	0.77	19.17	2.45	--	22.39	46.00	23.61	
	853.530	0.70	21.24	2.95	--	24.89	46.00	21.11	
	1560.000	45.63	26.35	3.86	34.16	41.68	74.00	32.32	PK
	3422.000	44.97	31.47	5.93	34.20	48.17	74.00	25.83	
	4874.000	40.93	33.31	7.14	34.29	47.09	74.00	26.91	
	7311.000	43.43	35.56	8.91	35.20	52.70	74.00	21.30	
Vertical	36.790	12.28	15.80	0.68	--	28.76	40.00	11.24	QP
	48.430	14.11	9.62	0.75	--	24.48	40.00	15.52	
	76.560	8.09	7.36	0.92	--	16.37	40.00	23.63	
	200.720	5.17	10.74	1.43	--	17.34	43.50	26.16	
	429.640	3.49	16.92	2.08	--	22.49	46.00	23.51	
	787.570	1.29	20.58	2.86	--	24.73	46.00	21.27	
	1728.000	45.91	26.86	4.10	34.17	42.70	74.00	31.30	PK
	2883.000	48.97	30.21	5.35	34.20	50.33	74.00	23.67	
	4874.000	42.78	33.31	7.14	34.29	48.94	74.00	25.06	
	7311.000	41.91	35.56	8.91	35.20	51.18	74.00	22.82	

TEST ENGINEER: RAVEN JIN



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Site no : Audix ACI (3m Chamber)
 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ)PK
 Env. / Ins. : 22'C 60%RH / E7405A
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11b CH01

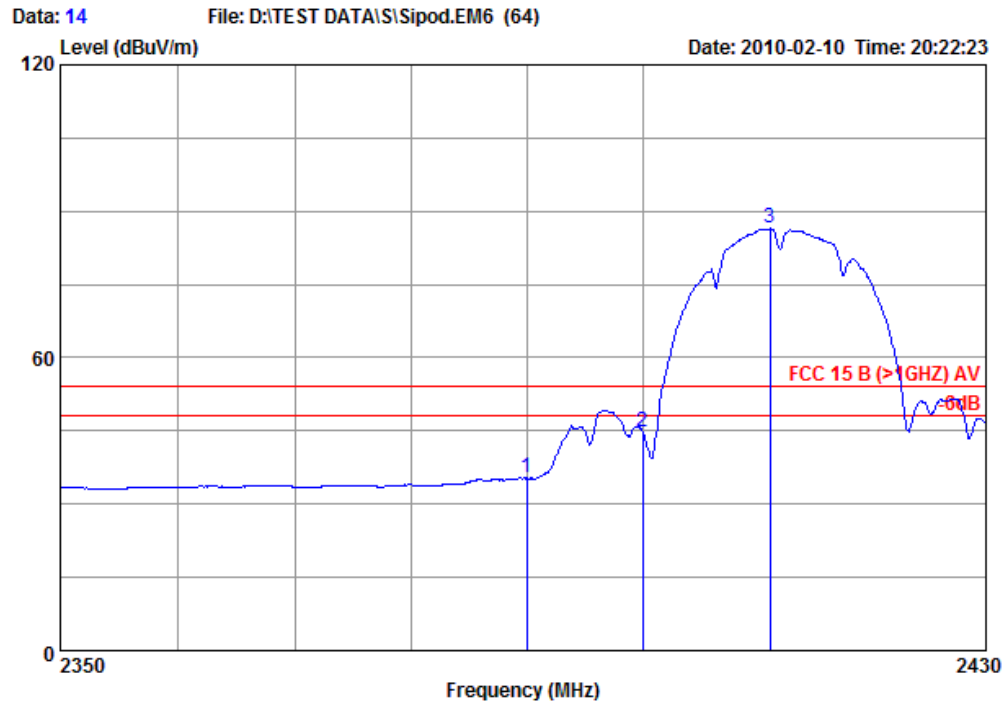
Data no. : 13
 Ant. pol. : HORIZONTAL
 Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	46.19	45.74	74.00	28.26	Peak
2	2400.000	28.91	34.20	4.89	56.08	55.68	74.00	18.32	Peak
3	2410.640	28.93	34.20	4.89	90.69	90.31	74.00	-16.31	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ) AV
 Env. / Ins. : 22'C 60%RH / E7405A
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11b CH01

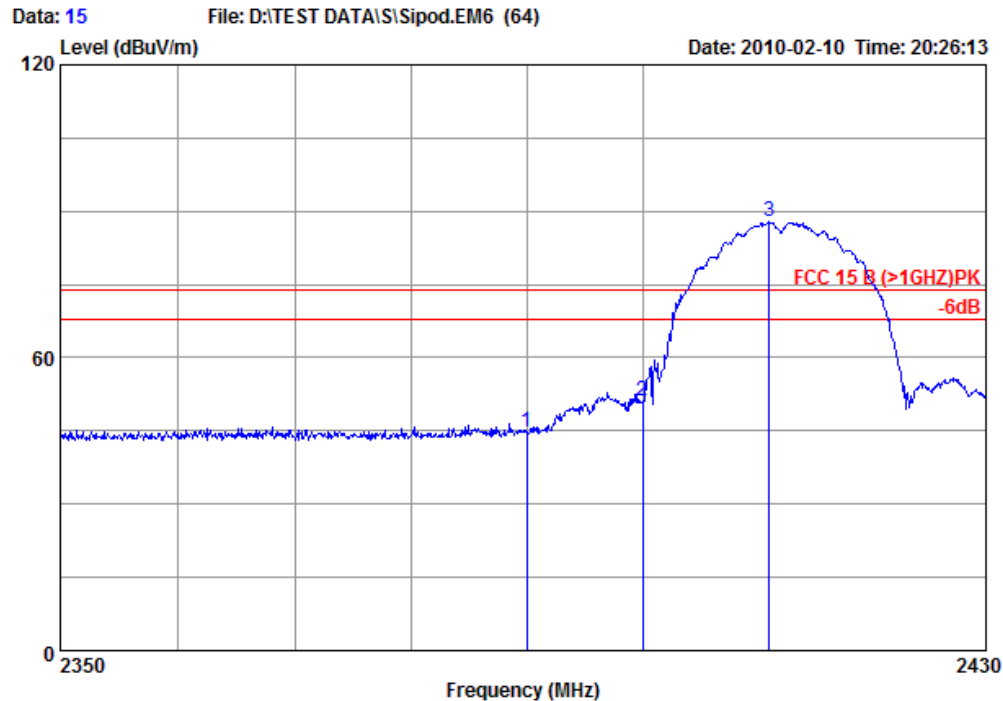
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 Ant. pol. : HORIZONTAL
 Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	35.72	35.27	54.00	18.73	Average
2	2400.000	28.91	34.20	4.89	45.33	44.93	54.00	9.07	Average
3	2411.120	28.93	34.20	4.89	86.83	86.45	54.00	-32.45	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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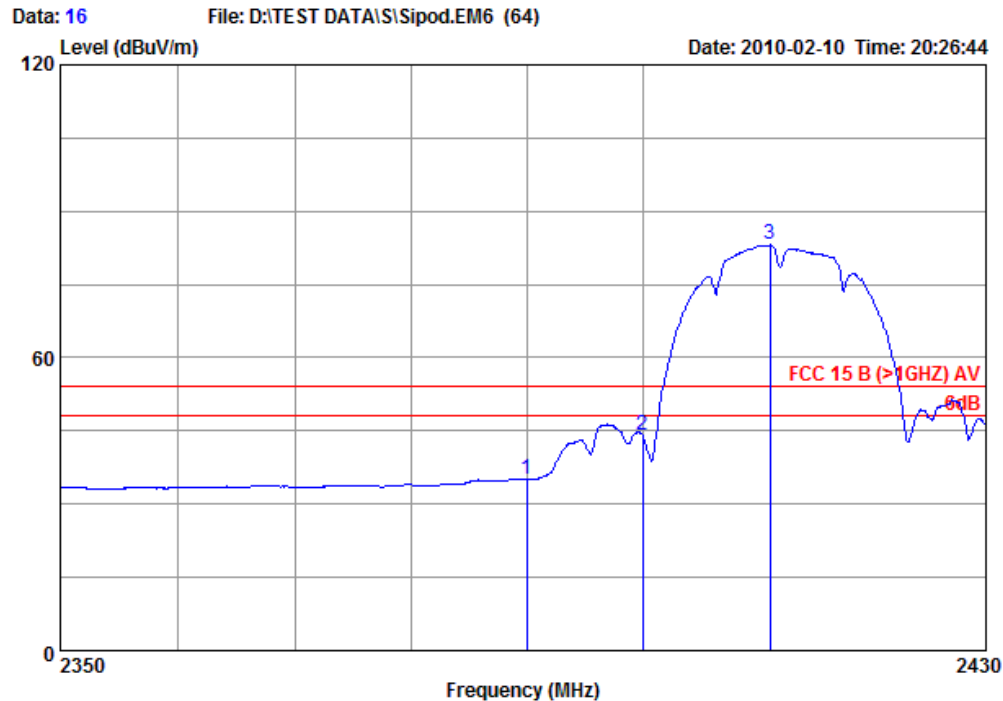
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Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ)PK Ant. pol. : VERTICAL
Env. / Ins. : 22'C 60%RH / E7405A Engineer : Raven
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11b CH01

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	45.12	44.67	74.00	29.33	Peak
2	2400.000	28.91	34.20	4.89	51.56	51.16	74.00	22.84	Peak
3	2411.040	28.93	34.20	4.89	88.14	87.76	74.00	-13.76	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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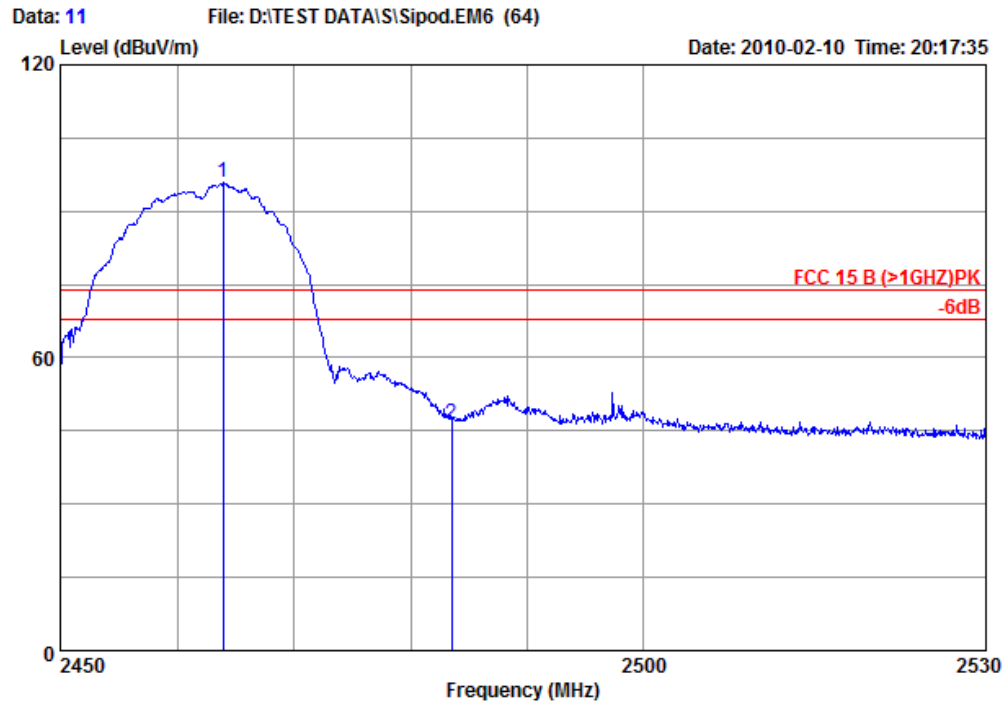
Site no : Audix ACI (3m Chamber) Data no. : 16
 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ) AV Ant. pol. : VERTICAL
 Env. / Ins. : 22'C 60%RH / E7405A Engineer : Raven
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11b CH01

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	35.57	35.12	54.00	18.88	Average
2	2400.000	28.91	34.20	4.89	44.39	43.99	54.00	10.01	Average
3	2411.120	28.93	34.20	4.89	83.59	83.21	54.00	-29.21	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ)PK
Env. / Ins. : 22'C 60%RH / E7405A
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11b CH11

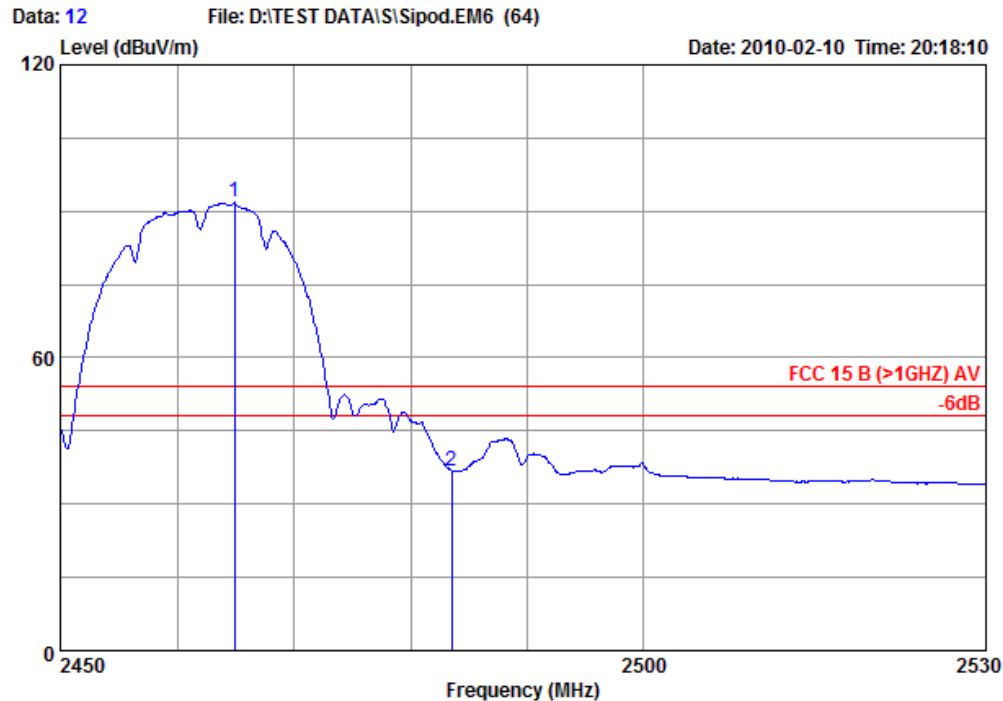
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Ant. pol. : HORIZONTAL
Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.920	29.09	34.20	4.96	95.92	95.77	74.00	-21.77	Peak
2	2483.500	29.15	34.20	4.96	46.66	46.57	74.00	27.43	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ) AV
Env. / Ins. : 22'C 60%RH / E7405A
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11b CH11

