APPLICATION FOR CERTIFICATION
On Behalf of
Texas Instruments Incorporated
TI-Nspire™ CX Wireless Network Adapter

Model No. : TINAVWNA
Brand : TEXAS INSTRUMENTS
FCC ID : V7R-TINAVWNA

Prepared for

Texas Instruments Incorporated
7800 Banner Dallas, TX 75251 United States

Prepared by

Audix Technology (Wujiang) Co., Ltd. EMC Dept.
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Report Number : ACWE-F1012005
Date of Test : Dec.22~24, 2010
Date of Report : Dec.31, 2010

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TEST REPORT CERTIFICATION

Applicant	:	Texas Instruments Incorporated
Manufacturer	:	Inventec Appliances(Pudong) Corporation
EUT Description	:	TI-Nspire™ CX Wireless Network Adapter
FCC ID	:	V7R-TINAVWNA
(A) Model No.	:	TINAVWNA
(B) Brand	:	TEXAS INSTRUMENTS
(C) Power Supply	:	DC 3.3V (Via Calculator)
(D) TEST VOLTAGE	:	DC 3.3V

Applicable Standards:

FCC RULES AND REGULATIONS PART 15 SUBPART C, Sep. 2009
ANSI C63.4/2009

The device described above was tested by Audix Technology (Wujiang) Co., Ltd. EMC Dept.to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C section 15.207, 15.205, 15.209&15.247 limits.

The measurement results are contained in this test report and Audix Technology (Wujiang) Co., Ltd. EMC Dept.is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC limits.

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

Date of Test: Dec.22~24, 2010 Date of Report: Dec.31, 2010

Prepared by : Judy Wu
(Judy Wu/Senior Assistant)

Reviewer : Kin Lin
(Kin Lin/Section Manager)

Approved & Authorized Signer : Allen Wang
(Allen Wang/Senior Manager)

1. SUMMARY OF MEASUREMENTS AND RESULTS

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

Description of Test Item	Standard	Results
CONDUCTED EMISSION	Section 15.207	Not applicable(1)
RADIATED EMISSION	Section 15.209& Section 15.205	PASS
6 dB BANDWIDTH	Section 15.247(a)(2)	PASS
MAXIMUM PEAK OUTPUT POWER	Section 15.247(b)(3)	PASS
BAND EDGES	Section 15.247(d)	PASS
POWER SPECTRAL DENSITY	Section 15.247(e)	PASS
EMISSION LIMITATIONS	Section 15.247(d)	PASS
MPE CALCULATION	Part 2: Section 2.1091	PASS

Note (1): Due to the EUT powered by DC battery, this test item is not applicable.

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description	:	TI-Nspire™ CX Wireless Network Adapter
Model No.	:	TINAVWNA
FCC ID	:	V7R-TINAVWNA
Brand	:	TEXAS INSTRUMENTS
Applicant	:	Texas Instruments Incorporated 7800 Banner Dallas, TX 75251 United States
Manufacturer	:	Inventec Appliances(Pudong) Corporation No. 789 Pu Xing Road, Shanghai, PRC
Radio Technology	:	DSSS &OFDM
Antenna Gain	:	4.64dBi
Type of Network		IEEE 802.11b/g
Fundamental Range	:	2400 MHz -2483.5MHz
Tested Frequency	:	2412MHz (Channel 1) 2437MHz (Channel 6) 2462MHz (Channel 11)
Date of Receipt of Sample	:	Dec.22, 2010
Date of Test	:	Dec.22~24, 2010

2.2. UUT's Configuration

Test UUT	:	UUT×1
I/O Ports	:	I/O port×1

2.3. Description Test Configuration

Test Configuration according TEXAS INSTRUMENTS Education Technology Docking Station for TI-Nspire™ CX Wireless Network Adapter EMC Test Plan (EMC TP 061307, rev.1.9)

Configuration: UUT+ NSC

2.4. Product Description and Features

The TI-Nspire™ wireless module (WM) is a moderately complex electronic product containing an IC, discrete electronic components, circuit board, and a xxxxx CONNECTOR. The product supports 802.11g wireless functionality.
The wireless module is the UUT (Unit Under Test).

TI-Nspire™ Clock & processor frequencies:
2.4 GHz Carrier Frequency
11.25 MHz APB Clock
22.5 MHz AHB Clock
27 MHz oscillator.
32.768 kHz Clock
45 MHz SDRAM Clock
60 MHz USB Clock
90 MHz CPU Clock
180 MHz PLL

There are also some 1MHz variable clocks for the power supply.

2.5. Operating Condition of EUT

2.5.1. Set up the EUT as test setup diagram.

2.5.2. For conducted or Radiated emission measurement, setup the EUT as the test configurations; turn on all the equipment, Drive the test software “TI-Nspire Computer Link 1.1.9182.0”, let EUT operate normal activity.

2.5.3. For other measurement items, keep the EUT be powered by the battery, Drive the test software “TI-Nspire Computer Link 1.1.9182.0”, let the EUT operate wireless TX activity under measurement.

