



Test Report

Product Name : 2.4GHz Digital Wireless A / V / Data
Transceiver Module
Model No. : 15-2400DK Module
FCC ID. : SK2-2400DK

Applicant : COP security system corp
Address : 4-6F., No.5, Lane 130, Mincyuan Rd., Sindian Dist.,
New Taipei City, Taiwan R.O.C. (23141)

Date of Receipt : 2012/04/12
Issued Date : 2012/06/15
Report No. : 124291R-RFUSP43V01
Report Version : V1.0

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date : 2011/06/15

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 Applicant : COP security system corp.
 Address : 4-6F., No.5, Lane 130, Mincyuan Rd., Sindian Dist., New Taipei
 City, Taiwan R.O.C. (23141)
 Manufacturer : COP security system corp.
 Model No. : 15-2400DK Module
 FCC ID. : SK2-2400DK
 EUT Voltage : DC 12V
 Trade Name : 
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2011
 Test Result : Complied

The test results relate only to the samples tested.

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Documented By :

(Carol Tsai / Engineering Adm. Specialist)

Reviewed By :

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Approved By :

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1. General Information

1.1. EUT Description

Product Name	2.4GHz Digital Wireless A / V / Data Transceiver Module
Model No.	15-2400DK Module
Trade Name	
Frequency Range	2403~2475MHz
Channel Number	25
Type of Modulation	QPSK, 16QAM
Channel Control	Auto
Antenna Type	Dipole
Antenna Gain	5dBi

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
00	2403	13	2442
01	2406	14	2445
02	2409	15	2448
03	2412	16	2451
04	2415	17	2454
05	2418	18	2457
06	2421	19	2460
07	2424	20	2463
08	2427	21	2466
09	2430	22	2469
10	2433	23	2472
11	2436	24	2475
12	2439		

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. The transmitter is presented with a continuous data stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its 25 channels and over the minimum number of hopping channels (15 channels).

The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hop sets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

Note:

1. This device is a 2.4GHz Digital Wireless A / V / Data Transceiver Module including a 2.4GHz receiving function, and transmitting function.
2. These test results on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
3. Regards to the frequency band operation; the lowest , middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
5. This device is a composite device in accordance with Part 15 regulations. The function receiving was measured and made a test report that the report number is 124291R-RFUSP37V02 under Declaration of Conformity.

In order to comply with FCC requirements, here is the Q&A for FCC hopping rules:

1. *Is the hopping sequence pseudorandom, based on the technical description? A list of pseudorandom shall be provided.*

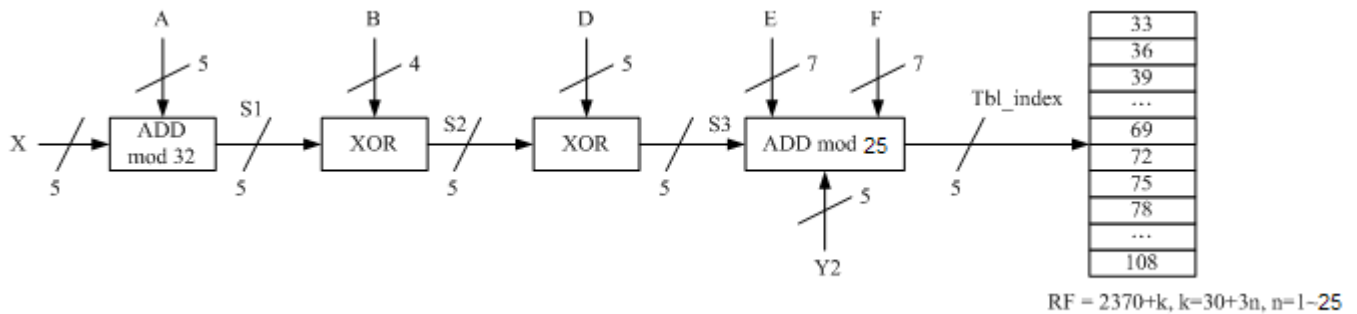


Figure 1 Architecture of random sequence generator

The hopping sequence generator contains one 5-bit adder, one 4-bit XOR, one 5-bit XOR and a 7-bit adder (Figure 1) to generate 7-bit random number.

There are two seeds for generating sequence. One seed is from 21-bit ID number (ID[20:0]) which is unique for each device. The other seed is from 16-bit token number (Token[15:0]) which can be randomly picked up upon power-on and continuously updated every clock.

$X = \text{Token}[5:1],$
 $A = \text{ID}[16:10],$
 $B = \text{ID}[20:17],$
 $D = \{\text{ID}[8], \text{ID}[6], \text{ID}[4], \text{ID}[2], \text{ID}[0]\} \text{ xor } \text{Token}[10:6],$
 $E = \{\text{ID}[13], \text{ID}[11], \text{ID}[9], \text{ID}[7], \text{ID}[5], \text{ID}[3], \text{ID}[1]\},$
 $F = (16 * \text{Token}[15:6]) \text{ mod } 25,$
 $Y2 = 32 * \text{Token}[0]$

Assuming ID is given as 0x66, Token is in the range [102, 117]. Since there are sixteen numbers in the Token, so we can generate sixteen random numbers using the above architecture.

$k = \{90, 105, 33, 51, 105, 48, 105, 45, 102, 42, 75, 93, 72, 90, 69, 87\}$

These sixteen numbers are used to map RF channels using $2370 + k$ MHz. This generator can generate k in the range {33, 36 ..., 105} also ensures that the spectral distance of adjacent channels is larger than 3 MHz.

Using the above random sequence generator and ID 0x66, we empirically generate the following

hopping table for FCC review.

	1	2	3	4	5	6	7	8	9	10
1	105	51	33	54	36	57	39	60	69	90
2	72	93	75	96	78	99	81	102	84	105
3	87	33	90	36	66	87	69	90	72	93
4	75	96	78	99	81	102	84	105	87	33
5	42	63	45	66	48	69	51	72	54	75
6	57	78	60	81	63	84	69	90	66	87
7	75	96	72	93	81	102	78	99	87	33
8	84	105	45	66	42	63	51	72	48	69
9	57	78	54	75	63	84	60	81	42	63
10	39	60	48	69	45	66	54	75	51	72
11	60	81	57	78	93	39	90	36	99	45
12	96	42	105	51	102	48	36	57	33	54
13	57	78	60	81	51	72	54	75	45	66
14	48	69	39	60	42	63	33	54	36	57
15	102	48	105	51	96	42	99	45	90	36
16	93	39	105	51	33	54	99	45	102	48
17	93	39	96	42	87	33	90	36	81	102
18	84	105	75	96	78	99	69	90	72	93
19	63	84	66	87	33	54	105	51	102	48
20	99	45	96	42	93	39	90	36	87	33
21	84	105	81	102	78	99	75	96	72	93
22	69	90	66	87	63	84	81	102	78	99
23	75	96	72	93	69	90	66	87	63	84
24	60	81	57	78	54	75	51	72	48	69
25	45	66	42	63	39	60	36	57	72	93
26	75	96	78	99	81	102	60	81	63	84
27	66	87	69	90	48	69	51	72	54	75
28	57	78	36	57	39	60	42	63	45	66
29	45	66	48	69	51	72	54	75	33	54
30	36	57	39	60	42	63	96	42	99	45
31	102	48	105	51	84	105	87	33	90	36
32	93	39	48	69	45	66	54	75	51	72
33	36	57	33	54	42	63	39	60	99	45
34	96	42	105	51	102	48	87	33	84	105
35	93	39	90	36	96	42	93	39	102	48

36	99	45	84	105	81	102	90	36	87	33
37	72	93	69	90	78	99	75	96	60	81
38	57	78	66	87	63	84	63	84	66	87
39	57	78	60	81	75	96	78	99	69	90
40	72	93	87	33	90	36	81	102	84	105
41	99	45	102	48	93	39	96	42	36	57
42	39	60	105	51	33	54	48	69	51	72
43	42	63	45	66	60	81	63	84	54	75
44	57	78	72	93	75	96	66	87	69	90
45	39	60	36	57	33	54	105	51	51	72
46	48	69	45	66	42	63	63	84	60	81
47	57	78	54	75	75	96	72	93	69	90
48	66	87	87	33	84	105	81	102	78	99
49	99	45	96	42	93	39	90	36	36	57
50	33	54	105	51	102	48	48	69	45	66
51	42	63	39	60	78	99	81	102	84	105
52	87	33	90	36	93	39	96	42	99	45
53	102	48	105	51	33	54	36	57	39	60
54	42	63	45	66	48	69	51	72	54	75
55	57	78	60	81	63	84	66	87	69	90
56	72	93	75	96	78	99	81	102	84	105
57	87	33	90	36	93	39	96	42	54	75
58	51	72	60	81	57	78	66	87	63	84
59	72	93	69	90	78	99	75	96	84	105
60	81	102	90	36	87	33	96	42	93	39
61	102	48	99	45	33	54	105	51	39	60
62	36	57	45	66	42	63	51	72	48	69
63	57	78	54	75	63	84	60	81	69	90
64	66	87	42	63	45	66	36	57	39	60
65	105	51	33	54	99	45	102	48	66	87
66	69	90	60	81	63	84	54	75	57	78
67	48	69	51	72	90	36	93	39	84	105
68	87	33	78	99	81	102	72	93	75	96
69	39	60	42	63	33	54	36	57	102	48
70	105	51	96	42	99	45	93	39	90	36
71	87	33	84	105	81	102	78	99	75	96
72	72	93	42	63	39	60	36	57	33	54
73	105	51	102	48	99	45	96	42	66	87

74	63	84	60	81	57	78	54	75	51	72
75	48	69	45	66	90	36	87	33	84	105
76	81	102	78	99	75	96	72	93	69	90
77	57	78	60	81	63	84	66	87	45	66
78	48	69	51	72	54	75	81	102	84	105
79	87	33	90	36	69	90	72	93	75	96
80	78	99	105	51	33	54	36	57	39	60
81	93	39	96	42	99	45	102	48	54	75
82	57	78	60	81	63	84	42	63	45	66
83	48	69	51	72	33	54	105	51	39	60
84	36	57	96	42	93	39	102	48	99	45
85	57	78	54	75	63	84	60	81	45	66
86	42	63	51	72	48	69	81	102	78	99
87	87	33	84	105	69	90	66	87	75	96
88	72	93	105	51	102	48	36	57	33	54
89	93	39	90	36	99	45	96	42	69	90
90	72	93	63	84	66	87	81	102	84	105
91	75	96	78	99	45	66	48	69	39	60
92	42	63	57	78	60	81	51	72	54	75
93	96	42	99	45	90	36	93	39	33	54
94	36	57	102	48	105	51	72	93	75	96
95	66	87	69	90	84	105	87	33	78	99
96	81	102	45	66	42	63	39	60	36	57
97	57	78	54	75	51	72	48	69	96	42
98	93	39	90	36	87	33	33	54	105	51
99	102	48	99	45	72	93	69	90	66	87
100	63	84	84	105	81	102	78	99	75	96

We also plot a figure based on the above random sequence. As you can see, the distribution of this sequence is quite uniformly located in these 25 targeted channels.

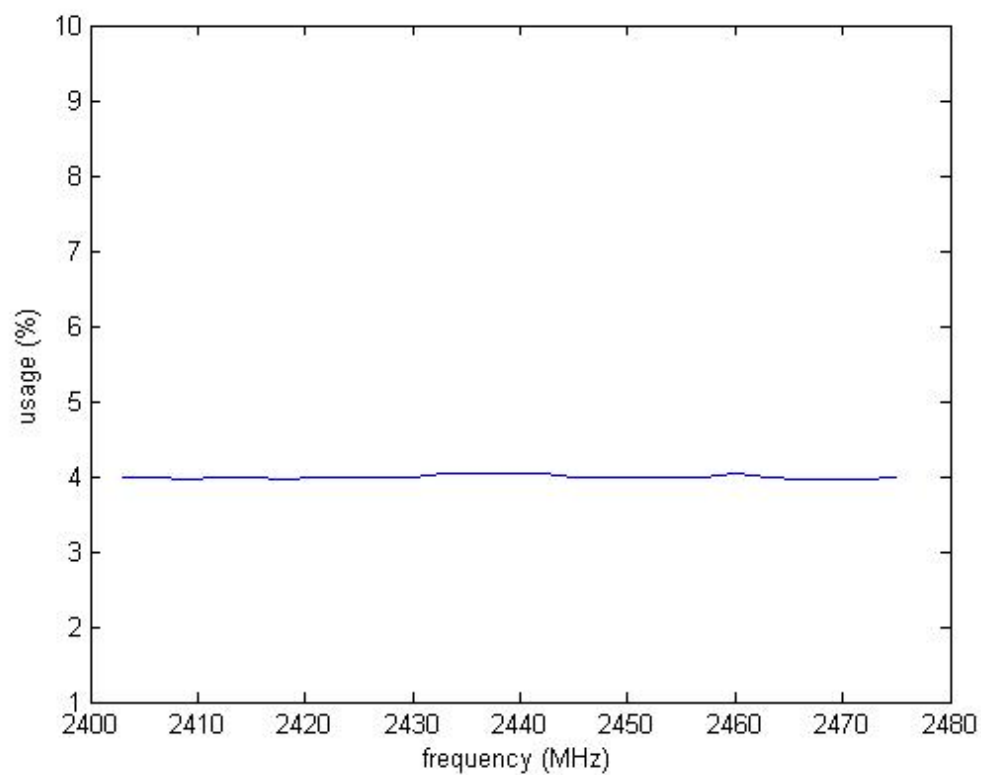


Figure 2 Channel distributions using random sequence generator

2. *Is each channel used equally on average, based on the technical description?*

Yes, because that hopping rate of our device is fixed and hopping sequence follows table shown in answer1.

3. *Does the associated system receiver have a compliant input bandwidth, based on the measured 20 dB emission bandwidth?*

Yes, the symbol rate of transmitter and receiver are the same regardless of modulation.

Therefore, the associated system receiver has a compliant input bandwidth. The 20 dB emission bandwidth of this system is 4.4 MHz.

4. *Does the associated system receiver have the ability to hop in synchronization with the transmitter, based on the technical description?*

Yes. To maintain communication between transmitter and receiver, our device uses same hopping rate and hopping table for both transmitter and receiver.

5. *15.247(g) Does the design of the frequency hopping system allow it to comply with all pertinent requirements when presented with a lengthy data stream?*

We have two modes. The first is initial acquisition mode. The second is normal operation mode. During the initial acquisition transmitter and receiver are doing hopping synchronization. There are 16 evenly distributed channel in this mode. During normal traffic mode we use a pseudorandom sequence shown in item 1. As long as connection between transmitter and receiver is maintained, we stay in normal operation mode. If connection is broken, our device will switch back to initial acquisition mode until connection is established.

6. *15.247(h) Does the frequency hopping system comply with the non-coordination requirement?*

In our hopping system, both transmitter and receiver have a unique ID for their own and they also know the other side's ID. They start to build up the connection after powering on. Different hopping systems are operated independently. There is no coordination between them.

1.3. Test Mode

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

Pre-Test Mode	
EMI	Mode 1: Transmit (16QAM) Mode 2: Transmit (QPSK)
Final Test Mode	
EMI	Mode 1: Transmit (16QAM) Mode 2: Transmit (QPSK)

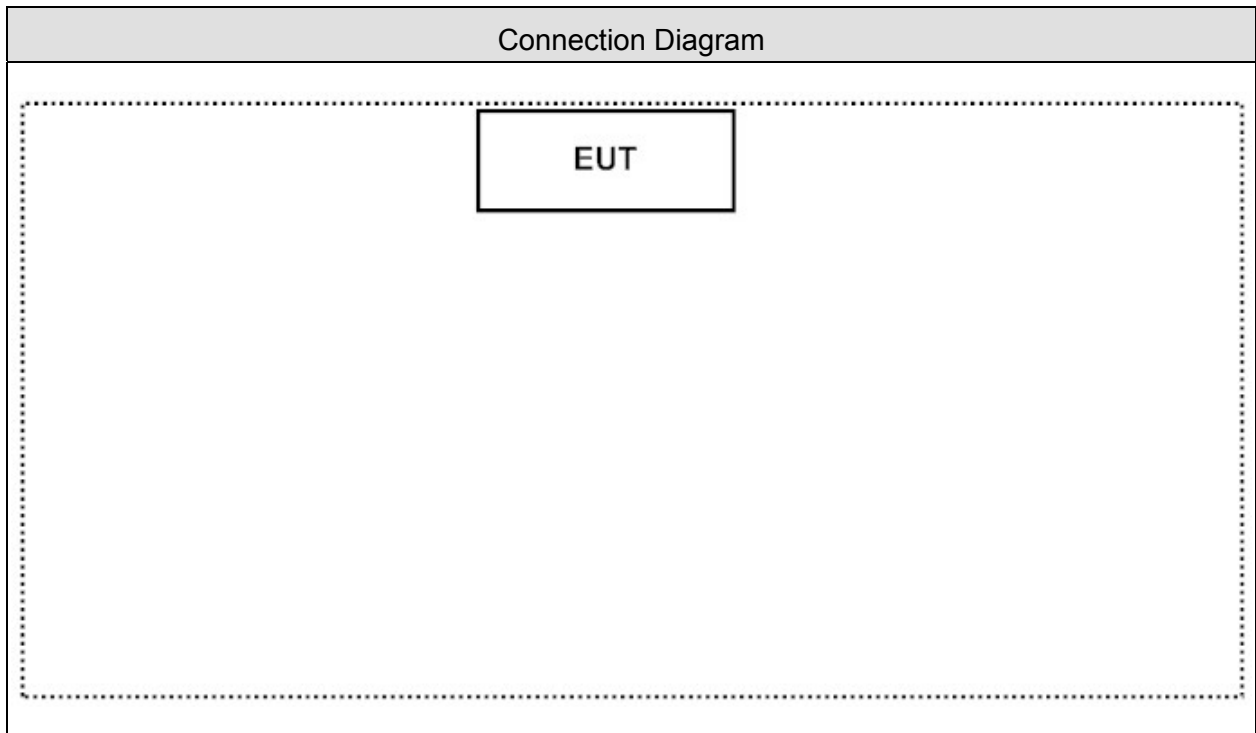
Emission	Mode 1	Mode 2
Conducted Emission	Yes	Yes
Peak Power Output	Yes	Yes
Radiated Emission	Yes	Yes
RF antenna conducted test	Yes	Yes
Band Edge	Yes	Yes
Number of hopping frequency	Yes	Yes
Carrier Frequency Separation	Yes	Yes
Occupied Bandwidth	Yes	Yes
Dwell Time	Yes	Yes

1.4. Tested System Details

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

N/A

1.5. Configuration of tested System



1.6. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.5.
2	Turn on the power.
3	The RF signal's status will continue transmit through EUT.
4	Repeat the above procedure (3)

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.247 Conducted Emission (FHSS)	15 - 35	23
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output (FHSS)	15 - 35	23
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission (FHSS)	15 - 35	25
Humidity (%RH)		25 - 75	54
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test (FHSS)	15 - 35	25
Humidity (%RH)		25 - 75	54
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Band Edge (FHSS)	15 - 35	25
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Number of hopping frequency (FHSS)	15 - 35	23
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Carrier Frequency Separation (FHSS)	15 - 35	23
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth (FHSS)	15 - 35	24
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Dwell Time (FHSS)	15 - 35	23
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000

Site Description: September 27, 2010 File on
Federal Communications Commission
Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 365520



Accredited by TAF
Accreditation Number: 1313
Effective through: December 27, 2013



Accredited by NVLAP
NVLAP Lab Code: 200347-0
Effective through: September 30, 2012



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E-Mail : service@quietek.com

2. Conducted Emission

2.1. Test Equipment

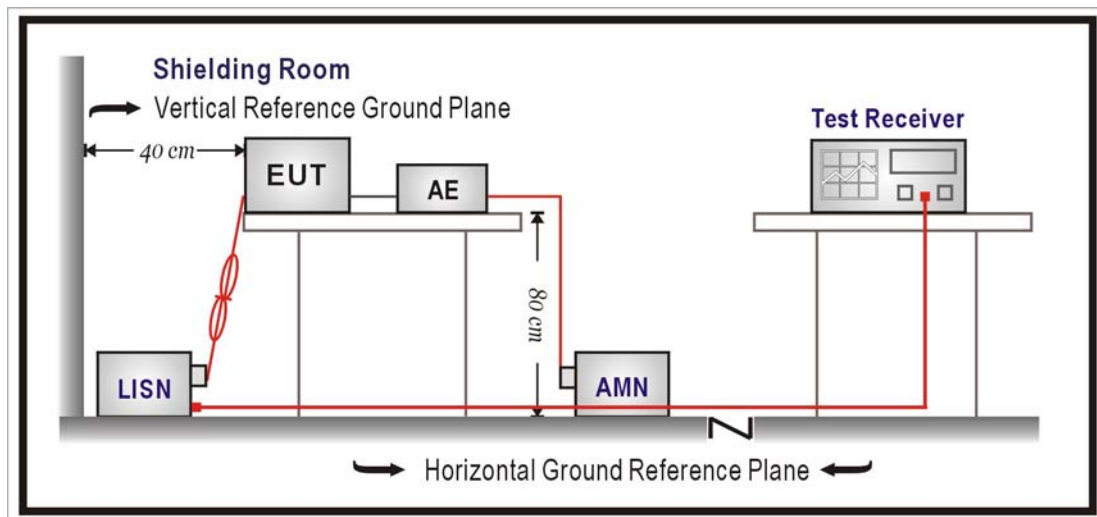
The following test equipments are used during the test:

Conducted Emission / SR2

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2012/02/29
LISN	R&S	ENV216	100092	2011/09/12
Test Receiver	R&S	ESCS 30	825442/014	2011/09/02

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

2.2. Test Setup



2.3. Limits

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

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

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2009 on conducted measurement.

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

2.5. Test Specification

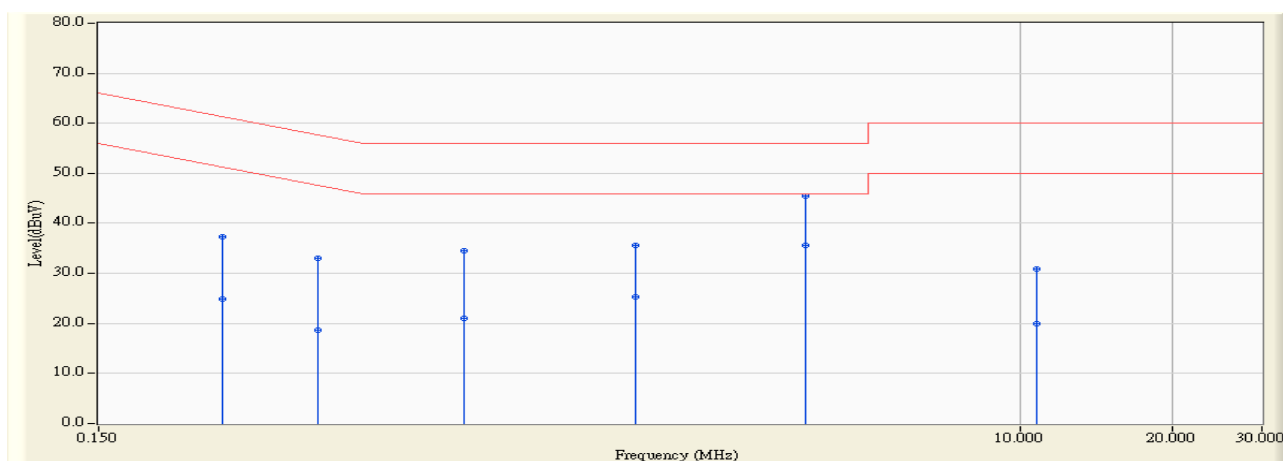
According to FCC Part 15 Subpart C Paragraph 15.207: 2011

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR2	Time : 2011/05/22 - 20:37
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A) - Line1	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Tx_2439MHz-Mode 1: Transmit (16QAM)

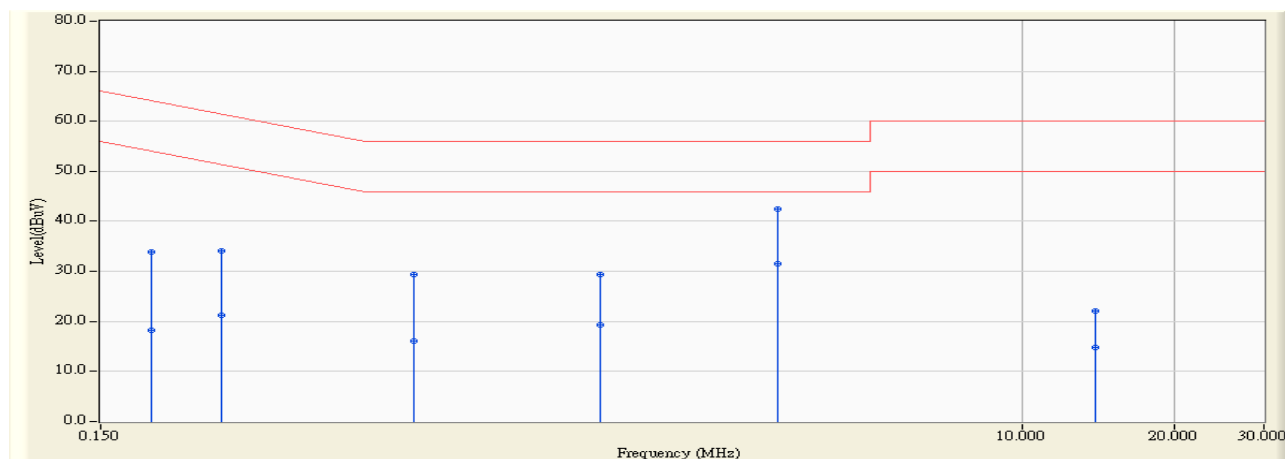


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.263	9.600	27.670	37.270	-24.057	61.327	QUASPEAK
2		0.263	9.600	15.250	24.850	-26.477	51.327	AVERAGE
3		0.408	9.610	23.400	33.010	-24.683	57.693	QUASPEAK
4		0.408	9.610	9.020	18.630	-29.063	47.693	AVERAGE
5		0.791	9.630	24.810	34.440	-21.560	56.000	QUASPEAK
6		0.791	9.630	11.370	21.000	-25.000	46.000	AVERAGE
7		1.728	9.782	25.890	35.672	-20.328	56.000	QUASPEAK
8		1.728	9.782	15.530	25.312	-20.688	46.000	AVERAGE
9		3.744	9.834	35.640	45.474	-10.526	56.000	QUASPEAK
10	*	3.744	9.834	25.710	35.544	-10.456	46.000	AVERAGE
11		10.763	10.093	20.770	30.863	-29.137	60.000	QUASPEAK
12		10.763	10.093	9.860	19.953	-30.047	50.000	AVERAGE

Note:

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

Site : SR2	Time : 2011/05/22 - 20:43
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A) - Line2	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Tx_2439MHz-Mode 1: Transmit (16QAM)

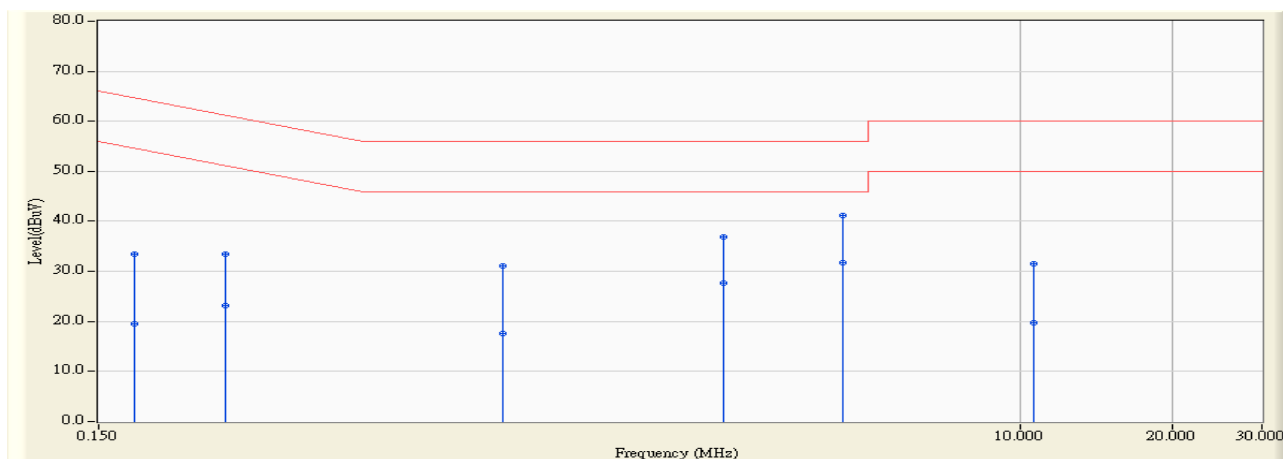


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.189	9.600	24.310	33.910	-30.168	64.078	QUASIPeAK
2		0.189	9.600	8.530	18.130	-35.948	54.078	AVERAGE
3		0.259	9.600	24.570	34.170	-27.281	61.451	QUASIPeAK
4		0.259	9.600	11.530	21.130	-30.321	51.451	AVERAGE
5		0.627	9.602	19.820	29.422	-26.578	56.000	QUASIPeAK
6		0.627	9.602	6.550	16.152	-29.848	46.000	AVERAGE
7		1.459	9.752	19.530	29.281	-26.719	56.000	QUASIPeAK
8		1.459	9.752	9.650	19.401	-26.599	46.000	AVERAGE
9	*	3.279	9.825	32.670	42.495	-13.505	56.000	QUASIPeAK
10		3.279	9.825	21.750	31.575	-14.425	46.000	AVERAGE
11		13.884	10.284	11.890	22.173	-37.827	60.000	QUASIPeAK
12		13.884	10.284	4.500	14.783	-35.217	50.000	AVERAGE

Note:

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

Site : SR2	Time : 2011/05/22 - 20:53
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A) - Line1	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Tx_2439MHz-Mode 2: Transmit (QPSK)

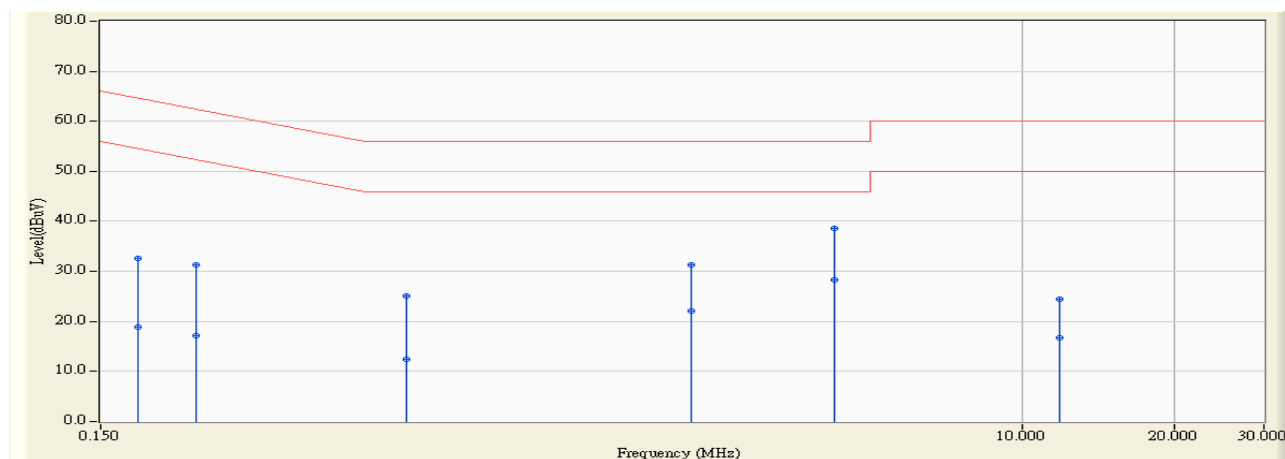


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.600	23.770	33.370	-31.255	64.625	QUASIPeAK
2		0.177	9.600	9.970	19.570	-45.055	64.625	AVERAGE
3		0.267	9.600	23.760	33.360	-27.851	61.211	QUASIPeAK
4		0.267	9.600	13.620	23.220	-37.991	61.211	AVERAGE
5		0.943	9.658	21.520	31.178	-24.822	56.000	QUASIPeAK
6		0.943	9.658	7.850	17.508	-38.492	56.000	AVERAGE
7		2.587	9.805	27.170	36.975	-19.025	56.000	QUASIPeAK
8		2.587	9.805	17.930	27.735	-28.265	56.000	AVERAGE
9	*	4.463	9.855	31.390	41.245	-14.755	56.000	QUASIPeAK
10		4.463	9.855	21.860	31.715	-24.285	56.000	AVERAGE
11		10.607	10.088	21.480	31.568	-28.432	60.000	QUASIPeAK
12		10.607	10.088	9.680	19.768	-40.232	60.000	AVERAGE

Note:

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

Site : SR2	Time : 2011/05/22 - 20:58
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A) - Line2	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Tx_2439MHz-Mode 2: Transmit (QPSK)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.600	23.040	32.640	-31.969	64.609	QUASIPeAK
2		0.177	9.600	9.250	18.850	-35.759	54.609	AVERAGE
3		0.232	9.600	21.810	31.410	-30.967	62.377	QUASIPeAK
4		0.232	9.600	7.460	17.060	-35.317	52.377	AVERAGE
5		0.603	9.600	15.600	25.200	-30.800	56.000	QUASIPeAK
6		0.603	9.600	2.930	12.530	-33.470	46.000	AVERAGE
7		2.216	9.787	21.560	31.348	-24.652	56.000	QUASIPeAK
8		2.216	9.787	12.210	21.998	-24.002	46.000	AVERAGE
9	*	4.240	9.860	28.840	38.700	-17.300	56.000	QUASIPeAK
10		4.240	9.860	18.350	28.210	-17.790	46.000	AVERAGE
11		11.857	10.201	14.260	24.461	-35.539	60.000	QUASIPeAK
12		11.857	10.201	6.500	16.701	-33.299	50.000	AVERAGE

Note:

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

3. Peak Power Output

3.1. Test Equipment

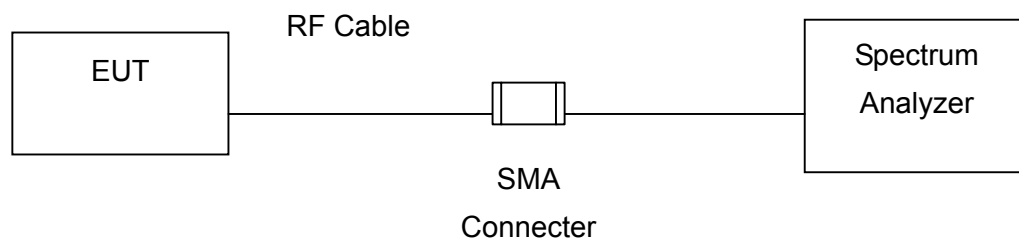
The following test equipment is used during the test:

Peak Power Output / No.7 Shielding Room

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2012/01/16

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

3.4. Limits

For frequency hopping systems operating in the 902-928 MHz band: 1 Watt for systems employing at least 50 hopping channels; and, 0.25 Watts for systems employing less than 50 hopping channels.