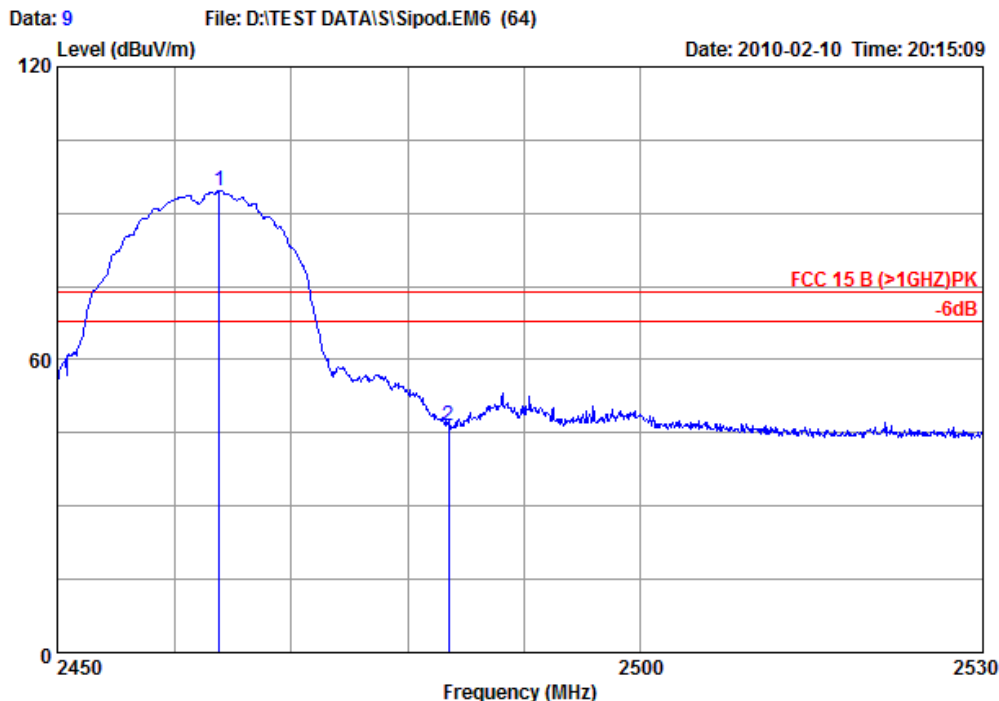
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Ant. pol. : HORIZONTAL
Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.880	29.09	34.20	4.96	92.02	91.87	54.00	-37.87	Average
2	2483.500	29.15	34.20	4.96	36.99	36.90	54.00	17.10	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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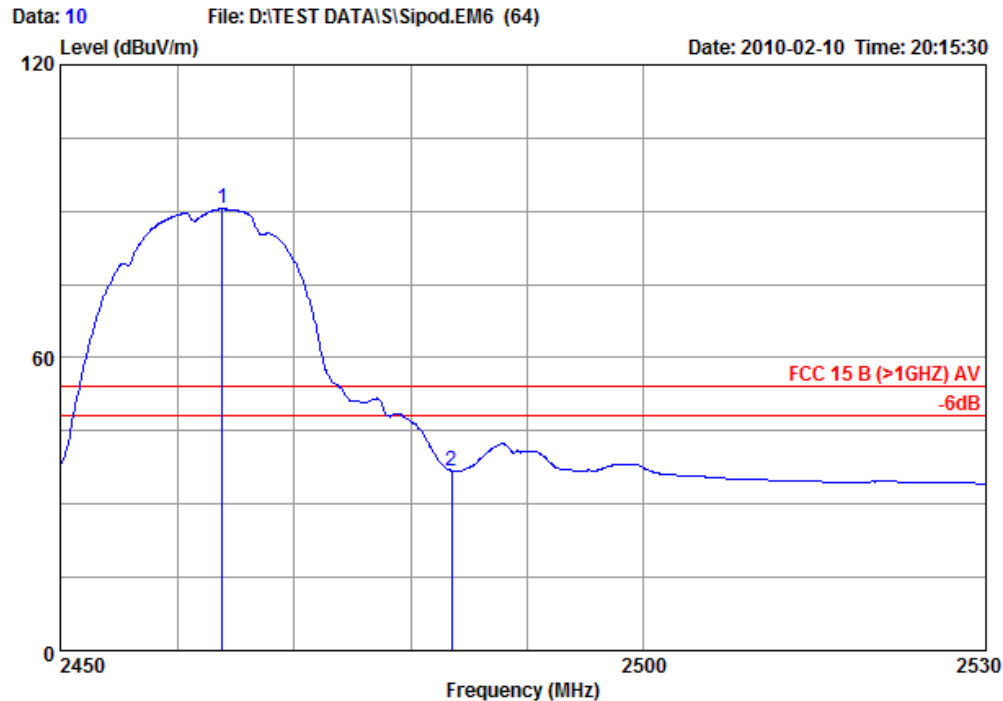
Site no : Audix ACI (3m Chamber) Data no. : 9
Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ)PK Ant. pol. : VERTICAL
Env. / Ins. : 22'C 60%RH / E7405A Engineer : Raven
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11b CH11

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.840	29.09	34.20	4.96	94.76	94.61	74.00	-20.61	Peak
2	2483.500	29.15	34.20	4.96	46.45	46.36	74.00	27.64	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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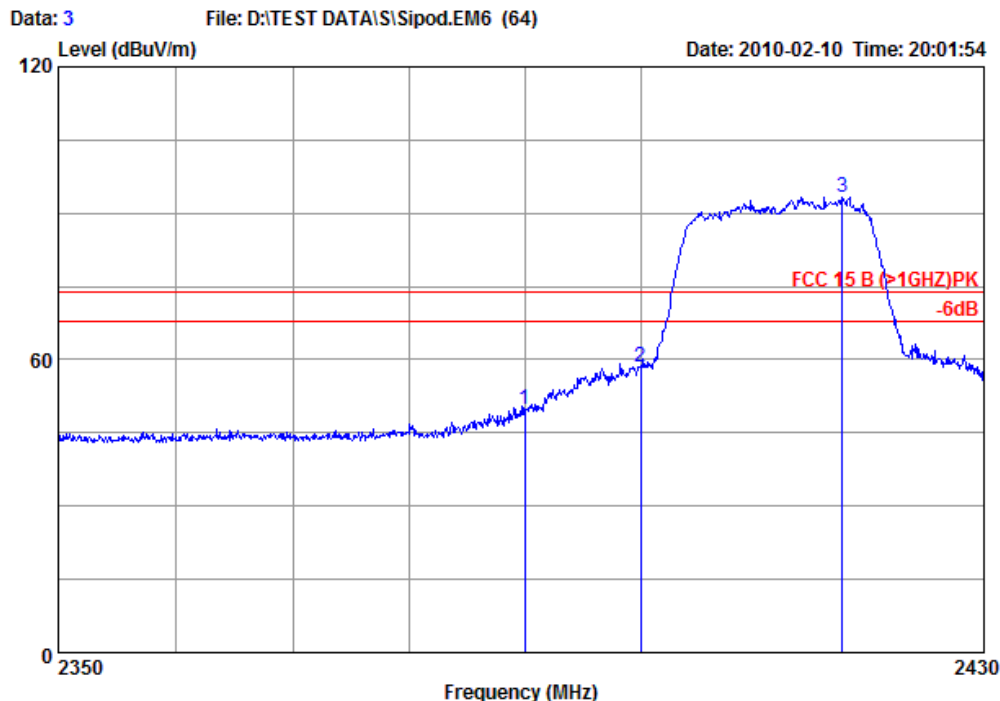
Site no : Audix ACI (3m Chamber) Data no. : 10
Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ) AV Ant. pol. : VERTICAL
Env. / Ins. : 22'C 60%RH / E7405A Engineer : Raven
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11b CH11

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.840	29.09	34.20	4.96	90.61	90.46	54.00	-36.46	Average
2	2483.500	29.15	34.20	4.96	36.93	36.84	54.00	17.16	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ)PK
 Env. / Ins. : 22'C 60%RH / E7405A
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11g CH01

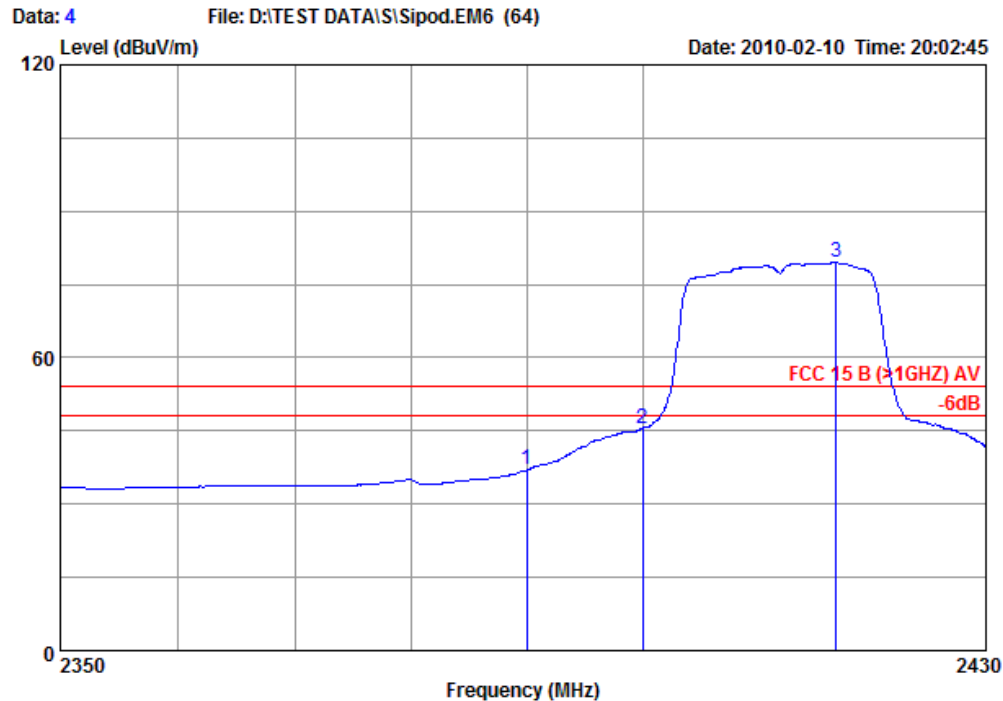
Data no. : 3
 Ant. pol. : HORIZONTAL
 Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	50.35	49.90	74.00	24.10	Peak
2	2400.000	28.91	34.20	4.89	58.81	58.41	74.00	15.59	Peak
3	2417.600	28.95	34.20	4.92	93.73	93.40	74.00	-19.40	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ) AV
 Env. / Ins. : 22'C 60%RH / E7405A
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11g CH01

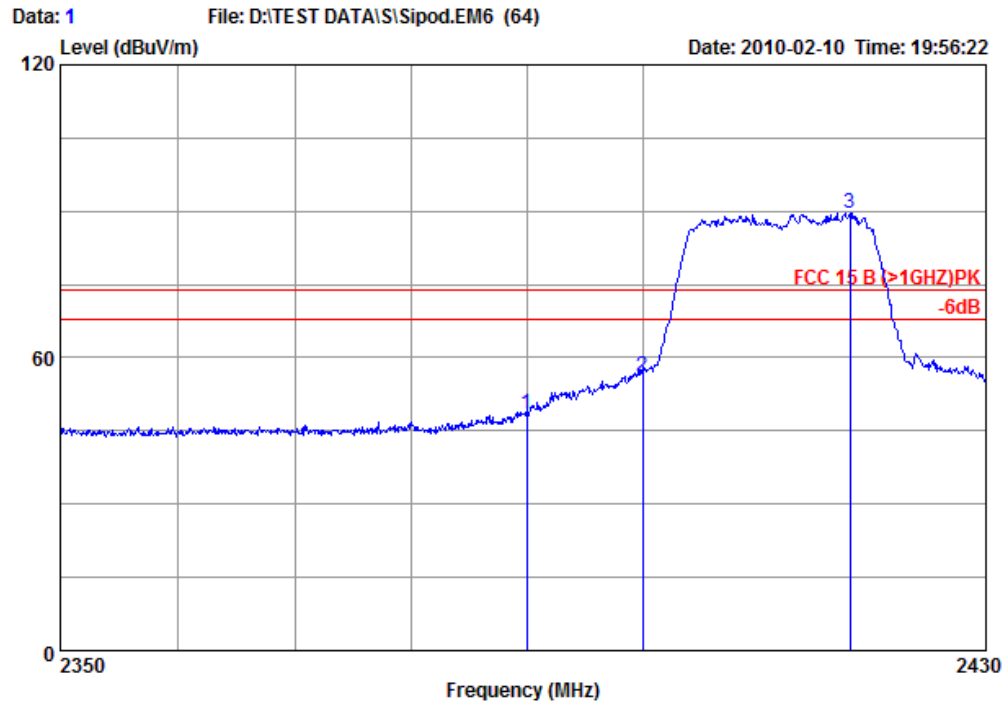
Data no. : 4
 Ant. pol. : HORIZONTAL
 Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	37.43	36.98	54.00	17.02	Average
2	2400.000	28.91	34.20	4.89	45.98	45.58	54.00	8.42	Average
3	2416.880	28.95	34.20	4.92	79.84	79.51	54.00	-25.51	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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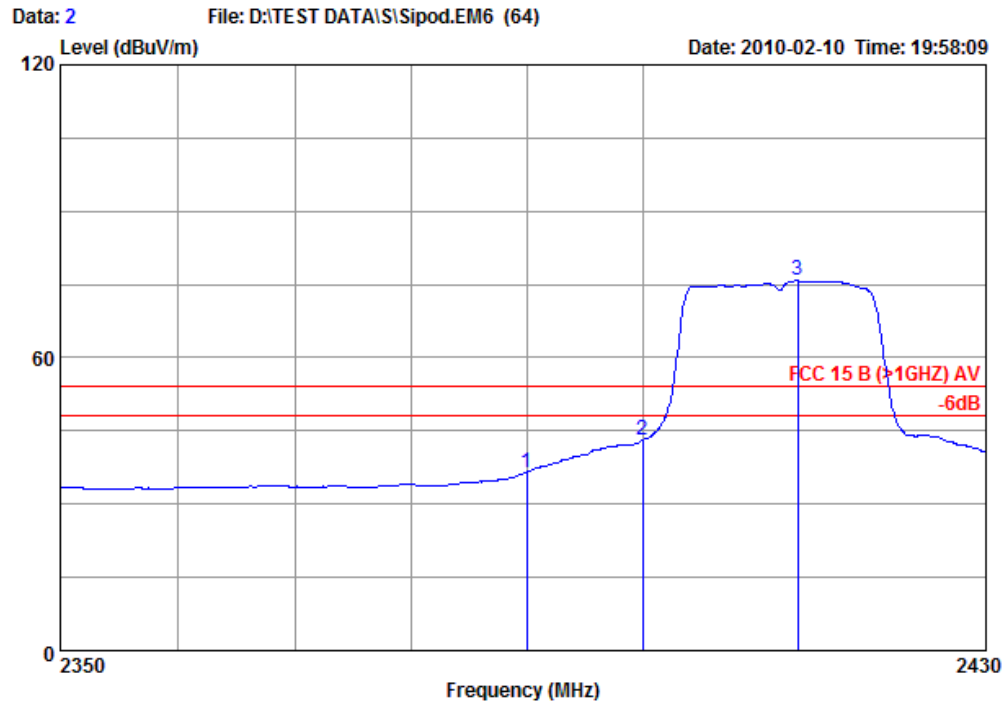
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 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ)PK Ant. pol. : VERTICAL
 Env. / Ins. : 22'C 60%RH / E7405A Engineer : Raven
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11g CH01

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	48.75	48.30	74.00	25.70	Peak
2	2400.000	28.91	34.20	4.89	56.59	56.19	74.00	17.81	Peak
3	2418.080	28.95	34.20	4.92	89.87	89.54	74.00	-15.54	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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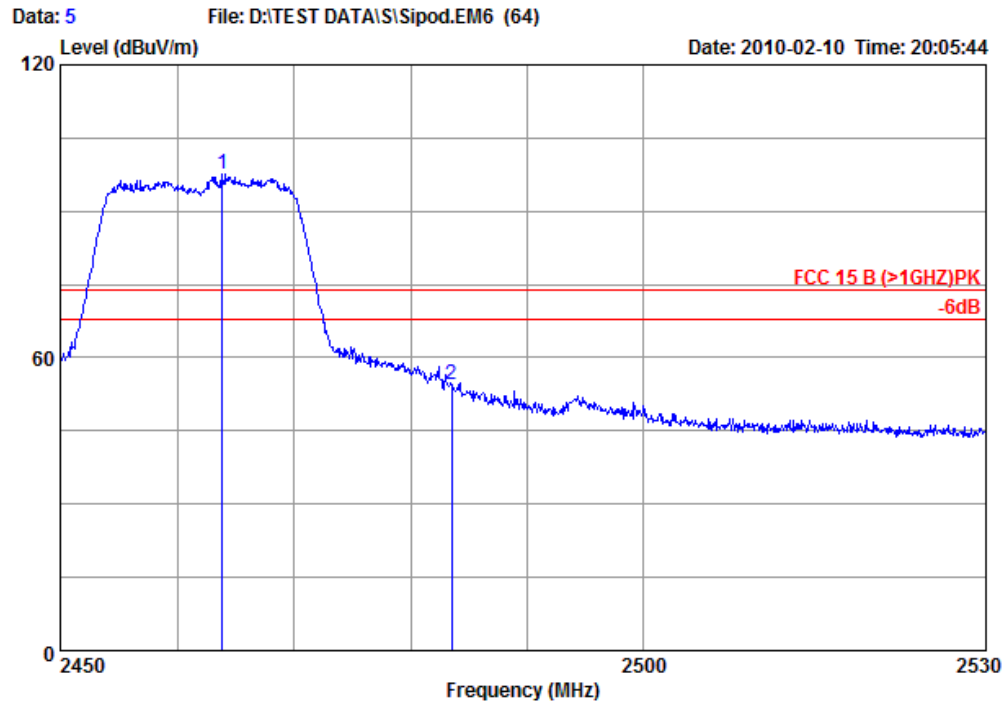
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 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ) AV Ant. pol. : VERTICAL
 Env. / Ins. : 22'C 60%RH / E7405A Engineer : Raven
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11g CH01