2.6. Description of Test Facility

Name of Firm	:	**Audix Technology (Wujiang) Co., Ltd. EMC Dept.**
Site Location	:	No. 1289 Jiangxing East Road, the Eastern Part of Wujiang Economic Development Zone Jiangsu China 215200
Test Facilities	:	**No.1 10m semi-anechoic chamber** Date of Validity: Aug. 20, 2012 FCC Registration No.**:** 252588 **No.1 3m semi-anechoic chamber** Date of Validity: Aug. 20, 2012 FCC Registration No.**:** 897661
NVLAP Lab Code	:	200786-0 (NVLAP is a NATA accredited body under Mutual Recognition Agreement) Valid until on Sep.30, 2011
DAR-Registration No.	:	DAT-P-264/07-00 Valid until on Dec.14, 2012

2.7. Measurement Uncertainty

Test Item	Range Frequency	Uncertainty
Radiated Disturbance Measurement (At 10m Chamber)	30MHz ~ 1000MHz	± 3.54dB (Horizontal)
		± 3.51dB (Vertical)
Radiated Disturbance Measurement (At 3m Chamber)	Above 1GHz	± 4.78dB

Remark: Uncertainty = $ku_c(y)$

Test Item	Uncertainty
6 dB Bandwidth	$\pm 2.8\times10^{-6}$ MHz
Maximum Peak Output Power	± 0.33dB
Band Edges	± 0.208dB
Power Spectral Density	± 0.34dB
Emission Limitations	± 0.208dB
Temperature	±0.416℃
Humidity	±3.16%

Remark: Uncertainty = $ku_c(y)$

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipment was used during the radiated emission measurement:

At 10m Semi-Anechoic Chamber (For 30MHz~1000MHz)

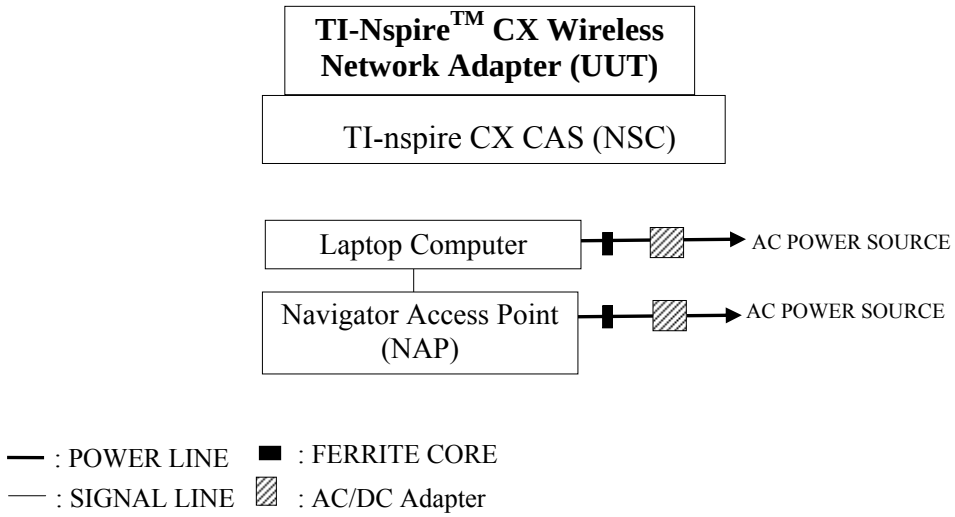
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45107028	2010-03-25	2011-03-24
2.	Spectrum Analyzer	Agilent	E7405A	MY45107030	2010-03-25	2011-03-24
3.	Pre-Amplifier	Agilent	8447D	2944A10918	2010-08-11	2011-08-10
4.	Pre-Amplifier	Agilent	8447D	2944A10922	2010-08-11	2011-08-10
5.	Bi-log Antenna (Horizontal)	Schaffner	CBL6112D	22253	2010-05-05	2011-05-04
6.	Bi-log Antenna (Vertical)	Schaffner	CBL6112D	22252	2010-05-05	2011-05-04
7.	Test Receiver	R&S	ESCI	100351	2010-01-05	2011-01-04
8.	50Ω Coaxial Switch # 1	ANRITSU	MP59B	6200547935	2010-08-11	2011-08-10
9.	50Ω Coaxial Switch # 2	ANRITSU	MP59B	6200547937	2010-08-11	2011-08-10
10.	50Ω Coaxial Switch # 3	ANRITSU	MP59B	6200547938	2010-08-11	2011-08-10
11.	RF Cable	Yuhang	CSYH	001	2010-08-14	2011-08-13
12.	RF Cable	Yuhang	CSYH	002	2010-08-14	2011-08-13
13.	RF Cable	Yuhang	CSYH	003	2010-08-14	2011-08-13
14.	RF Cable	Yuhang	CSYH	004	2010-08-14	2011-08-13
15.	RF Cable	Yuhang	CSYH	005	2010-08-14	2011-08-13
16.	RF Cable	Yuhang	CSYH	006	2010-08-14	2011-08-13
17.	RF Cable	Yuhang	CSYH	008	2010-08-14	2011-08-13
18.	RF Cable	Yuhang	CSYH	009	2010-08-14	2011-08-13

At 3m Semi-Anechoic Chamber (For Above 1GHz)