For frequency hopping systems in the 2400-2483.5 MHz band employing at least 75 hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1Watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

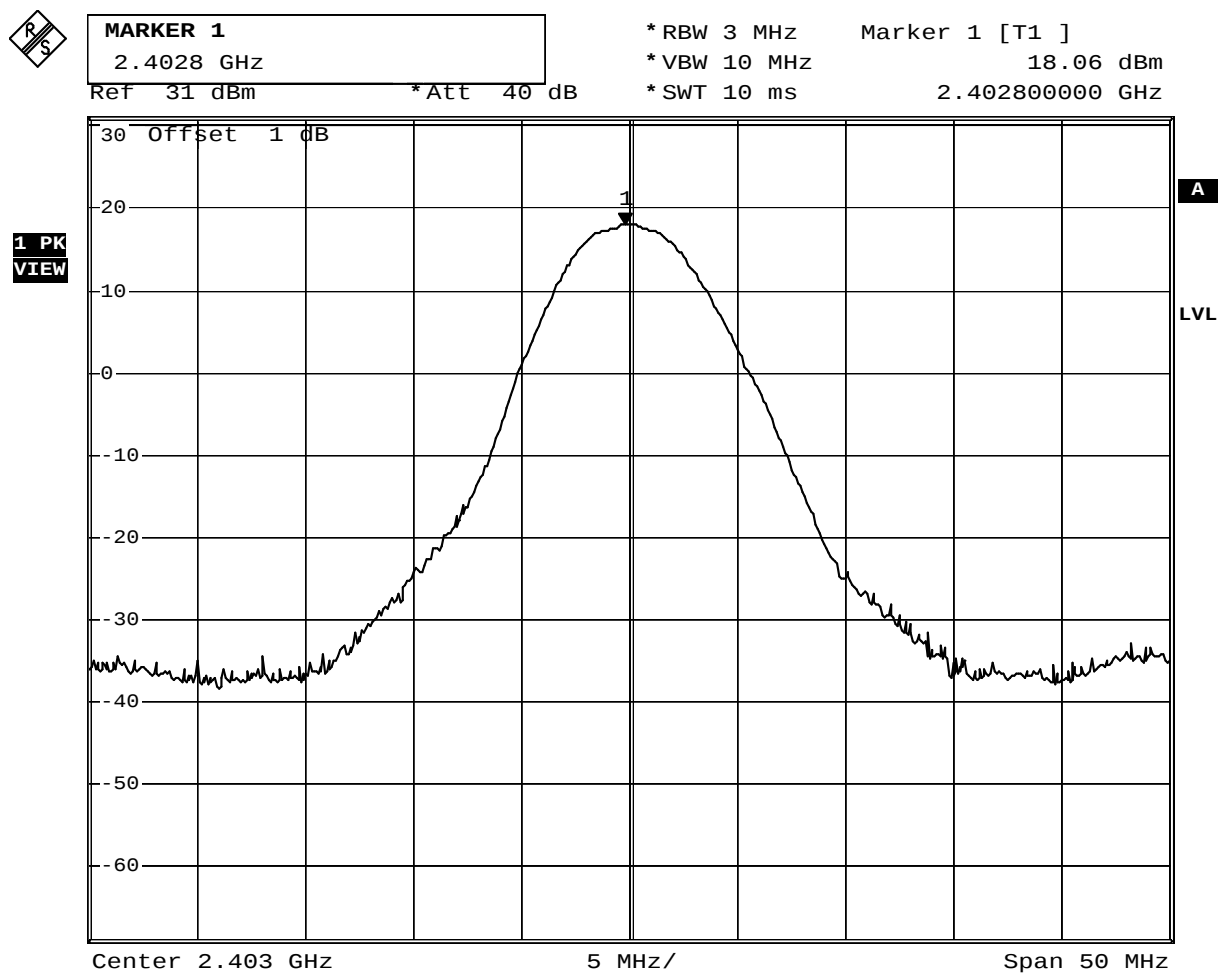
3.6. Test Result

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2403	18.06	1Watt= 21 dBm	Pass

Channel 00



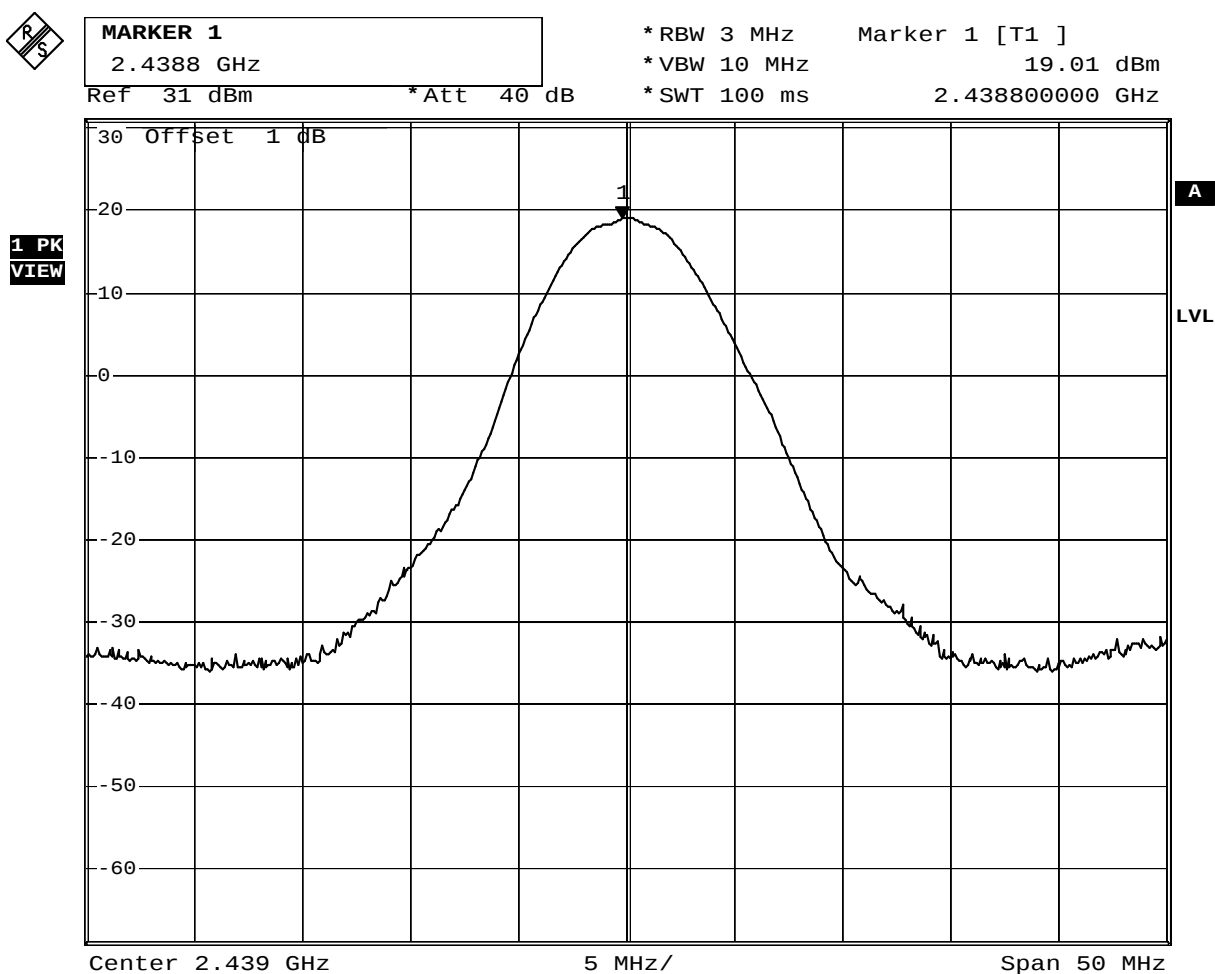
Date: 18.MAY.2011 12:14:43

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
12	2439	19.01	1Watt= 21 dBm	Pass

Channel 12



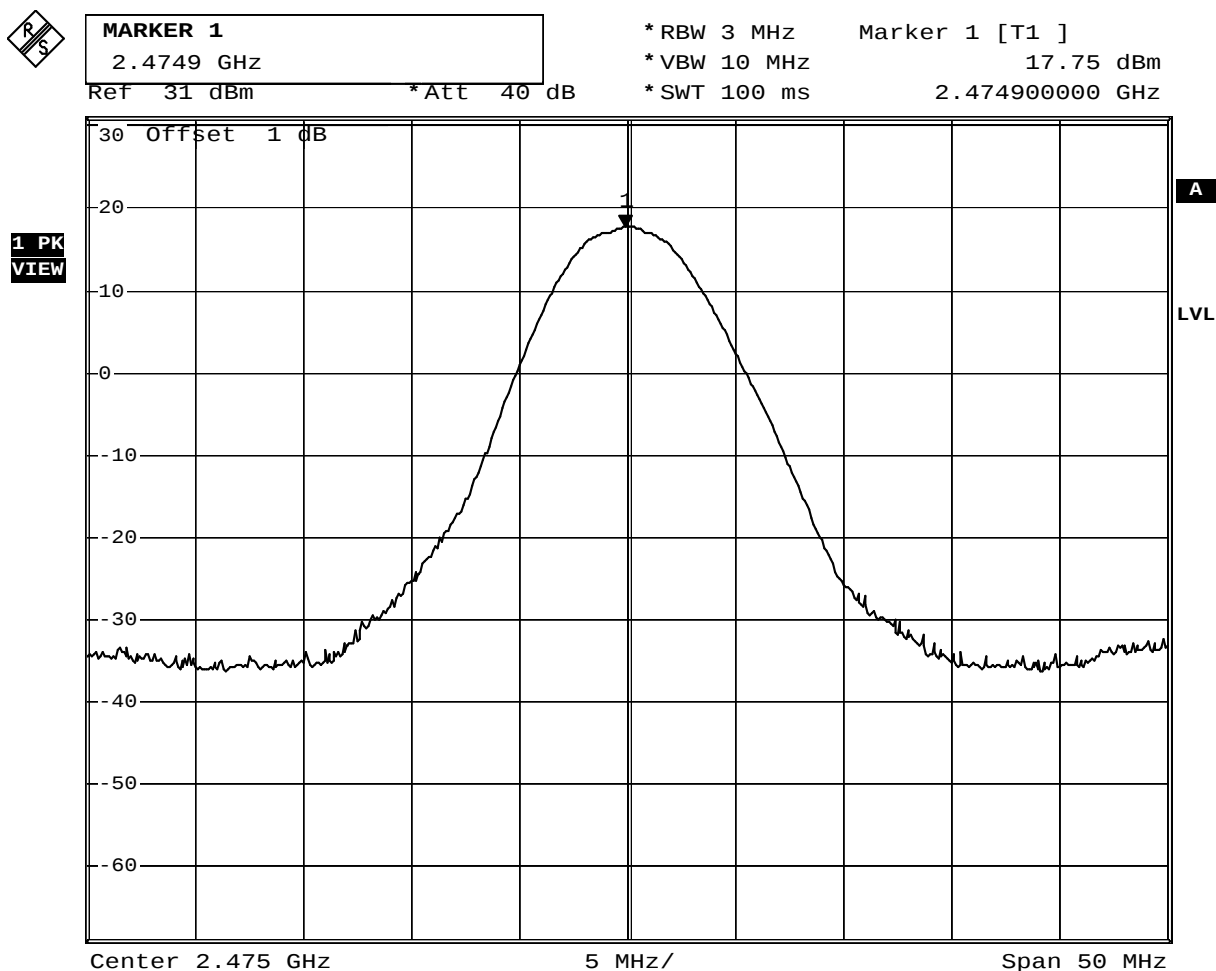
Date: 22.MAY.2011 15:13:42

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
24	2475	17.75	1Watt= 21 dBm	Pass

Channel 24



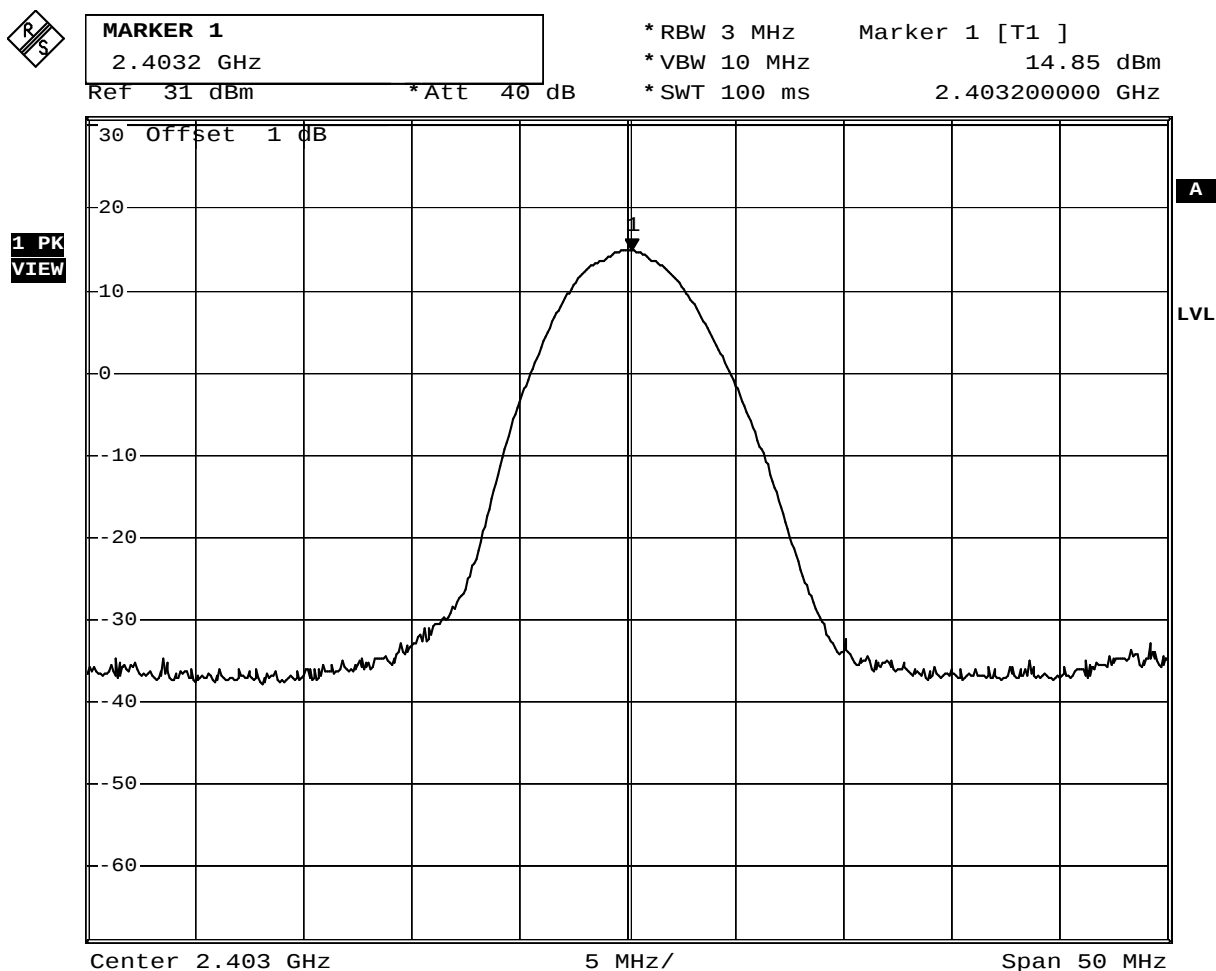
Date: 22.MAY.2011 15:14:23

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Peak Power Output		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2403	14.85	1Watt= 21 dBm	Pass

Channel 00



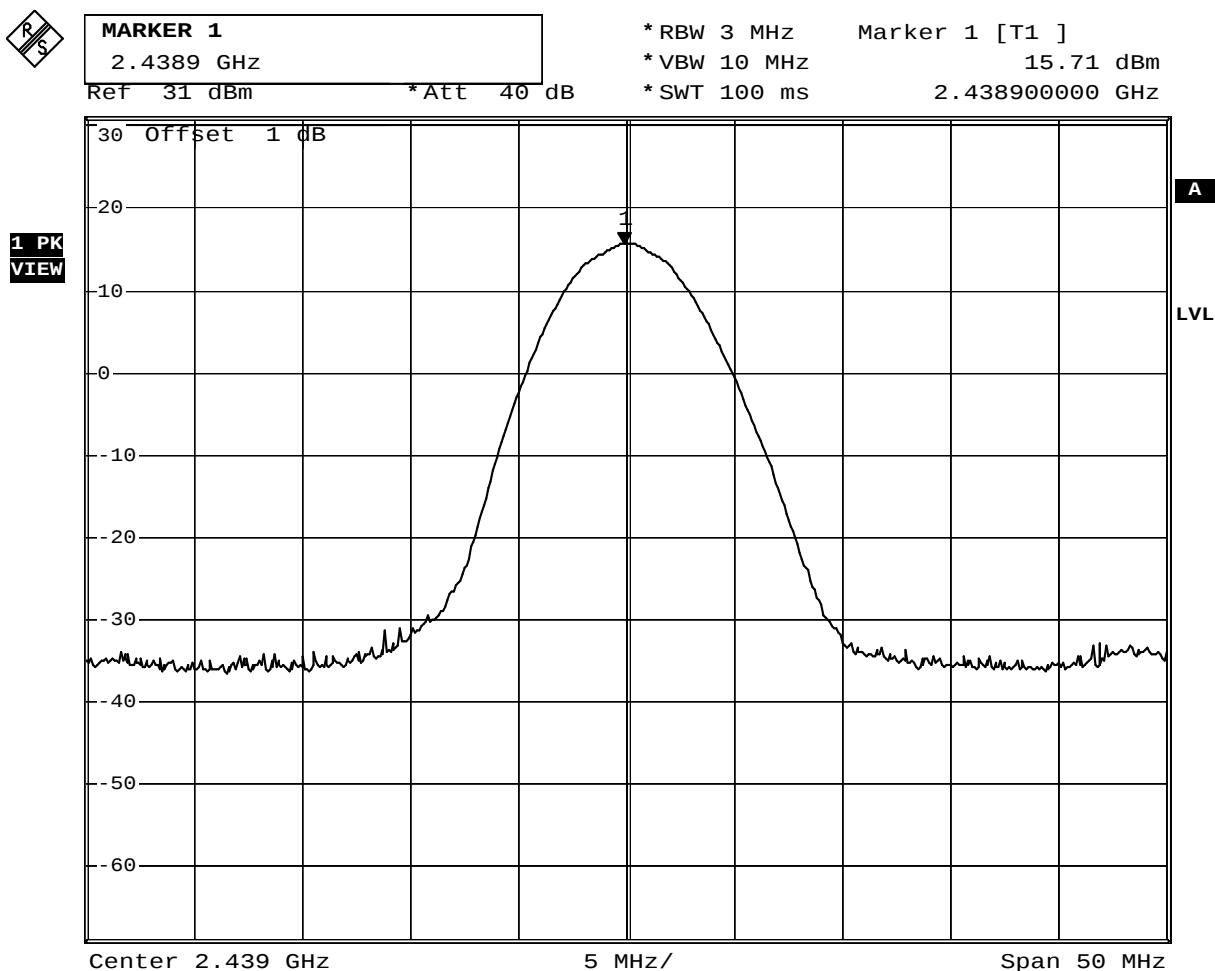
Date: 18.MAY.2011 12:58:14

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Peak Power Output		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
12	2439	15.71	1Watt= 21 dBm	Pass

Channel 12



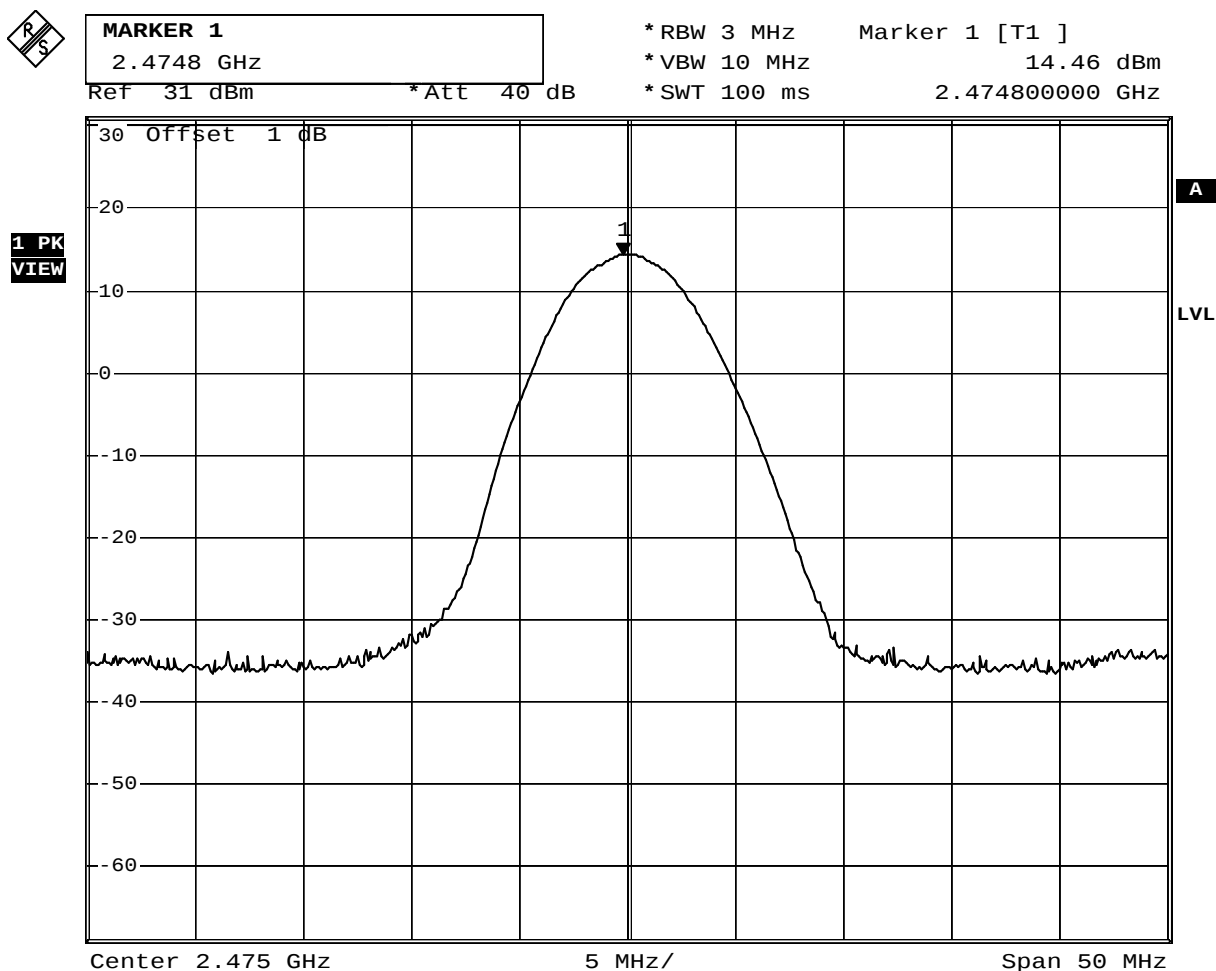
Date: 22.MAY.2011 15:16:57

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Peak Power Output		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
24	2475	14.46	1Watt= 21 dBm	Pass

Channel 24



Date: 22.MAY.2011 15:17:37

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

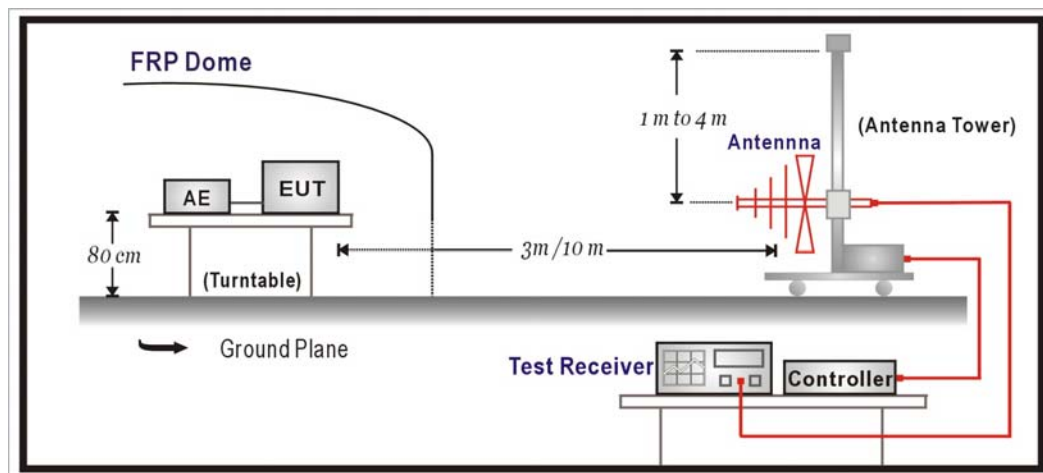
Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895	2012/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120D	743	2013/02/02
Pre-Amplifier	MITEQ	AMF-4D-005180-2 4-10P	888003	2012/12/05
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2013/03/01
Spectrum Analyzer	Agilent	E4440A	MY46187335	2013/02/07
Coaxial Cable	Huber+Suhner AG	Sucoflex 102	25623/2	2013/03/04

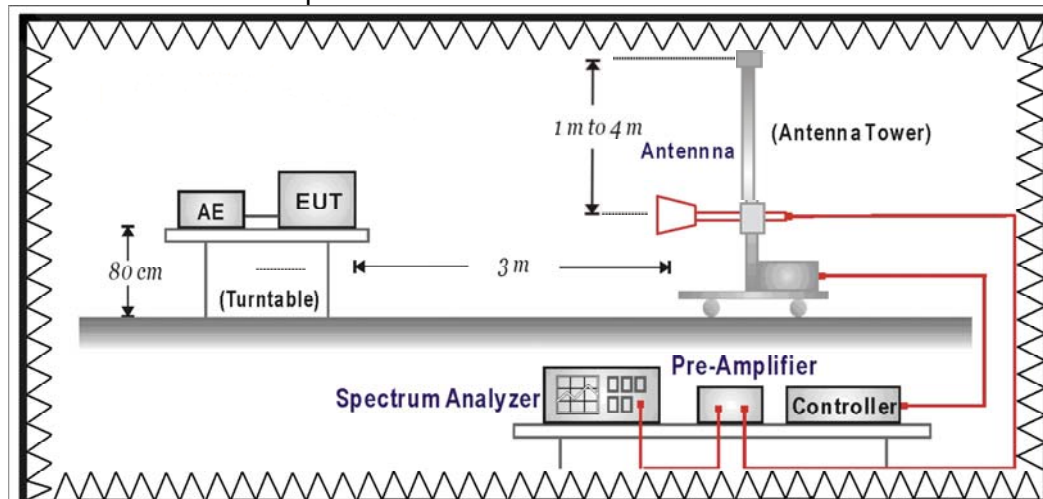
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

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

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	uV/m	dBuV/m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

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.

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2009 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

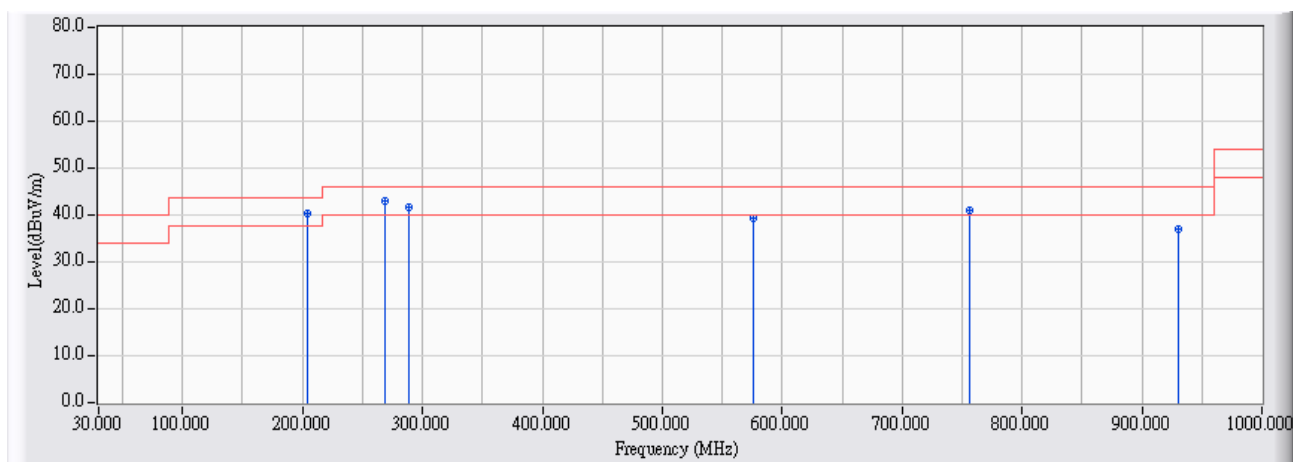
4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

4.6. Test Result

30MHz-1GHz Spurious

Site : CB1	Time : 2012/06/12 - 13:03
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : FCC_Sub_30-1G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2439MHz

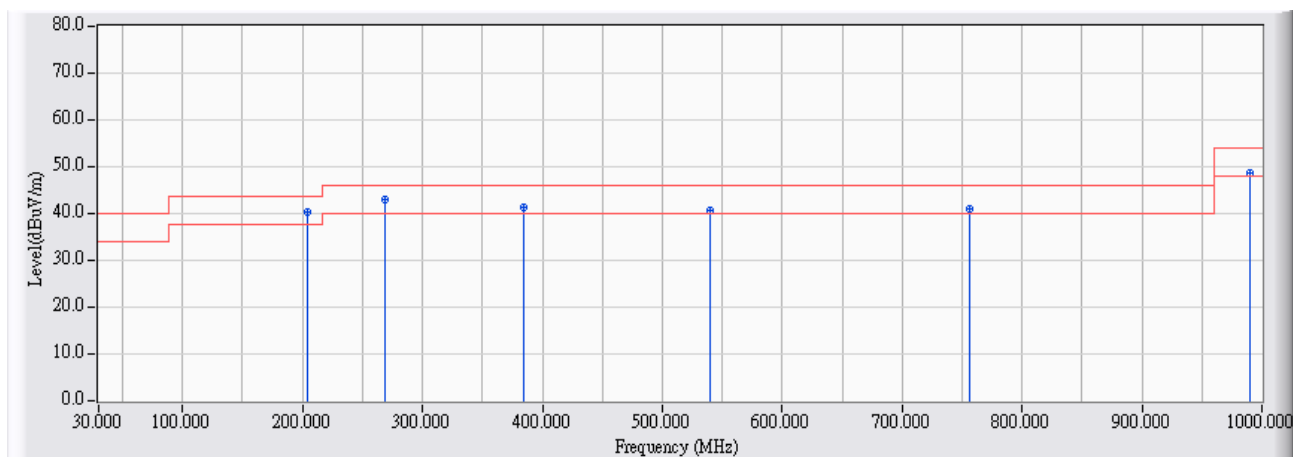


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		204.600	-3.601	43.962	40.360	-3.140	43.500	PEAK
2	*	269.267	-0.731	43.838	43.108	-2.892	46.000	PEAK
3		288.667	0.128	41.637	41.765	-4.235	46.000	PEAK
4		576.433	6.797	32.552	39.349	-6.651	46.000	PEAK
5		755.883	8.022	33.128	41.150	-4.850	46.000	PEAK
6		930.483	8.985	28.158	37.144	-8.856	46.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 13:14
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : FCC_Sub_30-1G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2439MHz

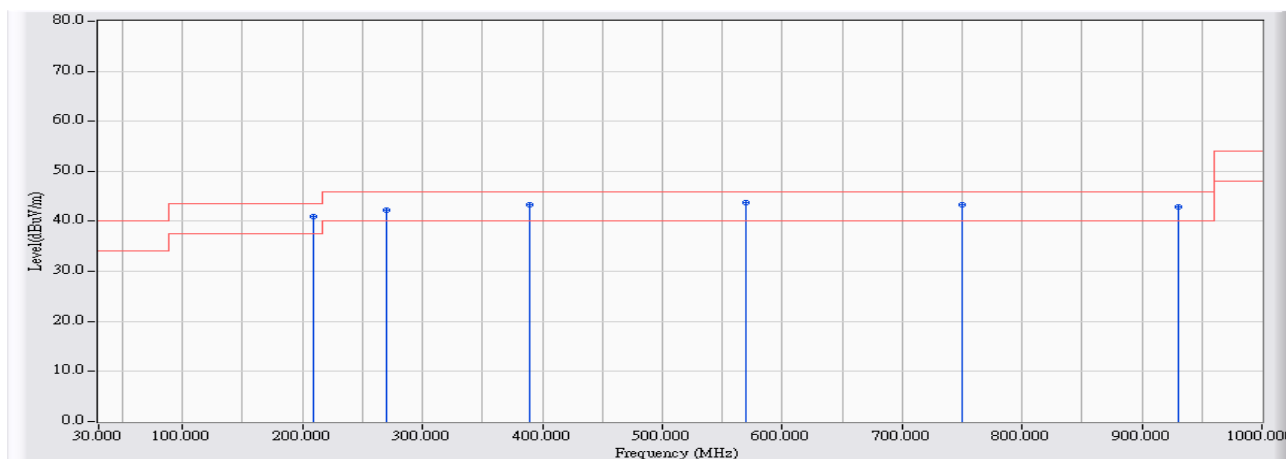


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		204.600	0.181	40.049	40.230	-3.270	43.500	PEAK
2	*	269.267	-0.048	43.131	43.083	-2.917	46.000	PEAK
3		384.050	4.263	37.002	41.265	-4.735	46.000	PEAK
4		539.250	7.045	33.494	40.539	-5.461	46.000	PEAK
5		755.883	9.643	31.241	40.884	-5.116	46.000	PEAK
6		990.300	10.785	37.728	48.512	-5.488	54.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 13:20
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : FCC_Sub_30-1G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 2: Transmit (QPSK) 2439MHz