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.86	34.20	4.89	37.01	36.56	54.00	17.44	Average
2	2400.000	28.91	34.20	4.89	43.52	43.12	54.00	10.88	Average
3	2413.520	28.95	34.20	4.92	76.09	75.76	54.00	-21.76	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ)PK
Env. / Ins. : 22'C 60%RH / E7405A
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11g CH11

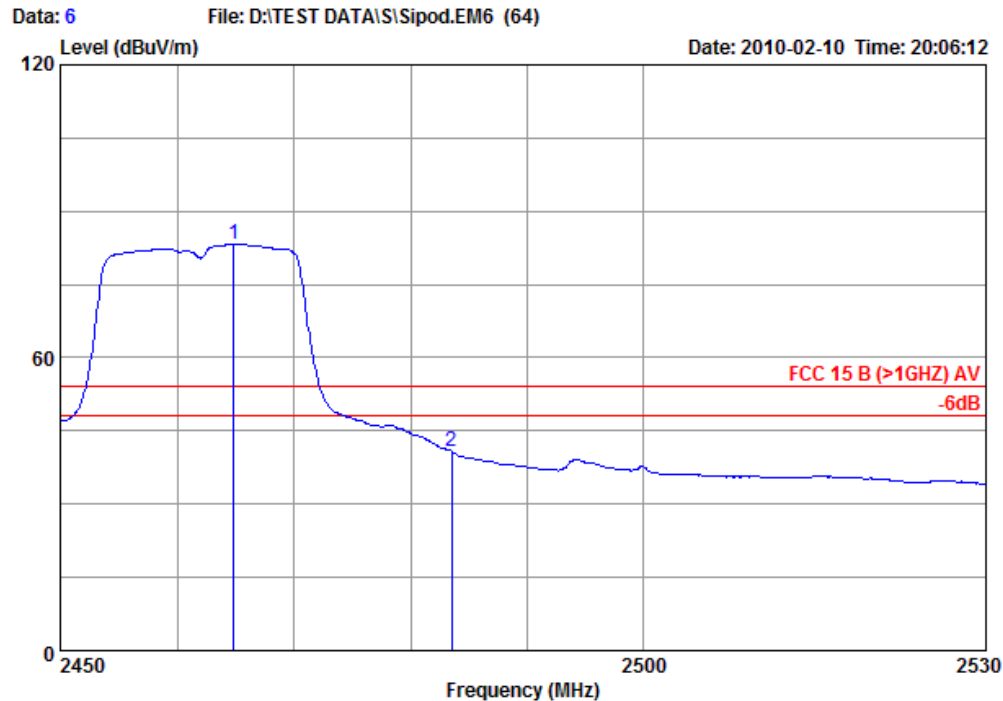
Data no. : 5
Ant. pol. : HORIZONTAL
Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.840	29.09	34.20	4.96	97.67	97.52	74.00	-23.52	Peak
2	2483.500	29.15	34.20	4.96	54.61	54.52	74.00	19.48	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ) AV
Env. / Ins. : 22'C 60%RH / E7405A
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11g CH11

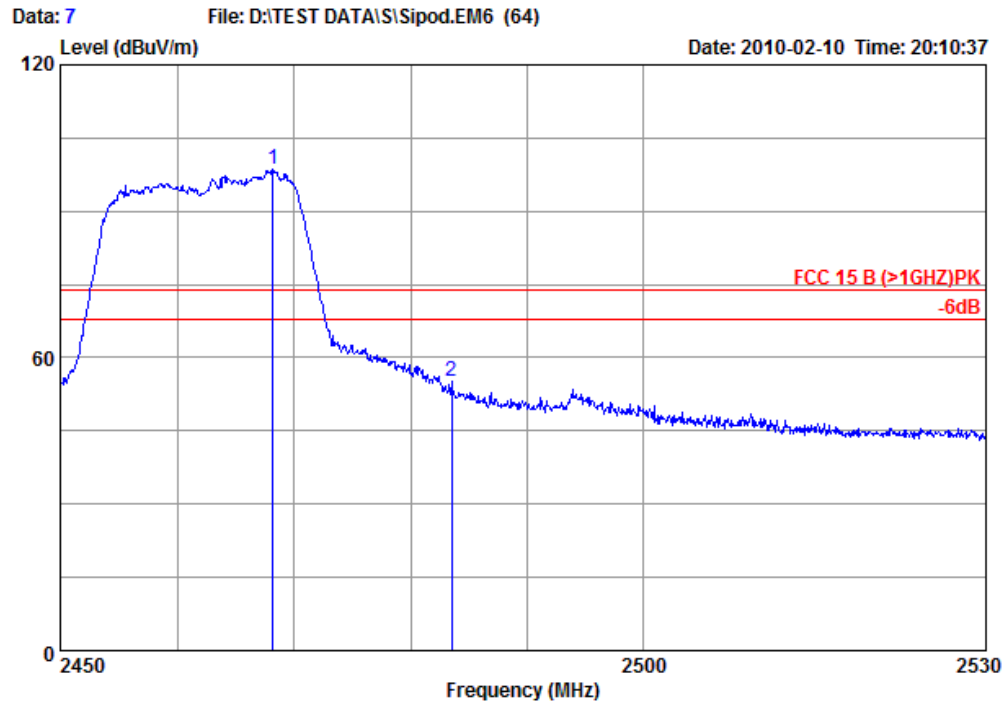
Data no. : 6
Ant. pol. : HORIZONTAL
Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.800	29.09	34.20	4.96	83.47	83.32	54.00	-29.32	Average
2	2483.500	29.15	34.20	4.96	40.97	40.88	54.00	13.12	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber)
Dis. / Ant. : 3m /EMCO3115
Limit : FCC 15 B (>1GHZ)PK
Env. / Ins. : 22'C 60%RH / E7405A
EUT : Sipod IP WALKIE TALKIE
M/N : C200
S/N : E2010011809
Power Rating: 120V/60Hz
Test Mode : Transmitting 802.11g CH11

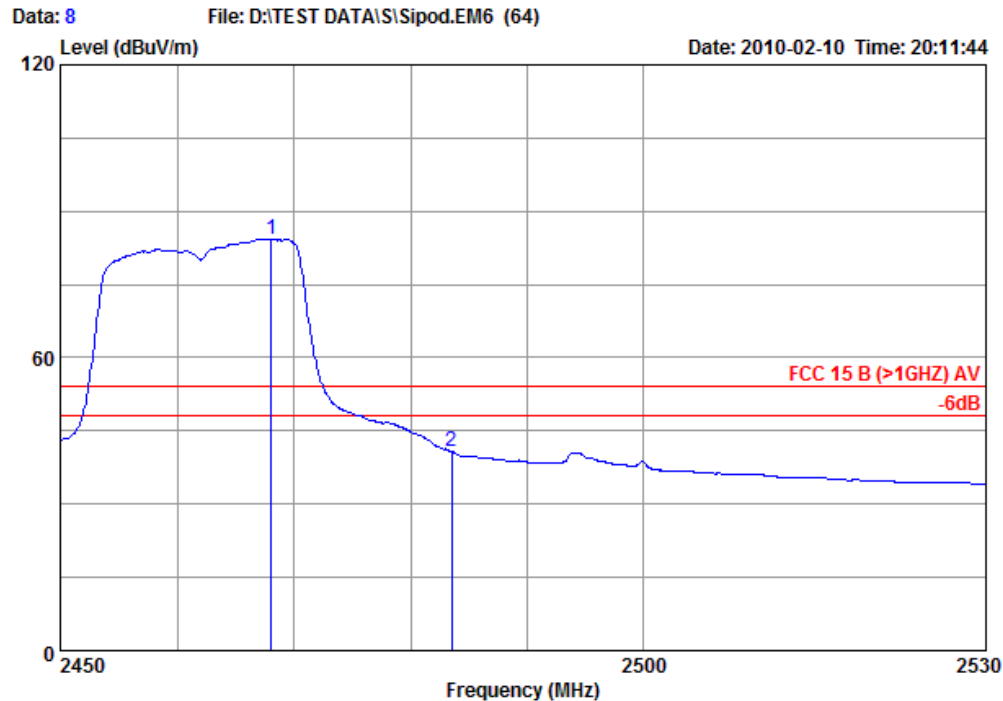
Data no. : 7
Ant. pol. : VERTICAL
Engineer : Raven

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2468.160	29.11	34.20	4.96	98.69	98.56	74.00	-24.56	Peak
2	2483.500	29.15	34.20	4.96	55.33	55.24	74.00	18.76	Peak

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.



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Site no : Audix ACI (3m Chamber) Data no. : 8
 Dis. / Ant. : 3m /EMCO3115
 Limit : FCC 15 B (>1GHZ) AV Ant. pol. : VERTICAL
 Env. / Ins. : 22'C 60%RH / E7405A Engineer : Raven
 EUT : Sipod IP WALKIE TALKIE
 M/N : C200
 S/N : E2010011809
 Power Rating: 120V/60Hz
 Test Mode : Transmitting 802.11g CH11

	Freq. (MHz)	Antenna Factor (dB/m)	Preamp Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2468.000	29.11	34.20	4.96	84.39	84.26	54.00	-30.26	Average
2	2483.500	29.15	34.20	4.96	40.96	40.87	54.00	13.13	Average

Remarks: Emission Level= Antenna Factor + Cable Loss - Preamp Factor + Reading.

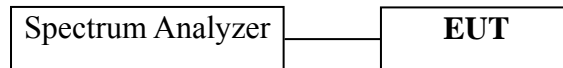
5 6 dB BANDWIDTH MEASUREMENT

5.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010

5.2 Block Diagram of Test Setup



5.3 Specification Limits (§15.247(a)(2))

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

5.4 Operating Condition of EUT

The test program “Unitest” was used to enable the EUT to transmit data at different channel frequency individually.

5.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with 100 kHz RBW and 100 kHz VBW. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB. The test procedure is defined in KDB558074.

5.6 Test Results

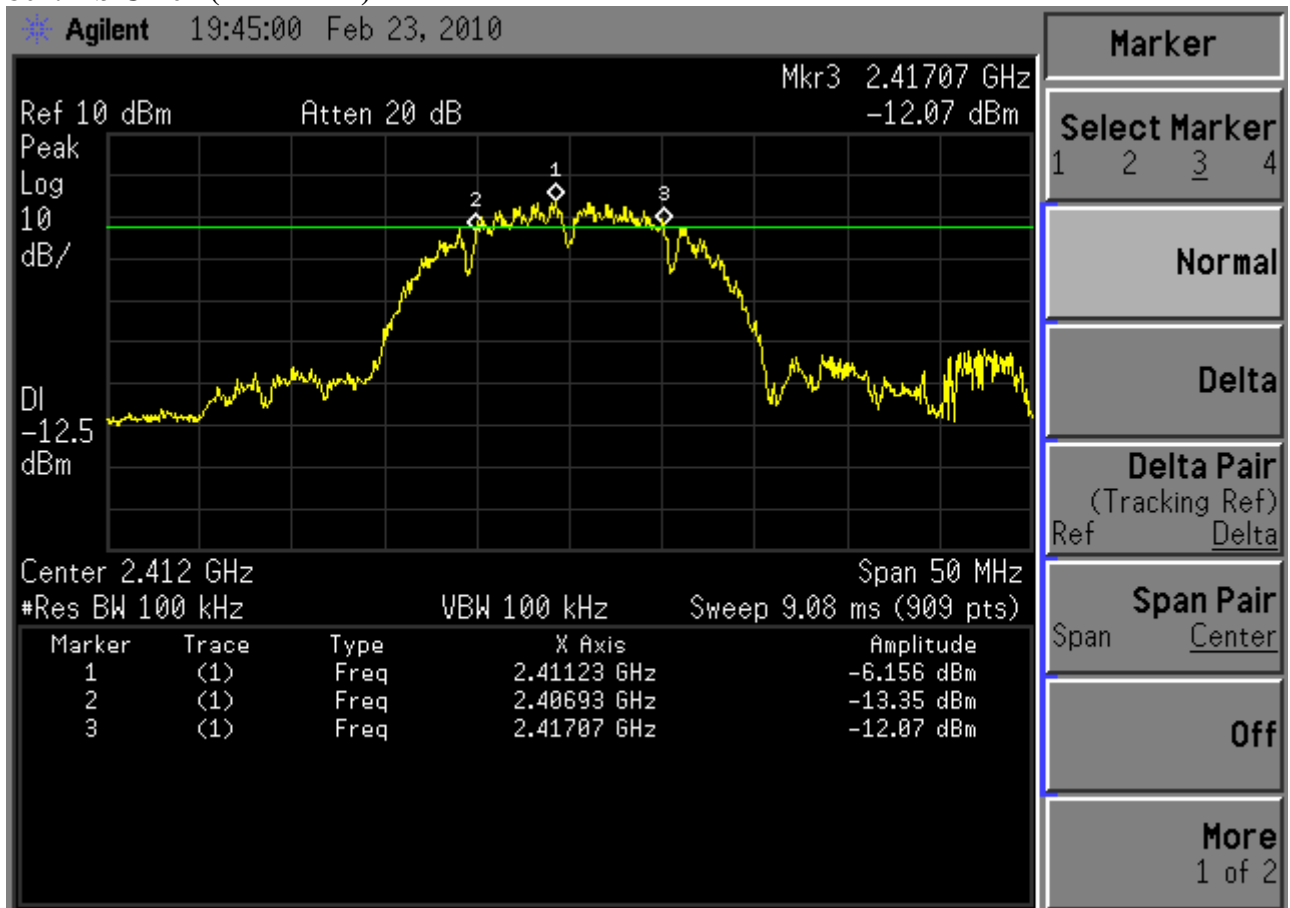
PASSED.

All the test results are attached in next pages.