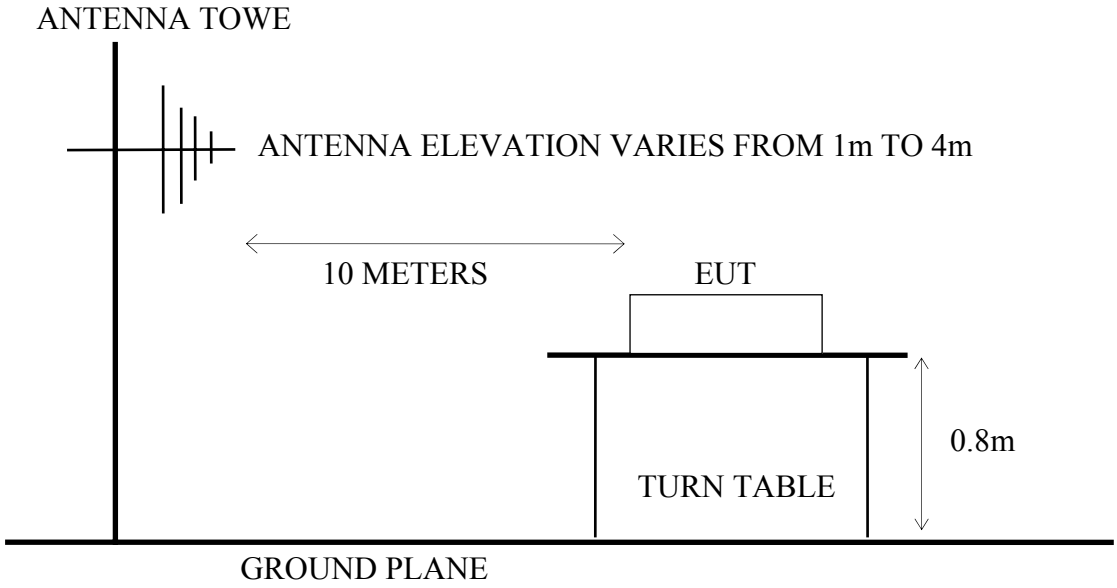
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8449B	2944A10921	2010-08-14	2011-08-13
2.	Spectrum Analyzer	Agilent	E4447A	MY45300136	2010-01-08	2011-01-07
3.	Bi-log Antenna	Schaffner	CBL6112D	22250	2010-06-10	2011-06-09
4.	Test Receiver	R&S	ESCI	100361	2010-01-05	2011-01-04
5.	50Ω Coaxial Switch	Anritsu	MP59B	6200547935	2010-08-14	2011-08-13
6.	RF Cable #1	Yuhang CSYH	cable-3m	001 (Length: 0.5m)	2010-08-14	2011-08-13
7.	RF Cable #2	Yuhang CSYH	cable-3m	002 (Length: 0.5m)	2010-08-14	2011-08-13
8.	RF Cable #3	Yuhang CSYH	cable-3m	003 (Length: 3.0m)	2010-08-14	2011-08-13
9.	Natch Filter	Micro-Tronics	BRM50702	57	2010-03-25	2011-03-24

3.2. Block Diagram of Test Setup

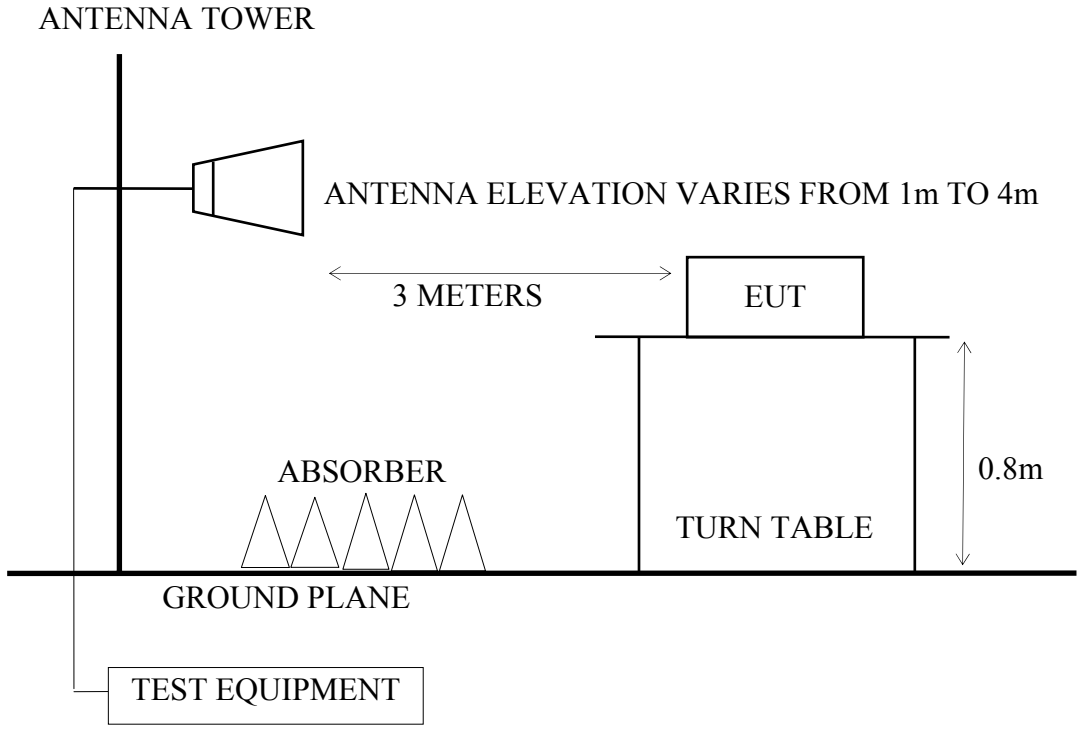
3.2.1.Block Diagram of Test Setup between EUT and simulators



3.2.2.No. 1 10m Semi-Anechoic Chamber Setup Diagram (Test distance:10m) for 30-1000MHz



3.2.3.No. 1 3m Semi-Anechoic Chamber Setup Diagram (Test distance: 3m) for above 1GHz



3.3. Radiated Emission Limits (FCC Part15 section 15.209,CISPR22)

Frequency MHz	Distance Meters	Field Strengths Limits dBμV/m
30 ~ 230	10	30.0
230 ~ 1000	10	37.0
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)

Remark：(1) Emission level (dBμV/m) = 20 log Emission level (μV/m)

(2) The tighter limit applies at the edge between two frequency bands.

3.4. Test Procedure

The measuring process is according to ANSI C63.4 and laboratory internal procedure TKC-301-024.

In the radiated disturbance measurement, the EUT and all simulators were set up on a non-metallic turn table which was 0.8 meters above the ground plane. Measurement distance between EUT and receiving antennas was set at 10 meters at 30MHz~1000MHz and 3 meters at above 1GHz. The specified distance is the distance between the antennas and the closest periphery of EUT. During the radiated measurement, the EUT was rotated 360° and receiving antennas were moved from 1 ~ 4 meters for finding maximum emission. Two receiving antennas were used for both horizontal and vertical polarization detection for 30MHz~1GHz, One receiving antennas was used for both horizontal and vertical polarization detection for above 1GHz (the absorbing material was added when testing of above 1GHz was done). All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver (or spectrum analyzer) was set to:

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz
RBW (1 MHz), VBW (1MHz) for Peak detector above 1GHz
RBW (1 MHz), VBW (10 Hz) for Average detector above 1GHz

The required frequency band was pre-scanned with peak detector; all final measurements were measured with quasi-peak detector below 1GHz, measured with average detector and peak detector above 1GHz.