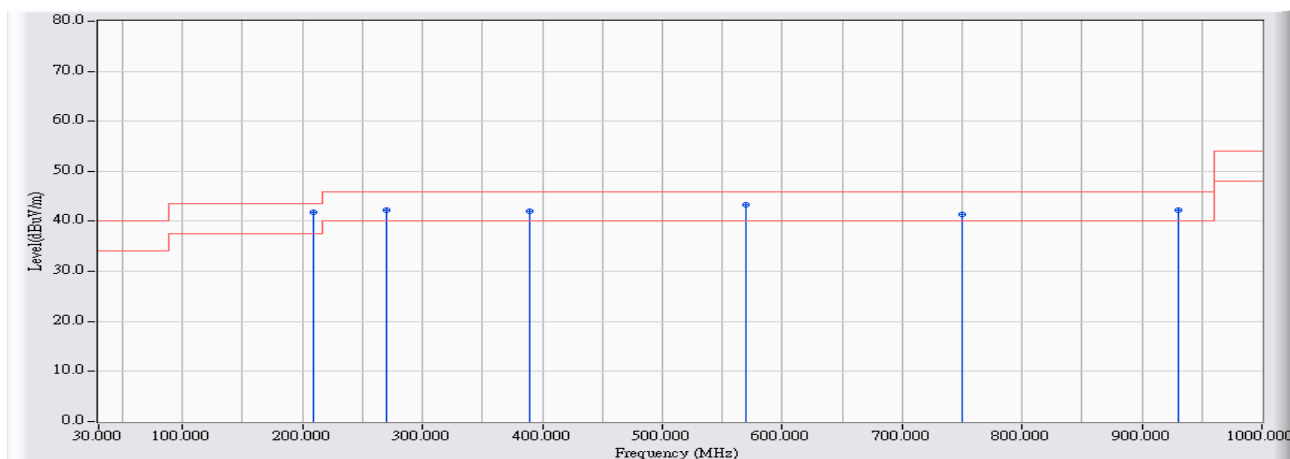


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		209.450	-3.368	44.435	41.068	-2.432	43.500	QUASIPeAK
2		269.590	-0.716	42.940	42.224	-3.776	46.000	QUASIPeAK
3		389.870	2.469	40.907	43.376	-2.624	46.000	QUASIPeAK
4	*	570.290	6.796	36.860	43.656	-2.344	46.000	QUASIPeAK
5		749.740	8.004	35.230	43.233	-2.767	46.000	QUASIPeAK
6		930.160	8.973	33.816	42.789	-3.211	46.000	QUASIPeAK

Note:

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

Site : CB1	Time : 2012/06/12 - 14:35
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : FCC_Sub_30-1G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 2: Transmit (QPSK) 2439MHz



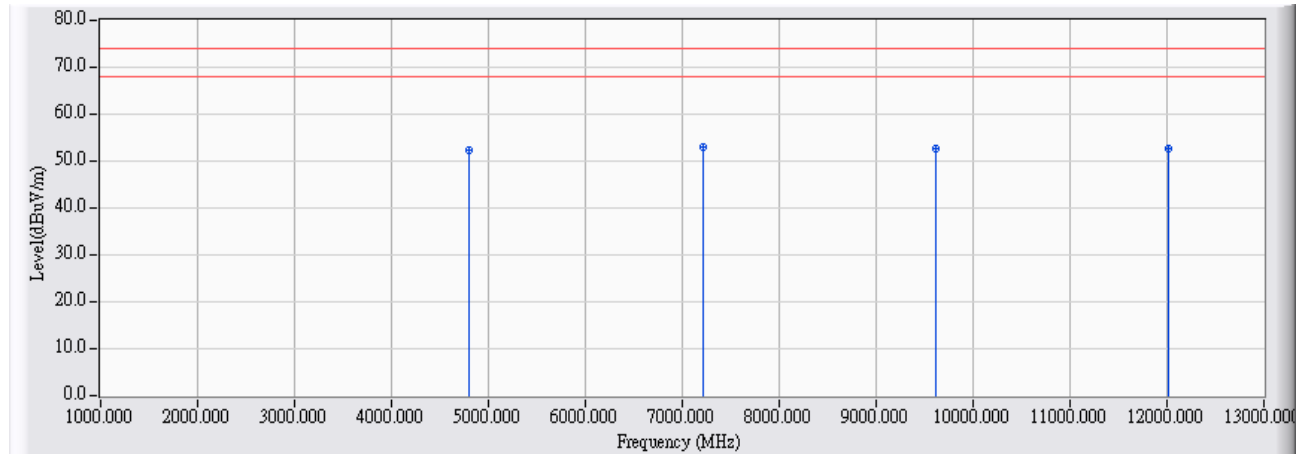
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	209.450	0.164	41.638	41.803	-1.697	43.500	PEAK
2		269.590	-0.046	42.372	42.326	-3.674	46.000	PEAK
3		389.870	4.405	37.716	42.121	-3.879	46.000	PEAK
4		570.290	7.288	36.003	43.291	-2.709	46.000	PEAK
5		749.740	9.666	31.702	41.367	-4.633	46.000	PEAK
6		930.160	9.739	32.604	42.343	-3.657	46.000	PEAK

Note:

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

Harmonic & Spurious:

Site : CB1	Time : 2012/06/12 - 16:44
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_Sub_1-18G-1-0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 1: Transmit (16QAM) 2403MHz

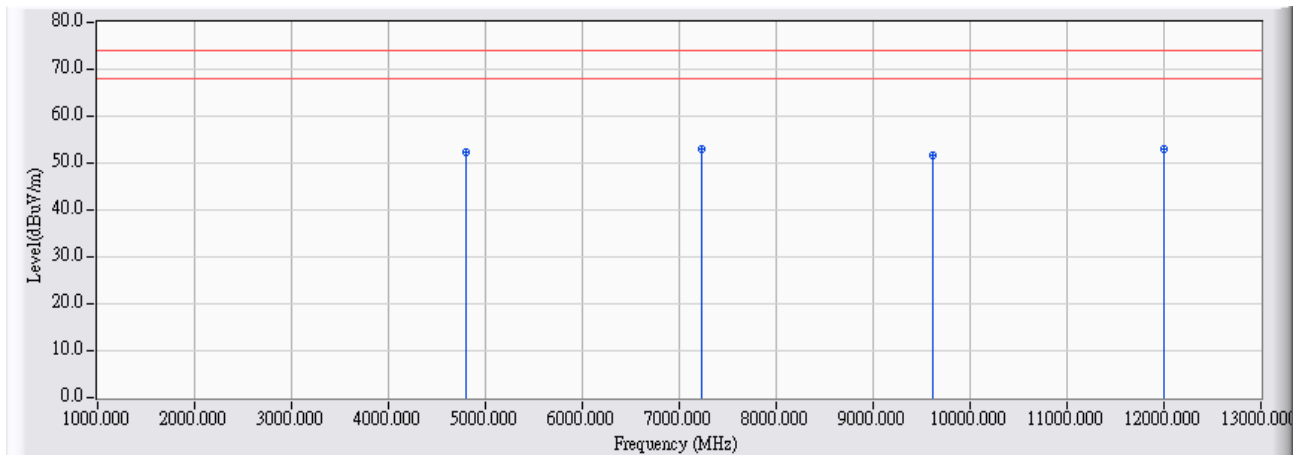


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4805.920	14.054	38.230	52.283	-21.717	74.000	54.000	PEAK
2	*	7218.480	20.519	32.400	52.919	-21.081	74.000	54.000	PEAK
3		9612.080	21.786	30.960	52.745	-21.255	74.000	54.000	PEAK
4		12011.970	22.925	29.750	52.675	-21.325	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/12 - 16:51
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_Sub_1-18G-1-0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2403MHz

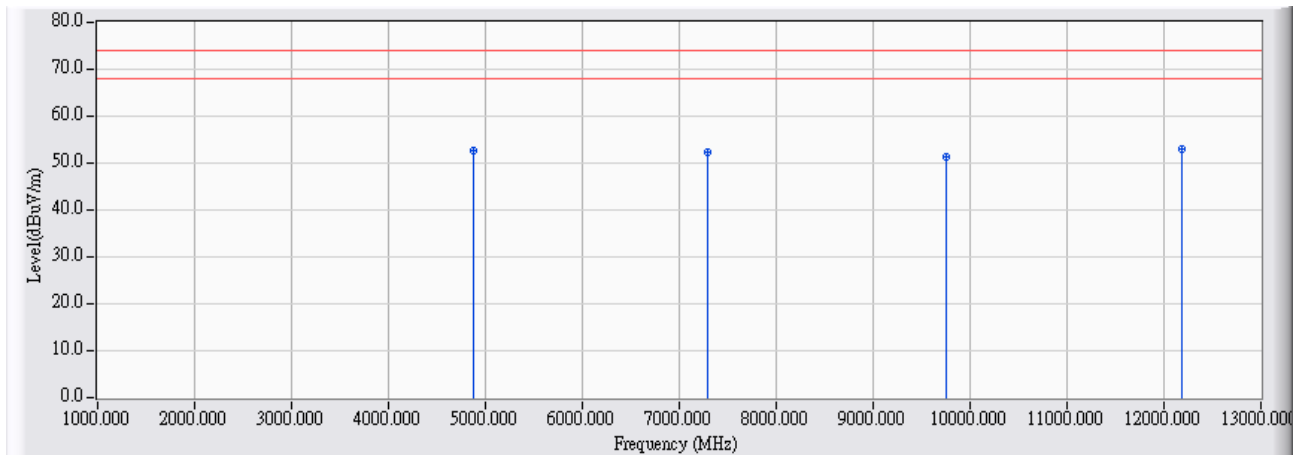


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4806.030	13.641	38.590	52.231	-21.769	74.000	54.000	PEAK
2	*	7229.900	19.746	33.120	52.866	-21.134	74.000	54.000	PEAK
3		9611.970	23.200	28.440	51.639	-22.361	74.000	54.000	PEAK
4		12001.160	24.344	28.520	52.864	-21.136	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/12 - 16:57
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_Sub_1-18G-1-0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 1: Transmit (16QAM) 2439MHz

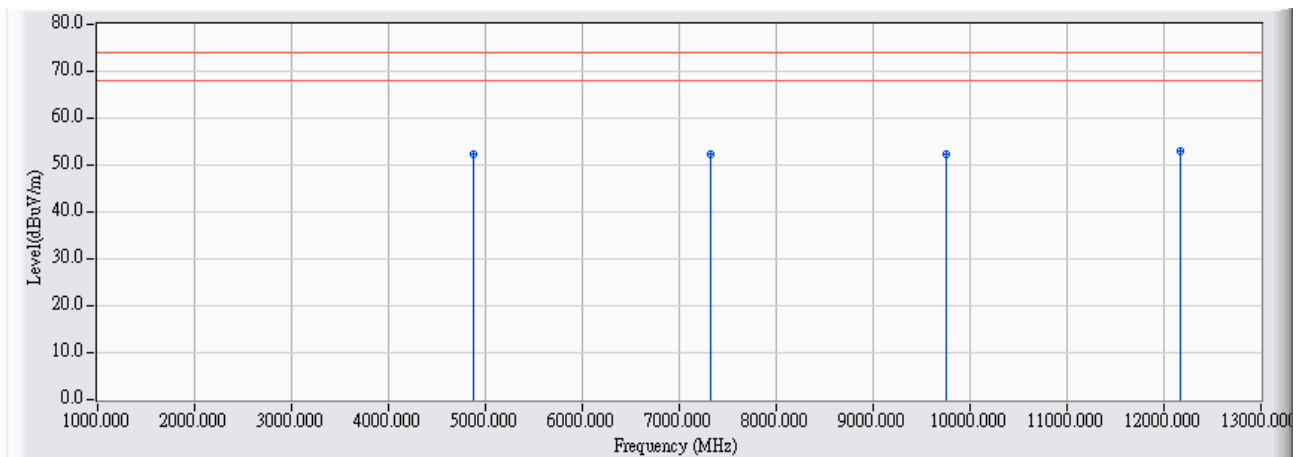


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4877.720	14.289	38.370	52.659	-21.341	74.000	54.000	PEAK
2		7294.700	20.655	31.690	52.345	-21.655	74.000	54.000	PEAK
3		9755.520	21.894	29.490	51.384	-22.616	74.000	54.000	PEAK
4	*	12180.660	23.403	29.440	52.843	-21.157	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/12 - 17:07
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_Sub_1-18G-1-0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 1: Transmit (16QAM) 2439MHz

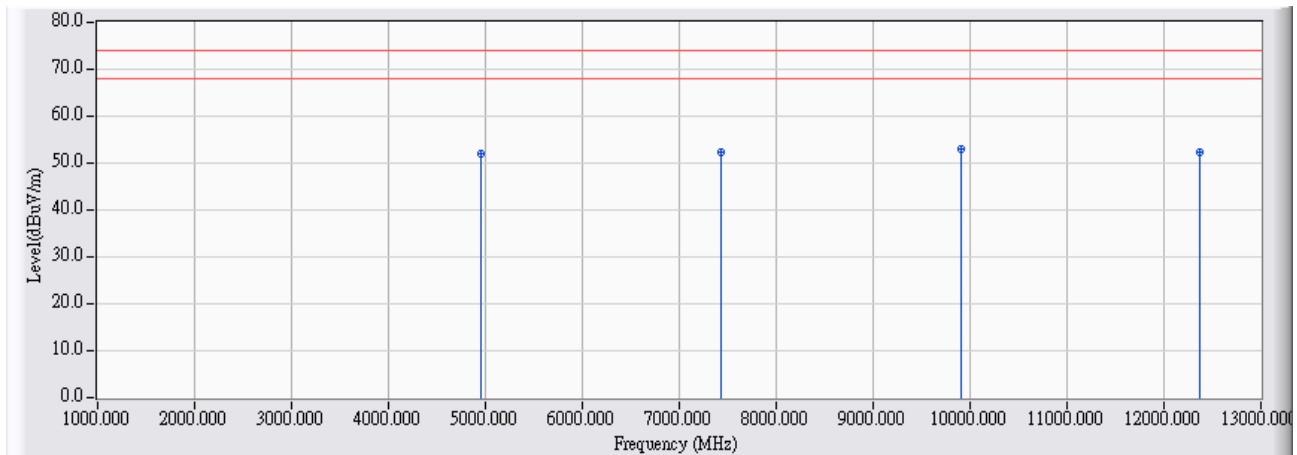


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4877.770	13.893	38.480	52.372	-21.628	74.000	54.000	PEAK
2		7316.970	20.196	32.100	52.295	-21.705	74.000	54.000	PEAK
3		9753.020	23.072	29.210	52.282	-21.718	74.000	54.000	PEAK
4	*	12174.050	24.921	28.060	52.981	-21.019	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/12 - 17:19
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_Sub_1-18G-1-0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 1: Transmit (16QAM) 2475MHz

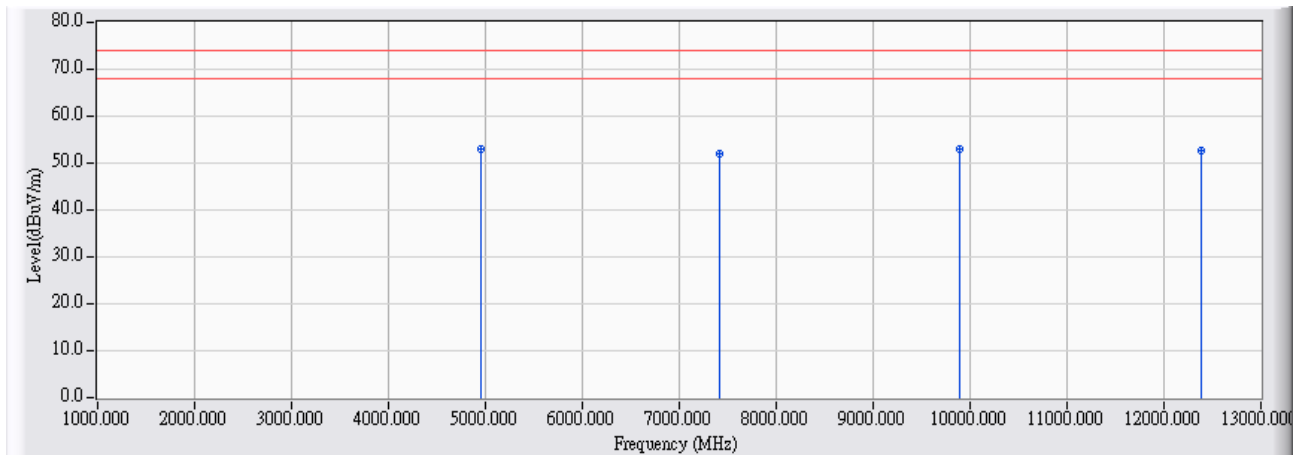


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	4951.630	14.531	37.600	52.131	-21.869	74.000	54.000	PEAK
2	7433.480	20.902	31.560	52.462	-21.538	74.000	54.000	PEAK
3	* 9900.080	22.004	30.980	52.984	-21.016	74.000	54.000	PEAK
4	12370.620	23.943	28.240	52.183	-21.817	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/12 - 17:22
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_Sub_1-18G-1-0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 1: Transmit (16QAM) 2475MHz

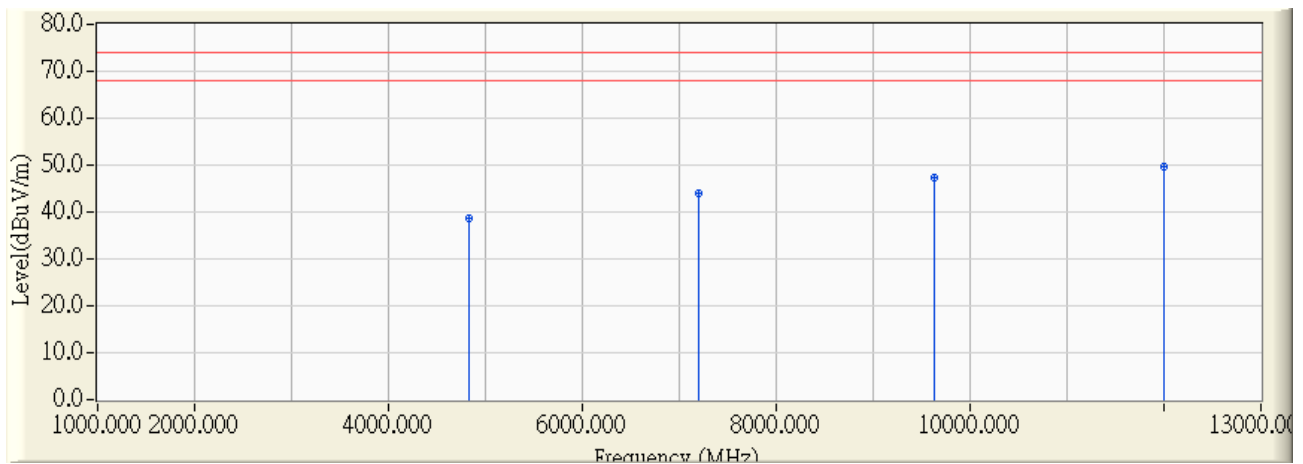


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	4949.920	14.145	38.730	52.875	-21.125	74.000	54.000	PEAK
2		7414.410	20.699	31.220	51.918	-22.082	74.000	54.000	PEAK
3		9899.670	22.941	29.900	52.840	-21.160	74.000	54.000	PEAK
4		12379.830	25.609	26.960	52.569	-21.431	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/08 - 10:29
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2403MHz

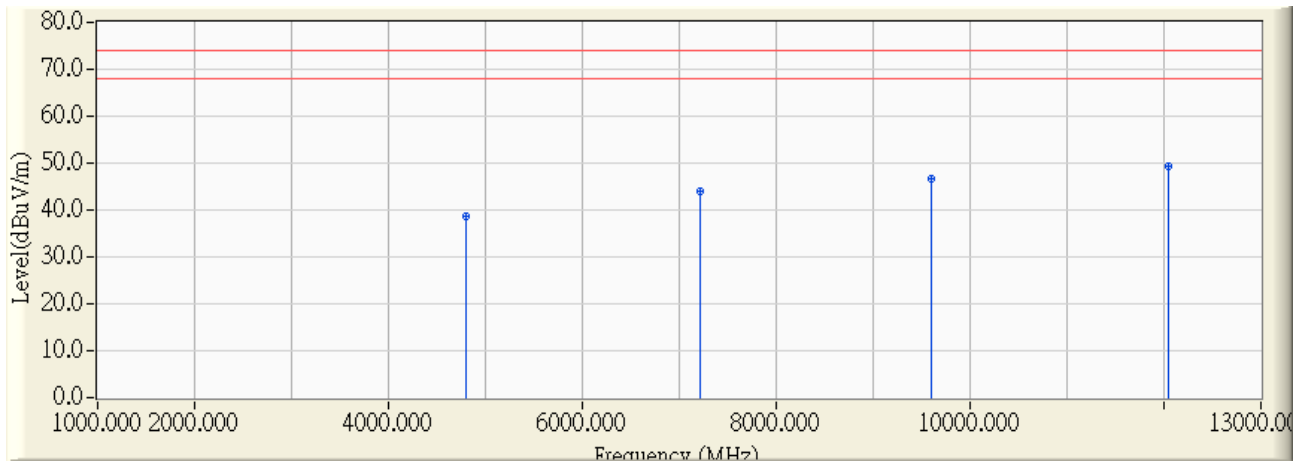


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4829.750	-0.788	39.482	38.694	-35.306	74.000	54.000	PEAK
2		7199.670	5.408	38.580	43.989	-30.011	74.000	54.000	PEAK
3		9632.000	9.115	38.218	47.333	-26.667	74.000	54.000	PEAK
4	*	12003.170	11.548	38.107	49.655	-24.345	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/08 - 10:34
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2403MHz

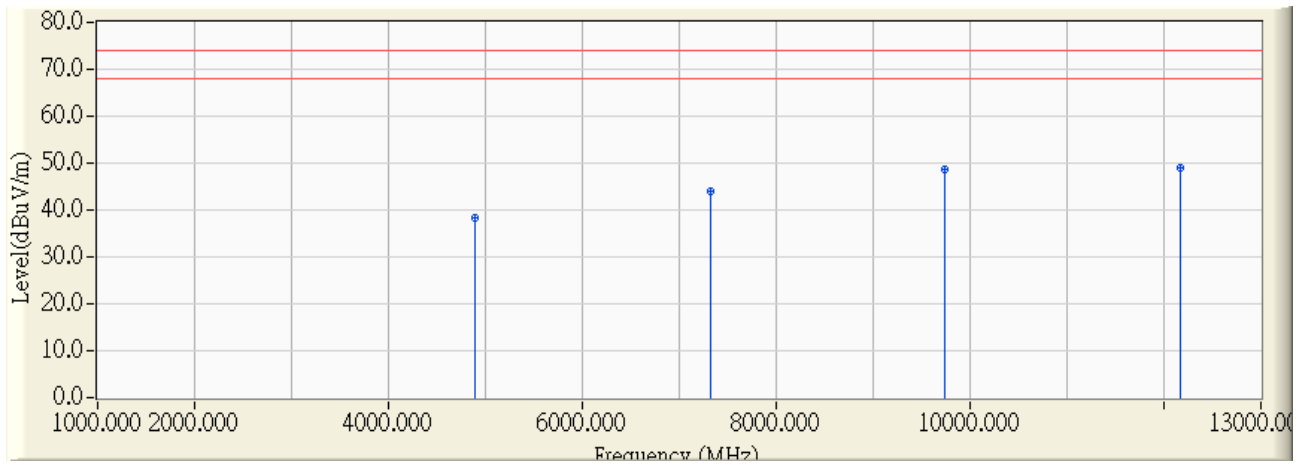


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4802.330	-0.861	39.365	38.505	-35.495	74.000	54.000	PEAK
2		7208.750	5.431	38.700	44.131	-29.869	74.000	54.000	PEAK
3		9599.330	8.878	37.903	46.781	-27.219	74.000	54.000	PEAK
4	*	12038.920	11.533	37.797	49.330	-24.670	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/08 - 10:43
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2439MHz

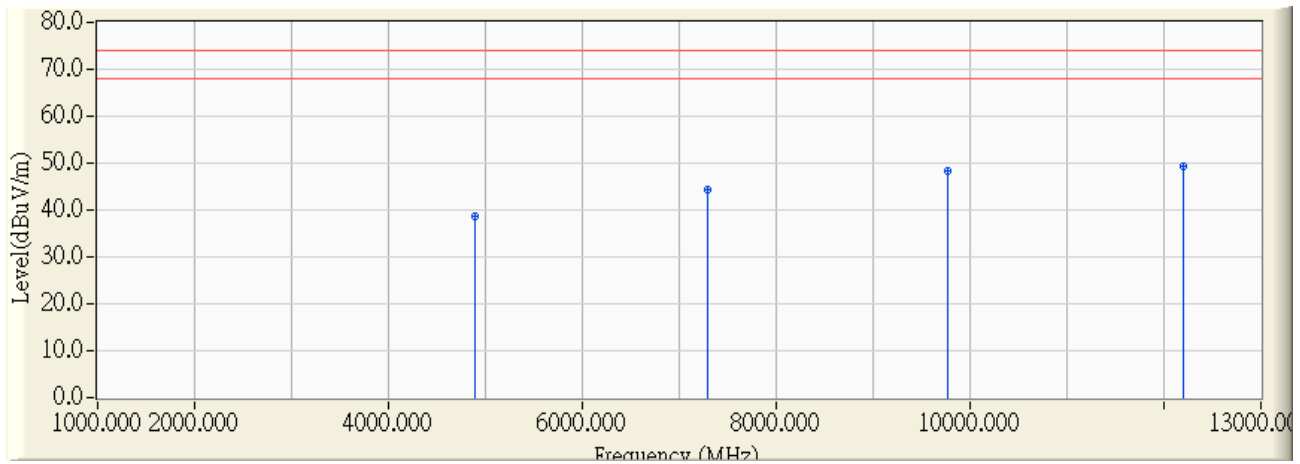


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4894.250	-0.618	38.913	38.294	-35.706	74.000	54.000	PEAK
2		7318.830	5.696	38.336	44.032	-29.968	74.000	54.000	PEAK
3		9738.330	9.885	38.670	48.555	-25.445	74.000	54.000	PEAK
4	*	12170.000	11.486	37.490	48.976	-25.024	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/08 - 10:39
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2439MHz

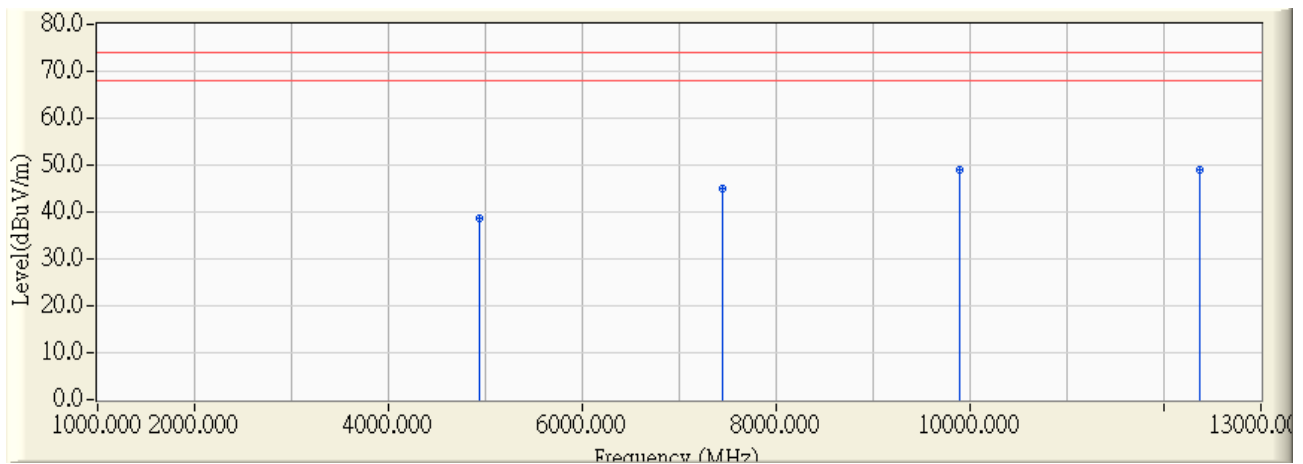


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		4893.500	-0.621	39.163	38.542	-35.458	74.000	54.000	PEAK
2		7295.330	5.640	38.653	44.293	-29.707	74.000	54.000	PEAK
3		9776.670	10.164	38.055	48.218	-25.782	74.000	54.000	PEAK
4	*	12203.420	11.475	38.003	49.478	-24.522	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/08 - 10:24
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 2: Transmit (QPSK) 2475MHz

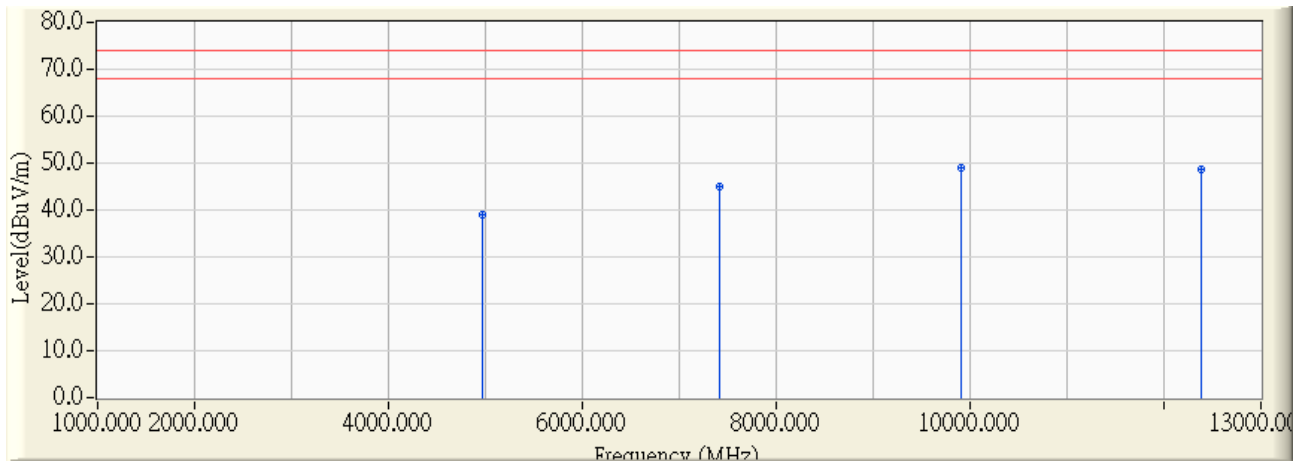


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	4944.420	-0.487	39.116	38.629	-35.371	74.000	54.000	PEAK
2	7445.820	6.003	39.006	45.009	-28.991	74.000	54.000	PEAK
3	* 9891.250	10.993	38.096	49.090	-24.910	74.000	54.000	PEAK
4	12366.920	11.417	37.622	49.039	-24.961	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	Time : 2012/06/08 - 10:20
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2475MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	4962.830	-0.438	39.319	38.880	-35.120	74.000	54.000	PEAK
2	7408.830	5.913	39.038	44.951	-29.049	74.000	54.000	PEAK
3	* 9915.330	11.168	37.790	48.958	-25.042	74.000	54.000	PEAK
4	12382.500	11.411	37.252	48.663	-25.337	74.000	54.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

5. RF antenna conducted test

5.1. Test Equipment

The following test equipment is used during the test:

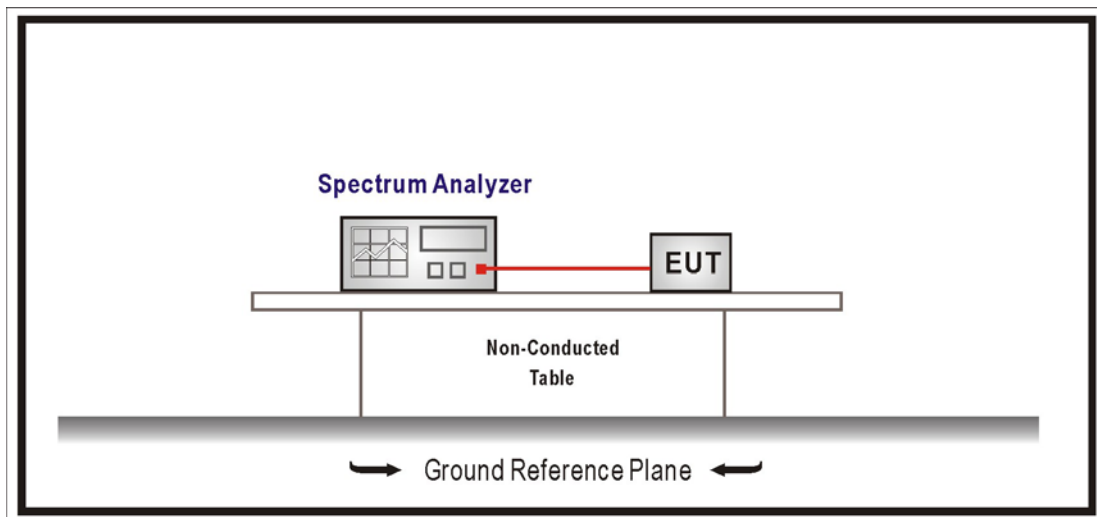
RF antenna conducted test / No.7 Shielding Room

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2012/01/16

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

5.2. Test Setup

RF Conducted Measurement:



5.3. Limits

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

5.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

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

5.5. Test Specification

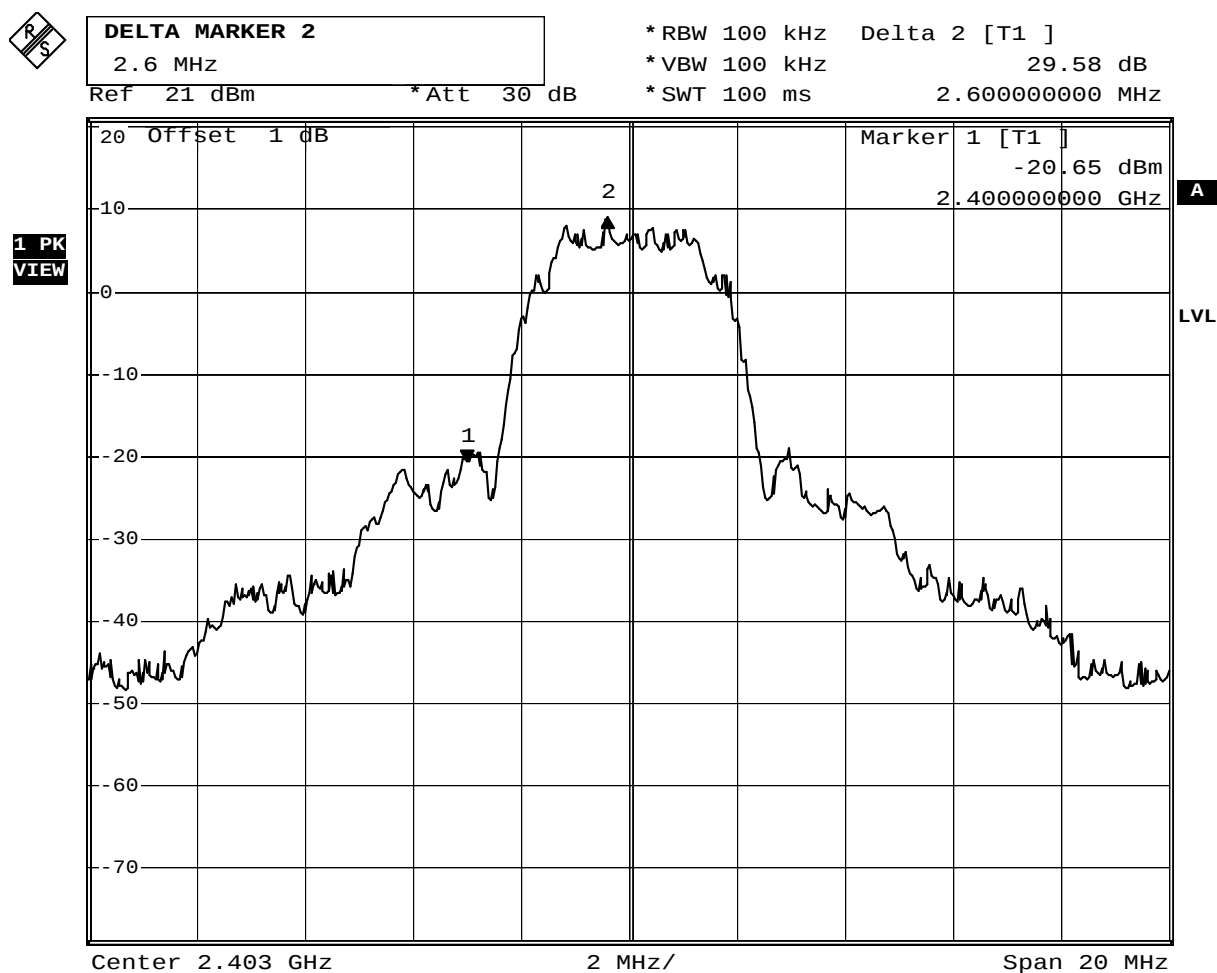
According to FCC Part 15 Subpart C Paragraph 15.247: 2011