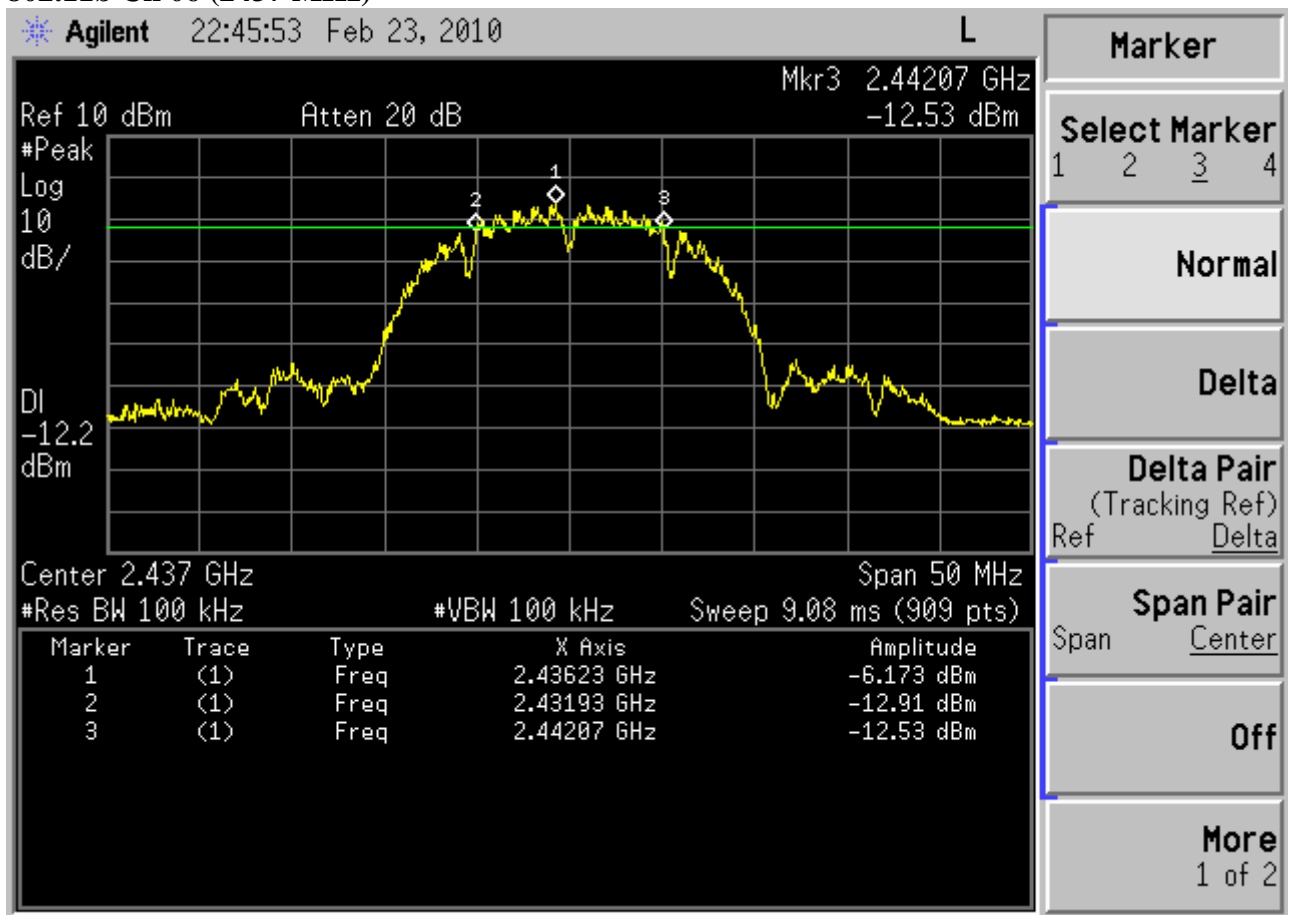
(Test Date : Feb 23, 2010 Temperature : 21℃ Humidity : 46 %)

Modulation	Channel	Frequency	6dB Bandwidth
802.11b	01	2412 MHz	10.14 MHz
	06	2437 MHz	10.14 MHz
	11	2462 MHz	10.14 MHz
802.11g	01	2412 MHz	16.46 MHz
	06	2437 MHz	16.46 MHz
	11	2462 MHz	16.40 MHz

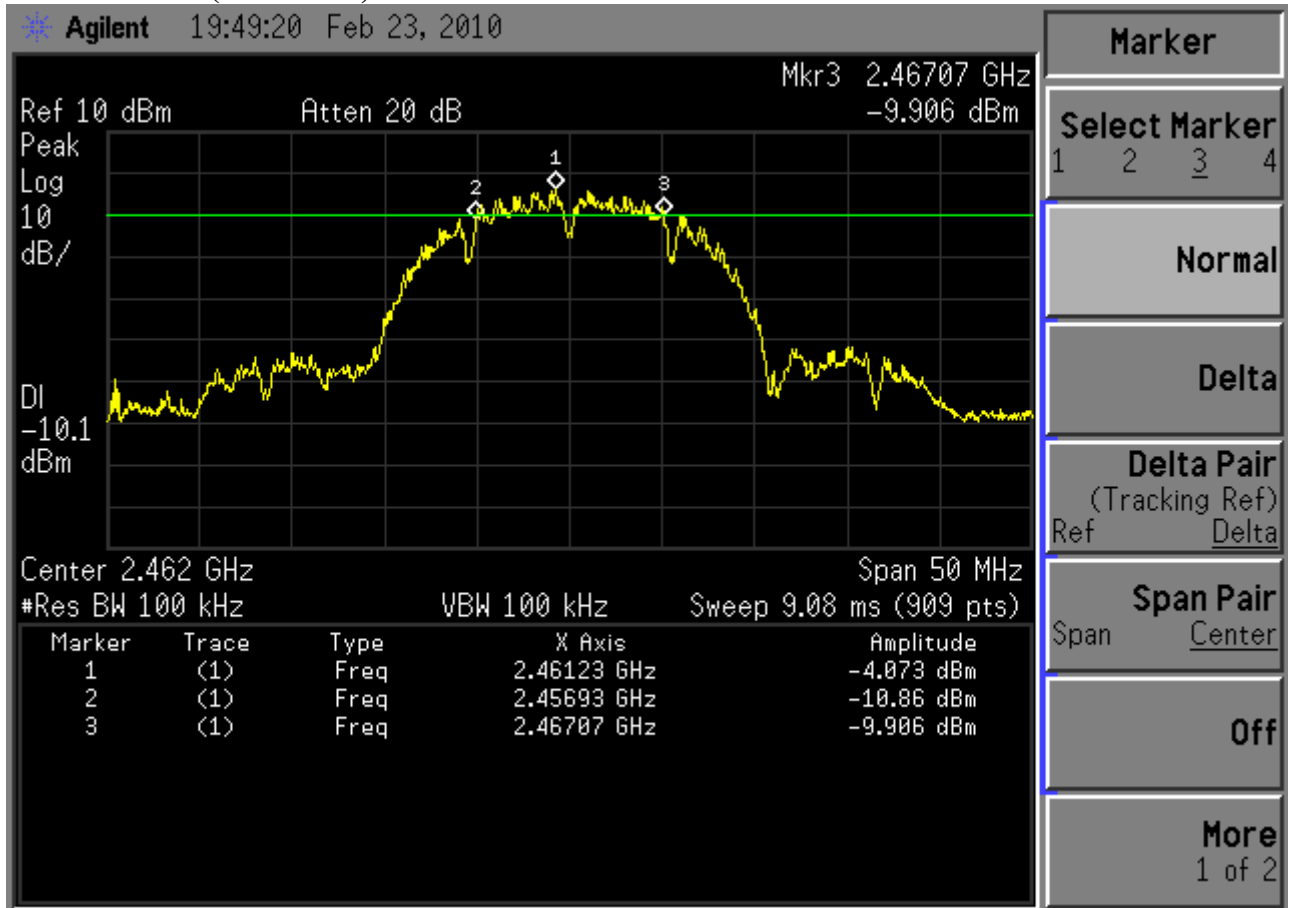
802.11b Ch 01 (2412 MHz)



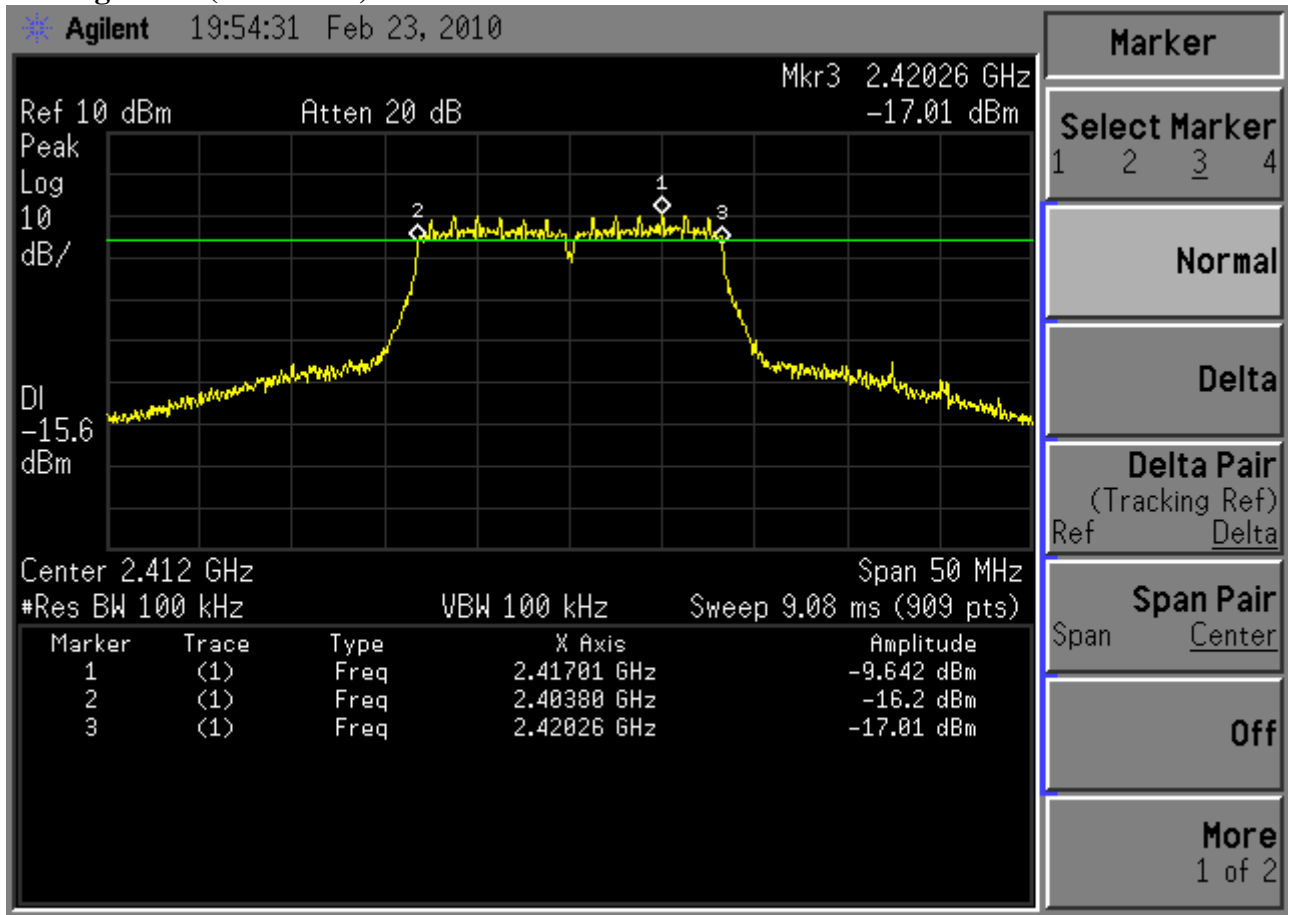
802.11b Ch 06 (2437 MHz)



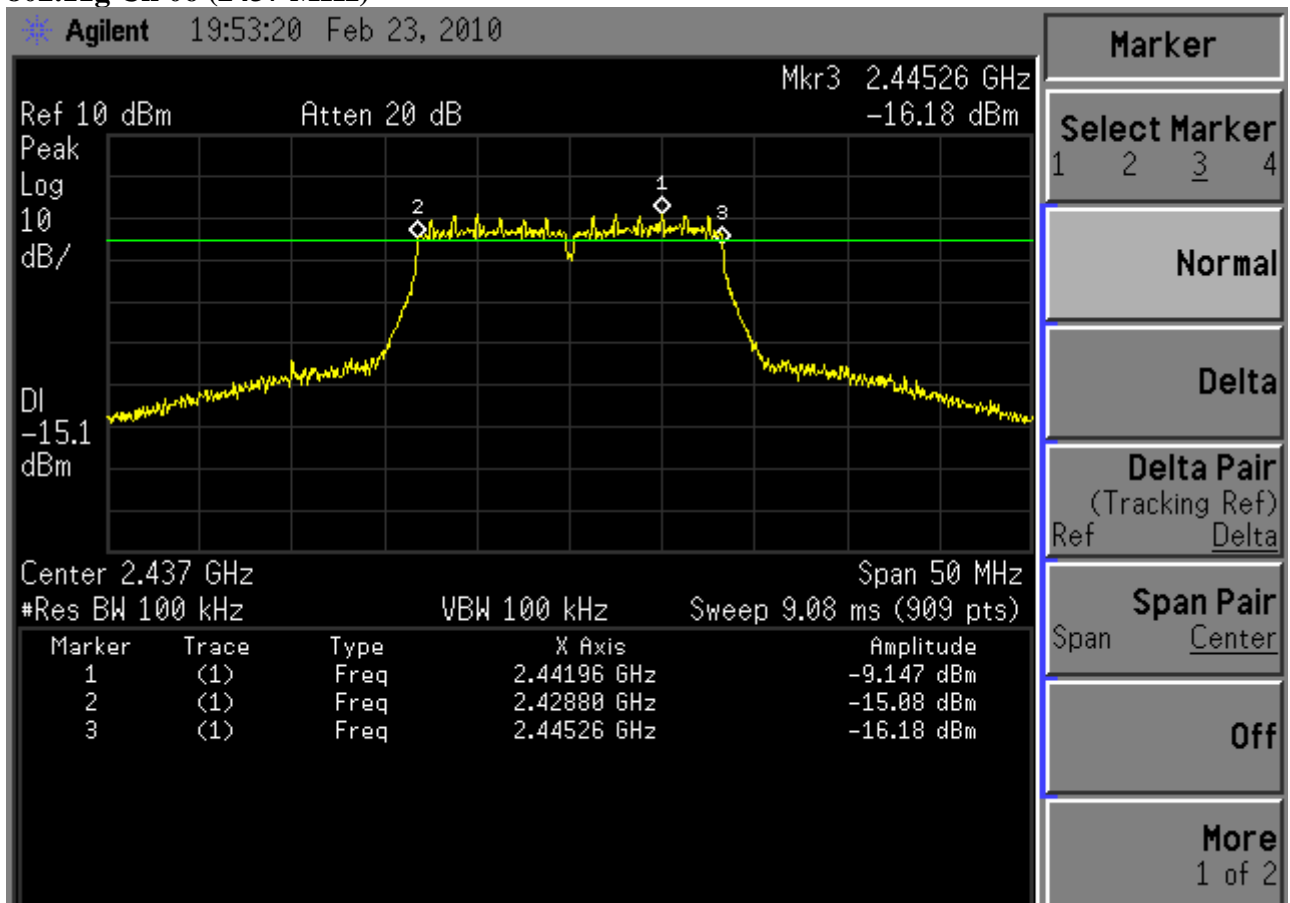
802.11b Ch 11 (2462 MHz)