The emission level is calculated automatically by the test system which uses the following equation：

1. For 30-1000MHz measurement:
   Emission Level (dBμV/m) = Meter-Reading (dBμV)+Antenna Factor (dB/m)+Cable Loss (dB)
2. For Above 1GHz measurement:
   Emission Level (dBμV/m) = Meter-Reading (dBμV)+Antenna Factor (dB/m)+Cable Loss(dB) -Pre-amplifier factor (dBμV)

3.5. Measurement Results

PASSED

(All the emissions not reported below are too low against the prescribed limits.)

3.5.1. For 30MHz~1GHz

Test Date：Dec.24, 2010 Temperature：25.8℃ Humidity：48%

The details of test modes and reference test data are as follows：

Item	Test Condition	Reference Test Data No.	
		Horizontal	Vertical
1	Wireless Module Operating	# 3	# 4

3.5.2. For Frequency above 1GHz

The EUT with following test modes were performed during this section testing and all the test results are listed in section 4.6.2.

No.	Test Mode and Frequency		
1.	Transmitting	802.11b	2412MHz (Channel 1)
2.			2437MHz (Channel 6)
3.			2462MHz (Channel 11)
4.		802.11g	2412MHz (Channel 1)
5.			2437MHz (Channel 6)
6.			2462MHz (Channel 11)

3.5.3. For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 3.6.3. (The restricted bands defined in part 15.205(a))

No.	Test Mode and Frequency			Reference Test Data No.	
				Horizontal	Vertical
1.	Transmitting	802.11b	2412MHz (Channel 1)	# 1, # 2	# 3, # 4
2.			2462MHz (Channel 11)	# 5, # 6	# 7, # 8
3.		802.11g	2412MHz (Channel 1)	# 11, # 13	# 14, # 15
4.			2462MHz (Channel 11)	# 18, # 20	# 21, # 22

3.5.4. Radiated Emission Measurement Results

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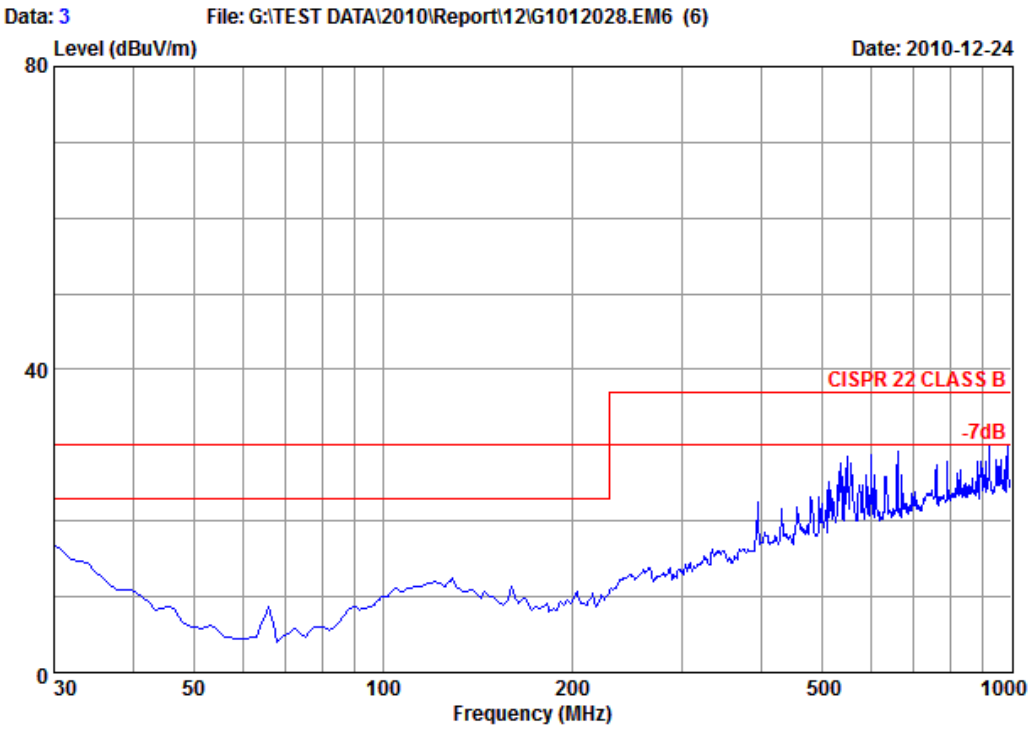

Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 3
Dis./Ant. : 10m . BI-LOG 6112D(22253) Ant.pol : HORIZONTAL
Env./Ins. : 25.8*C 48%/ESCI Engineer : Hilary
EUT. : TI-Nspire(TM)CX Wireless Network Adapter
M/N : TINAVWNA
Power Rating : DC 3.7V
Test Mode : Wireless Module Operating
Memo

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	547.98	19.28	3.28	5.01	27.57	37.00	9.43	QP
2	599.39	18.60	3.65	5.52	27.77	37.00	9.23	QP
3	659.53	20.00	3.81	4.44	28.25	37.00	8.75	QP
4	790.48	20.30	4.10	2.41	26.81	37.00	10.19	QP
5	921.43	20.98	4.41	3.38	28.77	37.00	8.23	QP
6	987.39	20.62	4.70	3.53	28.85	37.00	8.15	QP