5.6. Test Result

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dBc)	Result
00	2403	29.58	≥ 20	Pass
24	2475	47.31	≥ 20	Pass

Channel 00



Date: 20.MAY.2011 22:18:48

Channel 24



MARKER 1

2.4835 GHz

Ref 21 dBm

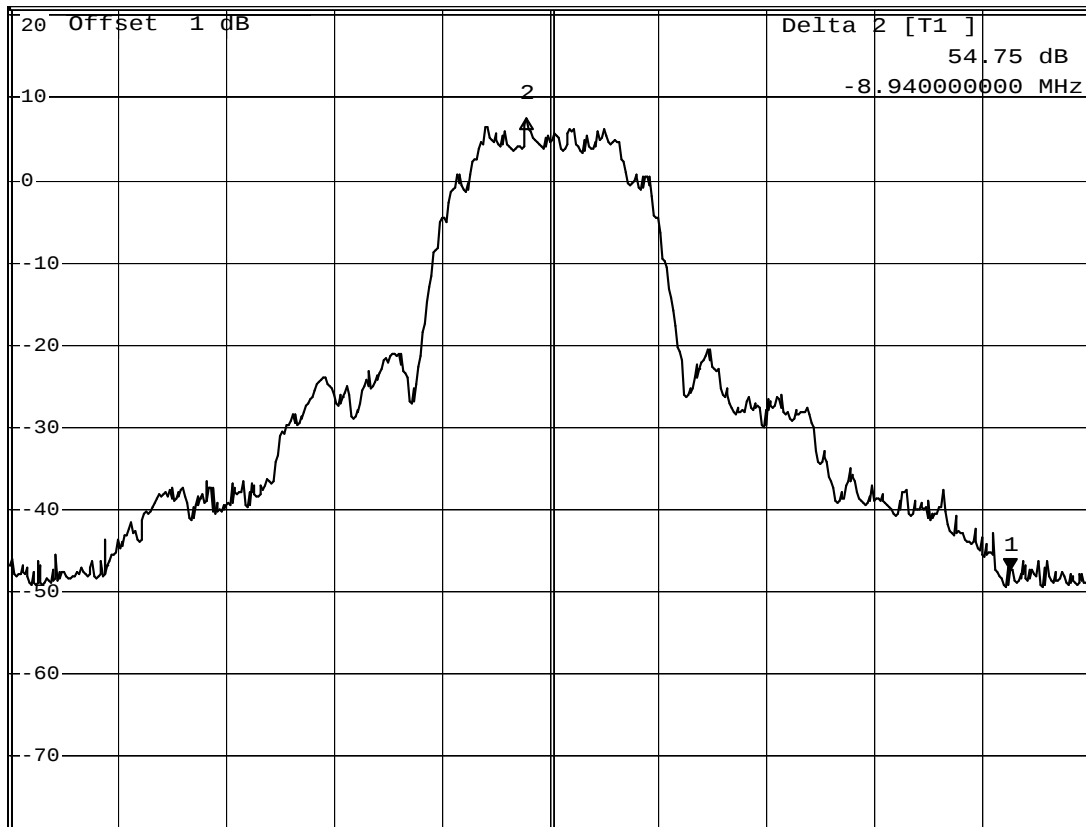
*Att 30 dB

*RBW 100 kHz Marker 1 [T1]

*VBW 100 kHz -47.31 dBm

*SWT 100 ms 2.483500000 GHz

1 PK
VIEW

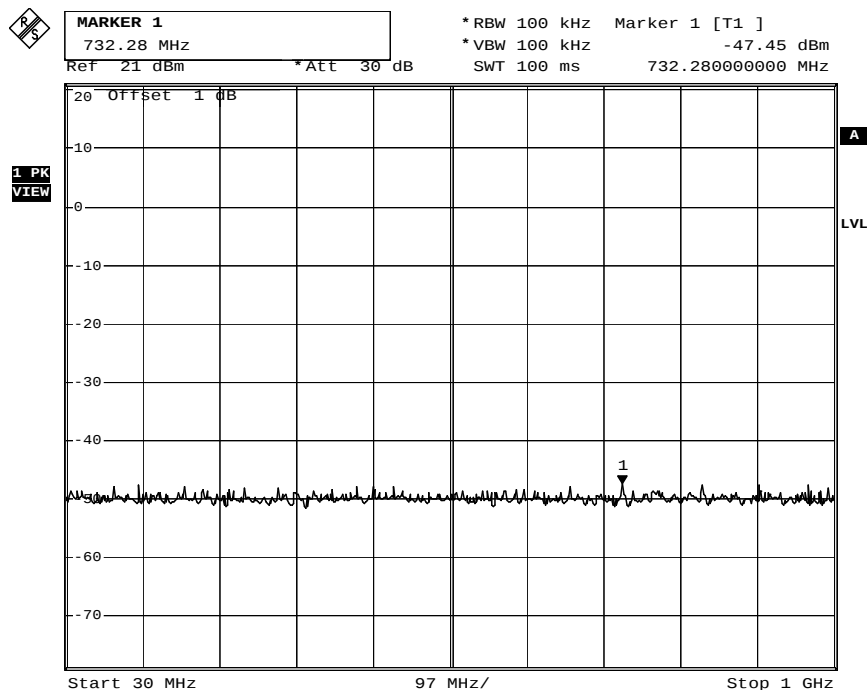


A

LVL

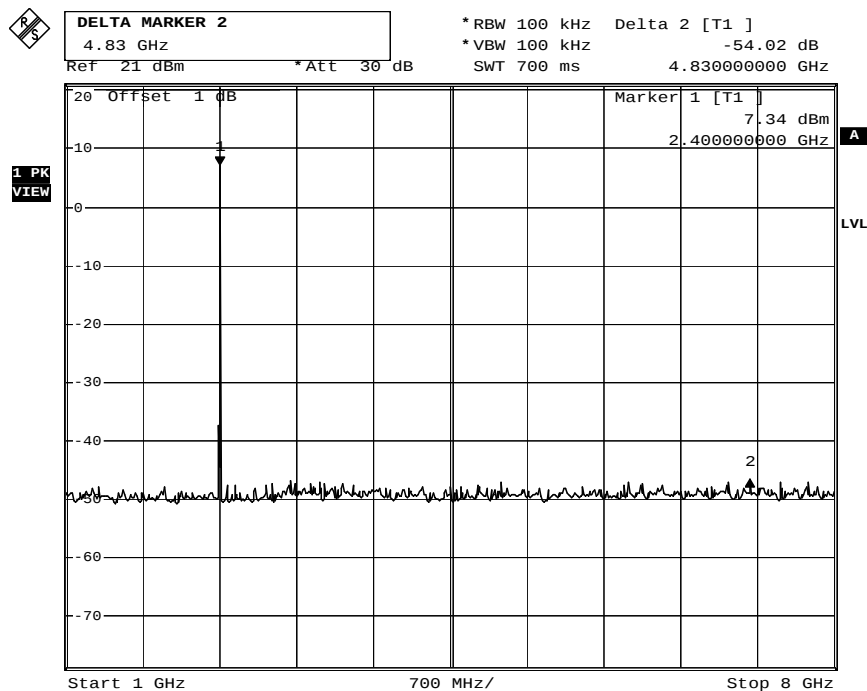
Date: 20.MAY.2011 22:23:23

Channel 00 (30MHz-1GHz)



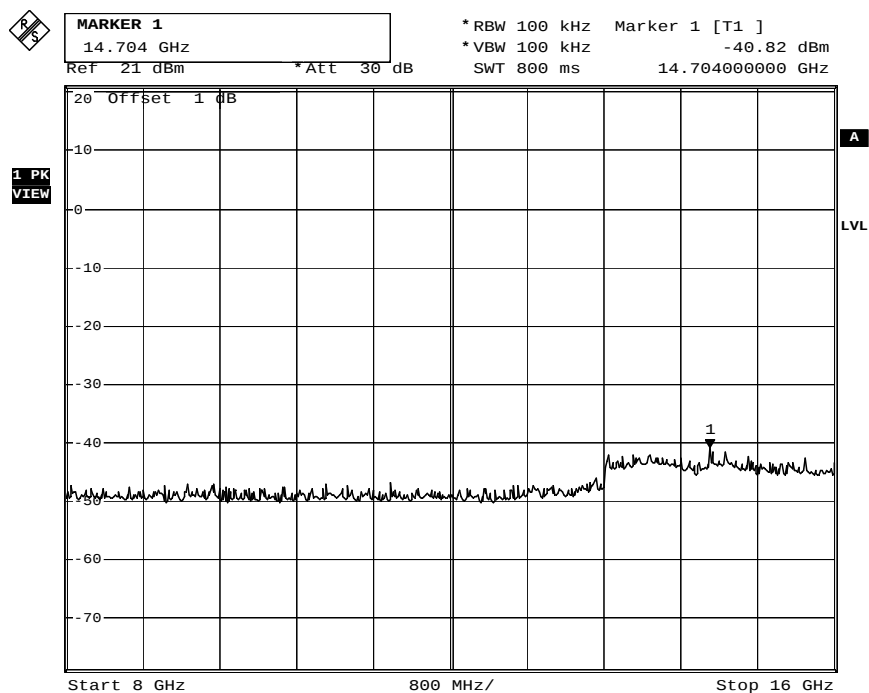
Date: 22.MAY.2011 15:28:11

Channel 00 (1GHz-8GHz)



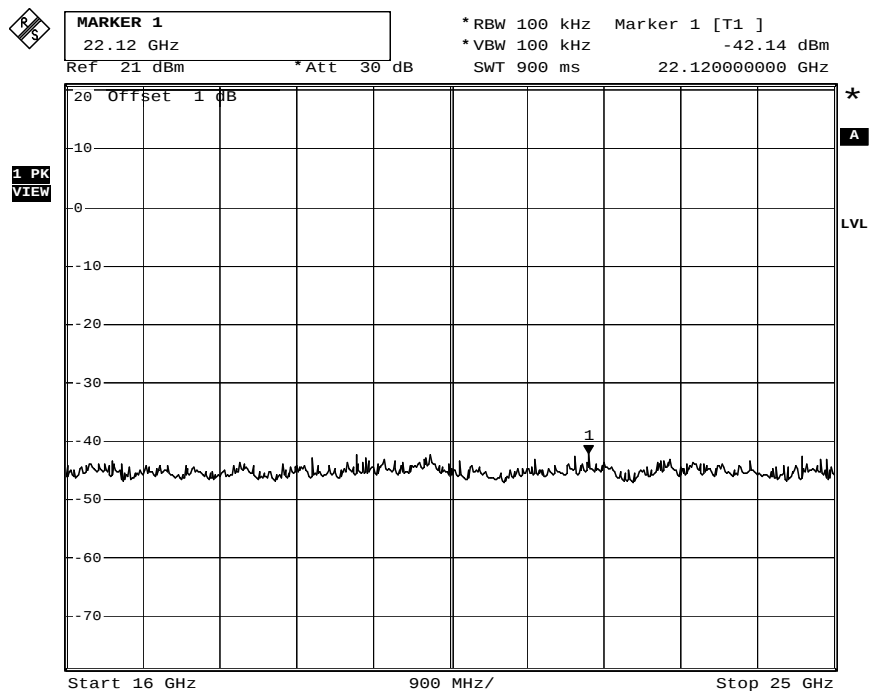
Date: 22.MAY.2011 15:29:03

Channel 00 (8GHz-16GHz)



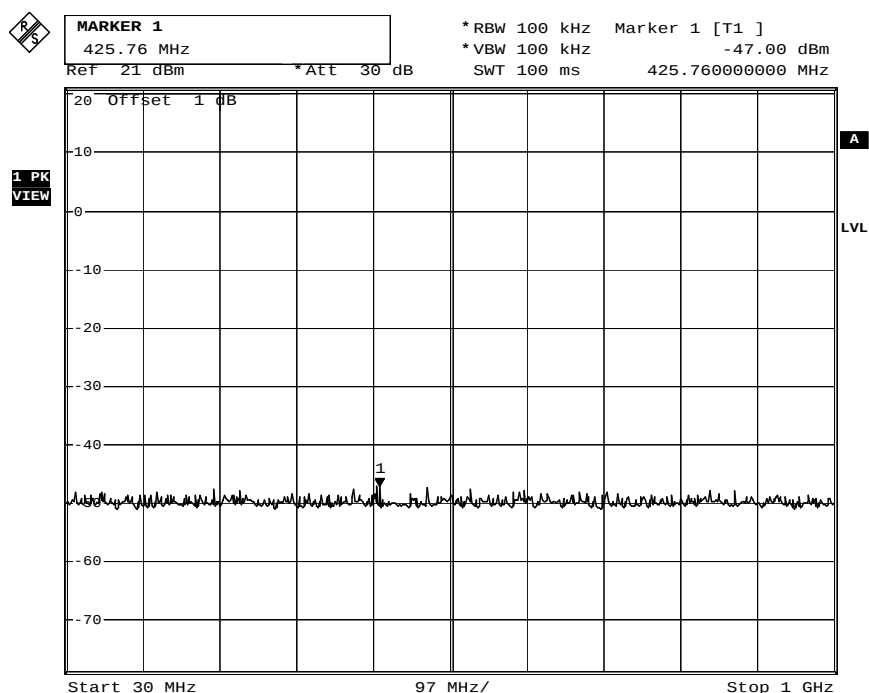
Date: 22.MAY.2011 15:29:30

Channel 00 (16GHz-25GHz)



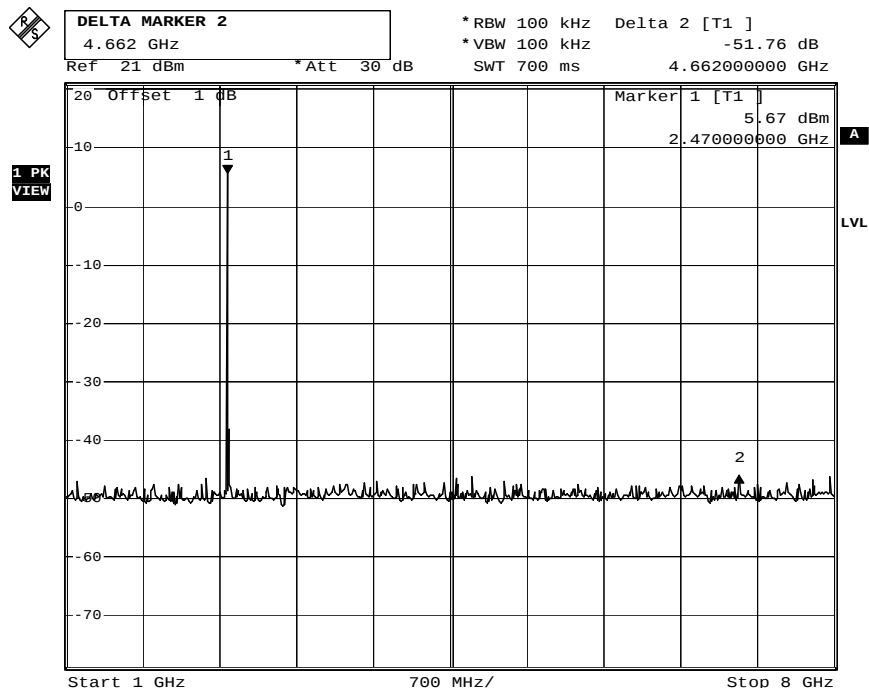
Date: 22.MAY.2011 15:29:53

Channel 24 (30MHz-1GHz)



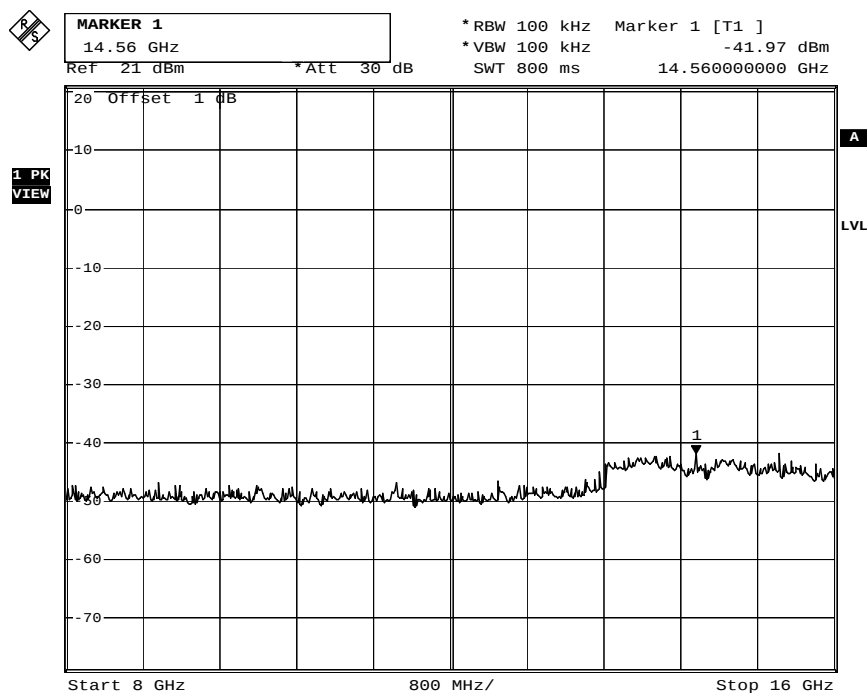
Date: 22.MAY.2011 15:30:50

Channel 24 (1GHz-8GHz)



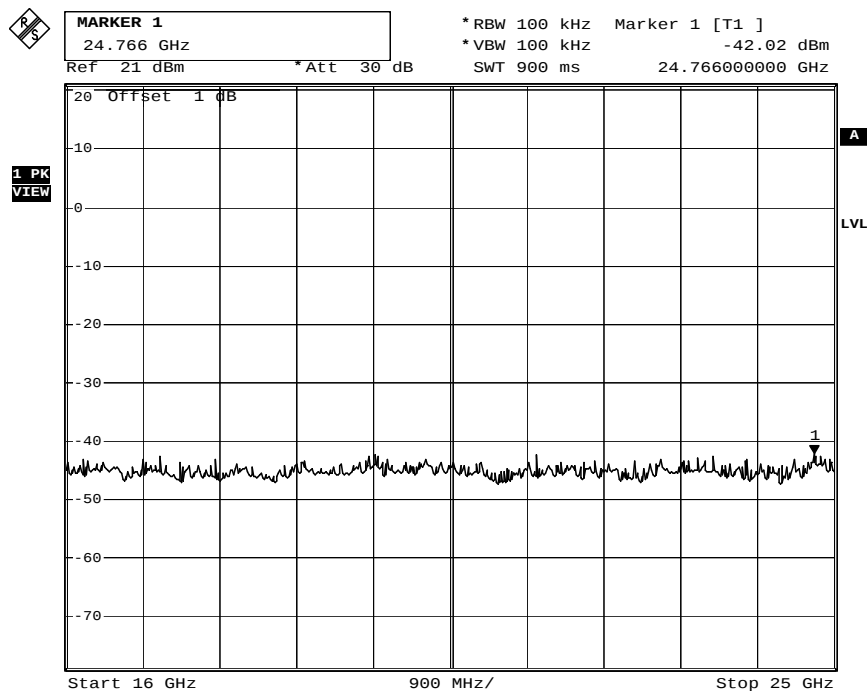
Date: 22.MAY.2011 15:31:31

Channel 24 (8GHz-16GHz)



Date: 22.MAY.2011 15:31:56

Channel 24 (16GHz-25GHz)

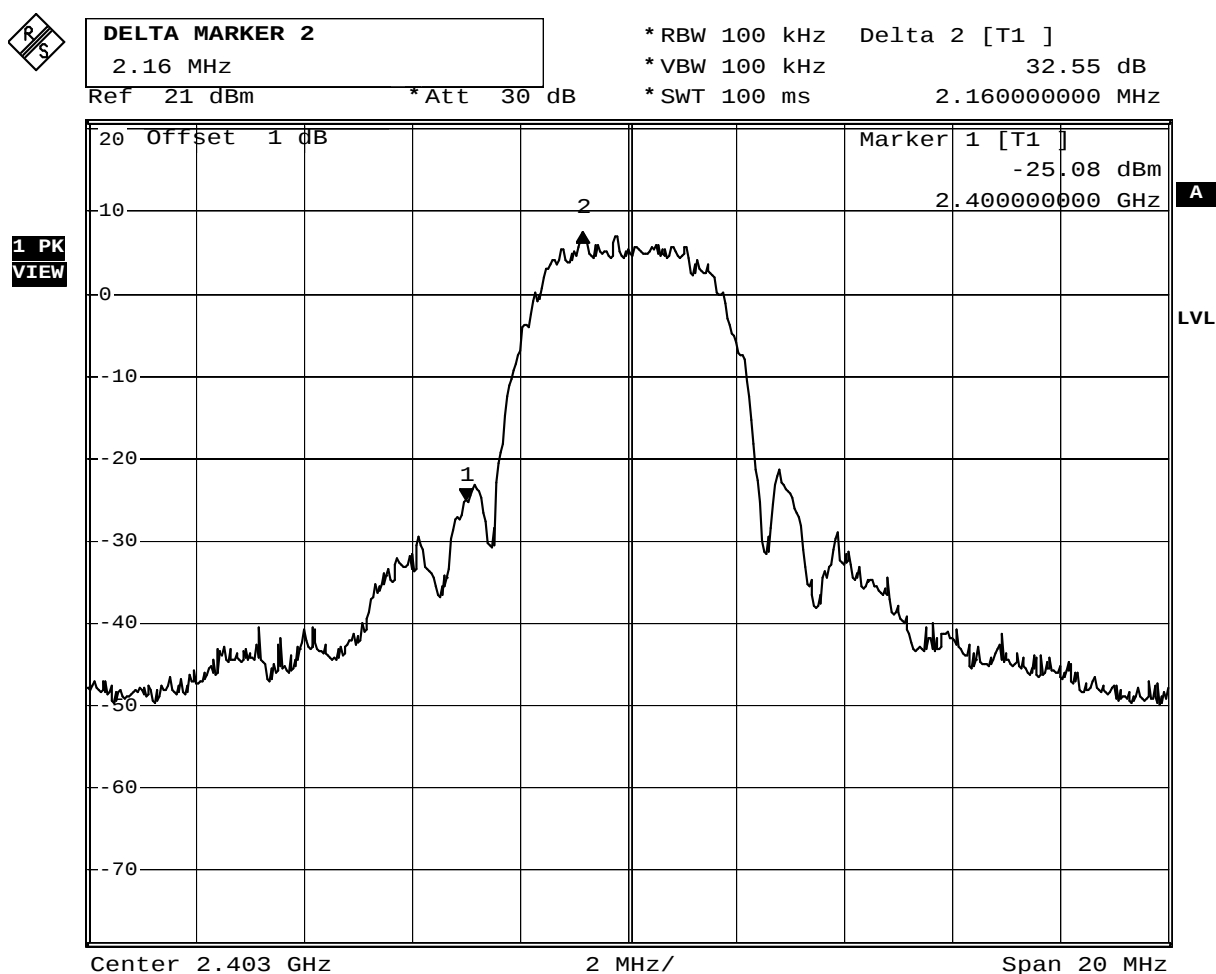


Date: 22.MAY.2011 15:32:16

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	RF antenna conducted test		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dBc)	Result
00	2403	32.55	≥ 20	Pass
24	2475	46.30	≥ 20	Pass

Channel 00



Date: 20.MAY.2011 22:08:47

Channel 24



MARKER 1

2.4835 GHz

Ref 21 dBm

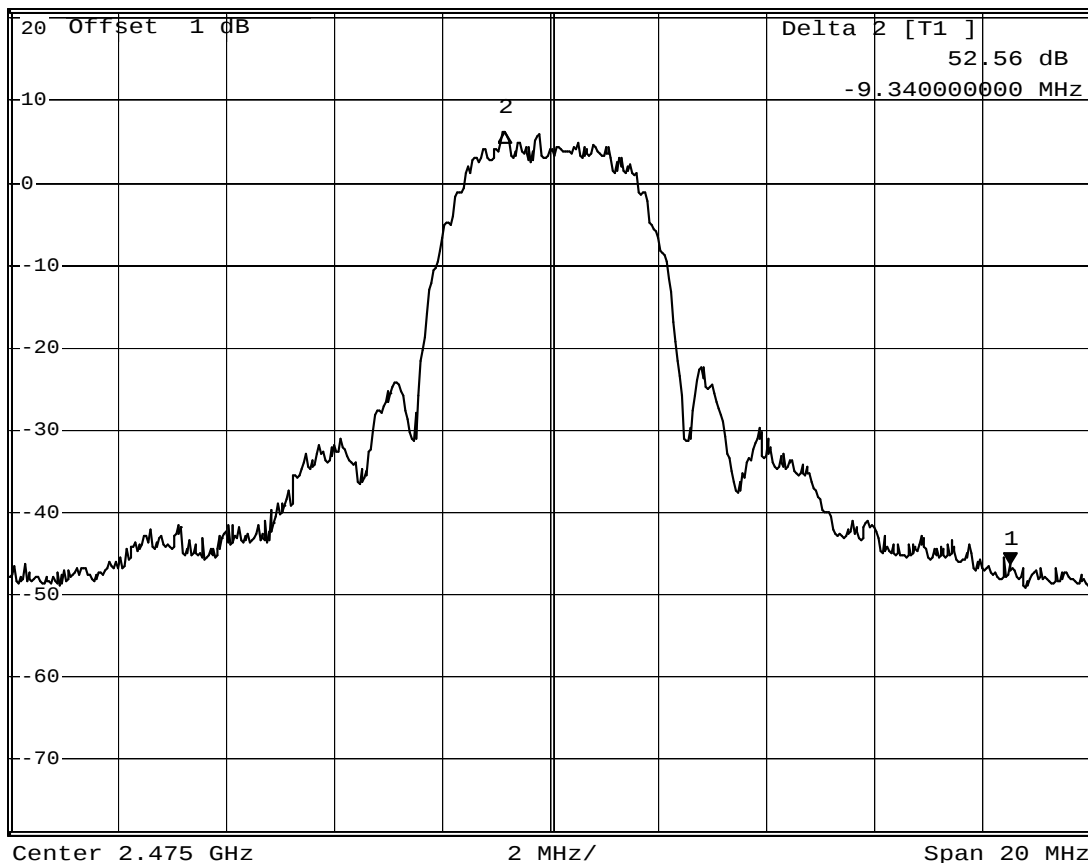
*Att 30 dB

*RBW 100 kHz Marker 1 [T1]

*VBW 100 kHz -46.30 dBm

*SWT 100 ms 2.483500000 GHz

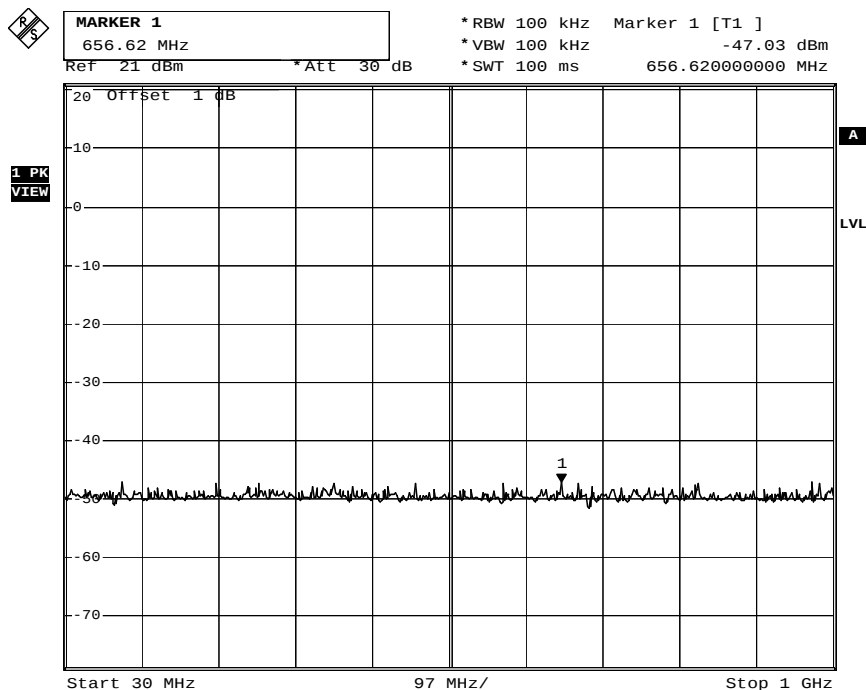
**1 PK
VIEW**



LVL

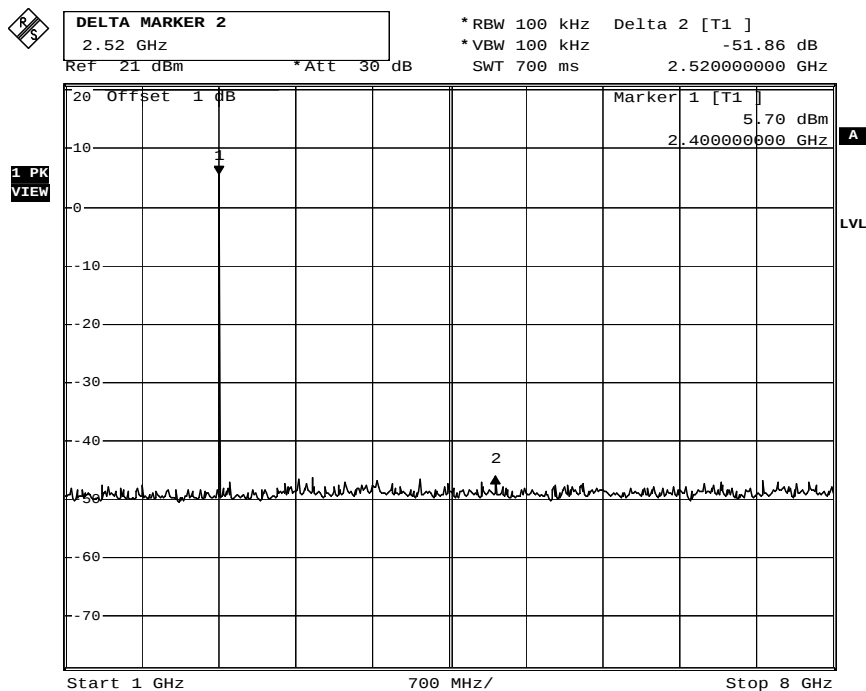
Date: 20.MAY.2011 22:14:36

Channel 00 (30MHz-1GHz)



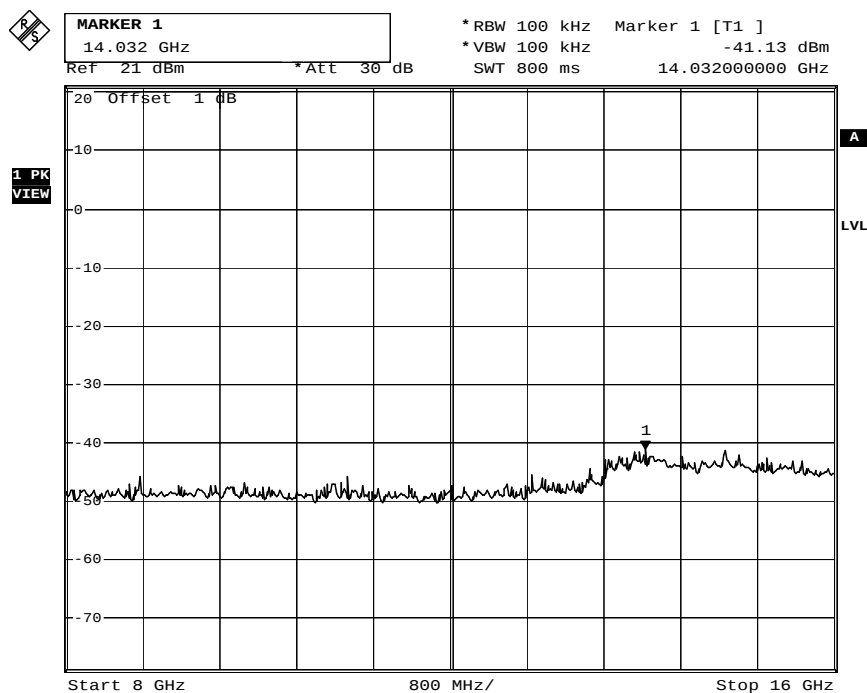
Date: 22.MAY.2011 15:20:54

Channel 00 (1GHz-8GHz)



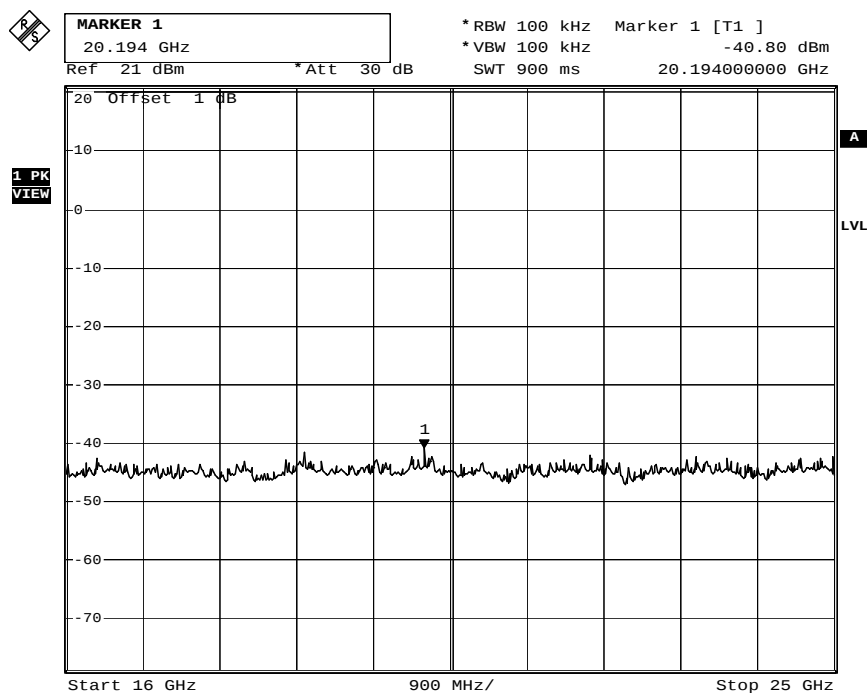
Date: 22.MAY.2011 15:22:17

Channel 00 (8GHz-16GHz)