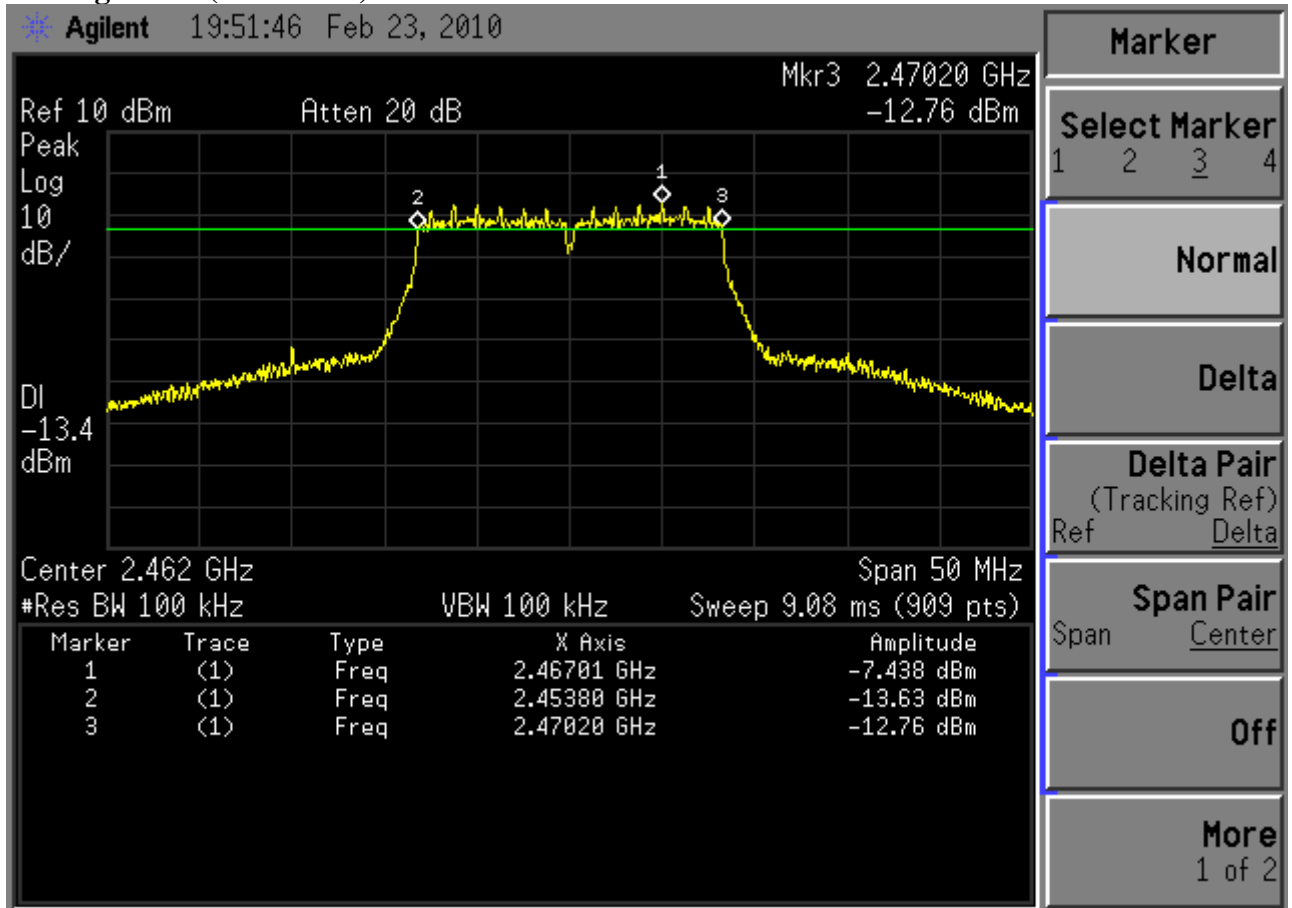
802.11g Ch 01 (2412 MHz)



802.11g Ch 06 (2437 MHz)



802.11g Ch 11 (2462 MHz)



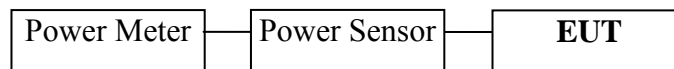
6 MAXIMUM PEAK OUTPUT POWER MEASUREMENT

6.1 Test Equipment

The following test equipment was used during the maximum peak output power measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Power Meter	Anritsu	ML2487A	6K00003245	Aug 05, 2009	Aug 05, 2010
2.	Power Sensor	Anritsu	MA2491A	32489	Aug 05, 2009	Aug 05, 2010

6.2 Block Diagram of Test Setup



6.3 Specification Limits ((§15.247(b)(3))

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5 MHz is: 1 Watt. (30 dBm)

6.4 Operating Condition of EUT

The test program “Unitest” was used to enable the EUT to transmit data at different channel frequency individually.

6.5 Test Procedure

This is an RF conducted test. Use a direct connection between the antenna port of the transmitter and the power meter, through suitable attenuation. We use Power Output Option 1 (which defined in KDB558074) to measure the power output. Power Output Option 1 is a peak measurement. The transmitter output was connected to the power meter that was designed to detect peak value automatically.

6.6 Test Results

PASSED. All the test results are listed below.

(Test date: Feb 23, 2010 Temperature : 22 °C Humidity : 53 %)

Modulation	Channel	Frequency	Peak Output Power	Average Output Power	Limit
802.11b	01	2412 MHz	6.98 dBm	3.80 dBm	30 dBm
	06	2437 MHz	7.41 dBm	4.57 dBm	30 dBm
	11	2462 MHz	8.75 dBm	6.10 dBm	30 dBm
802.11g	01	2412 MHz	10.95 dBm	2.61 dBm	30 dBm
	06	2437 MHz	11.51 dBm	3.67 dBm	30 dBm
	11	2462 MHz	13.17 dBm	4.89 dBm	30 dBm

7 EMISSION LIMITATIONS MEASUREMENT

7.1 Test Equipment

The following test equipment was used during the emission limitations test :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010

7.2 Block Diagram of Test Setup

The same as Section. 5.2.

7.3 Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (See Section 15.205(c)).(※This test result attaching to Section. 4.7)

7.4 Operating Condition of EUT

The test program “Unitest” was used to enable the EUT to transmit data at different channel frequency individually.

7.5 Test Procedure

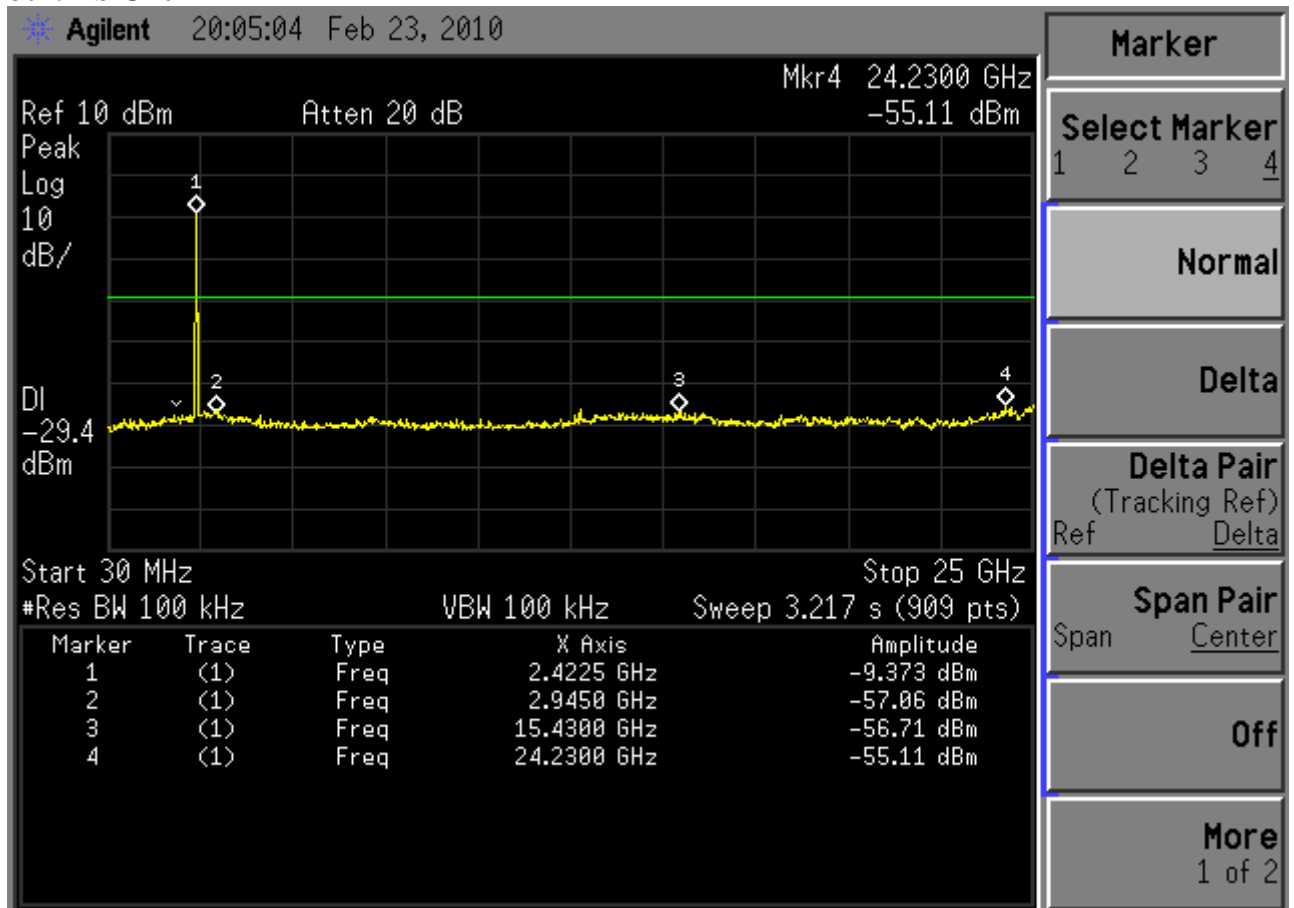
The transmitter output was connected to the spectrum analyzer. Set RBW = 100 kHz, VBW = 100 kHz, scan up through 10th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

7.6 Test Results

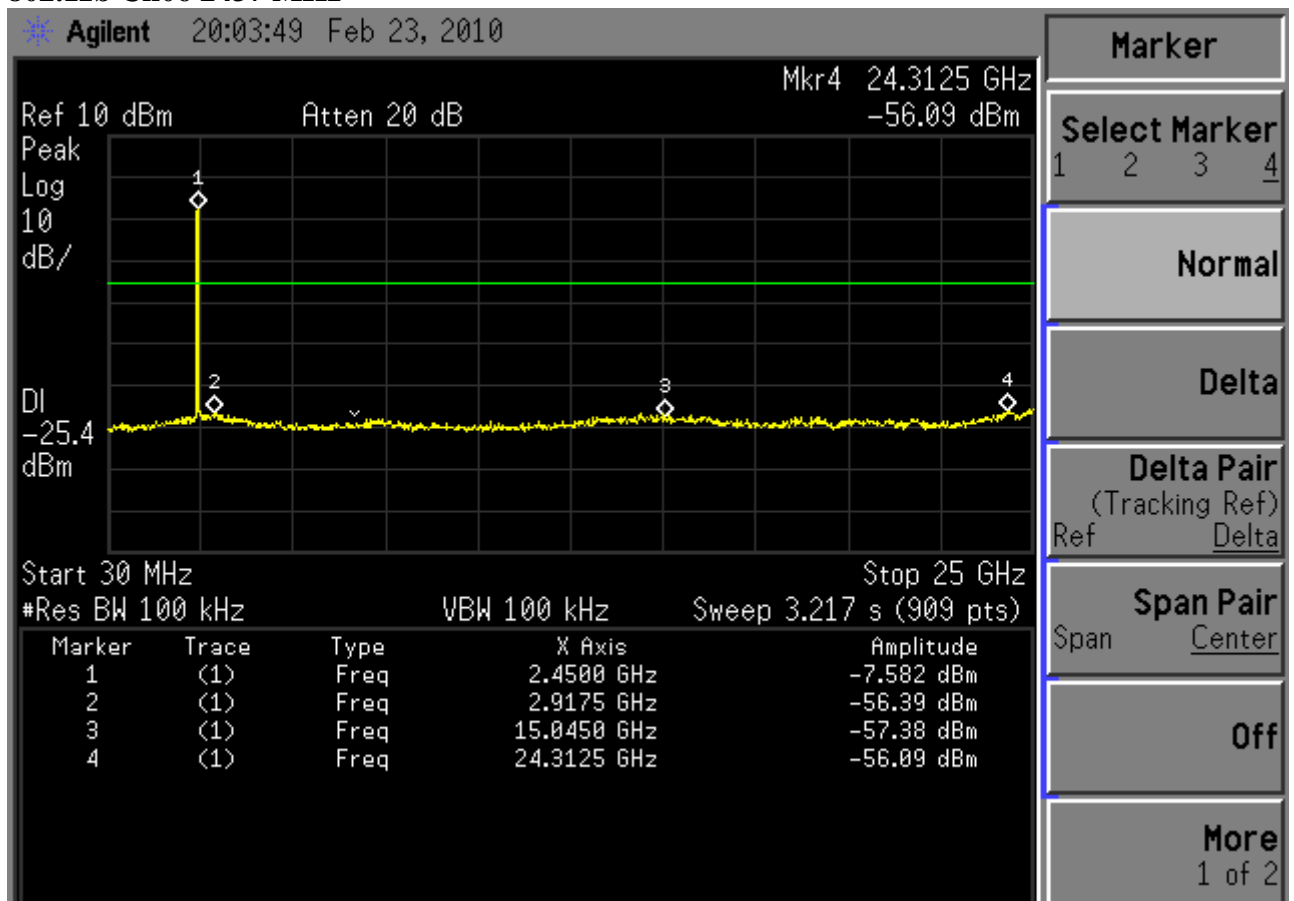
PASSED.

The test data was attached in the next pages.