Remarks: 1.Emission Level= Antenna factor + Cable loss + Reading
2.The emission level that are 20dB below the offical limit are not reported

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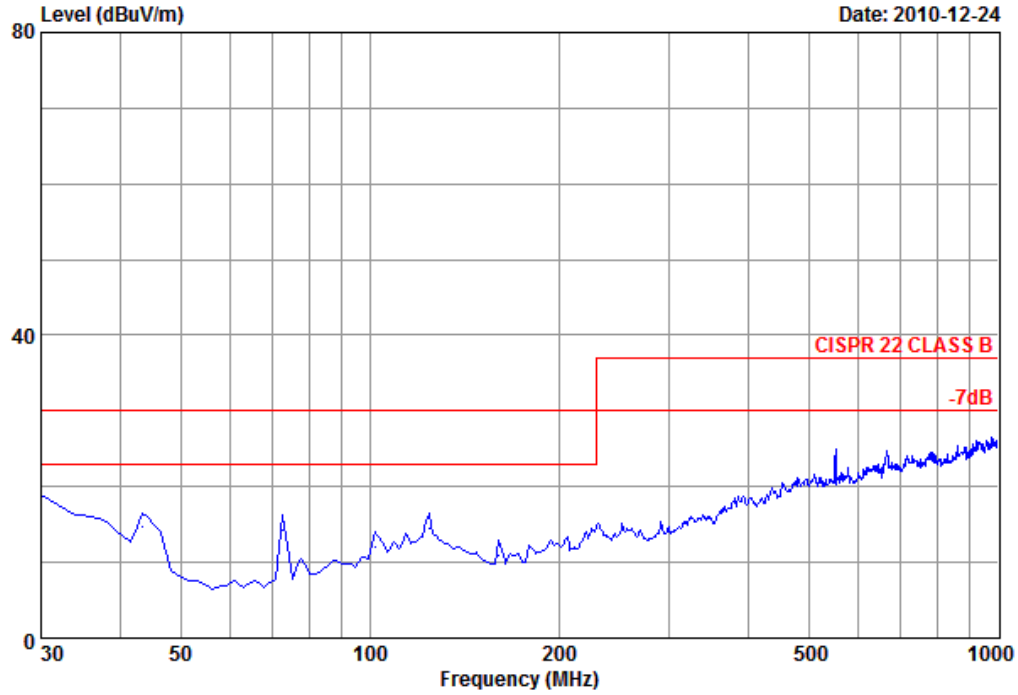
Data: 4 File: G:\TEST DATA\2010\Report\12\G1012028.EM6 (6)



Site No.	: NO.1 10m Semi-Anechoic Chamber	Data NO.	: 4
Dis./Ant.	: 10m . BI-LOG 6112D(22252)	Ant.pol	: VERTICAL
Env./Ins.	: 25.8*C 48%/ESCI	Engineer	: Hilary
EUT.	: TI-Nspire(TM)CX Wireless Network Adapter		
M/N	: TINAVWNA		
Power Rating	: DC 3.7V		
Test Mode	: Wireless Module Operating		
Memo			

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	43.58	11.90	0.67	2.03	14.60	30.00	15.40	QP
2	72.68	6.77	1.08	6.51	14.36	30.00	15.64	QP
3	101.78	10.30	1.11	0.70	12.11	30.00	17.89	QP
4	124.09	12.60	1.20	0.72	14.52	30.00	15.48	QP
5	159.98	9.00	1.46	0.46	10.92	30.00	19.08	QP
6	550.89	18.10	3.08	2.79	23.97	37.00	13.03	QP

Remarks: 1.Emission Level= Antenna factor + Cable loss + Reading
2.The emission level that are 20dB below the offical limit are not reported

3.6. Radiated Emission Measurement Results

3.6.1.Type of Network : IEEE 802.11b

Data of Test: Dec. 22, 2010
Ambient temperature: 18℃Relative humidity: 49%
Data Rate: 1Mbps
Test Frequency band: TX 2412MHz
Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595.00	Horizontal	55.8	74.00	18.20
3210.00	Horizontal	50.01	74.00	23.99
4824.00	Horizontal	45.87	74.00	28.13
7236.00	Horizontal	52.32	74.00	21.68

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595	Horizontal	48.63	54.00	5.37
4824	Horizontal	40.7	54.00	13.30
7236	Horizontal	39	54.00	15.00

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595.00	Vertical	48.96	74.00	25.04
3380.00	Vertical	46.71	74.00	27.29
4824.00	Vertical	48.68	74.00	25.32
7236.00	Vertical	52.56	74.00	21.44

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
4824.05	Vertical	43.02	54.00	10.98
7236.00	Vertical	41.33	54.00	12.67

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Test Frequency band: TX 2437MHz

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1612.00	Horizontal	58.82	74.00	15.18
3227.00	Horizontal	49.26	74.00	24.74
4876.00	Horizontal	48.08	74.00	25.92
7236.00	Horizontal	52.12	74.00	21.88

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1612	Horizontal	49.32	54.00	4.68
4876	Horizontal	44.25	54.00	9.75
7236	Horizontal	41.59	54.00	12.41

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1612.00	Vertical	49.06	74.00	24.94
4876.00	Vertical	46.56	74.00	27.44
7290.00	Vertical	53.34	74.00	20.66

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
4874.00	Vertical	42.82	54.00	11.18
7310.00	Vertical	41.16	54.00	12.84

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Test Frequency band: TX 2462MHz

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1646.00	Horizontal	58.25	74.00	15.75
4910.00	Horizontal	48.82	74.00	25.18
7396.00	Horizontal	52.12	74.00	21.88

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1646	Horizontal	49.11	54.00	4.89
4924	Horizontal	42.88	54.00	11.12
7396	Horizontal	41.78	54.00	12.22