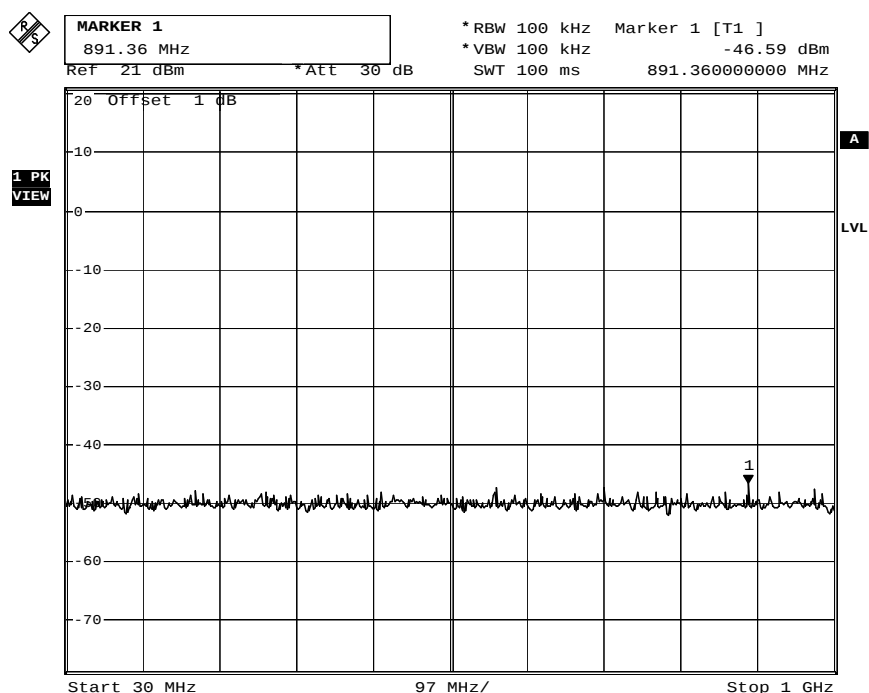
Date: 22.MAY.2011 15:22:51

Channel 00 (16GHz-25GHz)



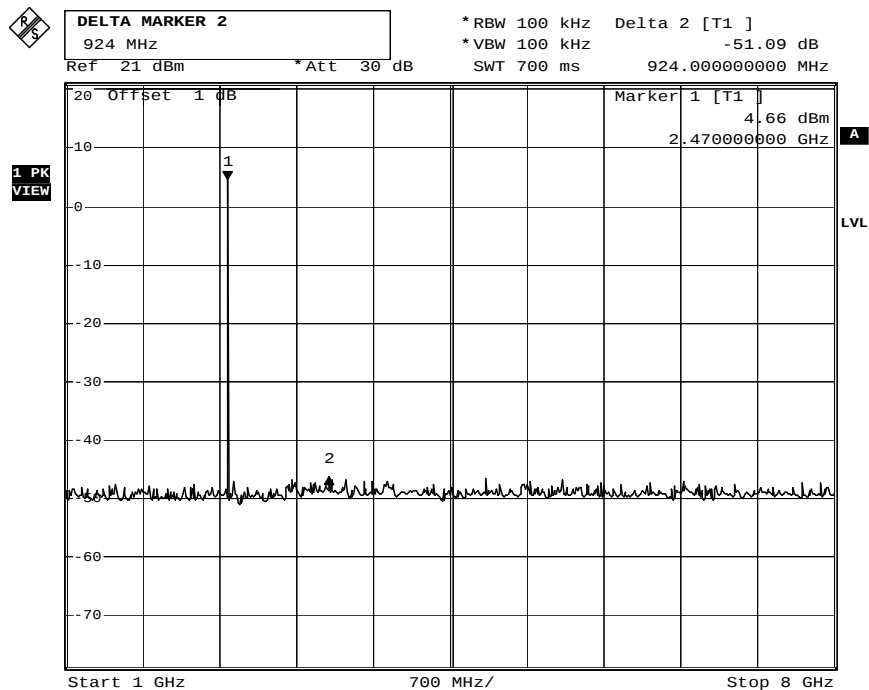
Date: 22.MAY.2011 15:23:37

Channel 24 (30MHz-1GHz)



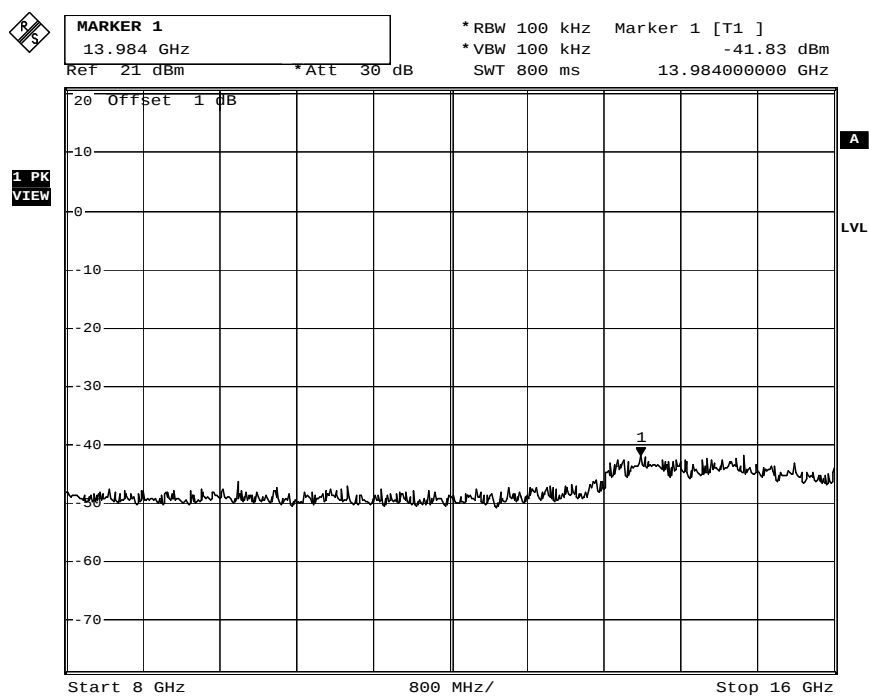
Date: 22.MAY.2011 15:24:34

Channel 24 (1GHz-8GHz)



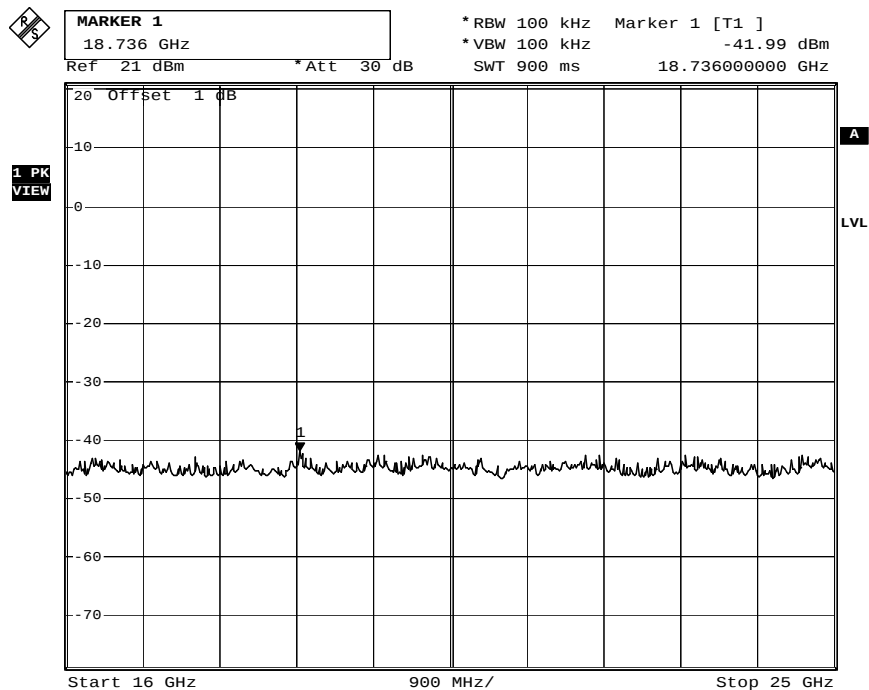
Date: 22.MAY.2011 15:25:35

Channel 24 (8GHz-16GHz)



Date: 22.MAY.2011 15:26:04

Channel 24 (16GHz-25GHz)



Date: 22.MAY.2011 15:26:37

6.3. Limits

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

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

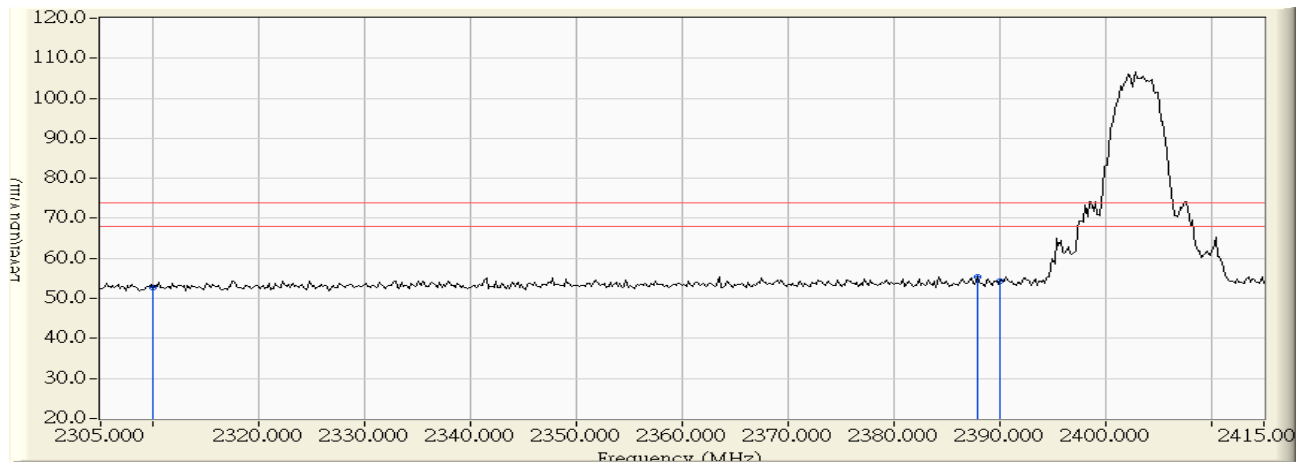
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2009 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

6.6. Test Result

Site : CB1	Time : 2012/06/12 - 16:18
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 1: Transmit (16QAM) 2403MHz

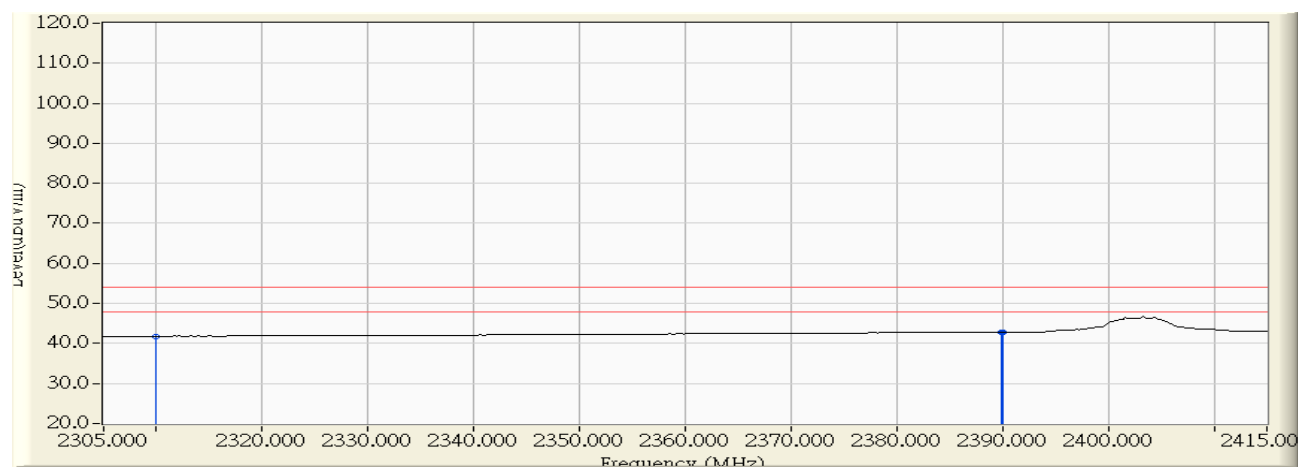


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	29.779	22.906	52.685	-21.315	74.000	PEAK
2	* 2387.867	30.556	24.915	55.472	-18.528	74.000	PEAK
3	2390.000	30.578	23.637	54.215	-19.785	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 16:26
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2403MHz

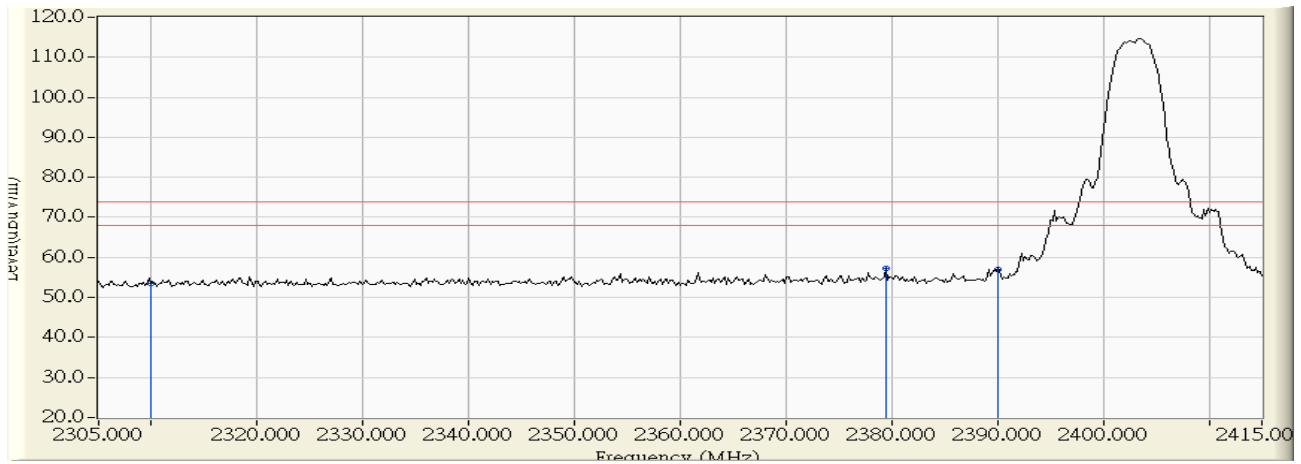


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	29.779	12.021	41.800	-12.200	54.000	AVERAGE
2	2389.883	30.577	12.287	42.864	-11.136	54.000	AVERAGE
3	* 2390.000	30.578	12.291	42.869	-11.131	54.000	AVERAGE

Note:

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

Site : CB1	Time : 2012/06/12 - 16:33
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2403MHz

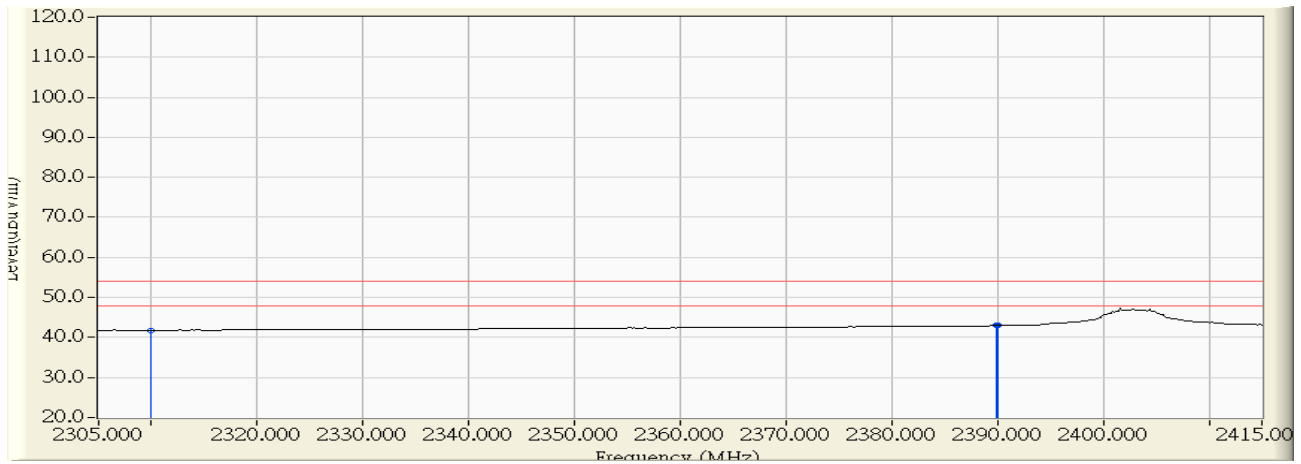


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	23.817	53.596	-20.404	74.000	PEAK
2	*	2379.433	30.473	26.842	57.314	-16.686	74.000	PEAK
3		2390.000	30.578	26.496	57.074	-16.926	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 16:41
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2403MHz

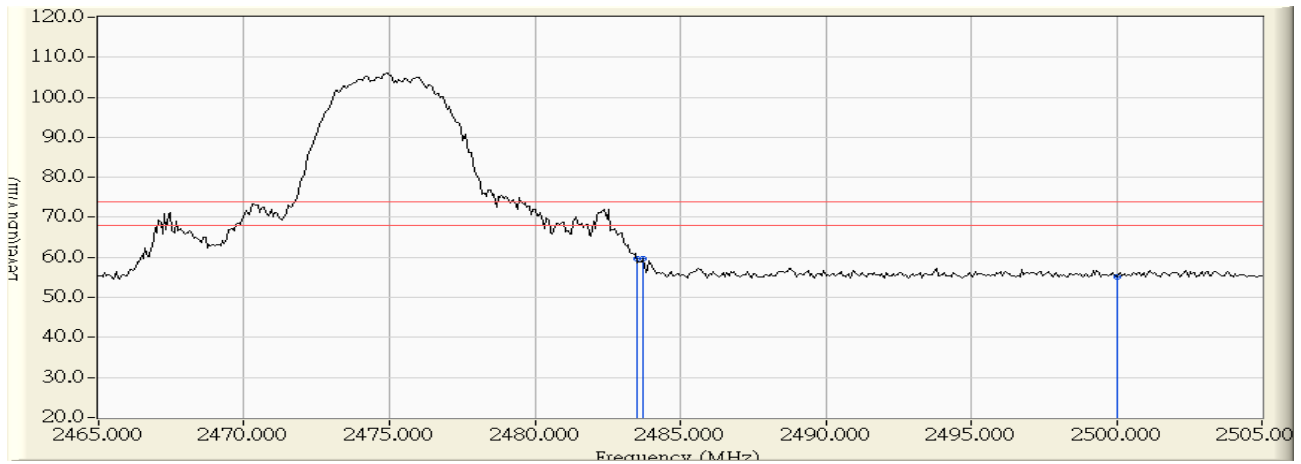


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	12.037	41.816	-12.184	54.000	AVERAGE
2	*	2389.883	30.577	12.409	42.986	-11.014	54.000	AVERAGE
3		2390.000	30.578	12.387	42.965	-11.035	54.000	AVERAGE

Note:

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

Site : CB1	Time : 2012/06/12 - 16:48
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2475MHz

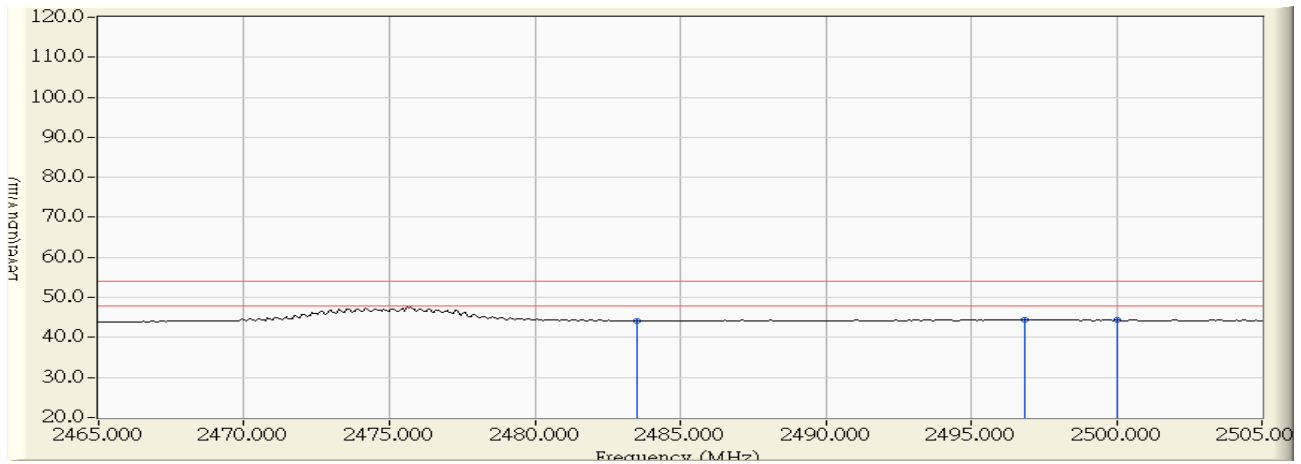


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	28.240	59.752	-14.248	74.000	PEAK
2	*	2483.733	31.514	28.262	59.776	-14.224	74.000	PEAK
3		2500.000	31.638	23.497	55.136	-18.864	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 16:54
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2475MHz

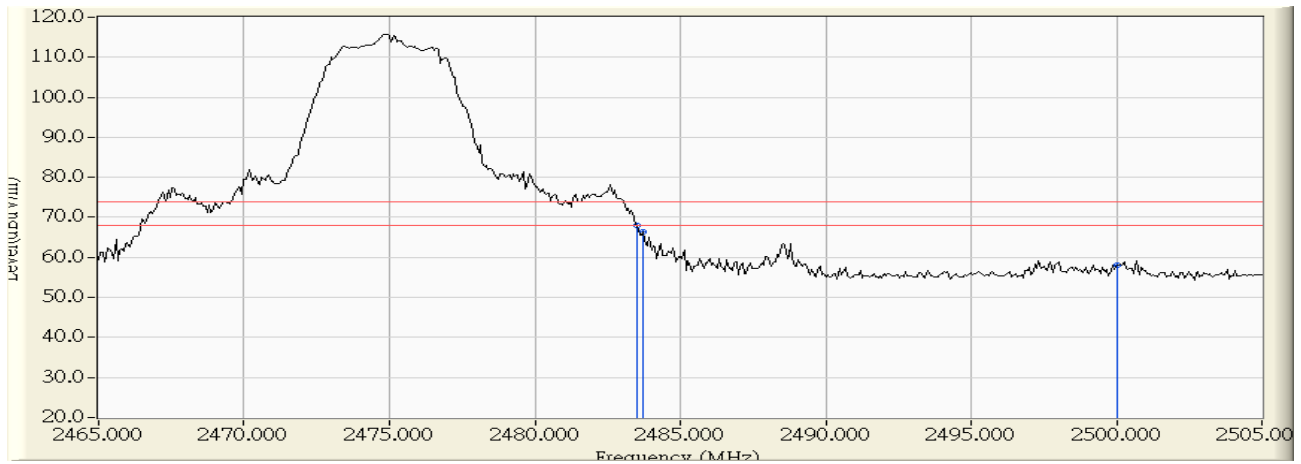


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	12.707	44.219	-9.781	54.000	AVERAGE
2	*	2496.867	31.637	12.697	44.334	-9.666	54.000	AVERAGE
3		2500.000	31.638	12.624	44.263	-9.737	54.000	AVERAGE

Note:

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

Site : CB1	Time : 2012/06/12 - 17:02
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 1: Transmit (16QAM) 2475MHz

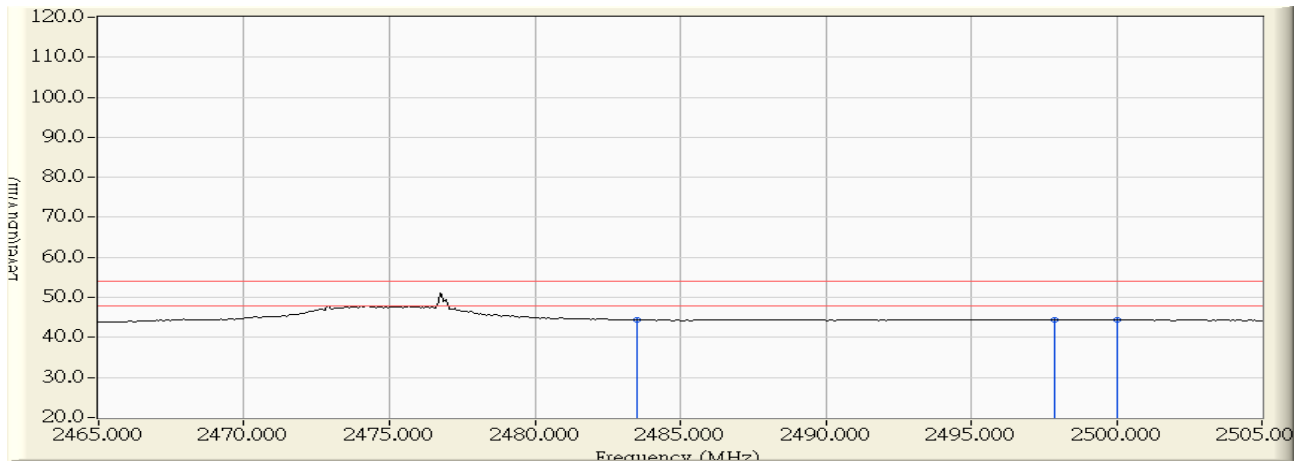


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2483.500	31.512	36.523	68.035	-5.965	74.000	PEAK
2		2483.733	31.514	34.891	66.405	-7.595	74.000	PEAK
3		2500.000	31.638	26.405	58.044	-15.956	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 17:08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 1: Transmit (16QAM)
Module	2475MHz

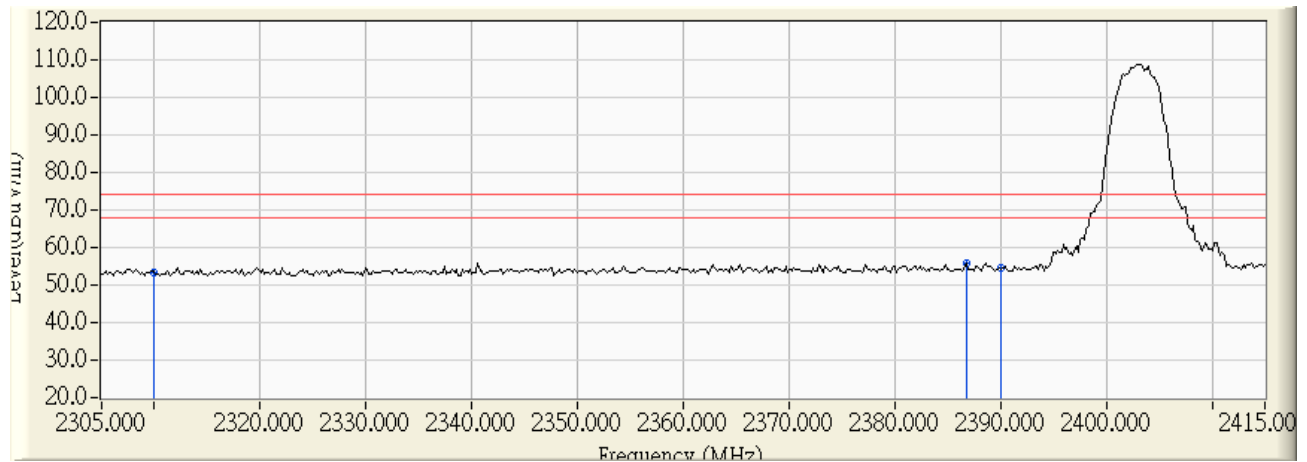


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	12.816	44.328	-9.672	54.000	AVERAGE
2	*	2497.867	31.637	12.818	44.456	-9.544	54.000	AVERAGE
3		2500.000	31.638	12.707	44.346	-9.654	54.000	AVERAGE

Note:

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

Site : CB1	Time : 2012/06/12 - 17:16
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2403MHz

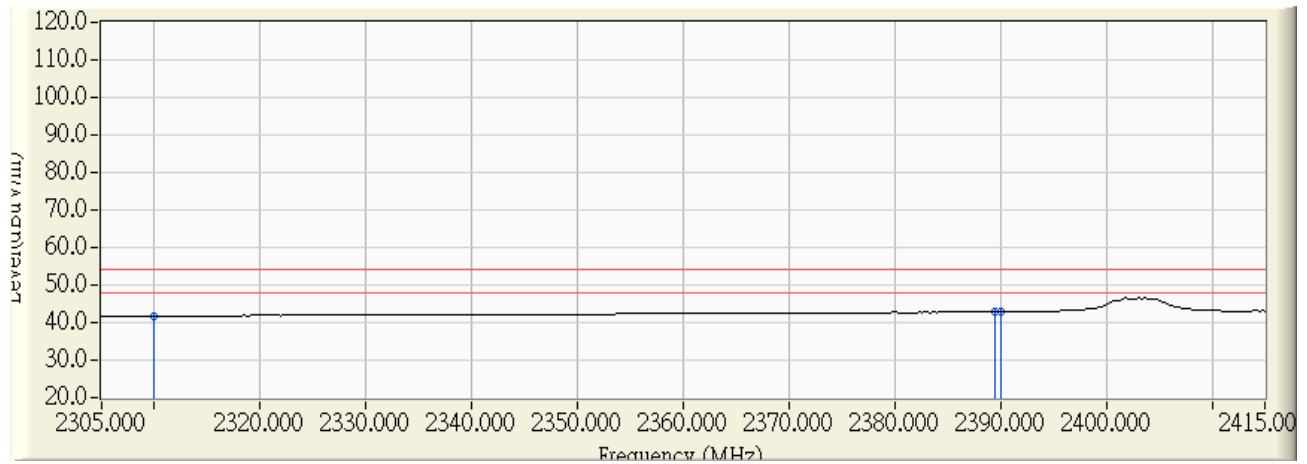


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	23.710	53.489	-20.511	74.000	PEAK
2	*	2386.767	30.545	25.336	55.882	-18.118	74.000	PEAK
3		2390.000	30.578	23.863	54.441	-19.559	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 17:22
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2403MHz

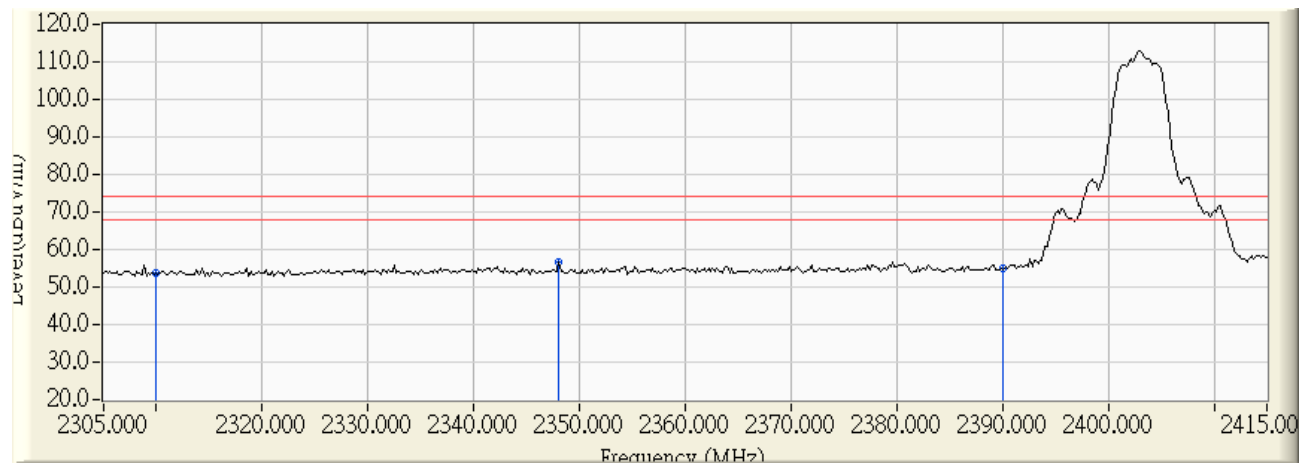


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	11.994	41.773	-12.227	54.000	AVERAGE
2	*	2389.517	30.574	12.248	42.821	-11.179	54.000	AVERAGE
3		2390.000	30.578	12.241	42.819	-11.181	54.000	AVERAGE

Note:

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

Site : CB1	Time : 2012/06/12 - 17:29
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2403MHz

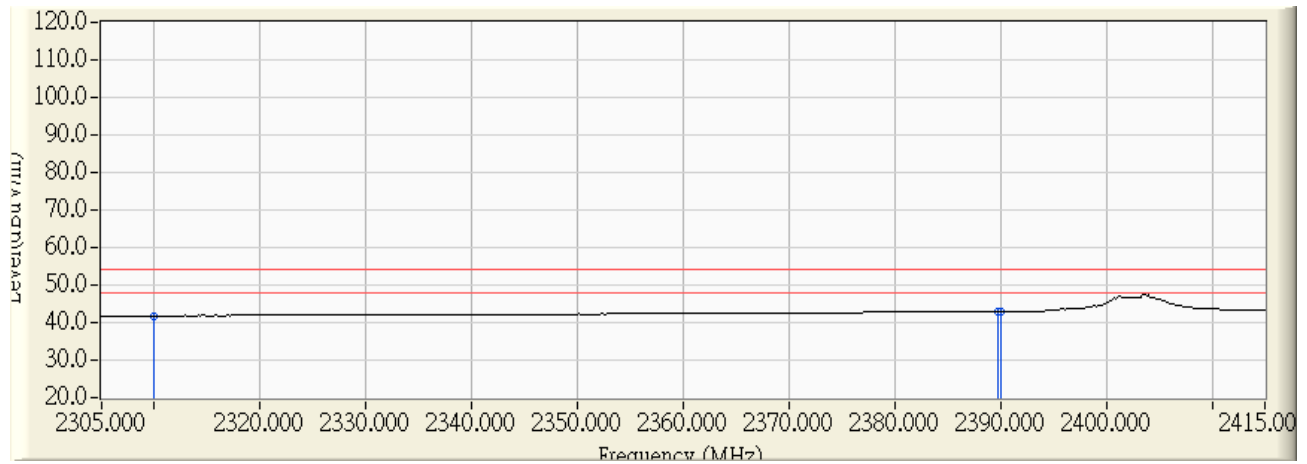


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	23.872	53.651	-20.349	74.000	PEAK
2	*	2348.083	30.159	26.350	56.509	-17.491	74.000	PEAK
3		2390.000	30.578	24.288	54.866	-19.134	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 17:36
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2403MHz