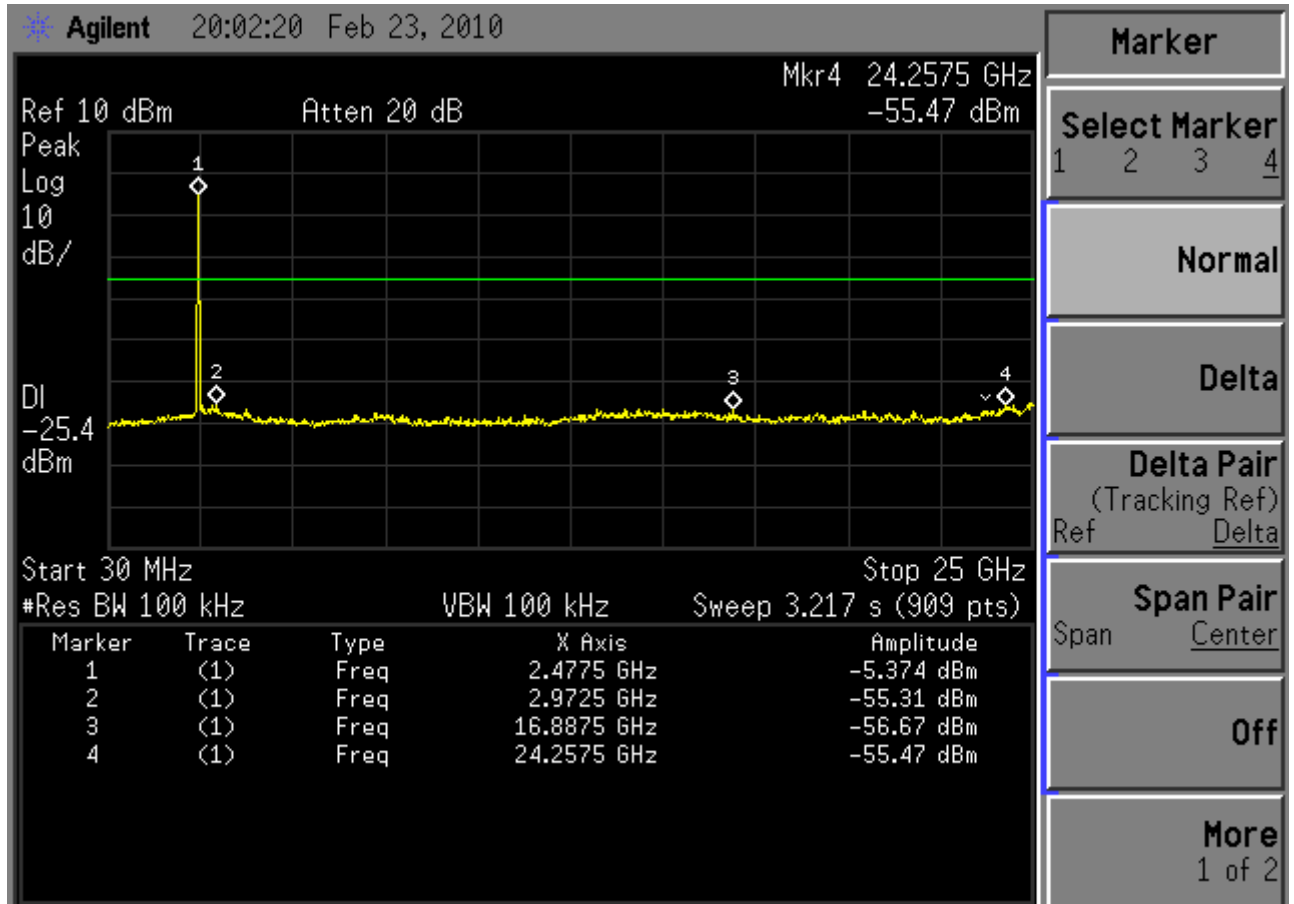
802.11b Ch01 2412 MHz



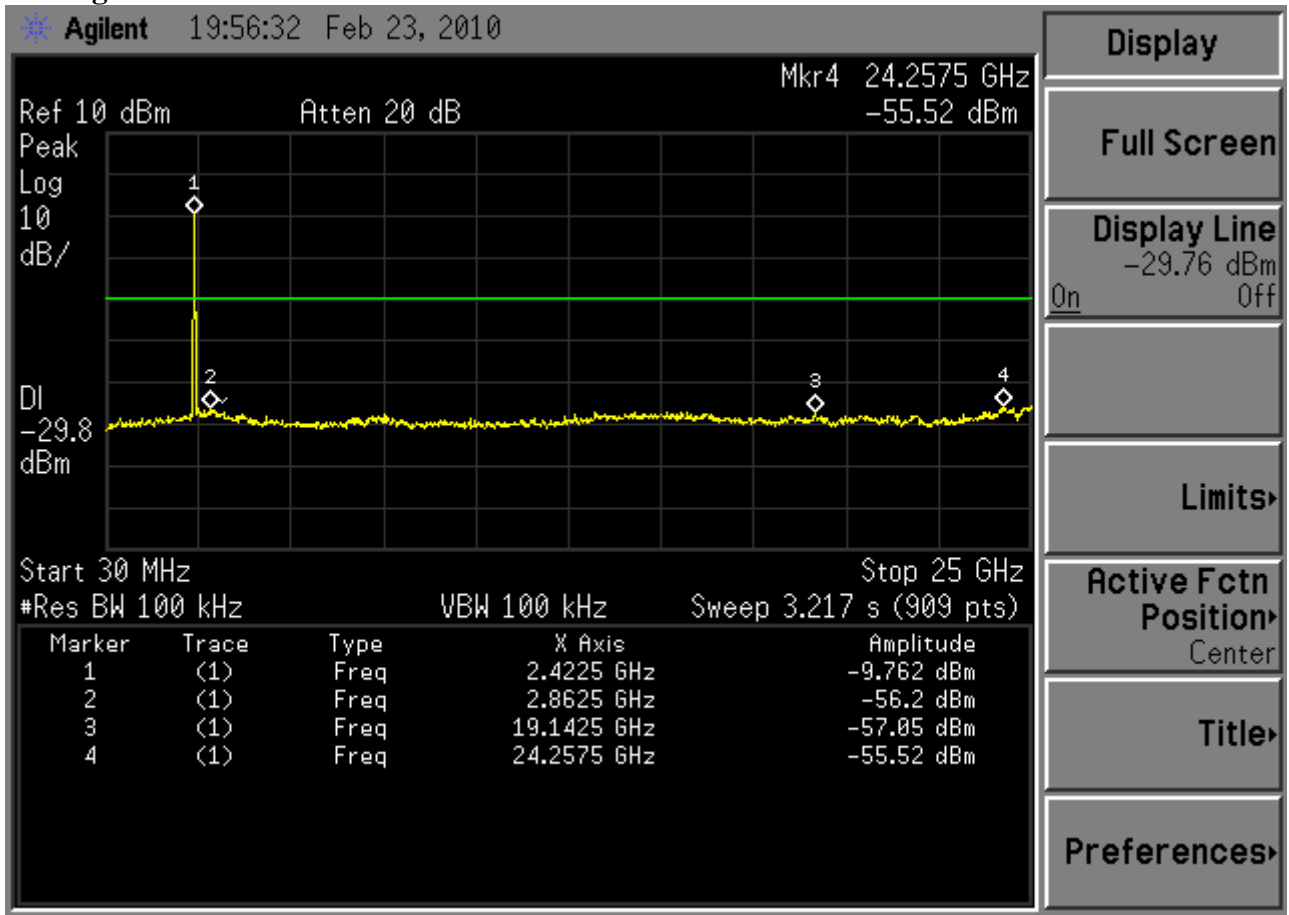
802.11b Ch06 2437 MHz



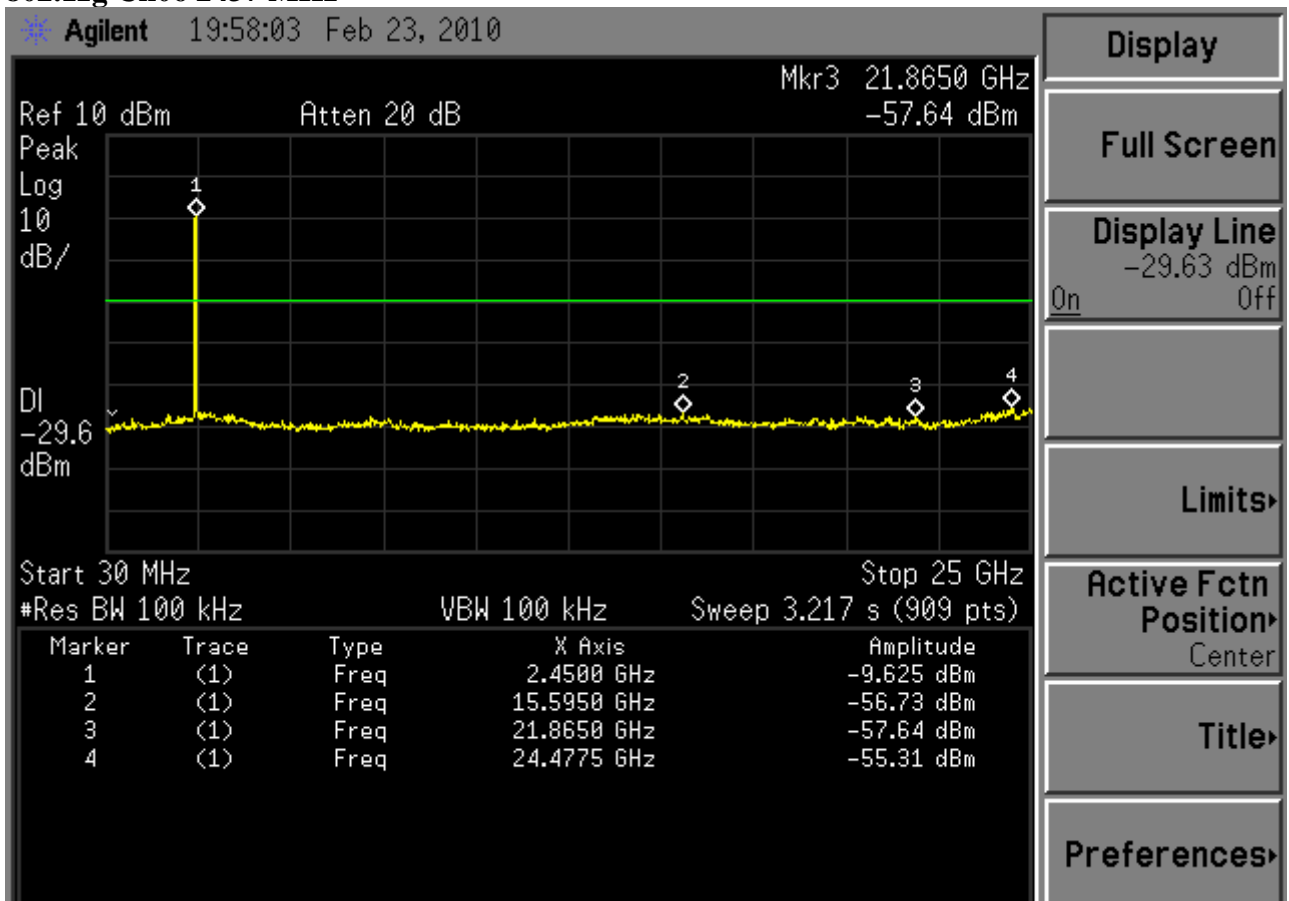
802.11b Ch11 2462 MHz



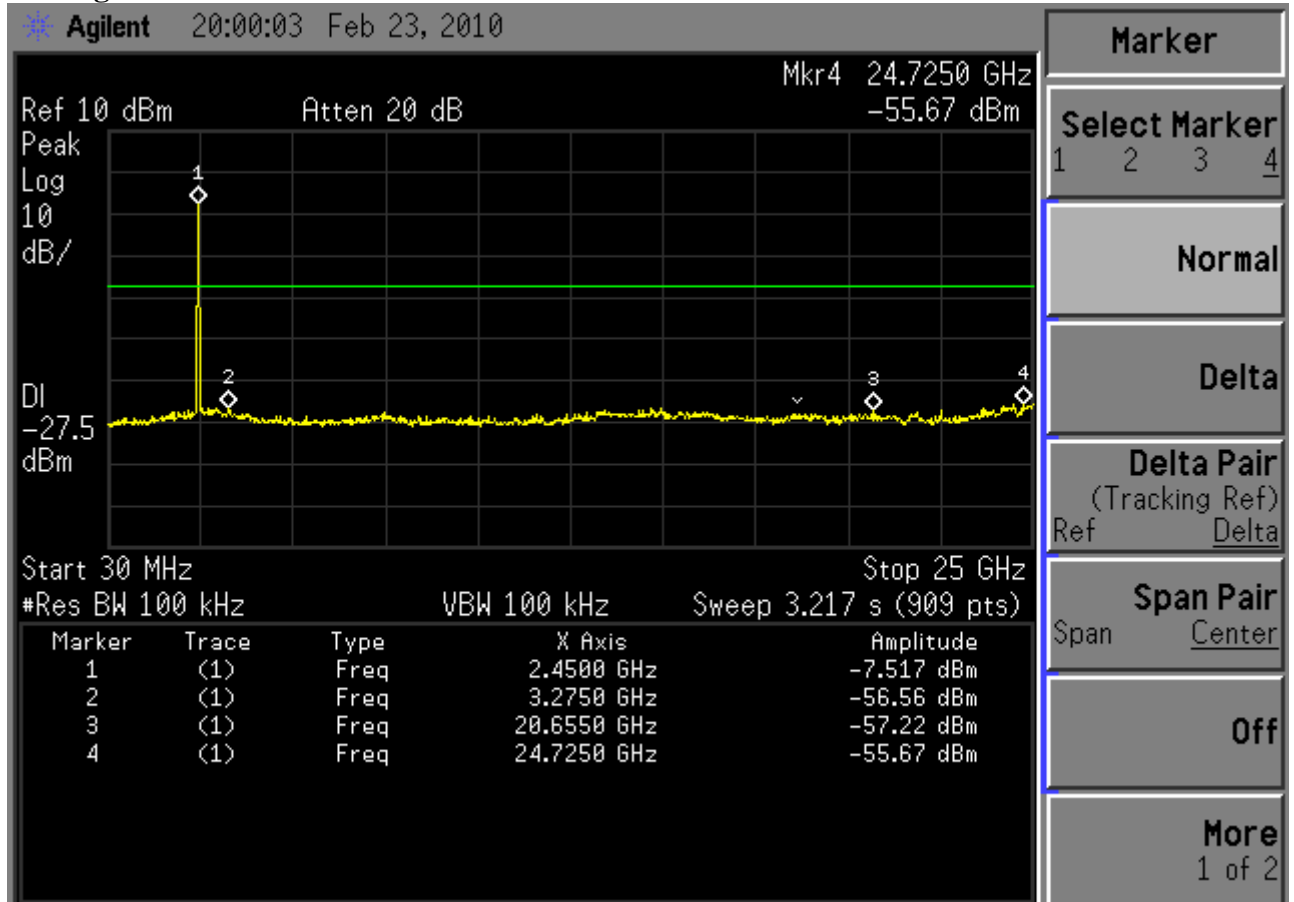
802.11g Ch01 2412 MHz



802.11g Ch06 2437 MHz



802.11g Ch11 2462 MHz



8 BAND EDGES MEASUREMENT

8.1 Test Equipment

The following test equipment was used during the band edges measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010

8.2 Block Diagram of Test Setup

The same as section.5.2.

8.3 Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits.

8.4 Operating Condition of EUT

The test program “Telnet” was used to enable the EUT to transmit and receive data at different channel frequency individually.

8.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100kHz bandwidth from band edge.

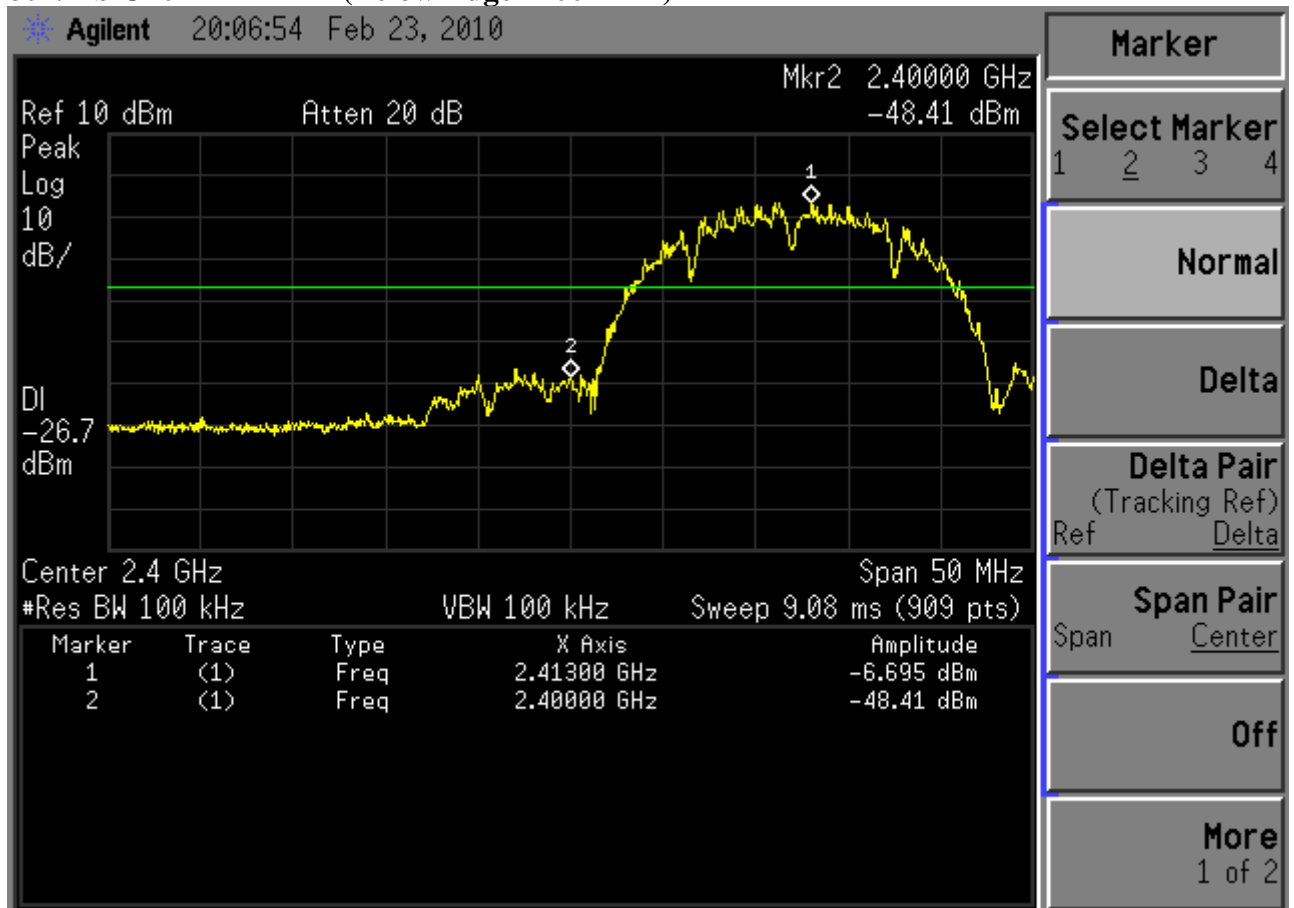
8.6 Test Results

PASSED. All the test results are attached in next pages.