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1646.00	Vertical	49.35	74.00	24.65
4924.00	Vertical	45.29	74.00	28.71
7386.00	Vertical	42.24	54.00	11.76

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
4924.06	Vertical	52.14	74.00	21.86
7396.00	Vertical	41.13	54.00	12.87

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

3.6.2.Type of Network : IEEE 802.11g

Data of Test: Dec. 22, 2010
Ambient temperature: 18℃Relative humidity: 49%
Data Rate: 6Mbps
Test Frequency band: TX 2412MHz

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595.00	Horizontal	61.73	74.00	12.27
2190.00	Horizontal	51.8	74.00	22.20
3210.00	Horizontal	55.63	74.00	18.37
4824.00	Horizontal	47.19	74.00	26.81
7236.00	Horizontal	52.68	74.00	21.32

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595	Horizontal	51.55	54.00	3.45
4824.17	Horizontal	42.68	54.00	11.32
7236.00	Horizontal	41.44	54.00	12.56

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595.00	Vertical	57.54	74.00	16.46
3210.00	Vertical	57.98	74.00	16.02
4825.00	Vertical	45.94	74.00	28.06
7236.00	Vertical	52.09	74.00	21.91

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595.00	Vertical	48.64	54.00	5.36
4821.38	Vertical	34.63	54.00	19.37
7236.00	Vertical	38.97	54.00	15.03

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Test Frequency band: TX 2437MHz

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1595	Horizontal	50.99	74.00	23.01
4824	Horizontal	45.69	74.00	28.31
7236	Horizontal	52.15	74.00	21.85

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
4824.00	Horizontal	41.57	54.00	12.43
7236.00	Horizontal	41	54.00	13.00

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1612.00	Vertical	63.31	74.00	10.69
2190.00	Vertical	52.3	74.00	21.70
3227.00	Vertical	53.22	74.00	20.78
4874.00	Vertical	47.21	74.00	26.79
7311.00	Vertical	52.66	74.00	21.34

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1612	Vertical	52.69	54.00	1.31
4874	Vertical	41.99	54.00	12.01
7311	Vertical	41.74	54.00	12.26

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Test Frequency band: TX 2462MHz

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1612.00	Horizontal	52.27	74.00	21.73
4874.00	Horizontal	45.33	74.00	28.67
7311.00	Horizontal	51.8	74.00	22.20

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
4874.00	Horizontal	42.71	54.00	11.29
7311.00	Horizontal	41.82	54.00	12.18

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

Peak

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1646.00	Vertical	60.81	74.00	13.19
2190.00	Vertical	52.07	74.00	21.93
3295.00	Vertical	51.77	74.00	22.23
4924.00	Vertical	45.09	74.00	28.91
7386.00	Vertical	52.31	74.00	21.69

Average

Frequency (MHz)	Antenna Polarization	Emission Level (dBuv)	Limit (dBuv)	Margin (dB)
1646.00	Vertical	51.33	54.00	2.67
4924.00	Vertical	41.97	54.00	12.03
7396.00	Vertical	41.15	54.00	12.85

Note 1. : All the emissions (up to 25GHz) not reported are too low to be measured.
Note 2. : The emission behavior belongs to narrowband spurious emission.

3.7. Spurious Emission Measurement Results in restricted band (FCC Part 15, 15.205)

3.7.1. IEEE 802.11b

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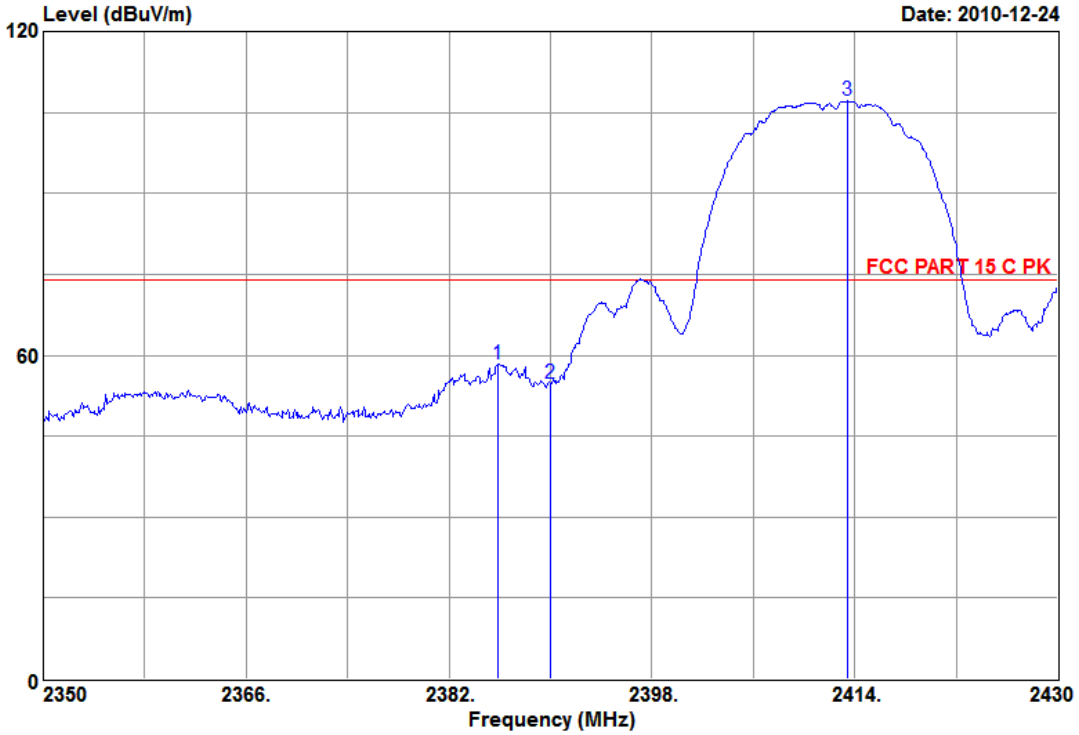
Data: 1 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH1