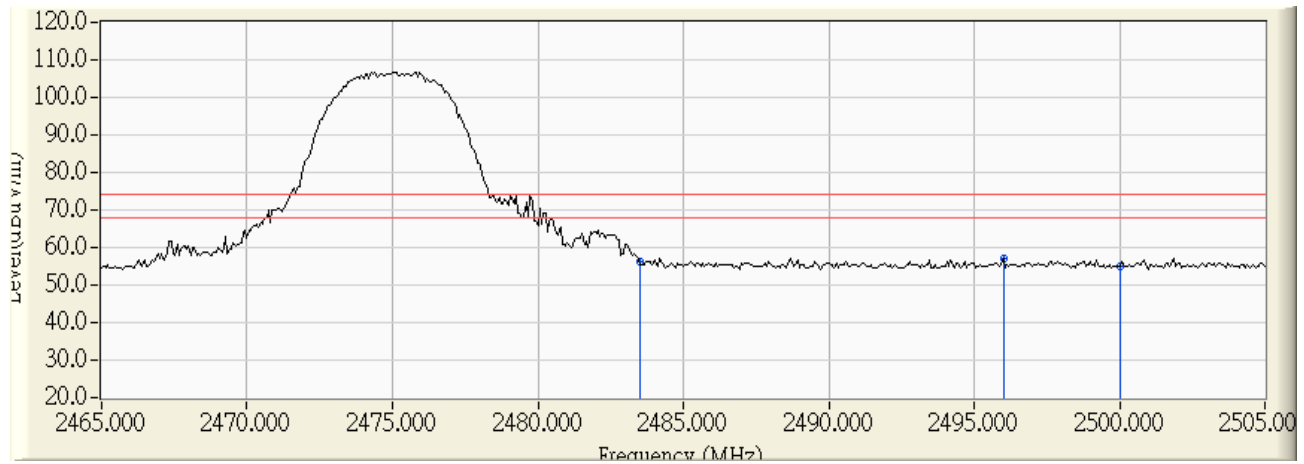


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	29.779	12.037	41.816	-12.184	54.000	AVERAGE
2	2389.700	30.575	12.341	42.916	-11.084	54.000	AVERAGE
3	* 2390.000	30.578	12.344	42.922	-11.078	54.000	AVERAGE

Note:

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

Site : CB1	Time : 2012/06/12 - 17:42
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2475MHz

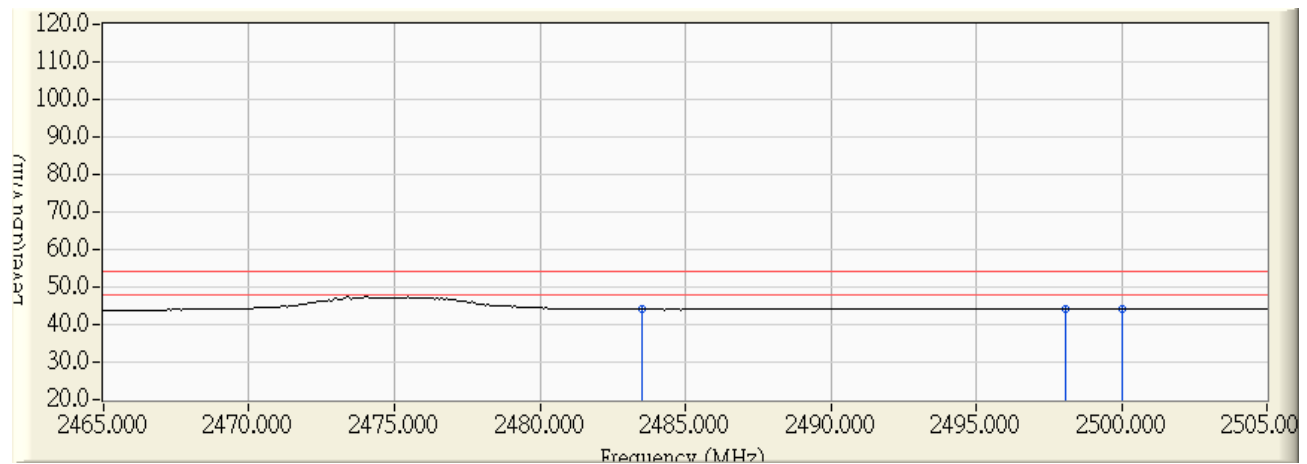


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	24.831	56.343	-17.657	74.000	PEAK
2	*	2496.000	31.636	25.452	57.089	-16.911	74.000	PEAK
3		2500.000	31.638	23.540	55.179	-18.821	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 17:49
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver Module	Note : Mode 2: Transmit (QPSK) 2475MHz

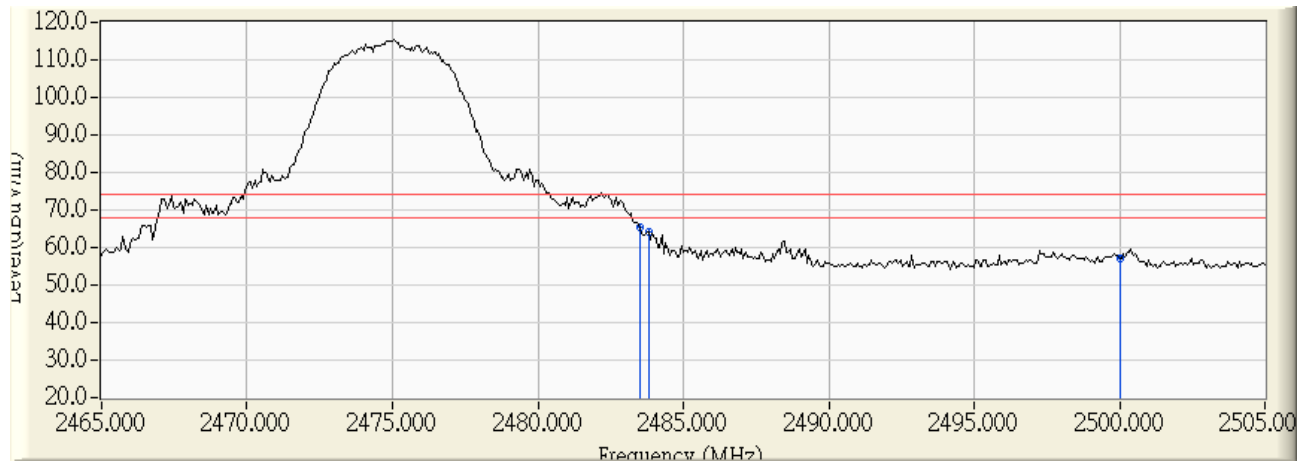


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	12.488	44.000	-10.000	54.000	AVERAGE
2	*	2498.067	31.638	12.512	44.150	-9.850	54.000	AVERAGE
3		2500.000	31.638	12.447	44.086	-9.914	54.000	AVERAGE

Note:

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

Site : CB1	Time : 2012/06/12 - 17:56
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2475MHz

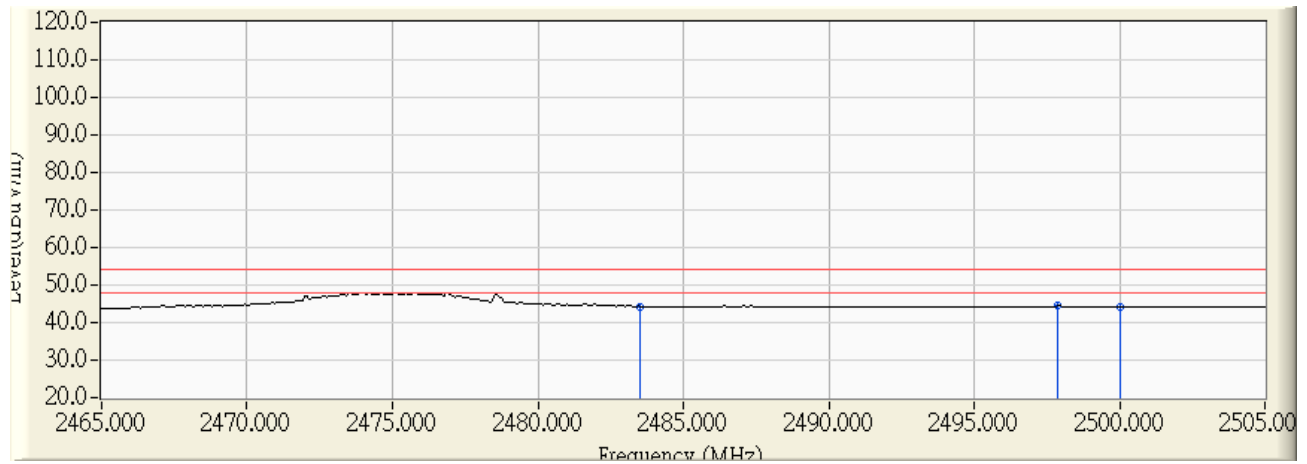


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2483.500	31.512	34.083	65.595	-8.405	74.000	PEAK
2		2483.800	31.515	32.707	64.222	-9.778	74.000	PEAK
3		2500.000	31.638	25.641	57.280	-16.720	74.000	PEAK

Note:

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

Site : CB1	Time : 2012/06/12 - 18:05
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 12V
EUT : 2.4GHz Digital Wireless A / V / Data Transceiver	Note : Mode 2: Transmit (QPSK)
Module	2475MHz



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	12.814	44.326	-9.674	54.000	AVERAGE
2	*	2497.867	31.637	12.802	44.440	-9.560	54.000	AVERAGE
3		2500.000	31.638	12.623	44.262	-9.738	54.000	AVERAGE

Note:

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

7. Number of hopping frequency

7.1. Test Equipment

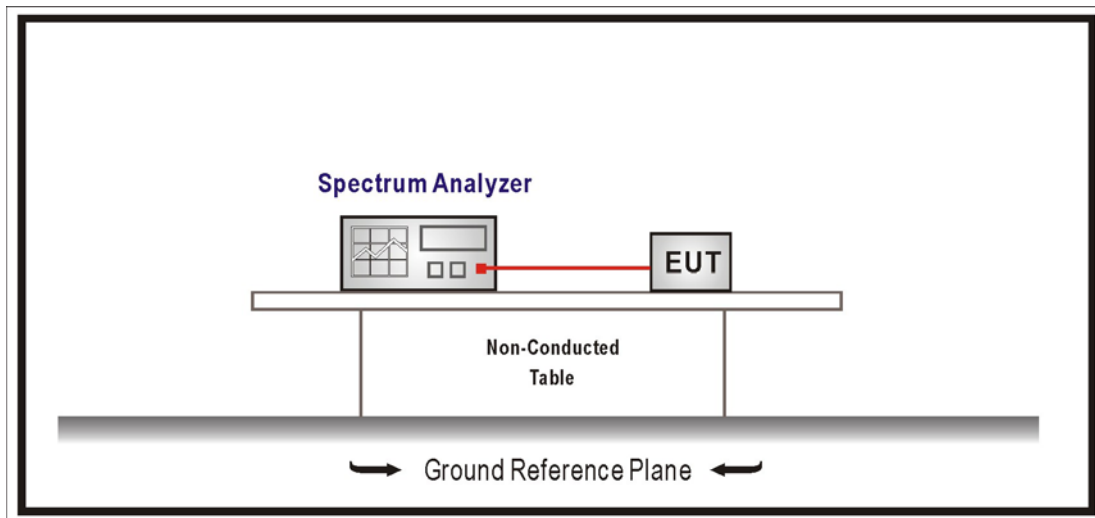
The following test equipment is used during the test:

Number of hopping frequency / No.7 Shielding Room

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2012/01/16

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

7.2. Test Setup



7.3. Limits

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

For frequency hopping systems operating in the 2400-2483.5 MHz bands, which use fewer than 75 hopping frequencies, may employ intelligent hopping techniques to avoid interference to other transmissions. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 non-overlapping channels are used.

For frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies.

7.4. Test Procedures

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Span = the frequency band of operation

$RBW \geq 1\%$ of the span , $VBW \geq RBW$

Sweep = auto, Detector function = peak, Trace = max hold

7.5. Test Specification

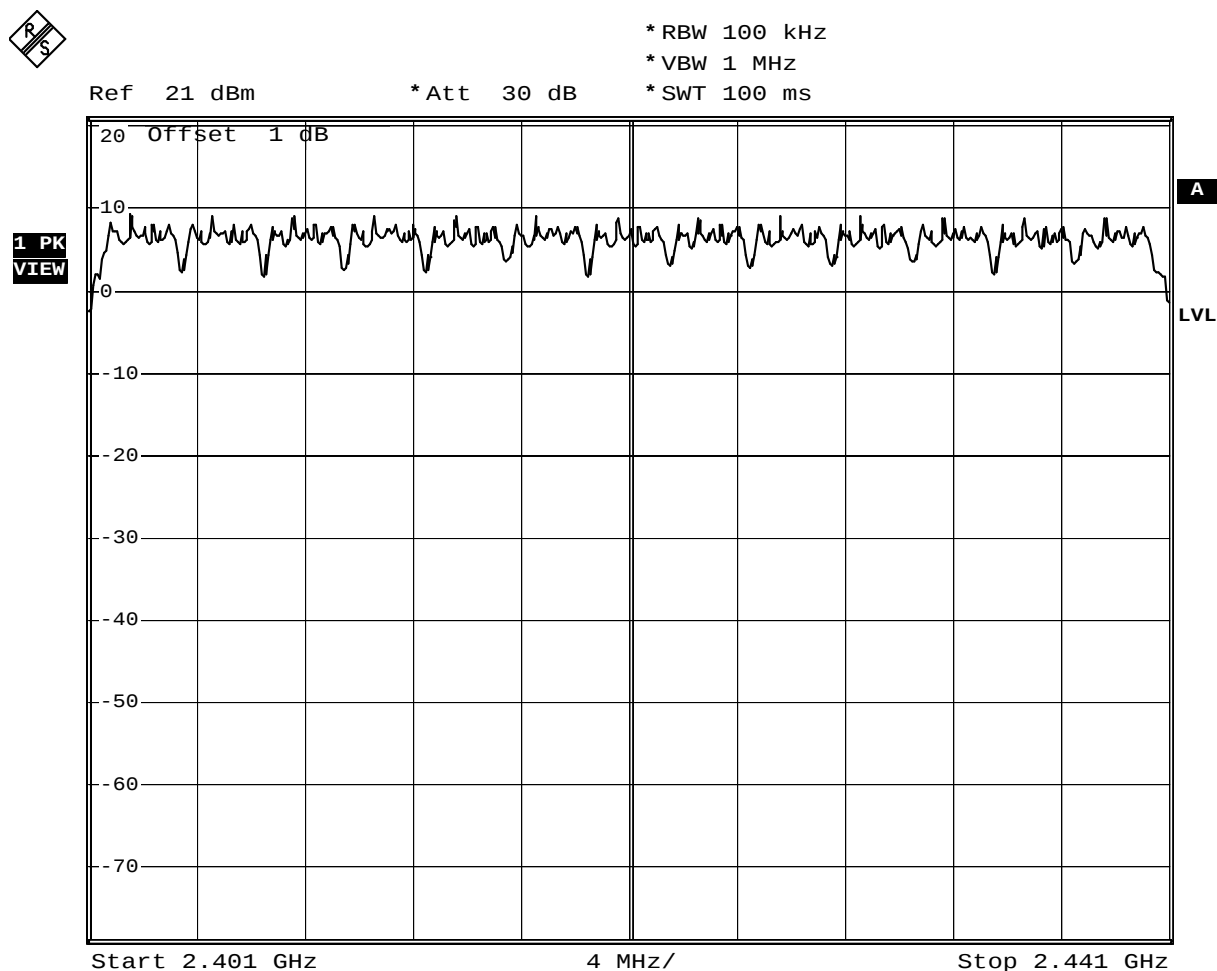
According to FCC Part 15 Subpart C Paragraph 15.247: 2011

7.6. Test Result

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Number of hopping frequency		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

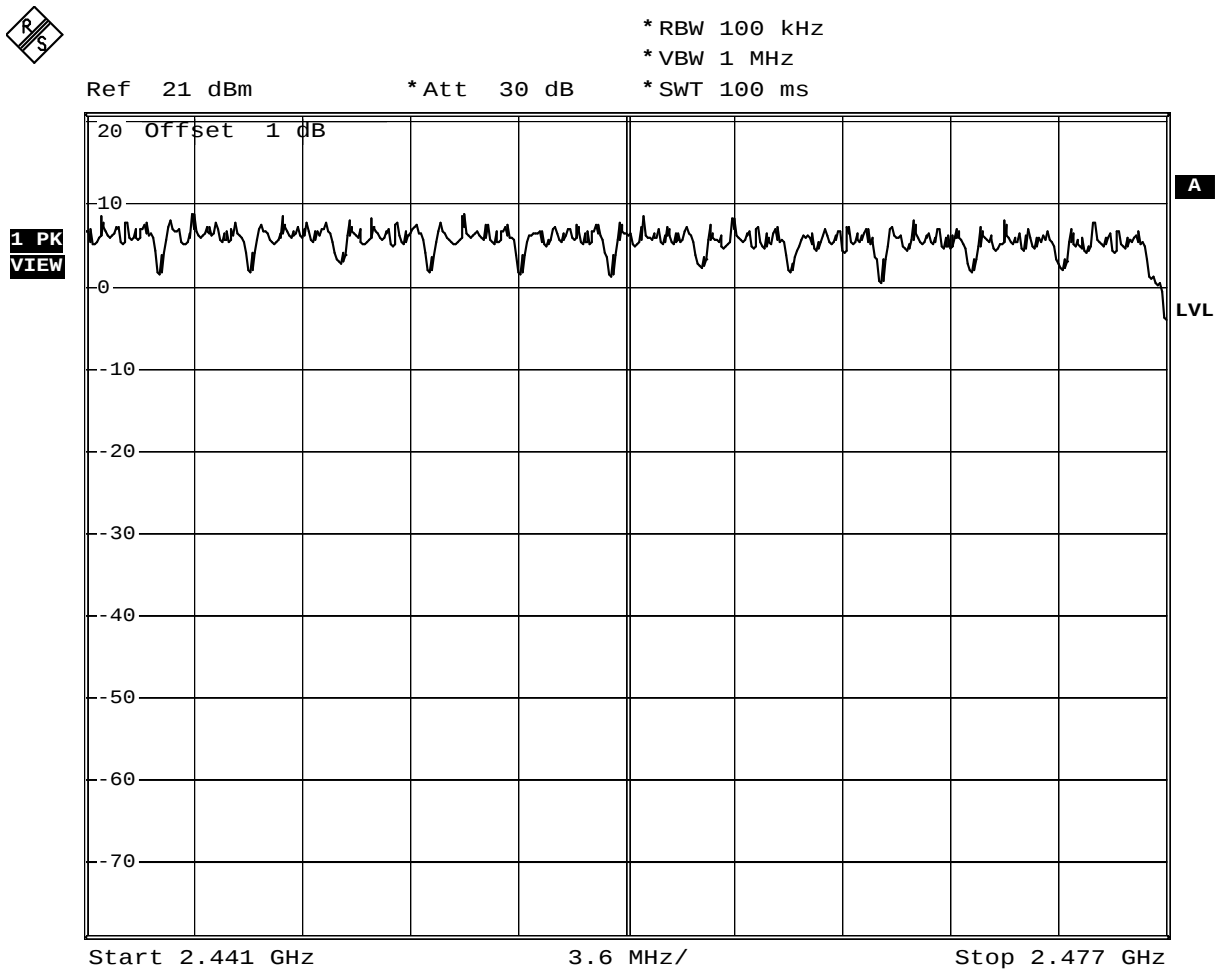
Frequency Range (MHz)	Measure Level (Channels)	Limit (Channels)	Result
2403 ~ 2475	25	≥ 15	Pass

2401-2441MHz



Date: 20.MAY.2011 21:24:29

2441-2477MHz



Date: 20.MAY.2011 21:25:45

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Number of hopping frequency		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

Frequency Range (MHz)	Measure Level (Channels)	Limit (Channels)	Result
2403 ~ 2475	25	≥ 15	Pass

2401-2441MHz



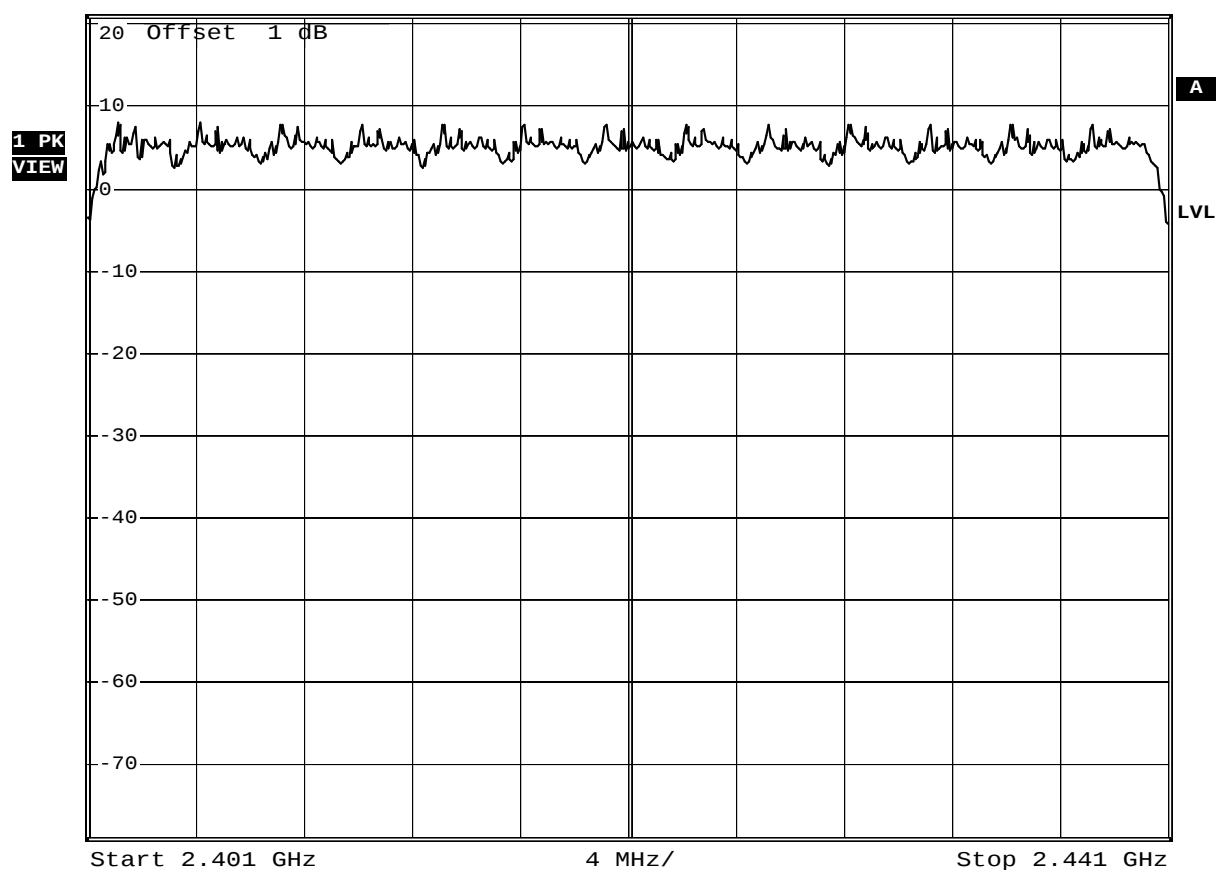
* RBW 100 kHz

* VBW 1 MHz

* SWT 100 ms

Ref 21 dBm

* Att 30 dB



Date: 20.MAY.2011 21:17:28

2441-2477MHz



* RBW 100 kHz

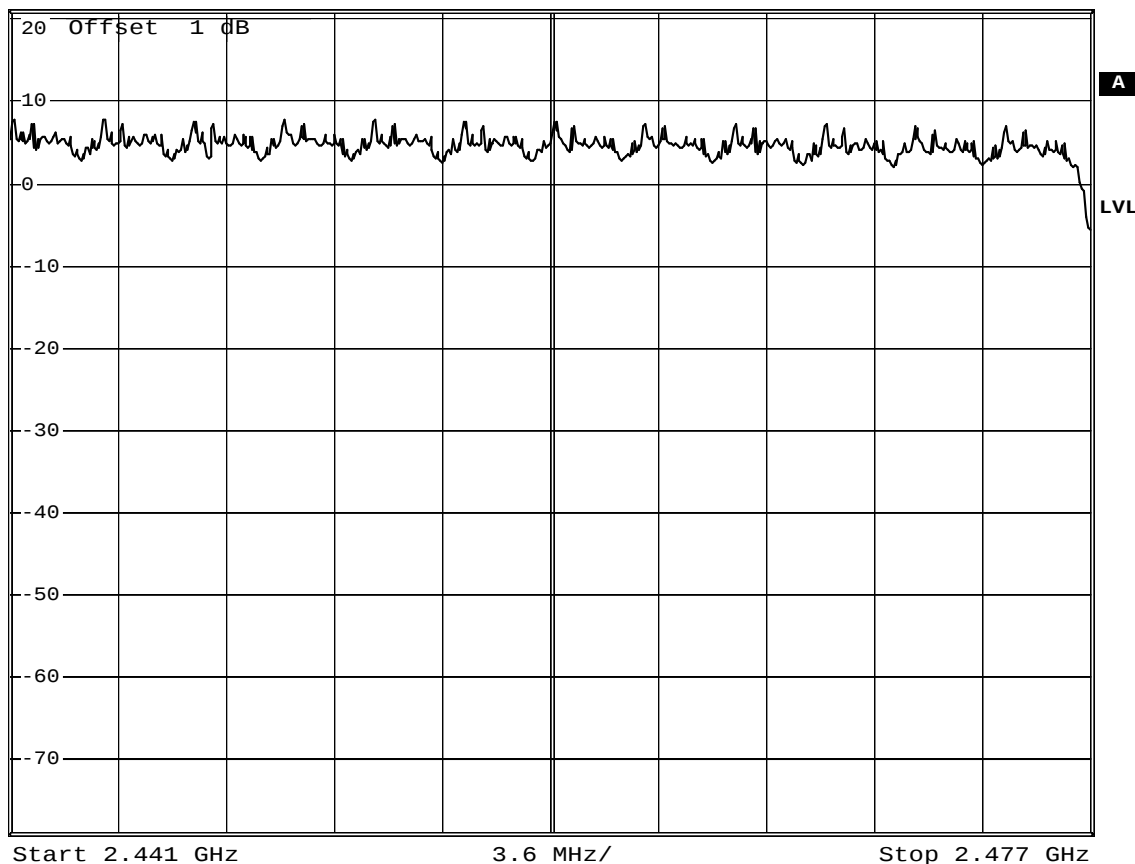
* VBW 1 MHz

* SWT 100 ms

Ref 21 dBm

* Att 30 dB

1 PK
VIEW



Date: 20.MAY.2011 21:14:17

8. Carrier Frequency Separation

8.1. Test Equipment

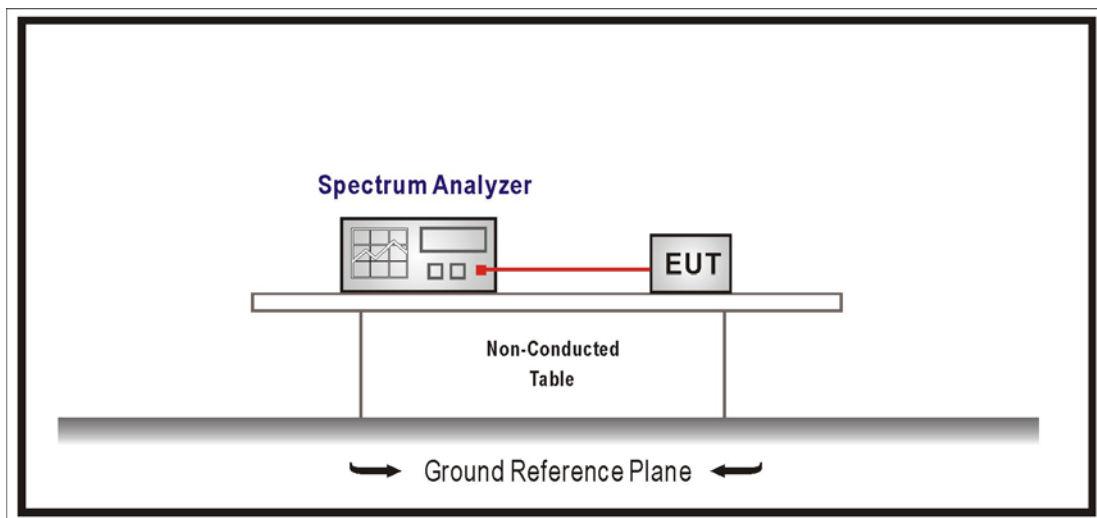
The following test equipment is used during the test:

Carrier Frequency Separation / No.7 Shielding Room

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2012/01/16

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

8.2. Test Setup



8.3. Limits

For frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

8.4. Test Procedures

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Span = wide enough to capture the peaks of two adjacent channels