(Test date: Feb. 23, 2010 Temperature : 21℃ Humidity : 46 %)

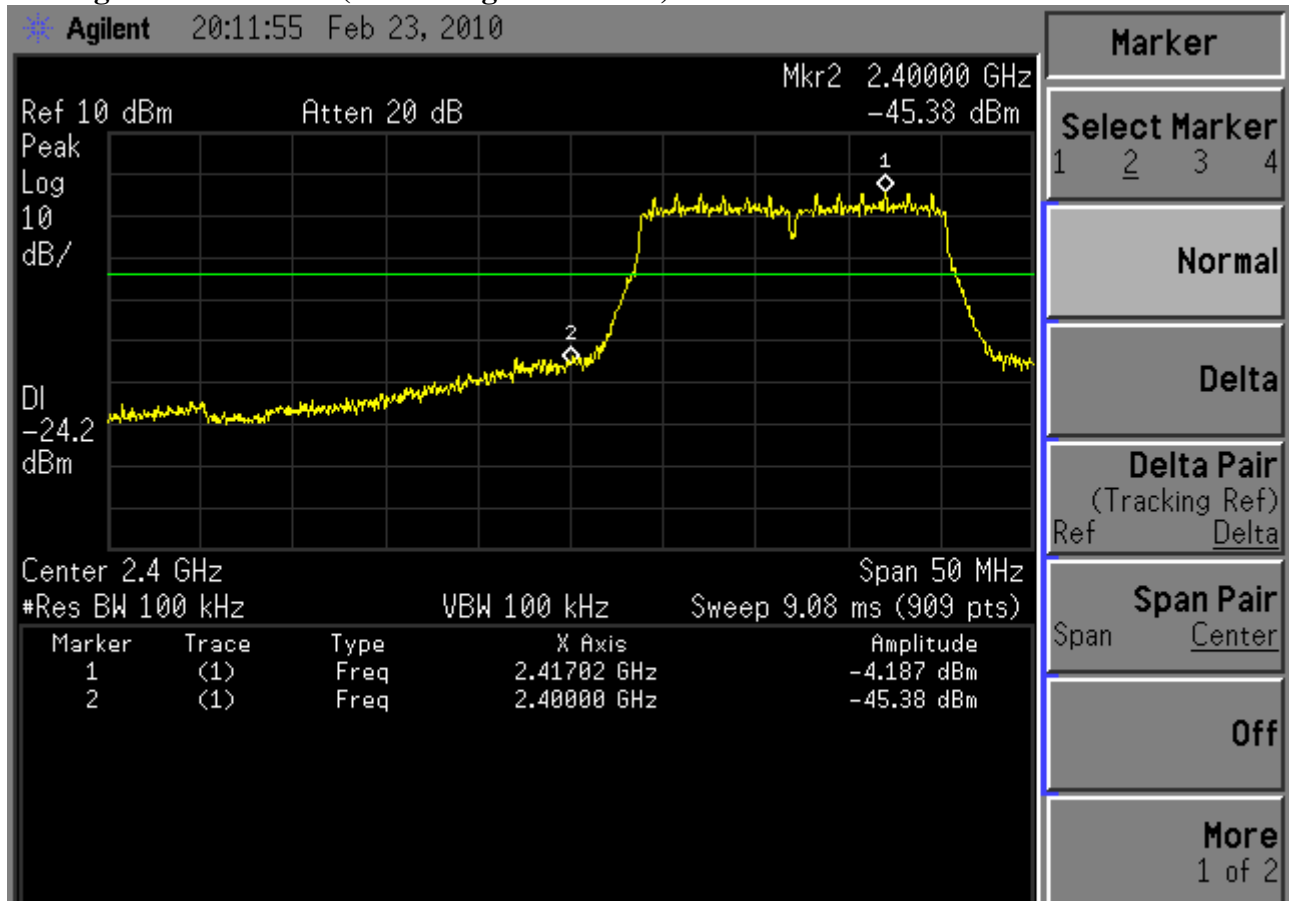
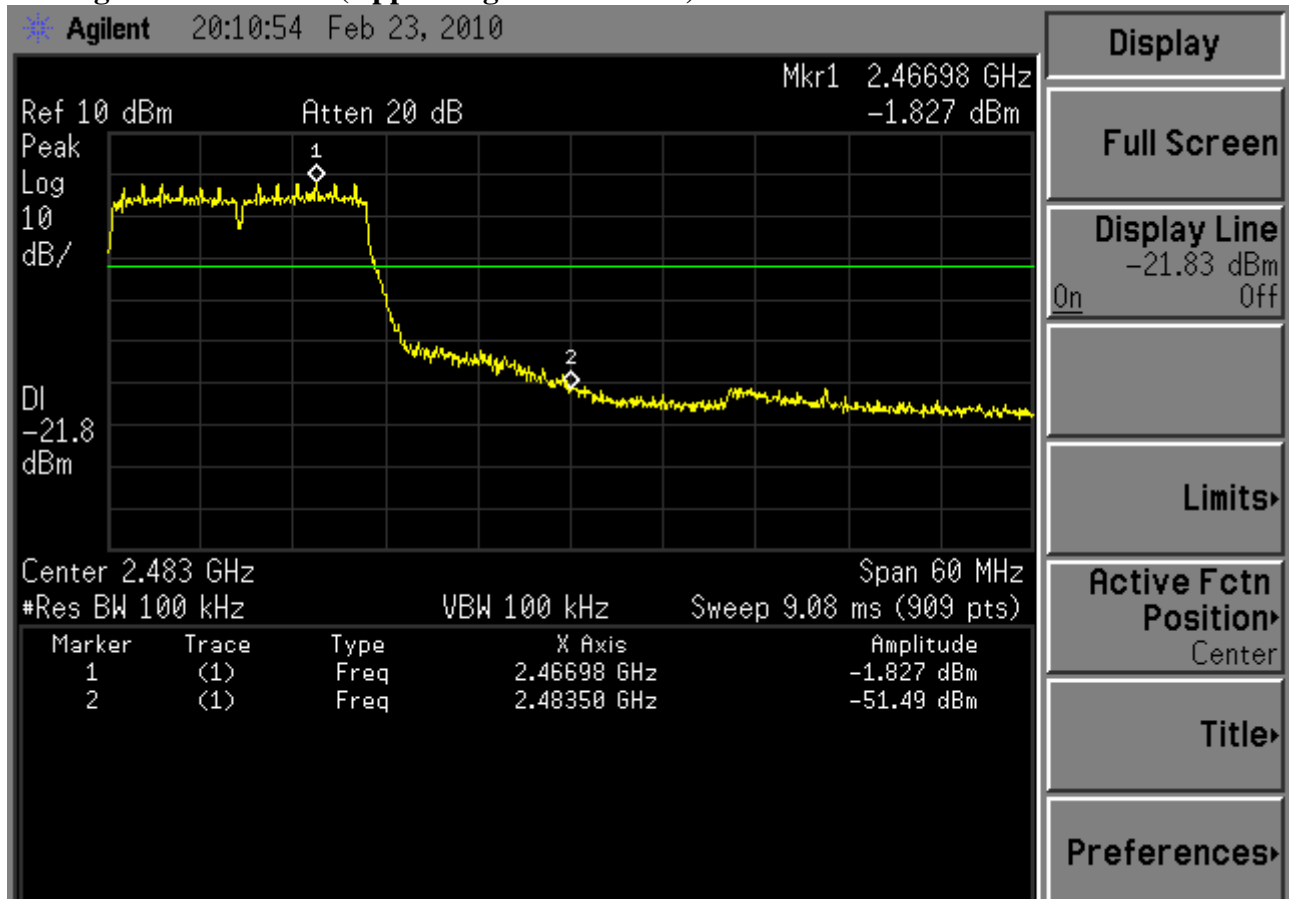
Modulation	Location	Channel	Frequency	Delta Marker	Result
802.11b	Below Band Edge	01	2400 MHz	41.715 dB	More than 20 dB below the highest level of the desired power
	Upper Band Edge	11	2483.5 MHz	56.858 dB	
802.11g	Below Band Edge	01	2400 MHz	41.193 dB	
	Upper Band Edge	11	2483.5 MHz	49.663 dB	

802.11b Ch01 2412MHz (Below Edge 2400 MHz)



802.11b Ch11 2462MHz (Upper Edge 2483.5 MHz)



802.11g Ch01 2412MHz (Below Edge 2400 MHz)**802.11g Ch11 2462MHz (Upper Edge 2483.5 MHz)**

9 POWER SPECTRAL DENSITY MEASUREMENT

9.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010

9.2 Block Diagram of Test Setup

The same as section.5.2.

9.3 Specification Limits (§15.247(e))

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band.

9.4 Operating Condition of EUT

The test program “Unitest” was used to enable the EUT to transmit data at different channel frequency individually.

9.5 Test Procedure

The same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output is measured, then a peak power spectral density measurement is required. Use PSD Option 1 (which defined in KDB558074) if Power output Option 1 was used.

PSD Option 1:

Locate and zoom in on emission peak(s) within the passband. Set RBW = 3kHz, VBW > RBW, sweep = (SPAN/3kHz). The peak level measured must be no greater than +8 dBm.

The transmitter output was connected to the spectrum analyzer. The fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz.

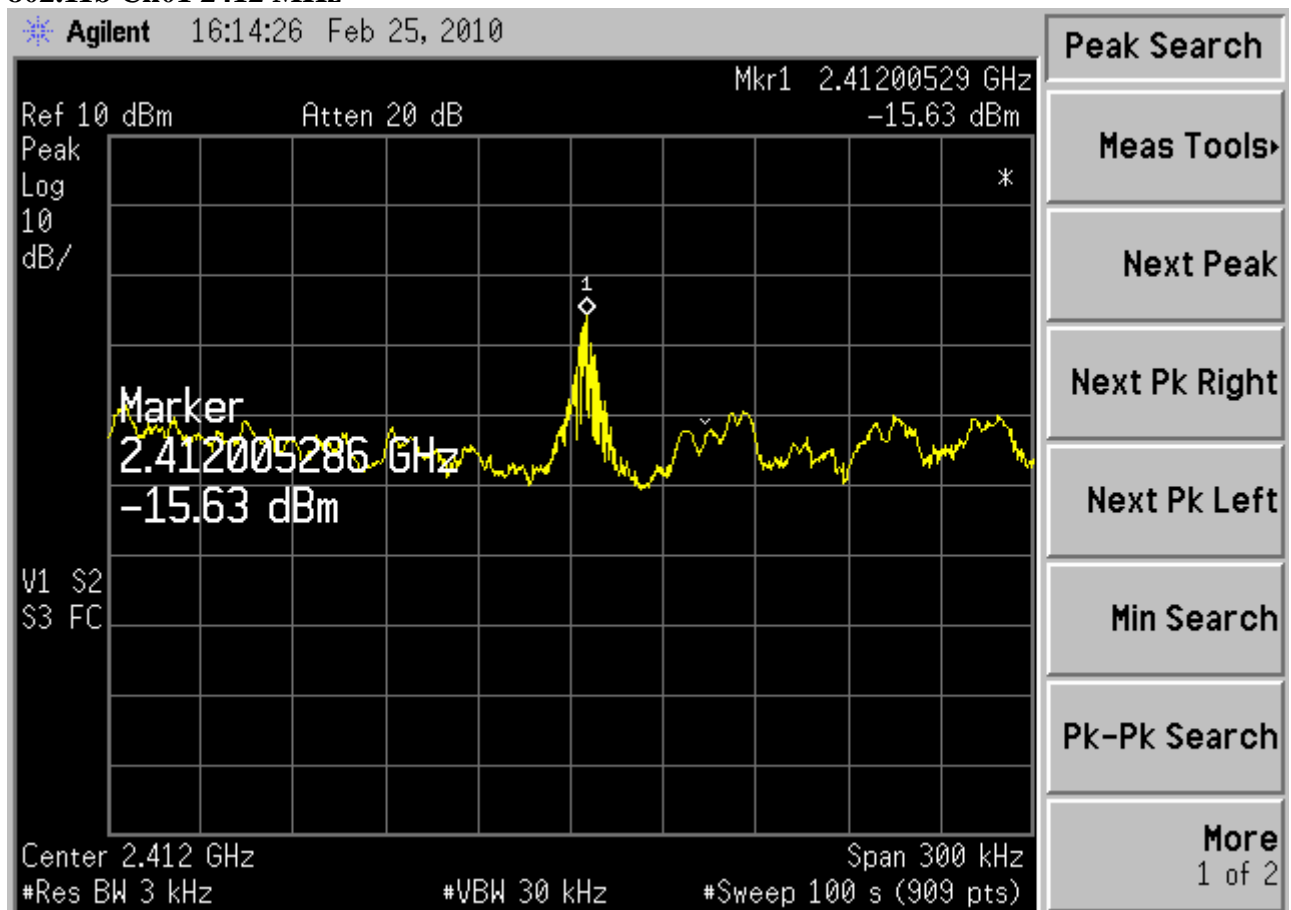
9.6 Test Results

PASSED. All the test results are attached in next pages.

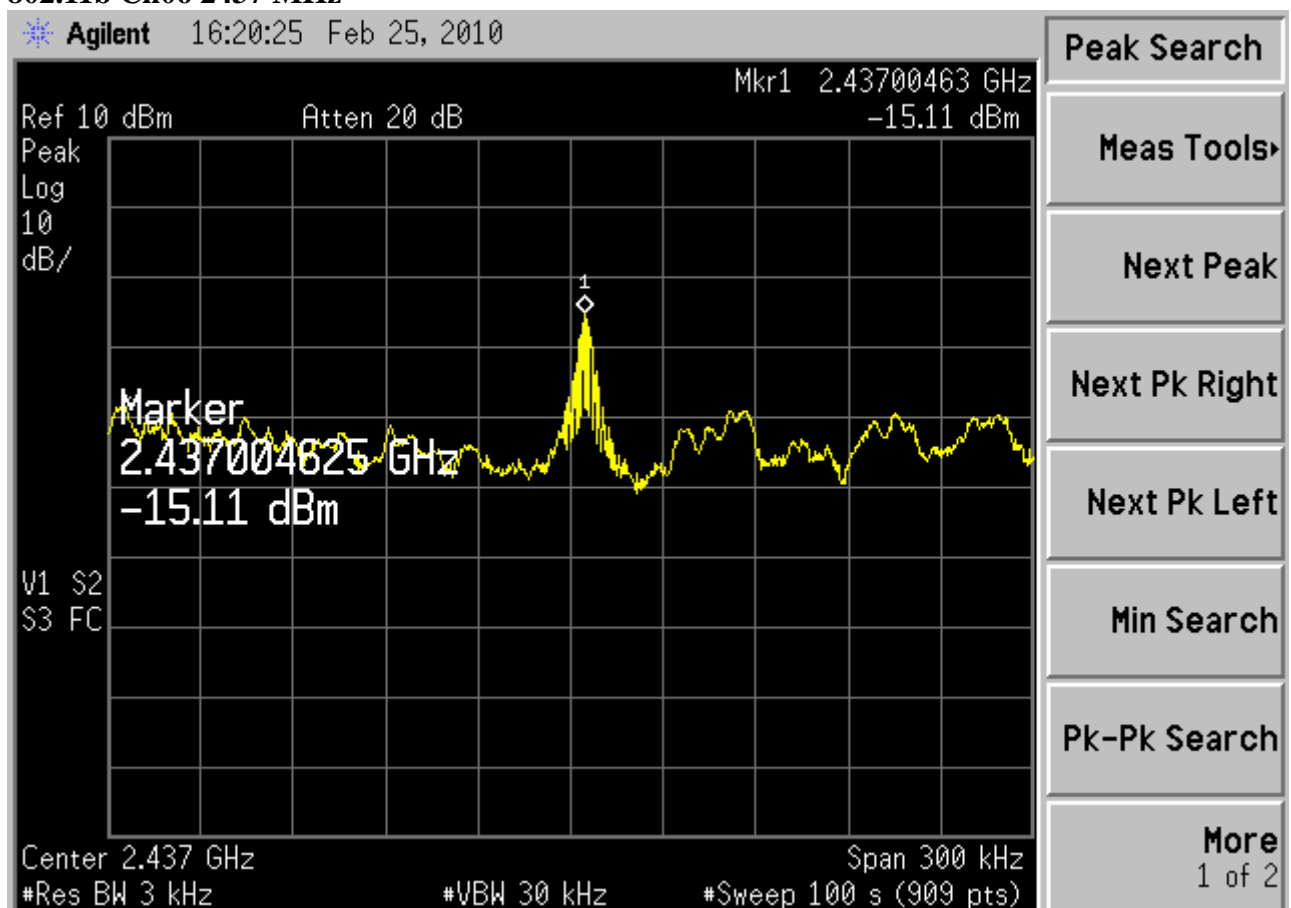
(Test date: Feb. 25, 2010 Temperature : 21°C Humidity : 55 %)