Data NO. : 1
Ant. pol. : HORIZONTAL

Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2385.84	28.53	7.51	57.52	58.38	74.00	15.62	Peak
2	2390.00	28.53	7.51	53.90	54.76	74.00	19.24	Peak
3	2413.44	28.58	7.55	106.14	107.09	74.00	-33.09	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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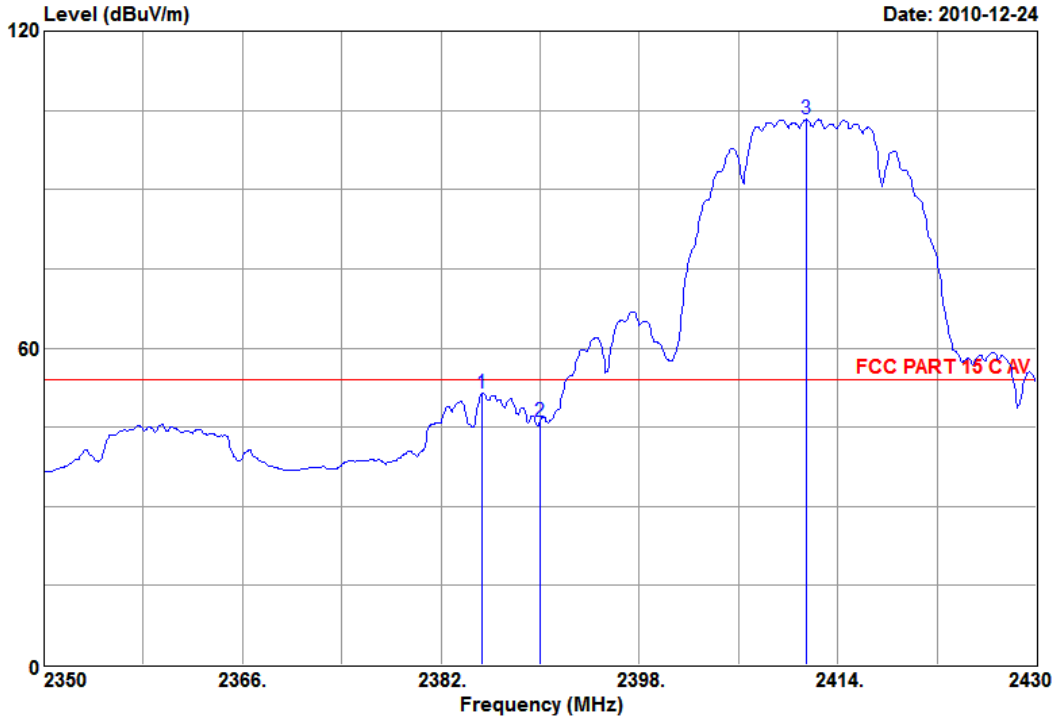
Data: 2 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH1

Data NO. : 2
Ant. pol. : HORIZONTAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2385.28	28.49	7.47	50.73	51.51	54.00	2.49	Average
2	2390.00	28.53	7.51	45.18	46.04	54.00	7.96	Average
3	2411.44	28.58	7.55	102.34	103.29	54.00	-49.29	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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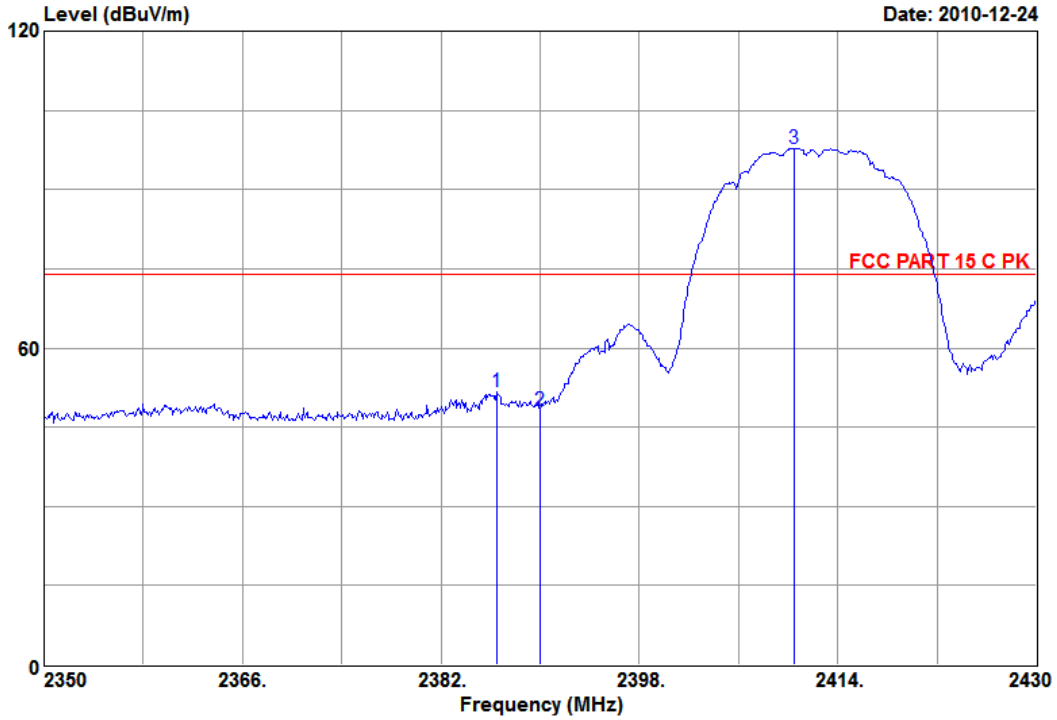
Data: 3 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH1