Resolution Bandwidth (RBW) $\geq$ 1% of the span, VBW $\geq$ RBW

Sweep = auto, Detector function = peak, Trace = max hold

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

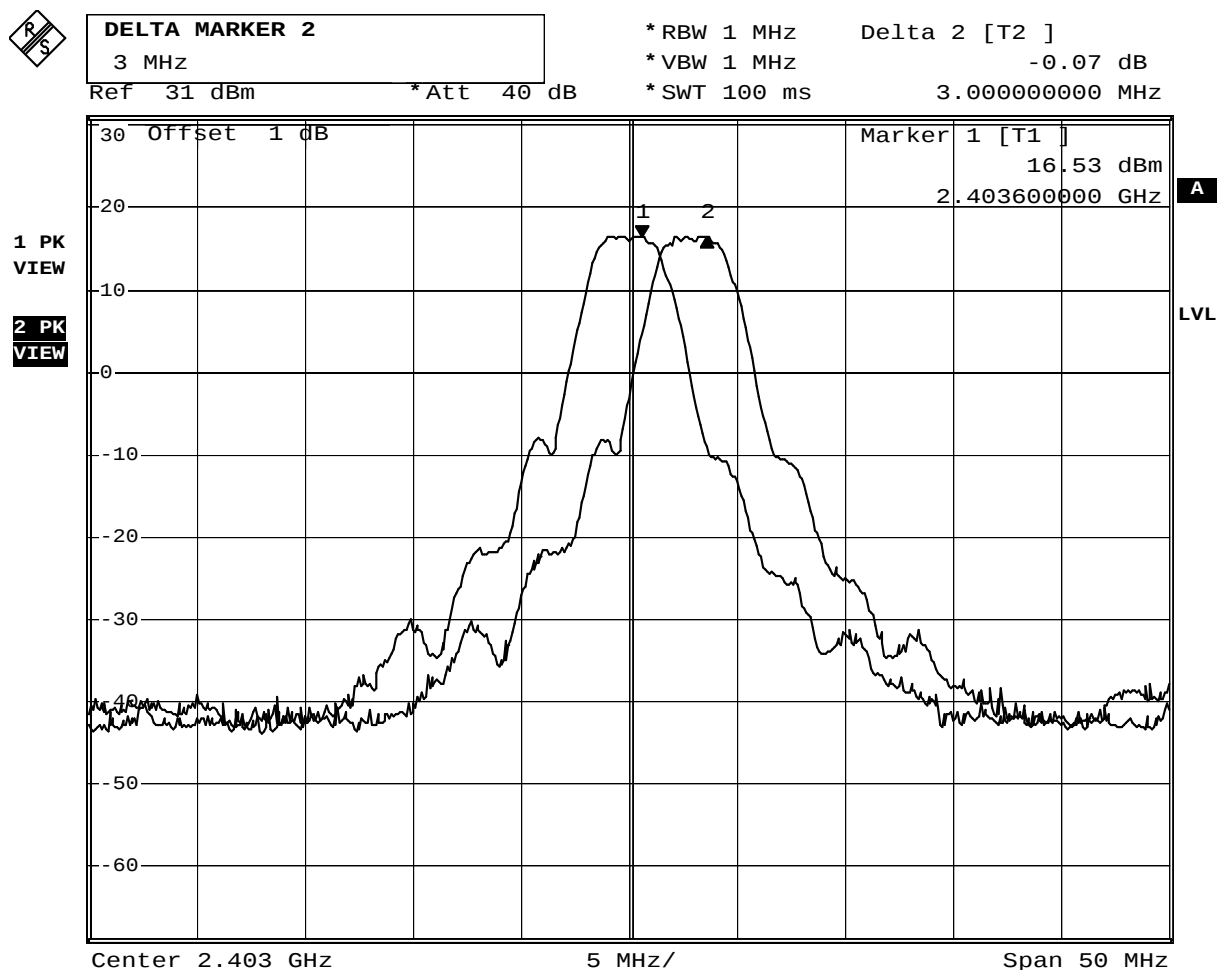
8.6. Test Result

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2403	3	>2.99	Pass

Channel 00

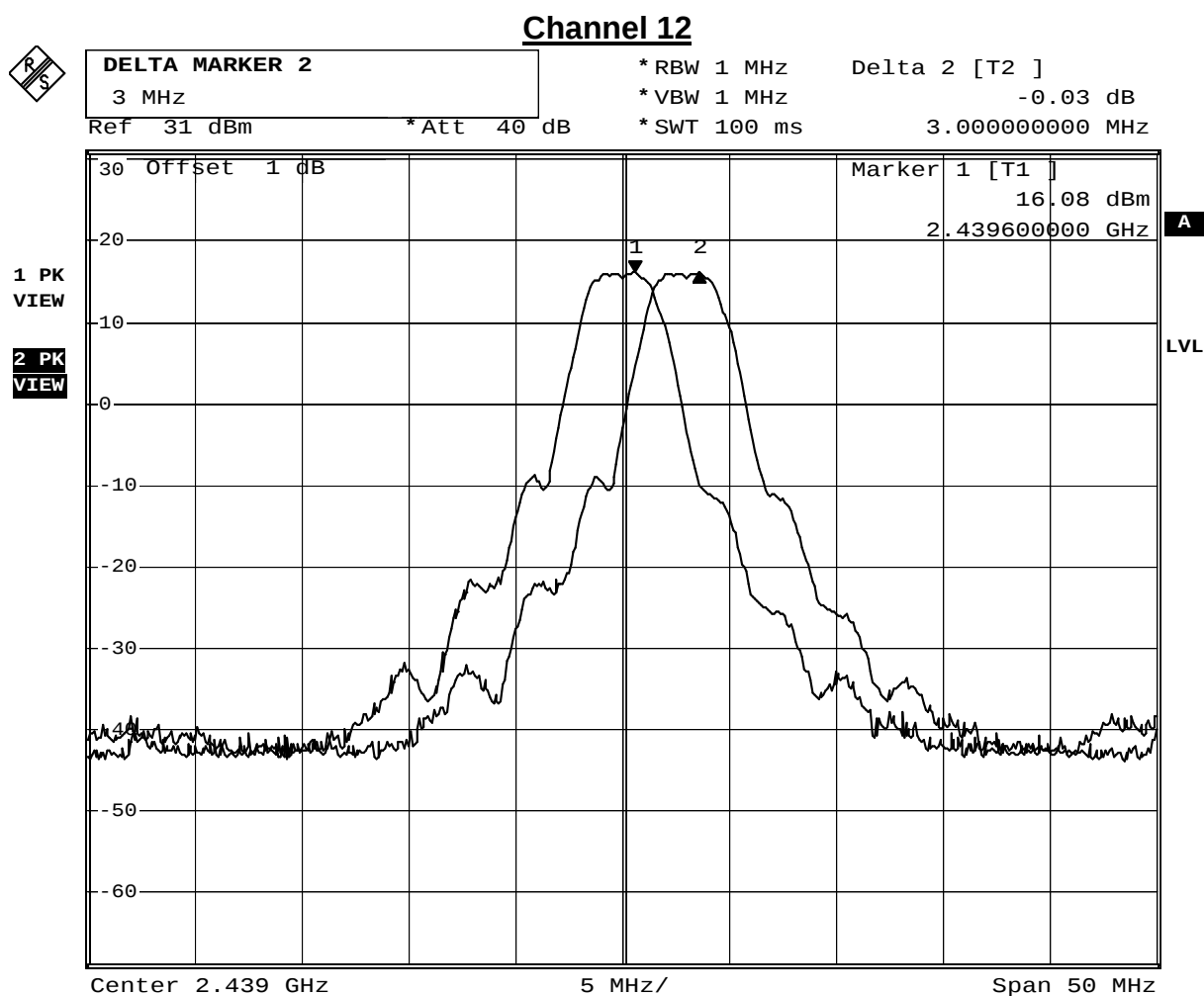


Date: 20.MAY.2011 21:31:22

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
12	2439	3	>2.99	Pass



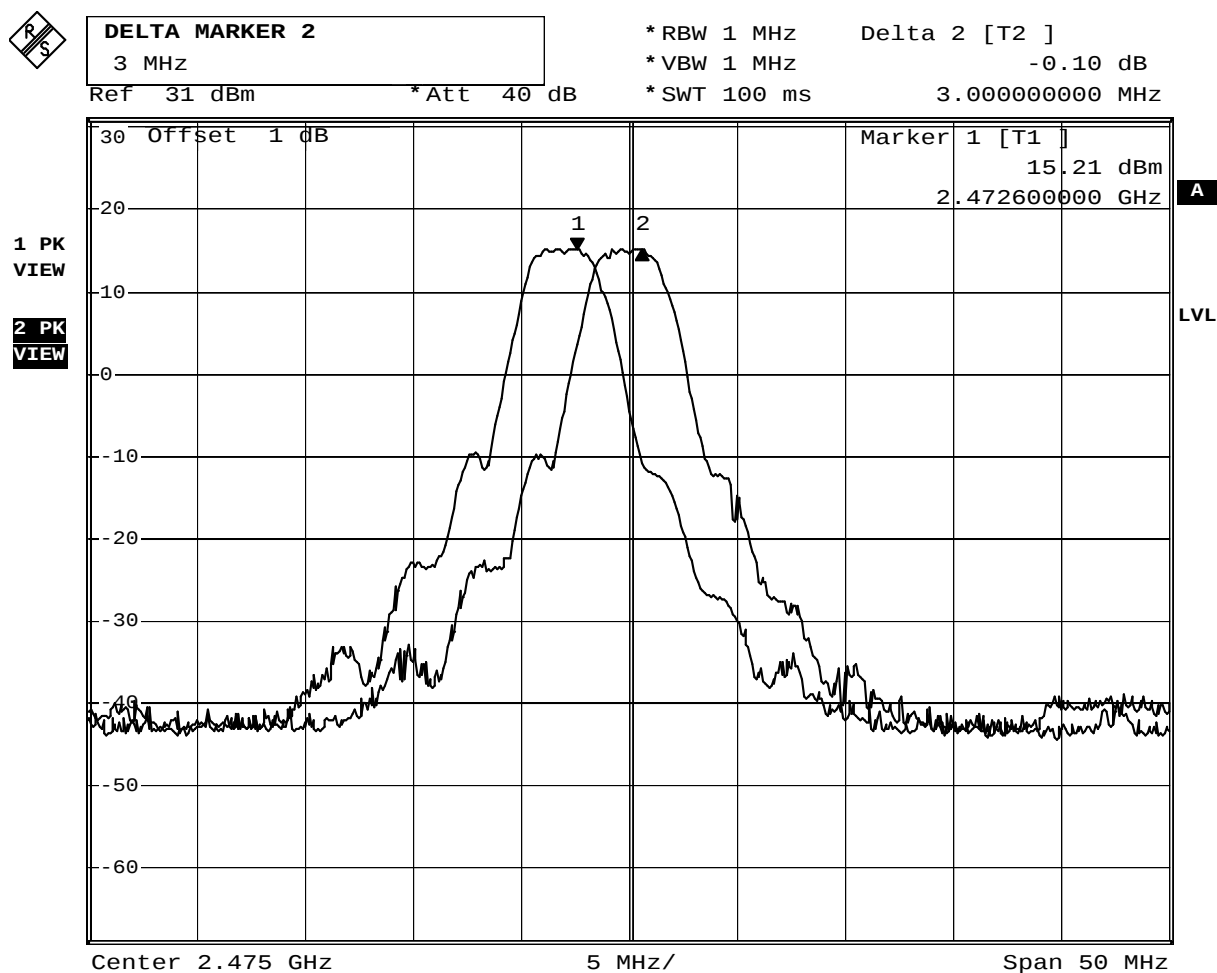
Date: 20.MAY.2011 21:33:21

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
24	2475	3	>2.99	Pass

Channel 24



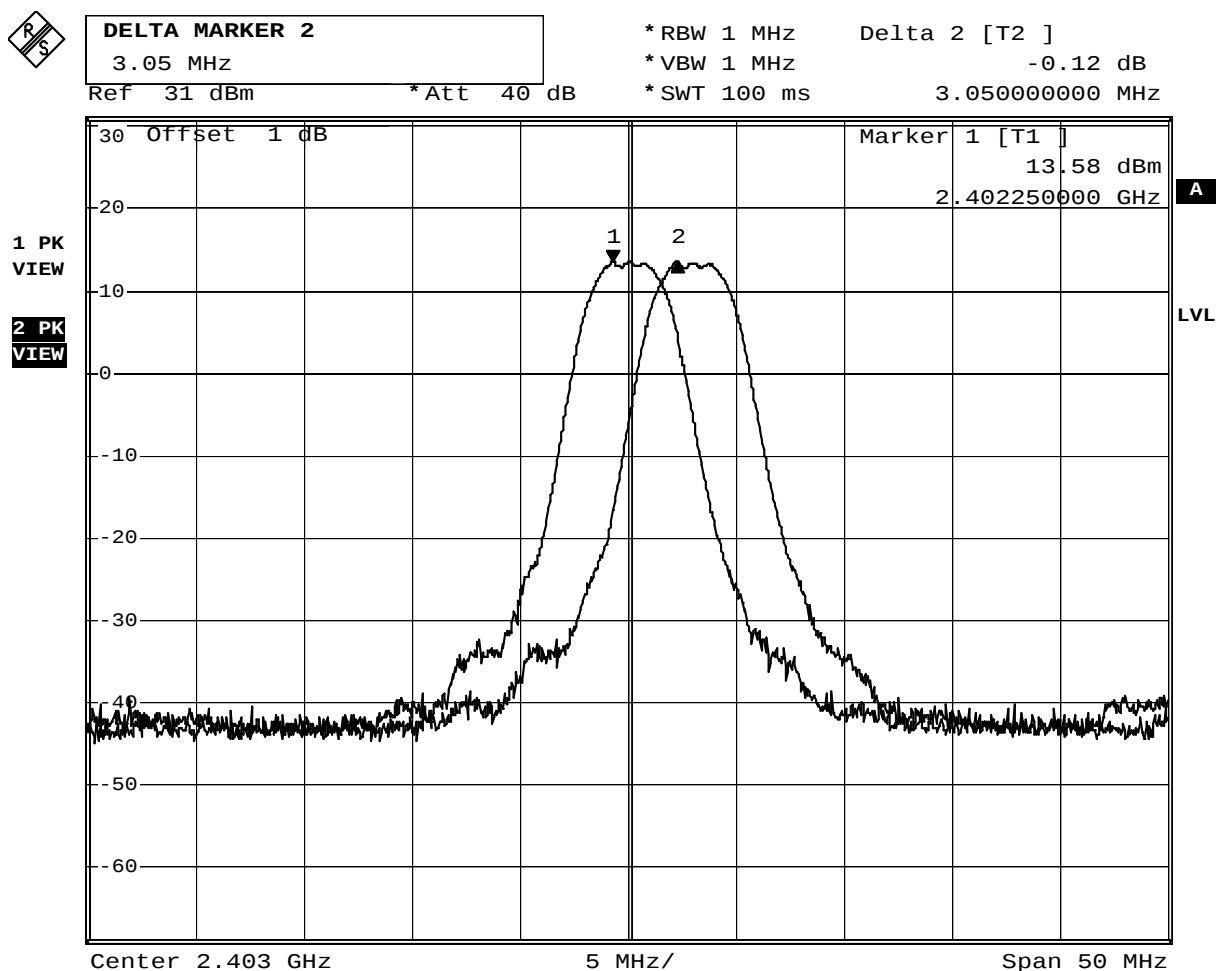
Date: 20.MAY.2011 21:34:46

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2403	3.05	>3.04	Pass

Channel 00



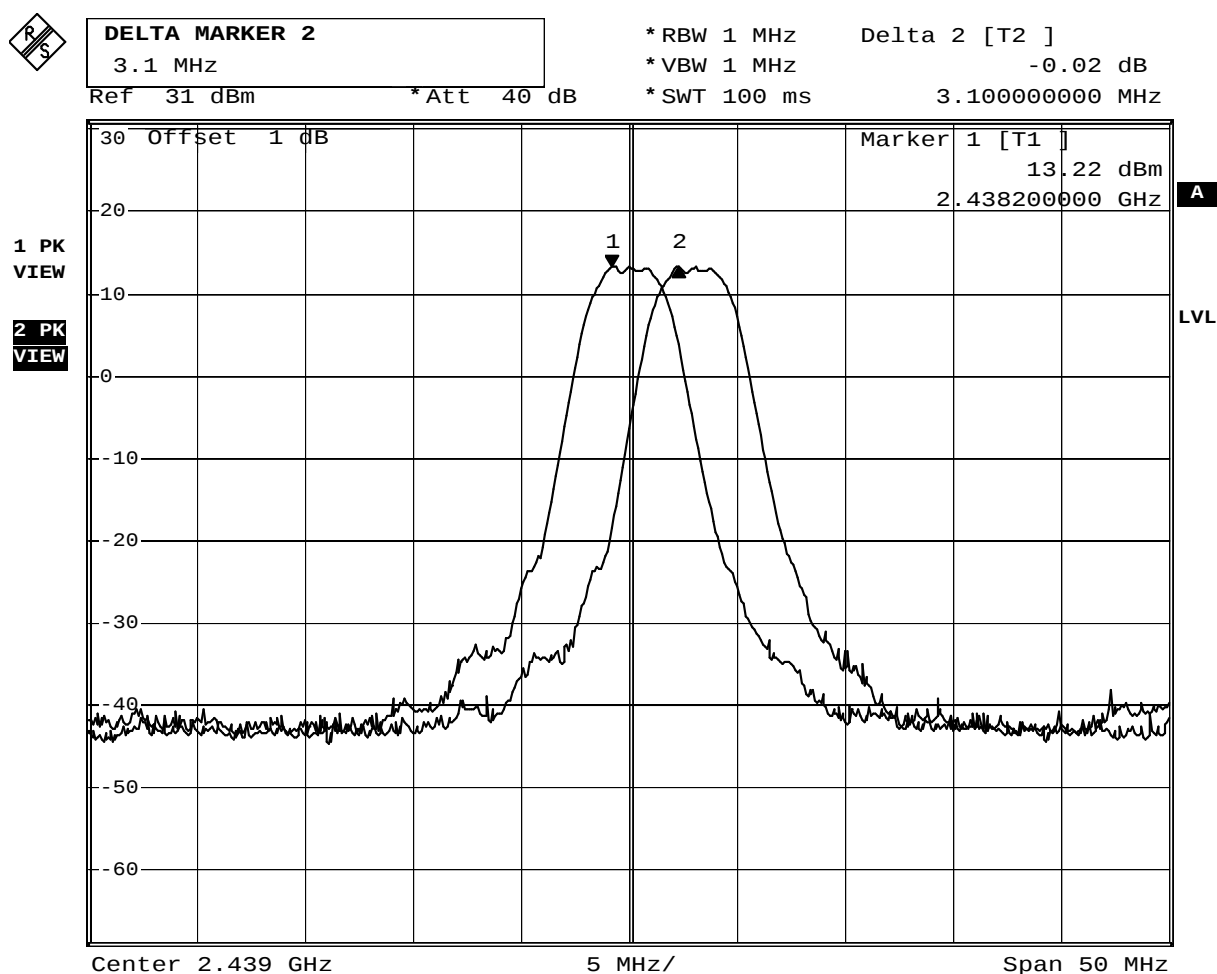
Date: 20.MAY.2011 21:55:51

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
12	2439	3.10	>3.01	Pass

Channel 12



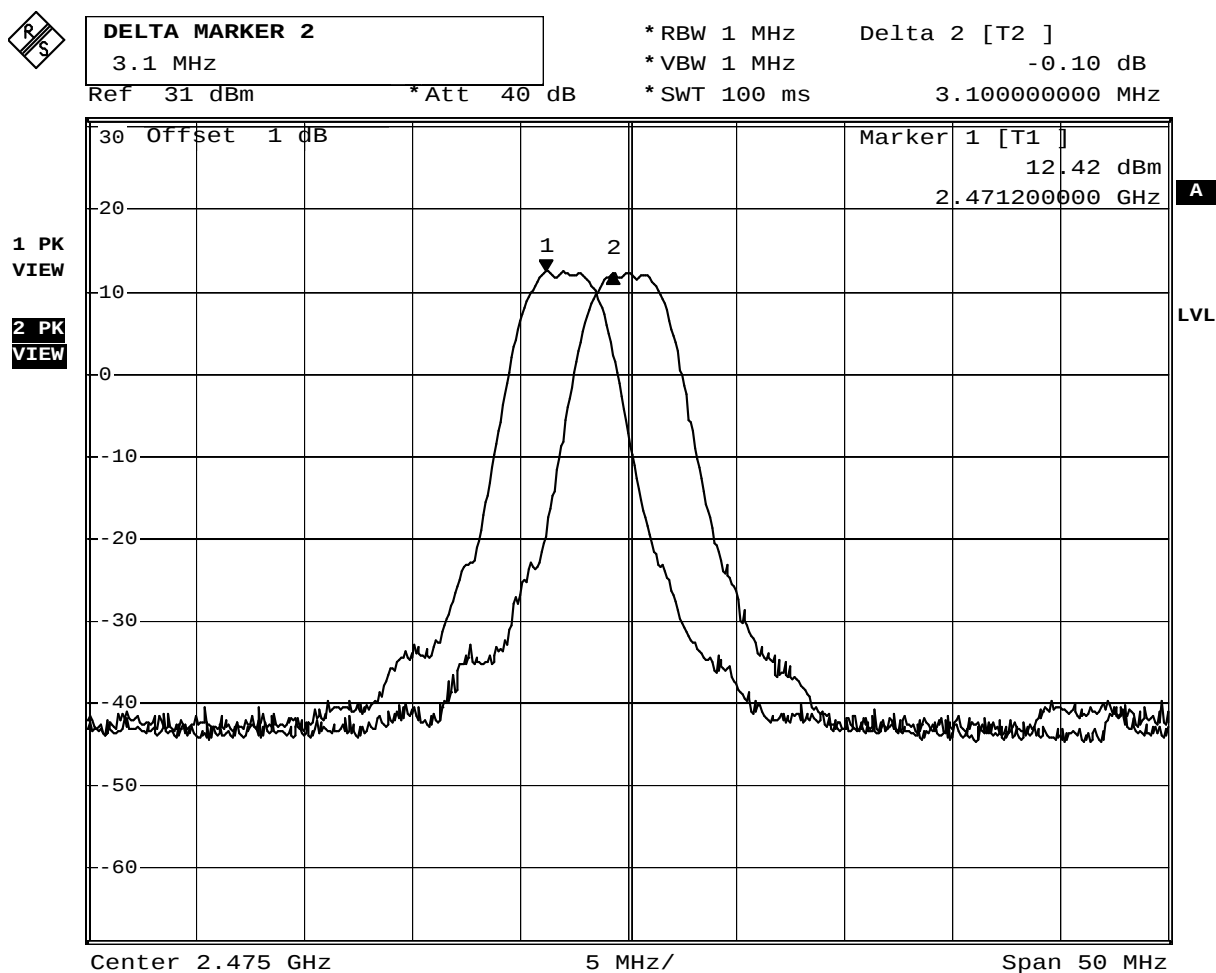
Date: 20.MAY.2011 21:49:14

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
24	2475	3.10	>3.07	Pass

Channel 24



Date: 20.MAY.2011 21:50:55

9. Occupied Bandwidth

9.1. Test Equipment

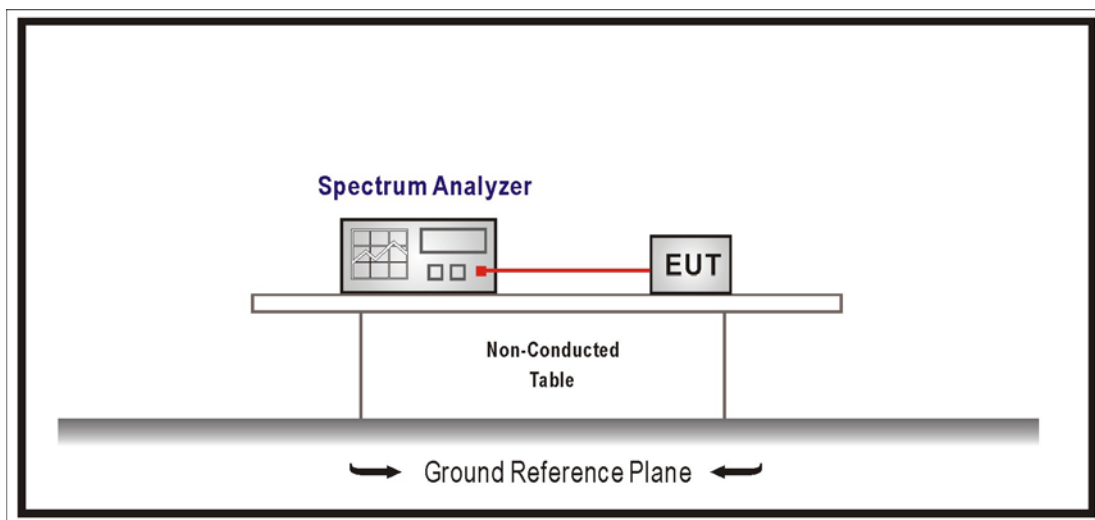
The following test equipment is used during the test:

Occupied Bandwidth / No.7 Shielding Room

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2012/01/16

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

9.2. Test Setup



9.3. Limits

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

For frequency hopping systems operating in the 5725-5850 MHz bands. The maximum 20 dB bandwidth of the hopping channel is 1 MHz.

For frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

9.4. Test Procedures

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW $\geq$ 1% of the 20 dB bandwidth, VBW $\geq$ RBW

Sweep = auto, Detector function = peak, Trace = max hold

The EUT should be transmitting at its maximum data rate.