Modulation	Channel	Frequency	Power Spectral Density	Limit
802.11b	01	2412 MHz	-15.63 dBm	8dBm
	06	2437MHz	-15.11 dBm	8dBm
	11	2462MHz	-13.64 dBm	8dBm
802.11g	01	2412 MHz	-26.43 dBm	8dBm
	06	2437MHz	-27.17 dBm	8dBm
	11	2462MHz	-24.62 dBm	8dBm

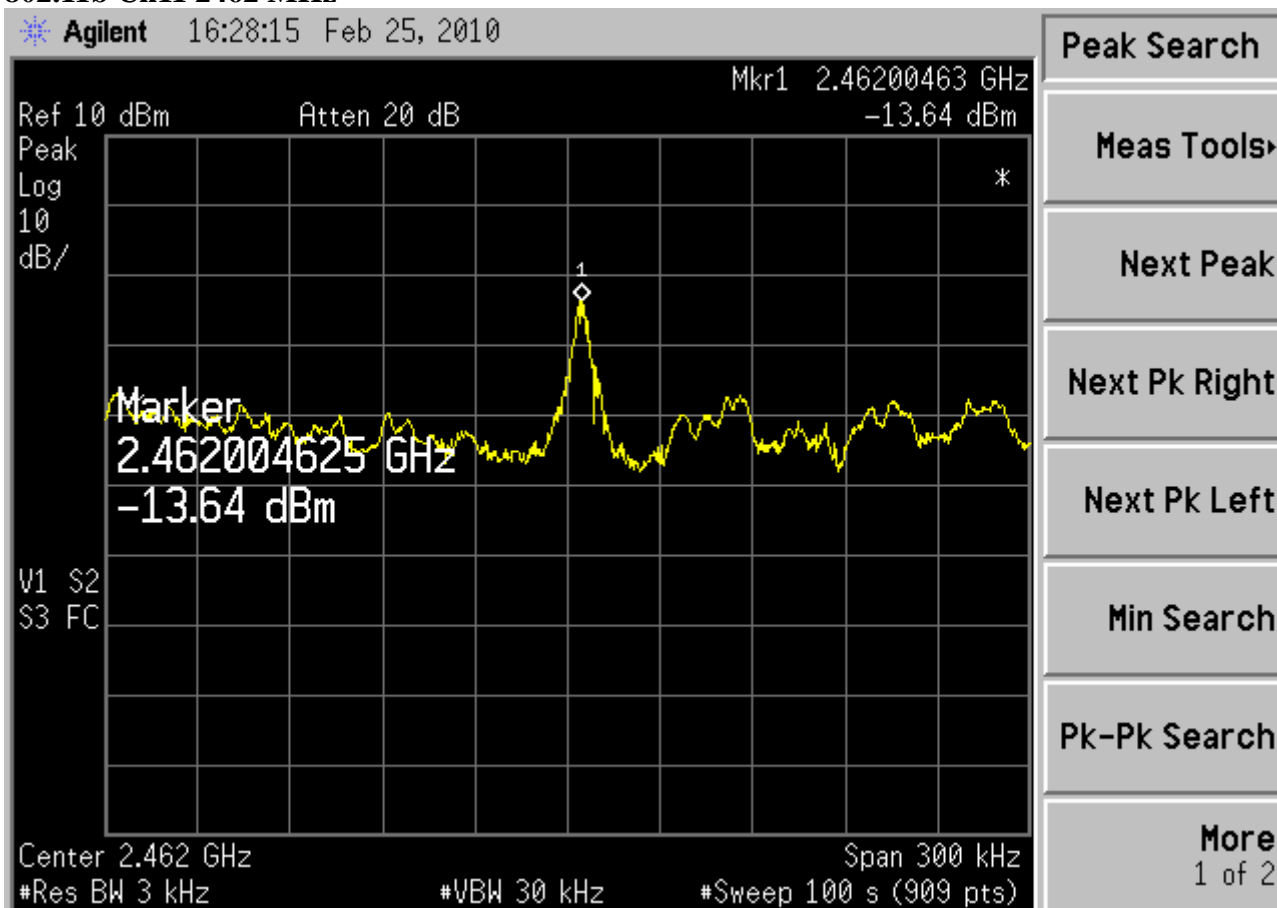
802.11b Ch01 2412 MHz



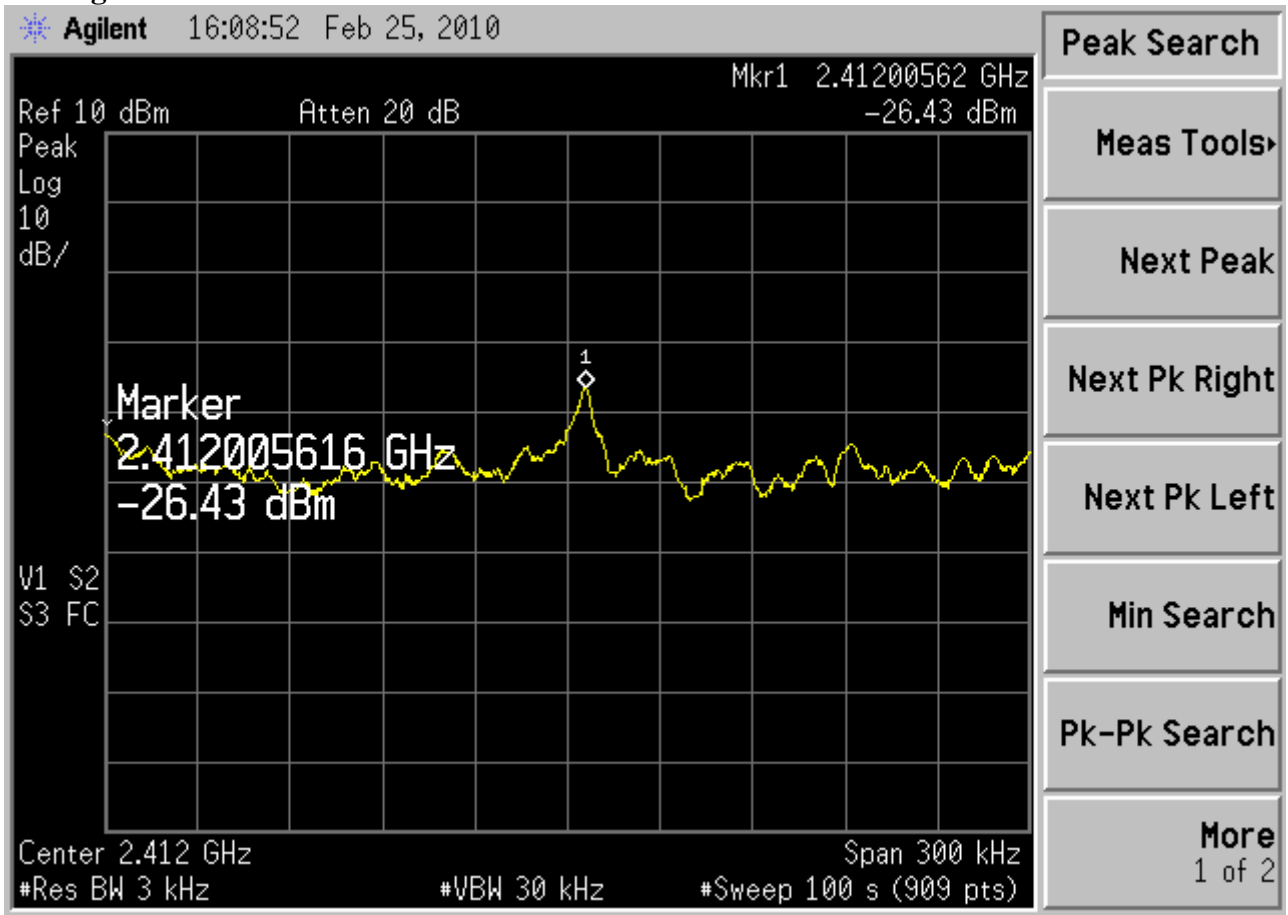
802.11b Ch06 2437 MHz



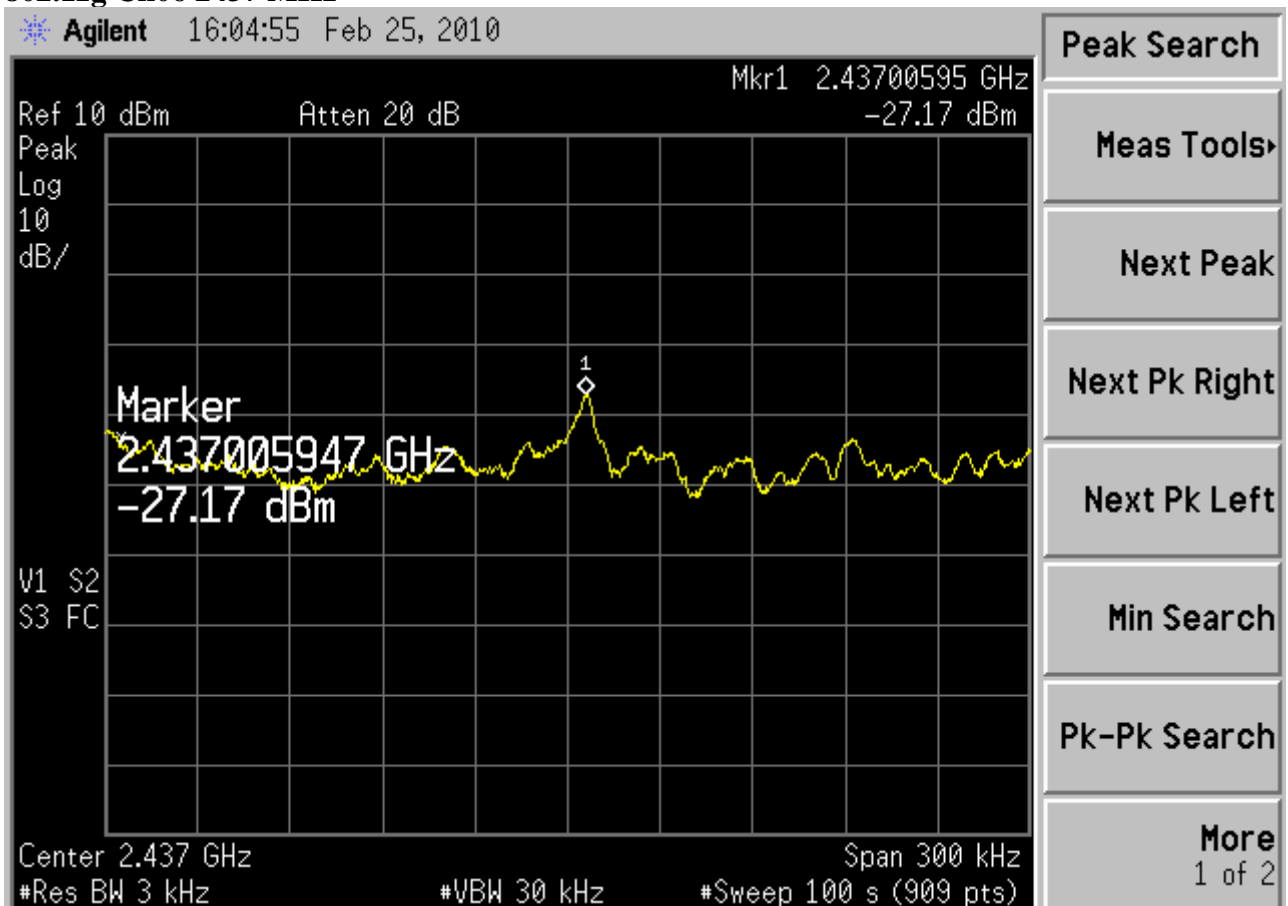
802.11b Ch11 2462 MHz



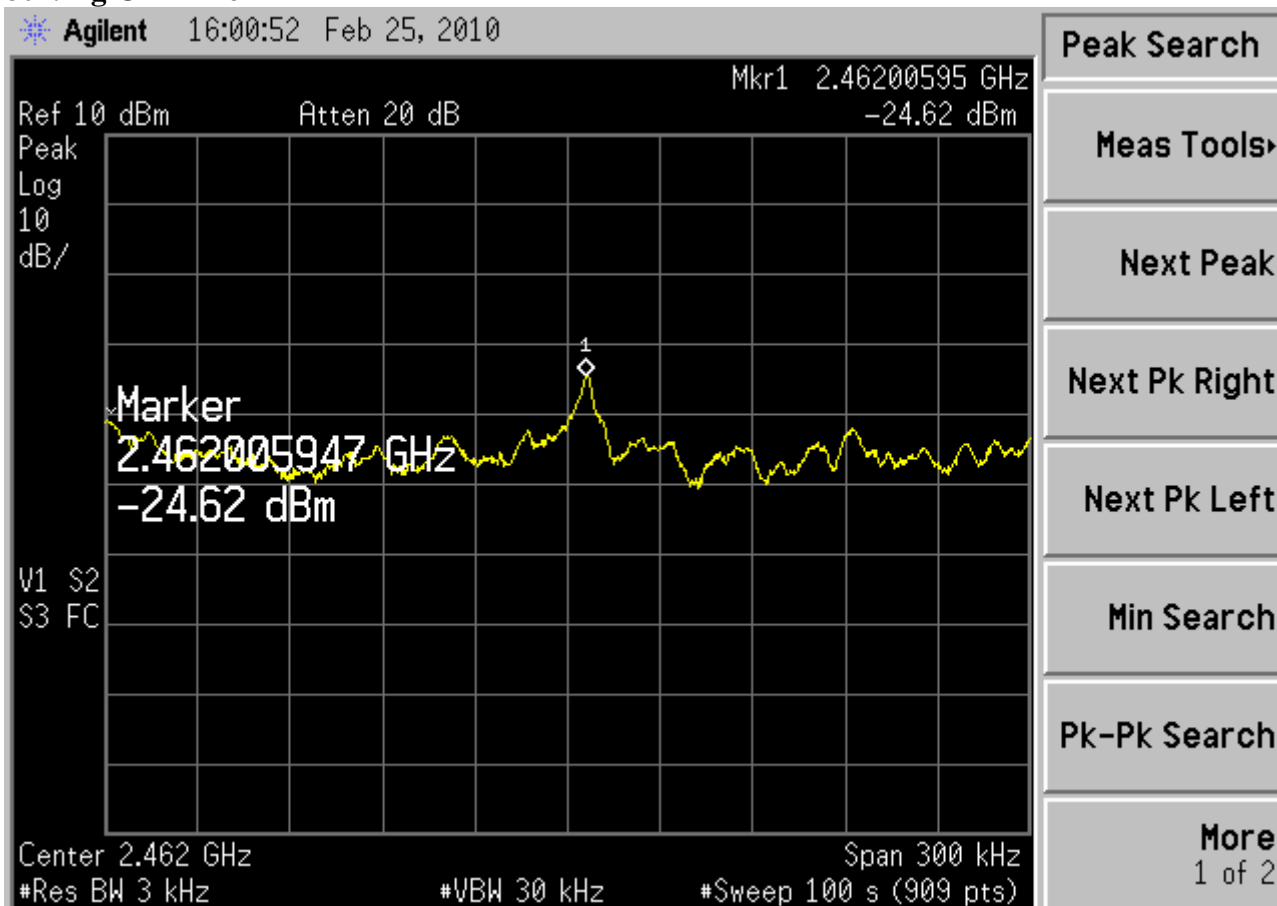
802.11g Ch01 2412 MHz



802.11g Ch06 2437 MHz



802.11g Ch11 2462 MHz



10 DEVIATION TO TEST SPECIFICATIONS

None.