9.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

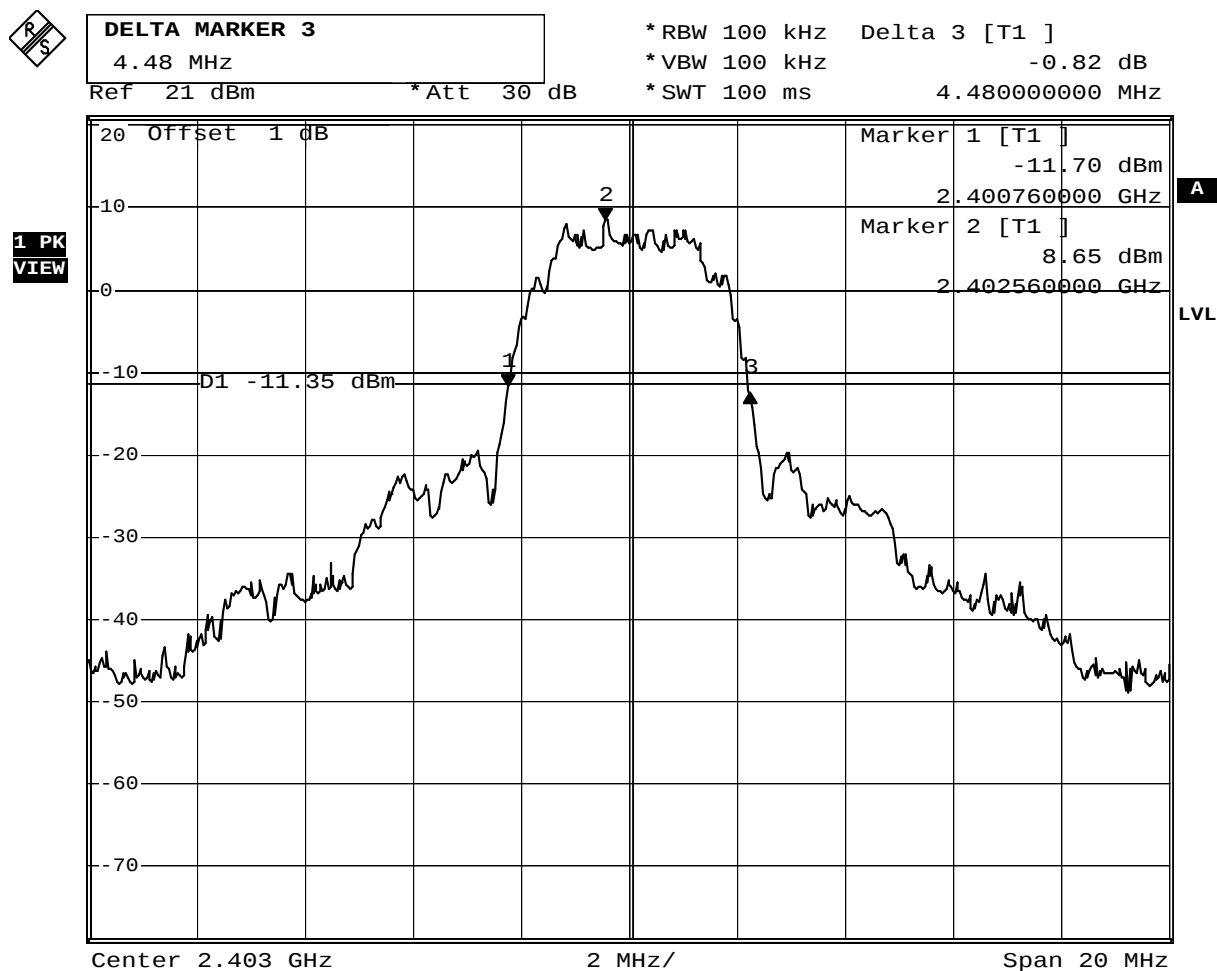
9.6. Test Result

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2403	4.48	--	Pass

Channel 00



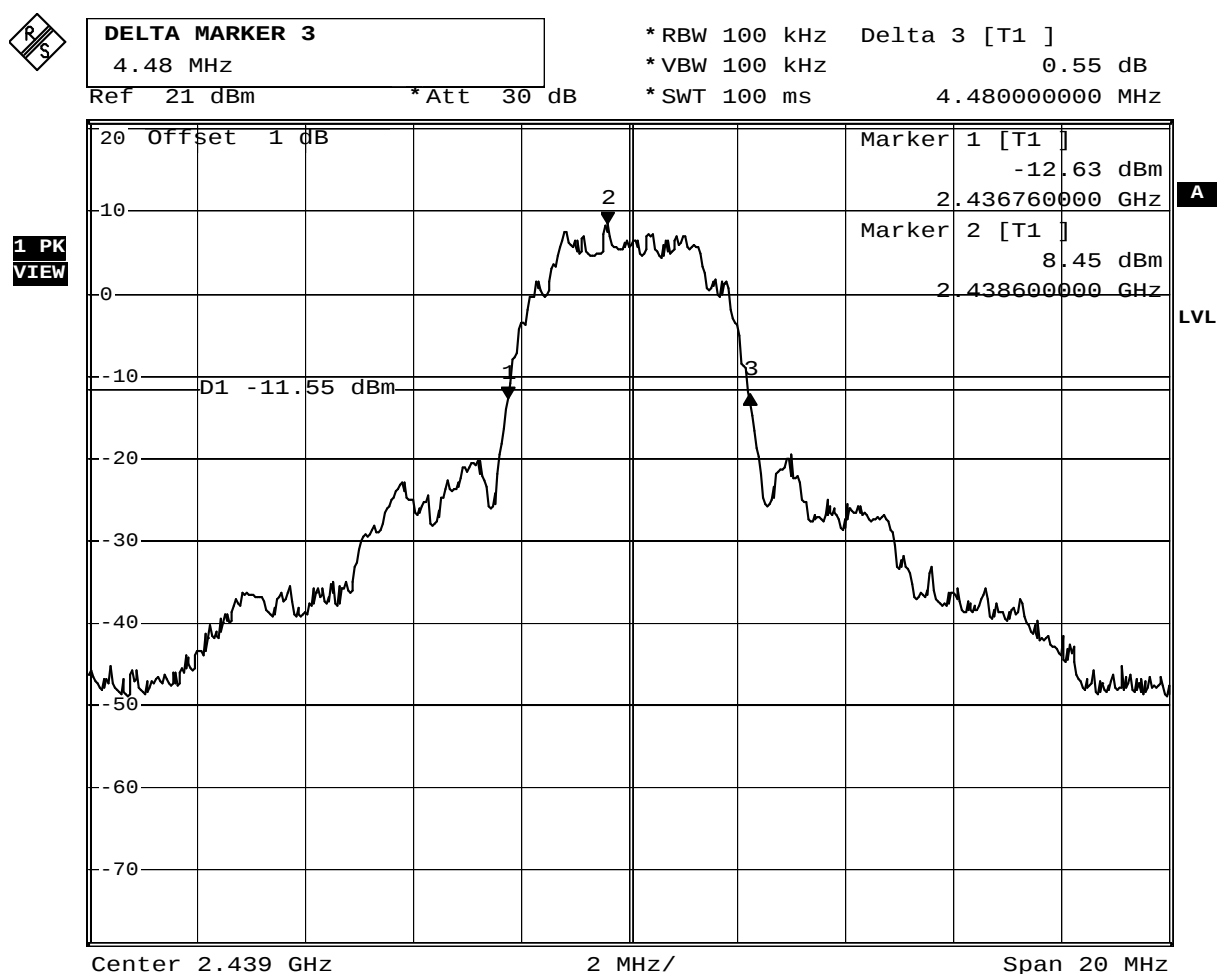
Date: 20.MAY.2011 20:27:01

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
12	2439	4.48	--	Pass

Channel 12



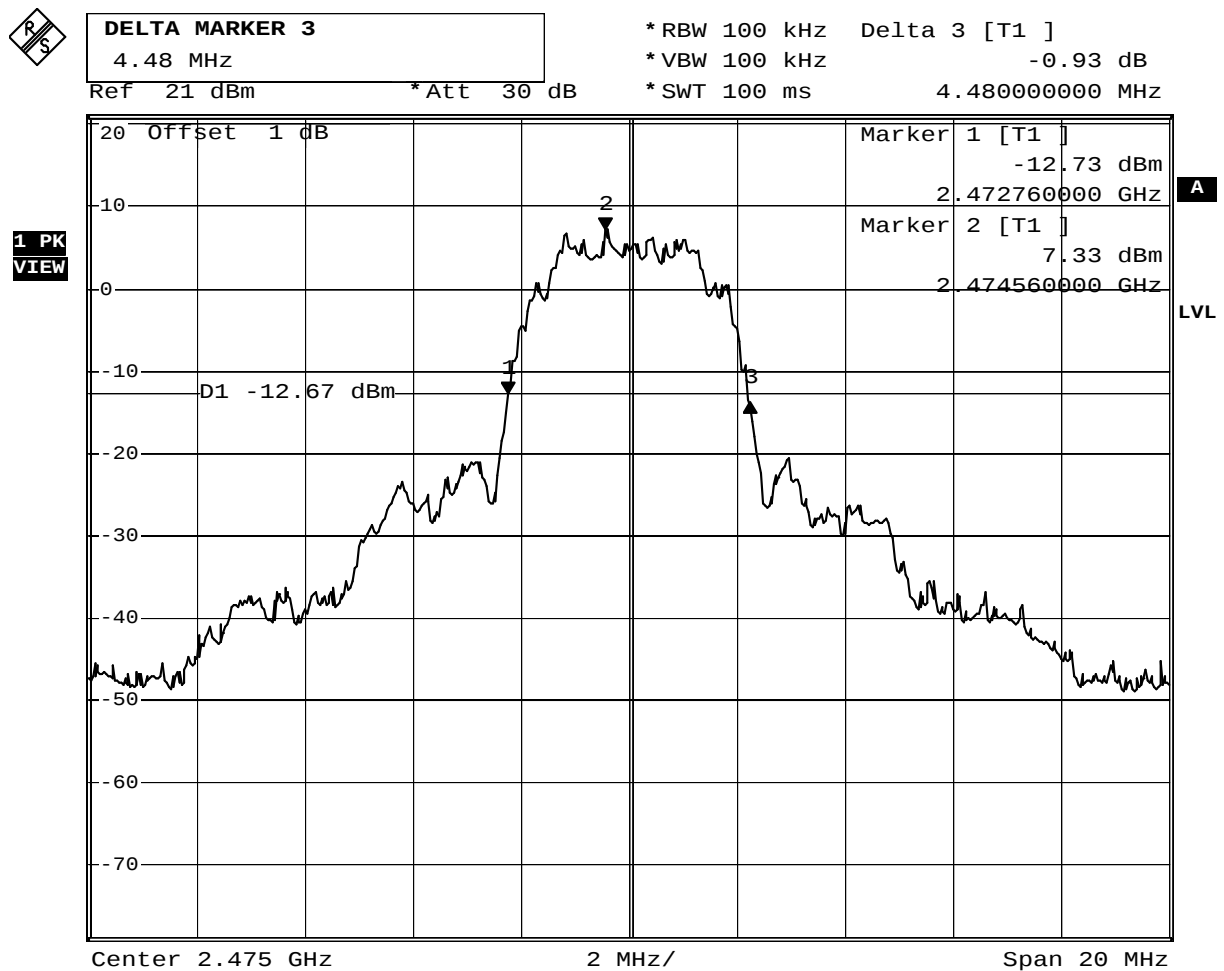
Date: 20.MAY.2011 20:32:00

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

16QAM

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
24	2475	4.48	--	Pass

Channel 24



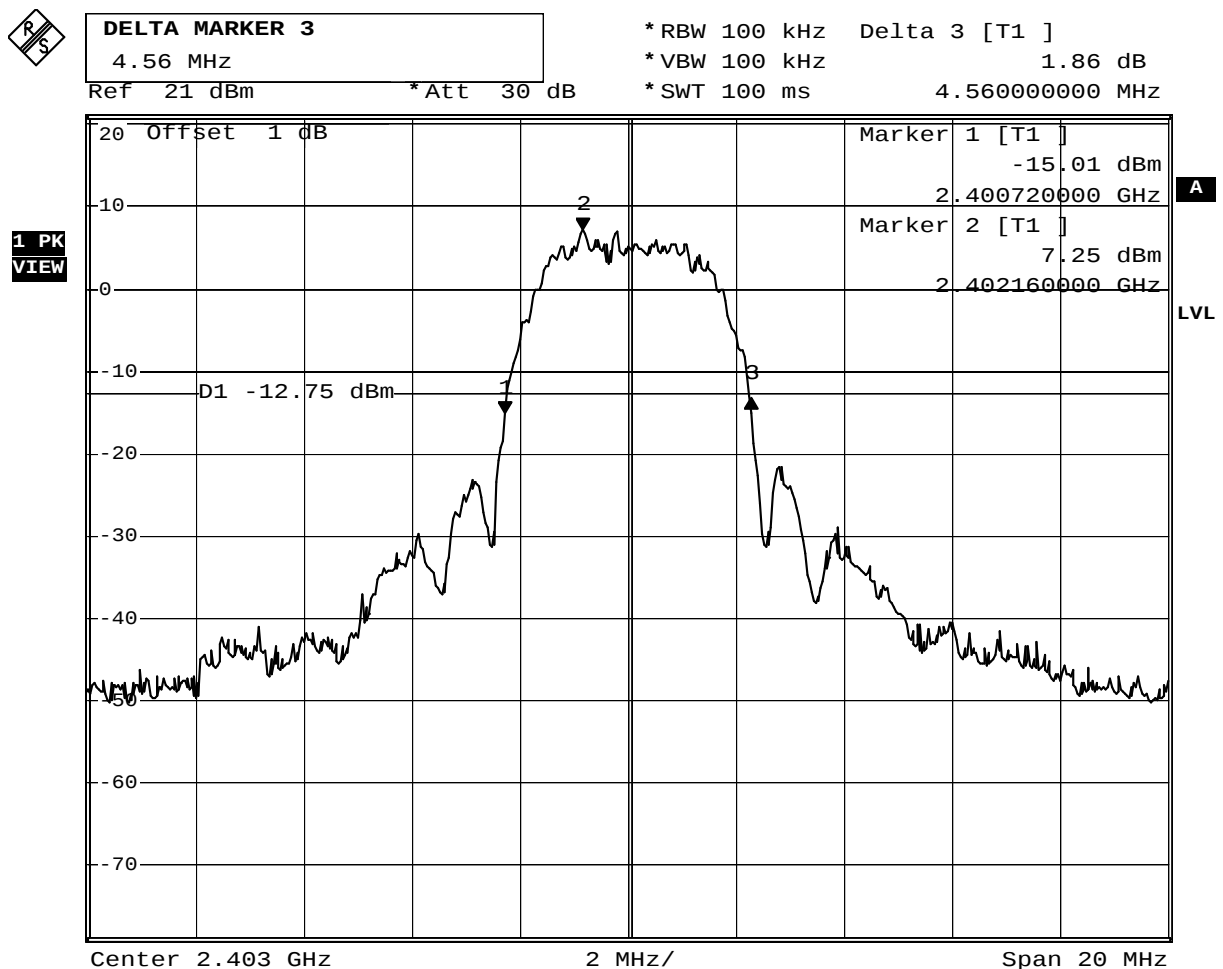
Date: 20.MAY.2011 20:33:57

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2403	4.56	--	Pass

Channel 00



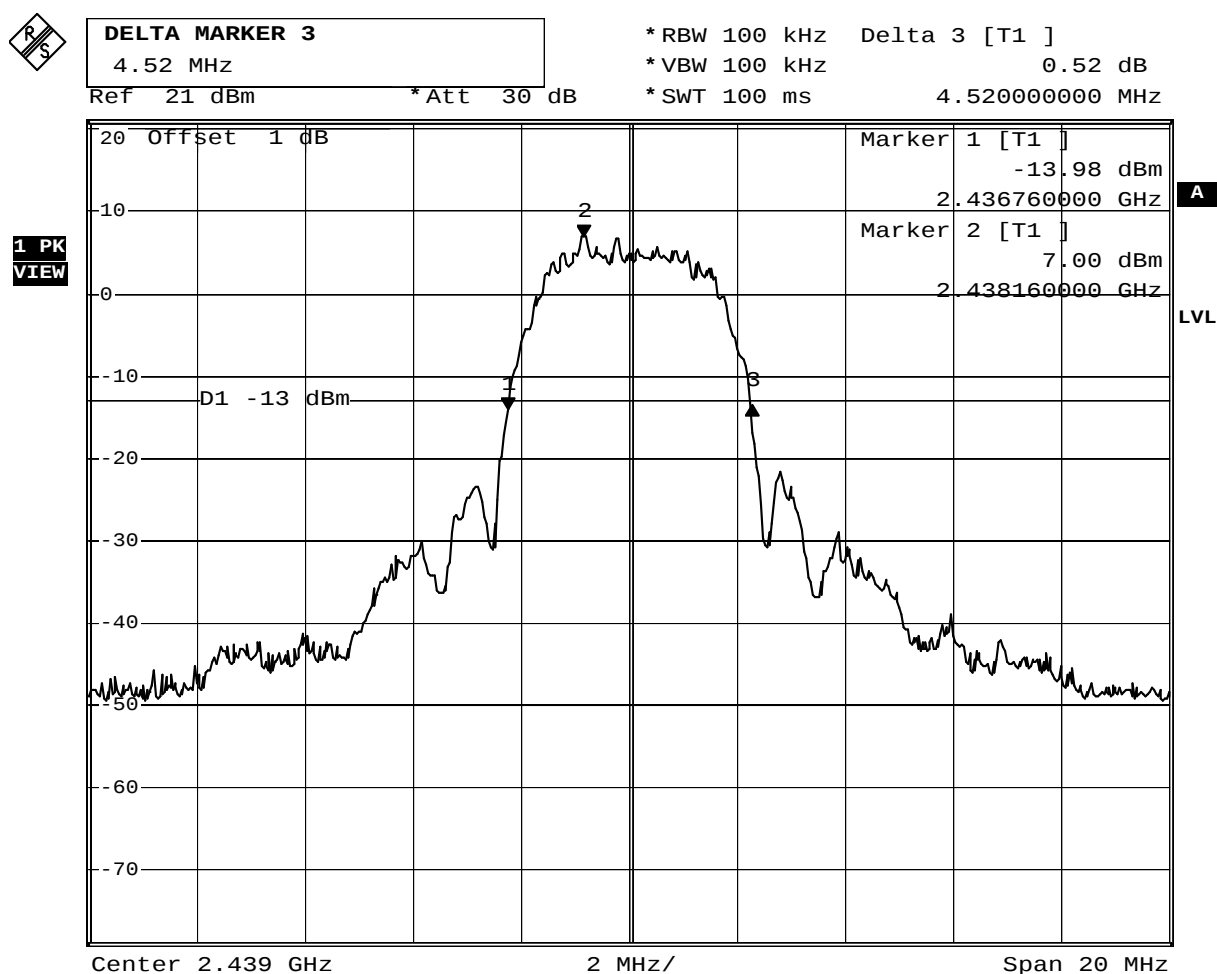
Date: 20.MAY.2011 21:02:41

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
12	2439	4.52	--	Pass

Channel 12



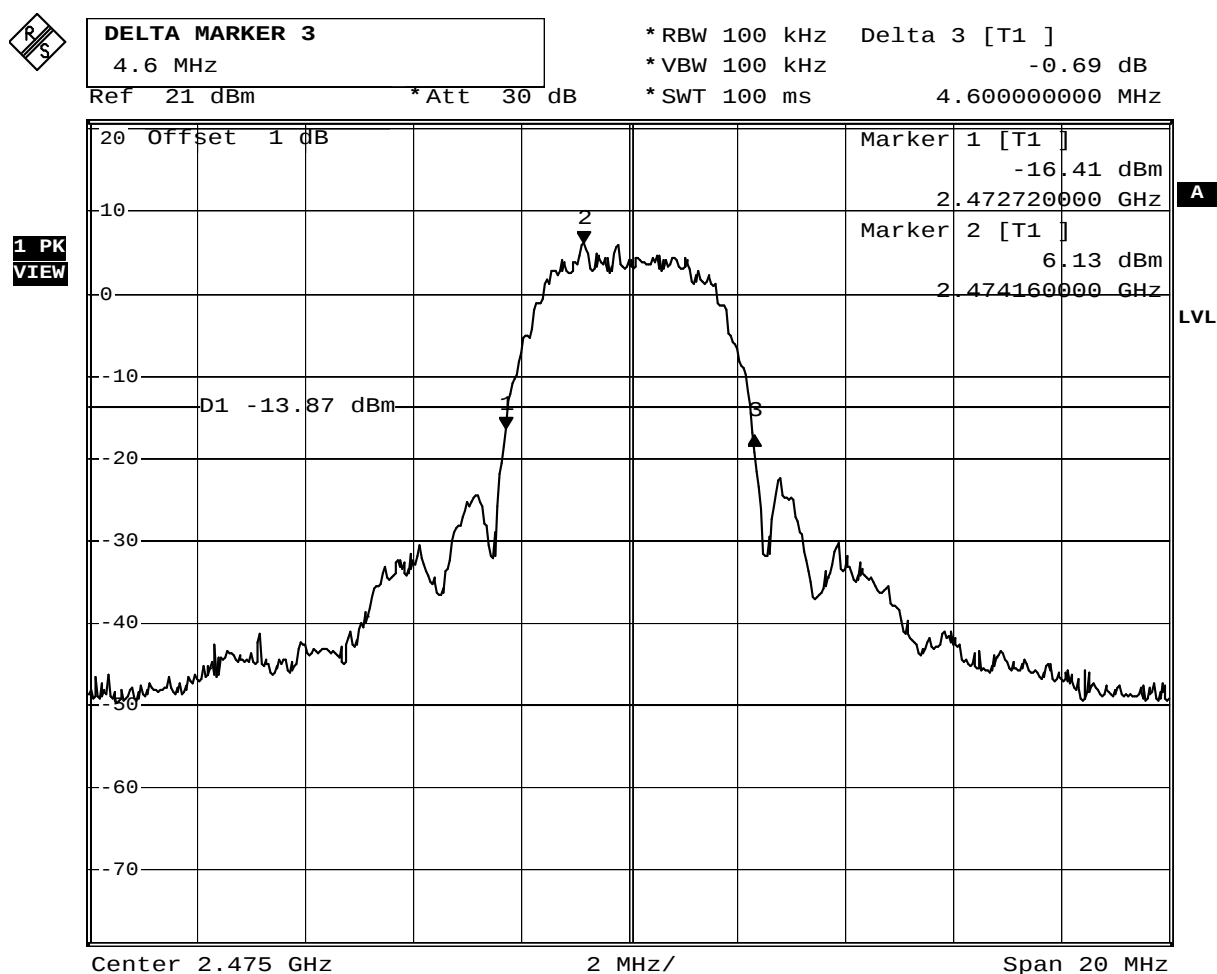
Date: 20.MAY.2011 21:04:20

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/20	Test Site	No.7 Shielding Room

QPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
24	2475	4.60	--	Pass

Channel 24



Date: 20.MAY.2011 20:59:10

10. Dwell Time

10.1. Test Equipment

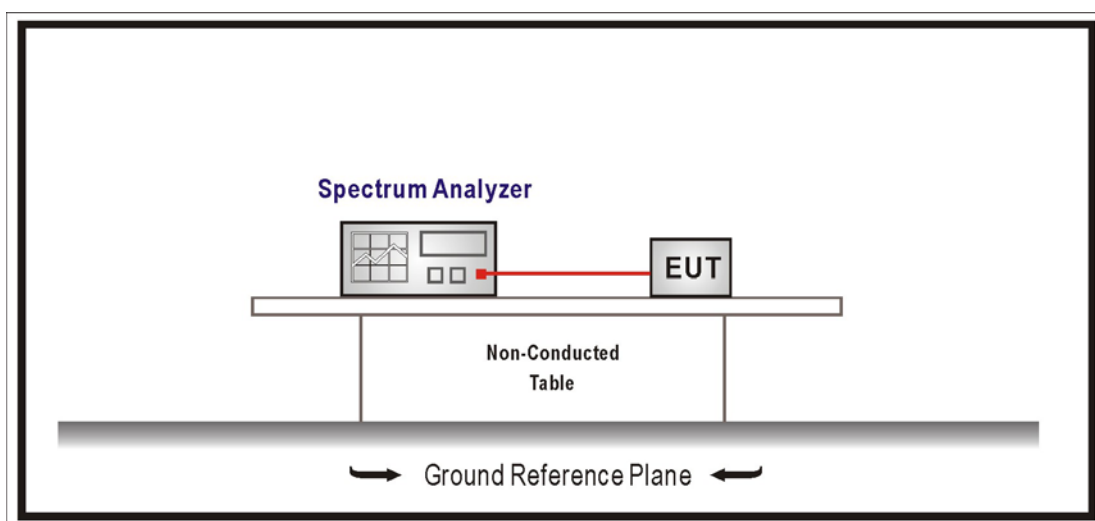
The following test equipment is used during the test:

Dwell Time / No.7 Shielding Room

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2012/01/16

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

10.2. Test Setup



10.3. Limits

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. For frequency hopping systems operating in the 2400-2483.5 MHz bands. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. For frequency hopping systems operating in the 5725-5850 MHz bands. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

10.4. Test Procedures

The EUT was setup according to ANSI C63.4, 2009 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Span = zero span, centered on a hopping channel

RBW = 1 MHz, VBW $\geq$ RBW

Sweep = as necessary to capture the entire dwell time per hopping channel

Detector function = peak, Trace = max hold

10.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

10.6. Test Result

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Dwell Time		
Test Mode	Mode 1: Transmit (16QAM)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

Occupancy Time of Frequency Hopping System

A) 2403MHz Test Time Period: $0.4 \times 25 = 10\text{sec}$, Hopping Times Within 1sec: $6/10\text{msec} = 600 / \text{sec}$

The Maximum Occupancy Time Within 2.64sec: $0.0011 \times (600/25) \times 10 = 0.264\text{sec}$.

B) 2439MHz Test Time Period: $0.4 \times 25 = 10\text{sec}$, Hopping Times Within 1sec: $6/10\text{msec} = 600 / \text{sec}$

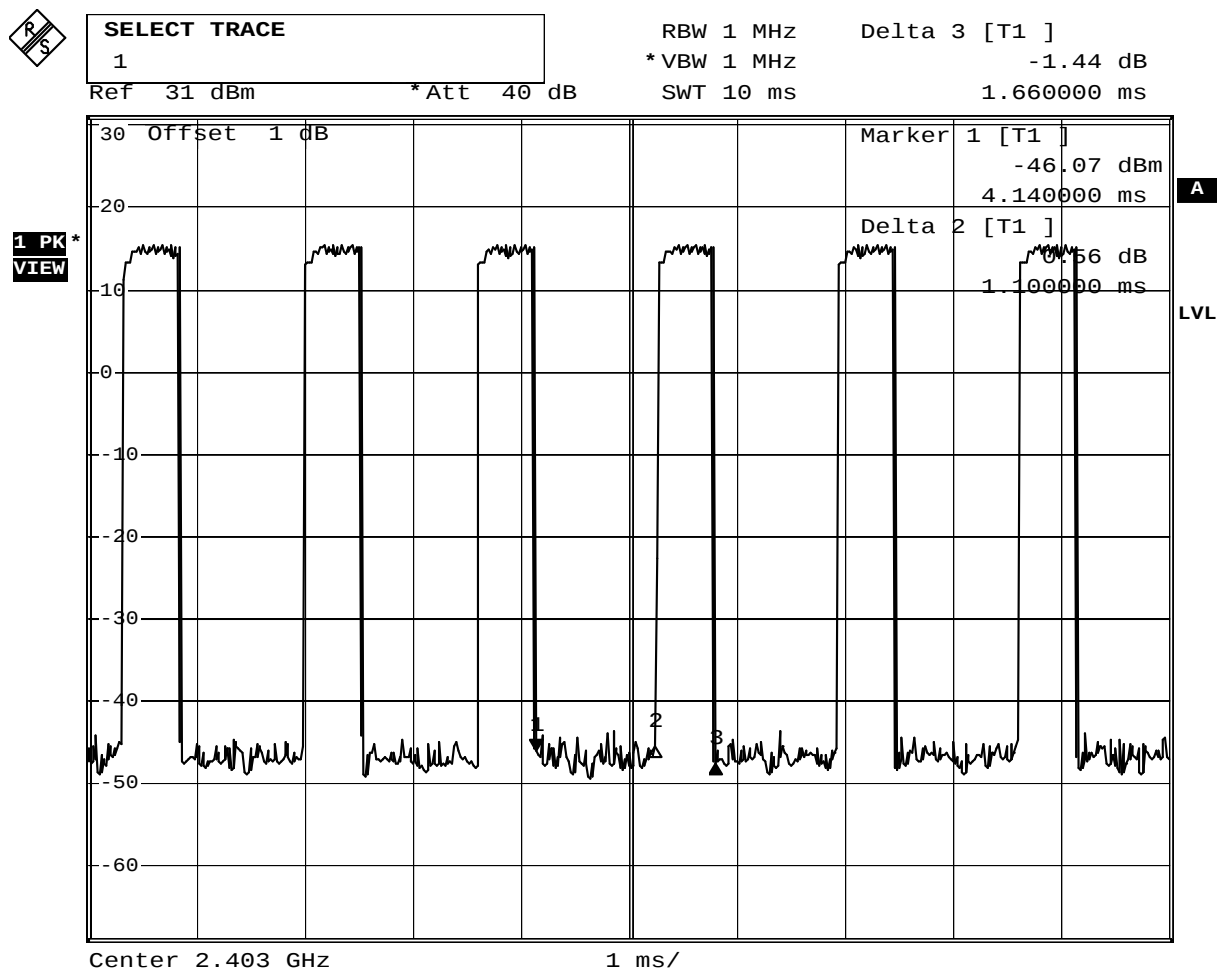
The Maximum Occupancy Time Within 2.64sec: $0.0011 \times (600/25) \times 10 = 0.264\text{sec}$.

C) 2475MHz Test Time Period: $0.4 \times 25 = 10\text{sec}$, Hopping Times Within 1sec: $6/10\text{msec} = 600 / \text{sec}$

The Maximum Occupancy Time Within 2.64sec: $0.0011 \times (600/25) \times 10 = 0.264\text{sec}$.

Test Result: The Average Occupancy Time of Each Highest , Middle and Lowest Channel Is Less Than 0.4sec , And Corresponds to The Standard .

Hop rate-2403MHz



Date: 18.MAY.2011 12:12:52

Hop rate-2439MHz



DELTA MARKER 3

1.68 ms

RBW 1 MHz

Delta 3 [T1]

*VBW 1 MHz

0.59 dB

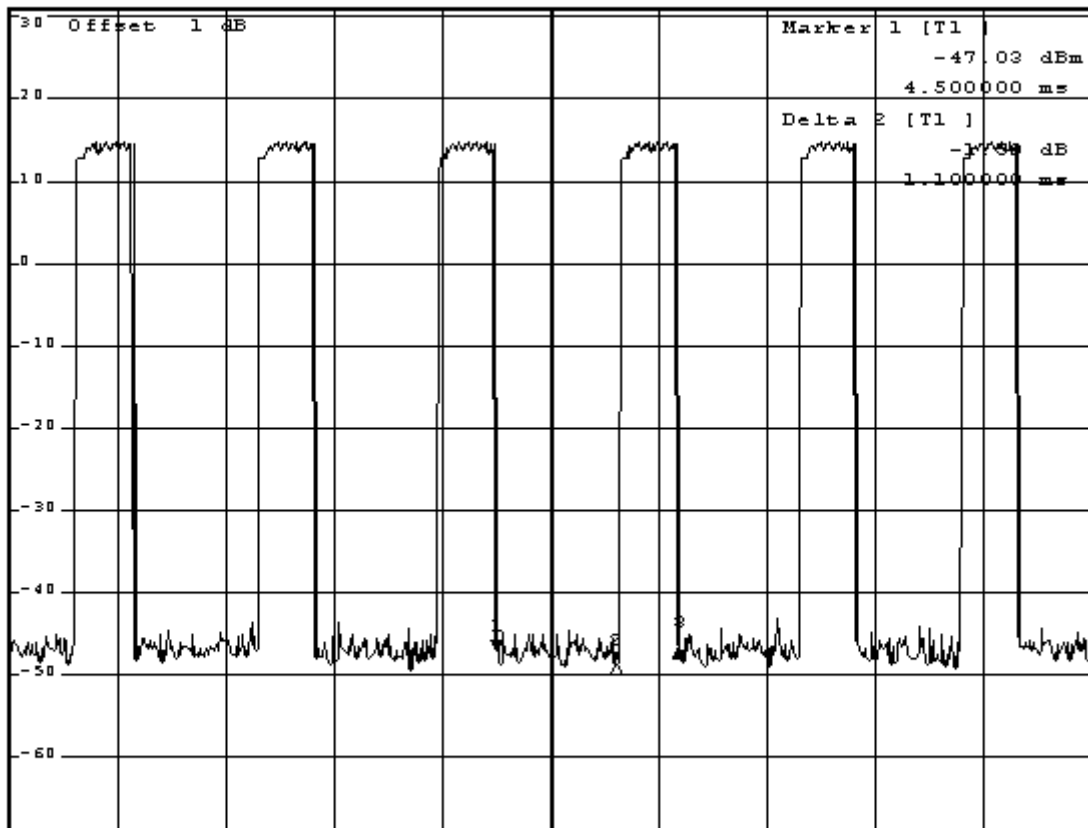
Ref 31 dBm

*Att 40 dB

SWT 10 ms

1.680000 ms

1.00
VIEW



A

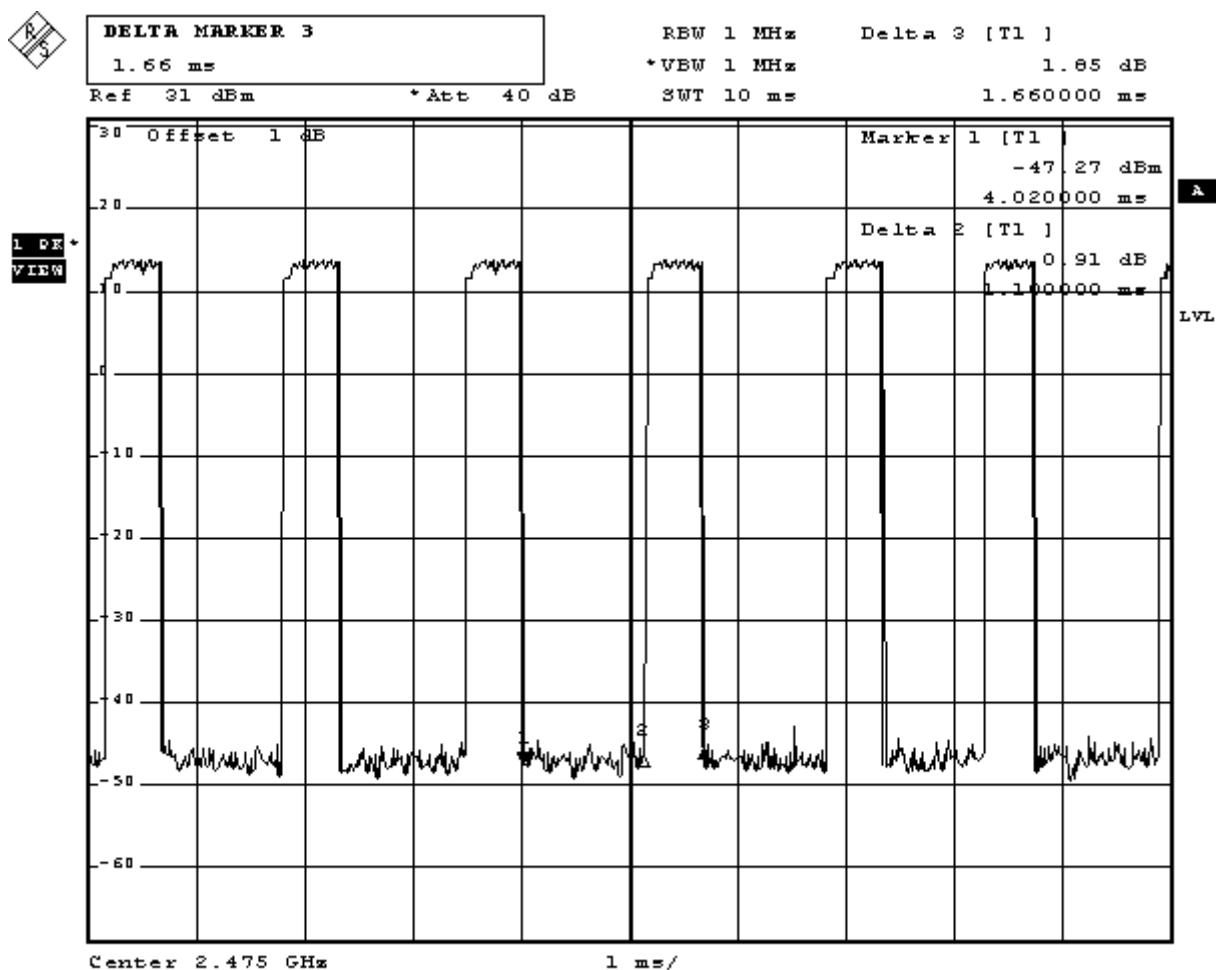
LVL

Center 2.439 GHz

1 ms/

Date: 18.MAY.2011 12:47:59

Hop rate-2475MHz



Date: 18.MAY.2011 12:44:09

Note: Dwell time = time slot length * hop rate / number of hopping channels * period

Product	2.4GHz Digital Wireless A / V / Data Transceiver Module		
Test Item	Dwell Time		
Test Mode	Mode 2: Transmit (QPSK)		
Date of Test	2011/05/18	Test Site	No.7 Shielding Room

Occupancy Time of Frequency Hopping System

A) 2403MHz Test Time Period: $0.4 \times 25 = 10\text{sec}$, Hopping Times Within 1sec: $6/10\text{msec} = 600 / \text{sec}$

The Maximum Occupancy Time Within 2.64sec: $0.0011 \times (600/25) \times 10 = 0.264\text{sec}$.

B) 2439MHz Test Time Period: $0.4 \times 25 = 10\text{sec}$, Hopping Times Within 1sec: $6/10\text{msec} = 600 / \text{sec}$

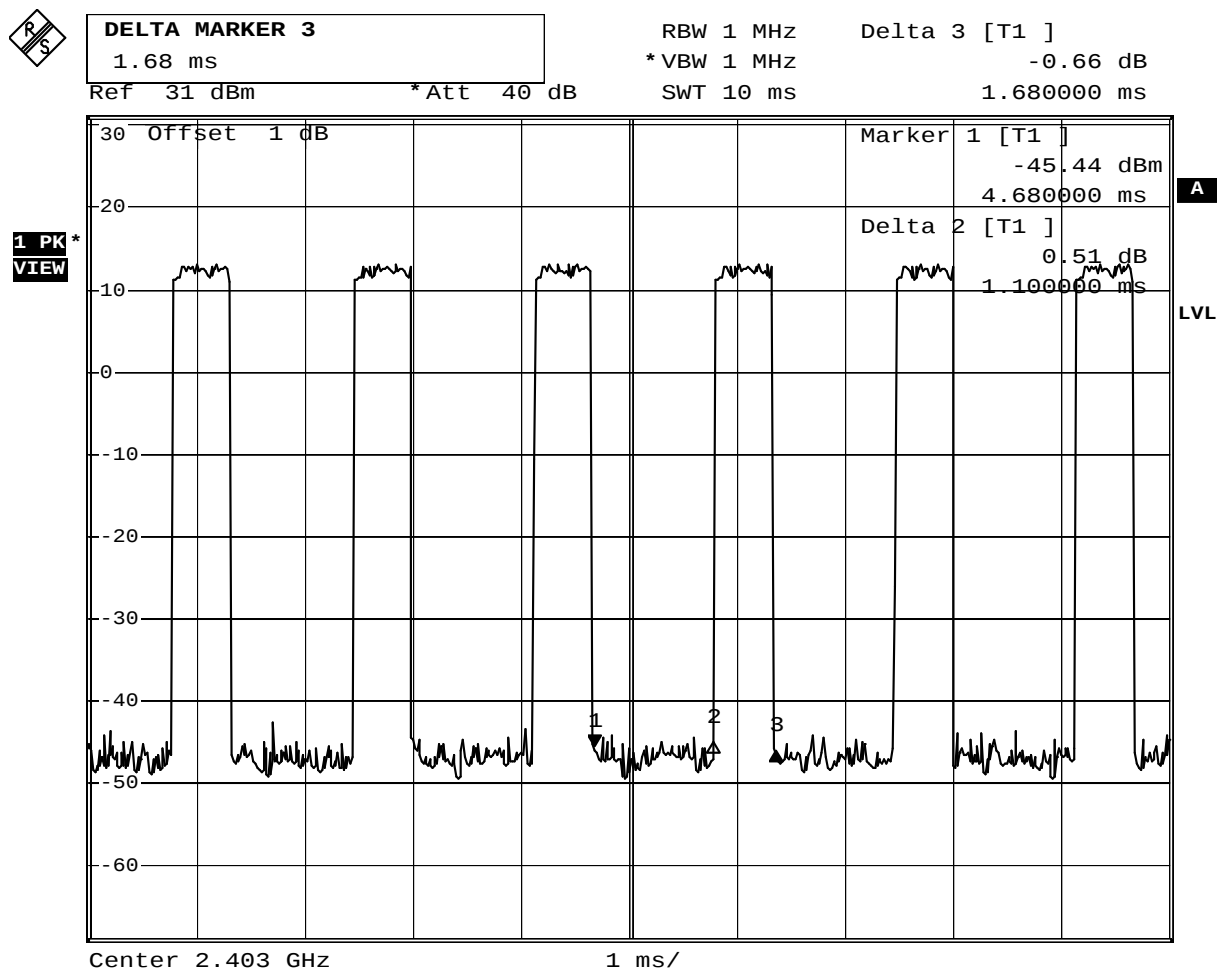
The Maximum Occupancy Time Within 2.64sec: $0.0011 \times (600/25) \times 10 = 0.264\text{sec}$.

C) 2475MHz Test Time Period: $0.4 \times 25 = 10\text{sec}$, Hopping Times Within 1sec: $6/10\text{msec} = 600 / \text{sec}$

The Maximum Occupancy Time Within 2.64sec: $0.0011 \times (600/25) \times 10 = 0.264\text{sec}$.

Test Result: The Average Occupancy Time of Each Highest , Middle and Lowest Channel Is Less Than 0.4sec , And Corresponds to The Standard .

Hop rate-2403MHz



Date: 18.MAY.2011 14:10:02

Hop rate-2439MHz



DELTA MARKER 3

1.66 ms

RBW 1 MHz

Delta 3 [T1]

*VBW 1 MHz

2.46 dB

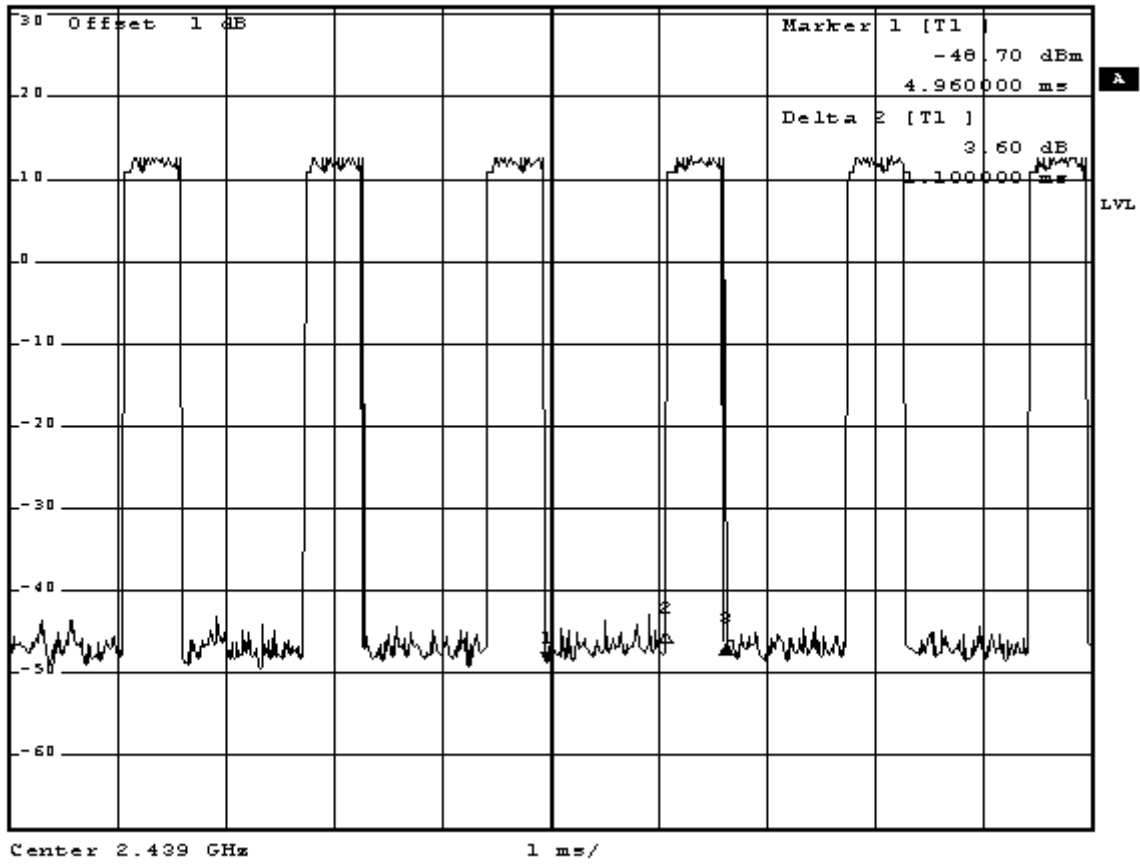
Ref 31 dBm

*Att 40 dB

SWT 10 ms

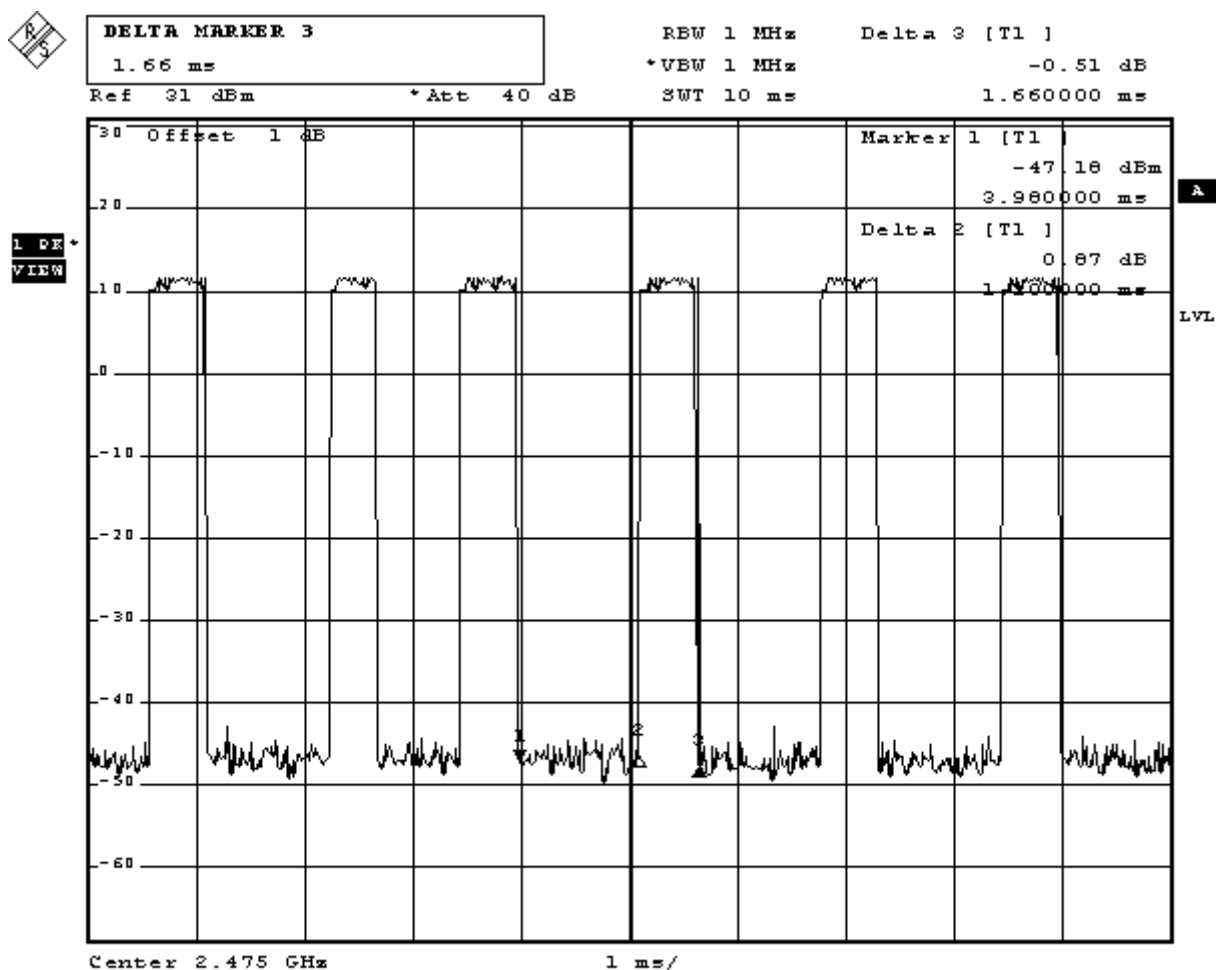
1.660000 ms

1.0K
VIEW



Date: 18.MAY.2011 14:11:23

Hop rate-2475MHz



Date: 18.MAY.2011 14:07:47

Note: Dwell time = time slot length * hop rate / number of hopping channels * period