Data NO. : 3
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2386.48	28.53	7.51	50.73	51.59	74.00	22.41	Peak
2	2390.00	28.53	7.51	47.38	48.24	74.00	25.76	Peak
3	2410.48	28.58	7.55	96.89	97.84	74.00	-23.84	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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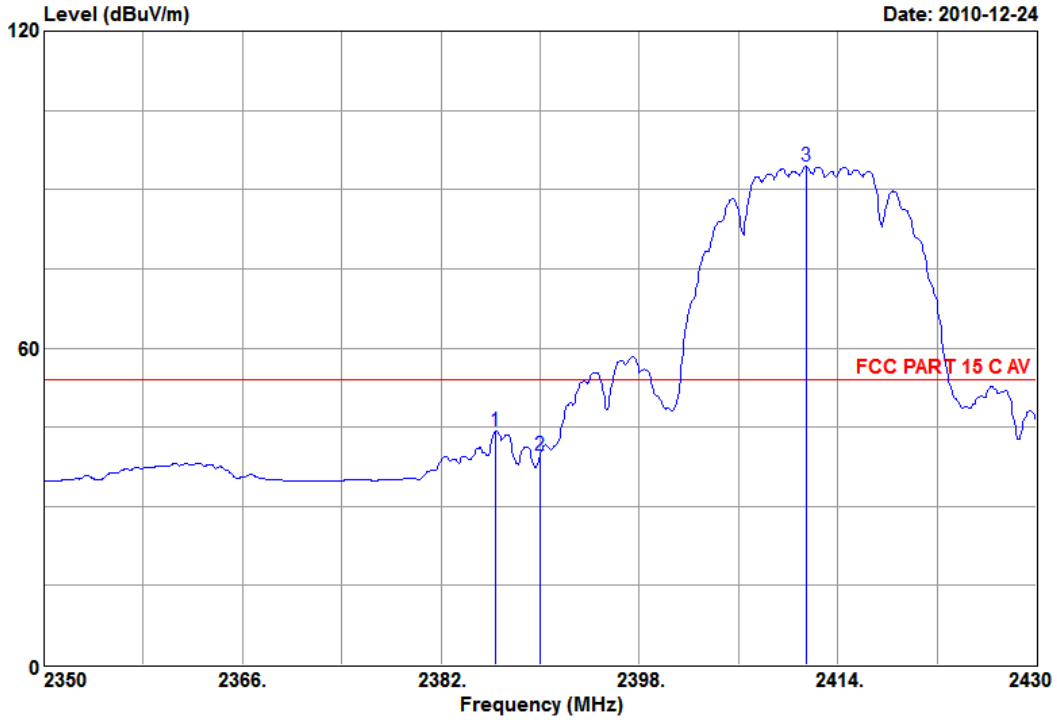
Data: 4 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH1

Data NO. : 4
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2386.40	28.53	7.51	43.45	44.31	54.00	9.69	Average
2	2390.00	28.53	7.51	38.74	39.60	54.00	14.40	Average
3	2411.44	28.58	7.55	93.43	94.38	54.00	-40.38	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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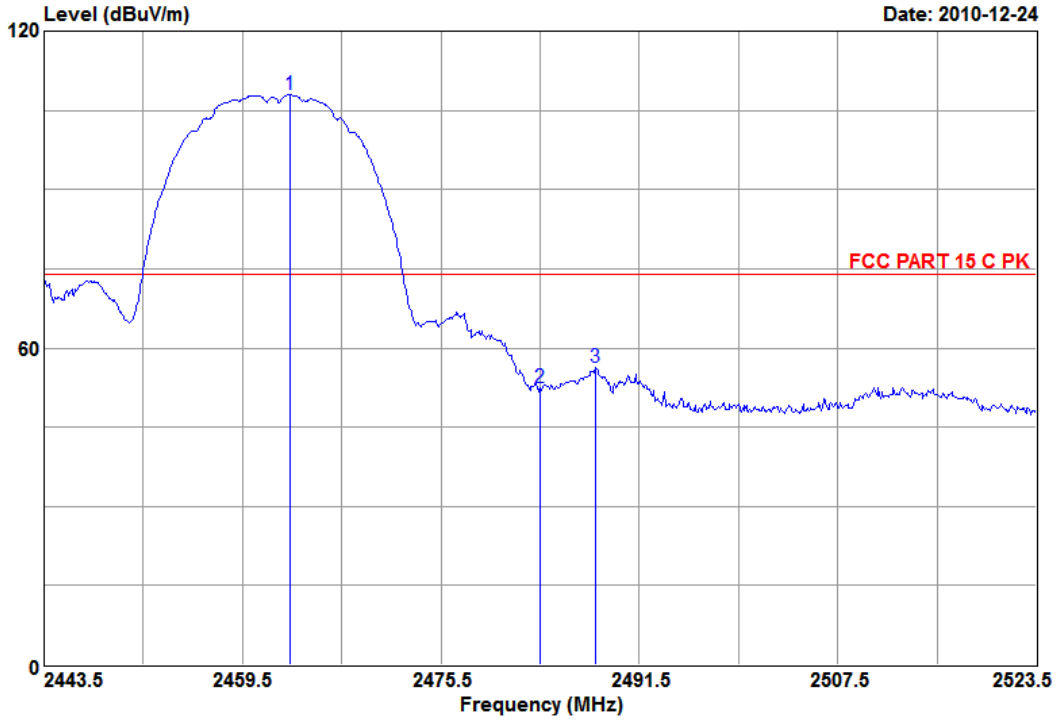
Data: 5 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH11

Data NO. : 5
Ant. pol. : HORIZONTAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.34	28.71	7.68	106.70	107.90	74.00	-33.90	Peak
2	2483.50	28.76	7.73	51.12	52.41	74.00	21.59	Peak
3	2487.98	28.80	7.77	54.89	56.26	74.00	17.74	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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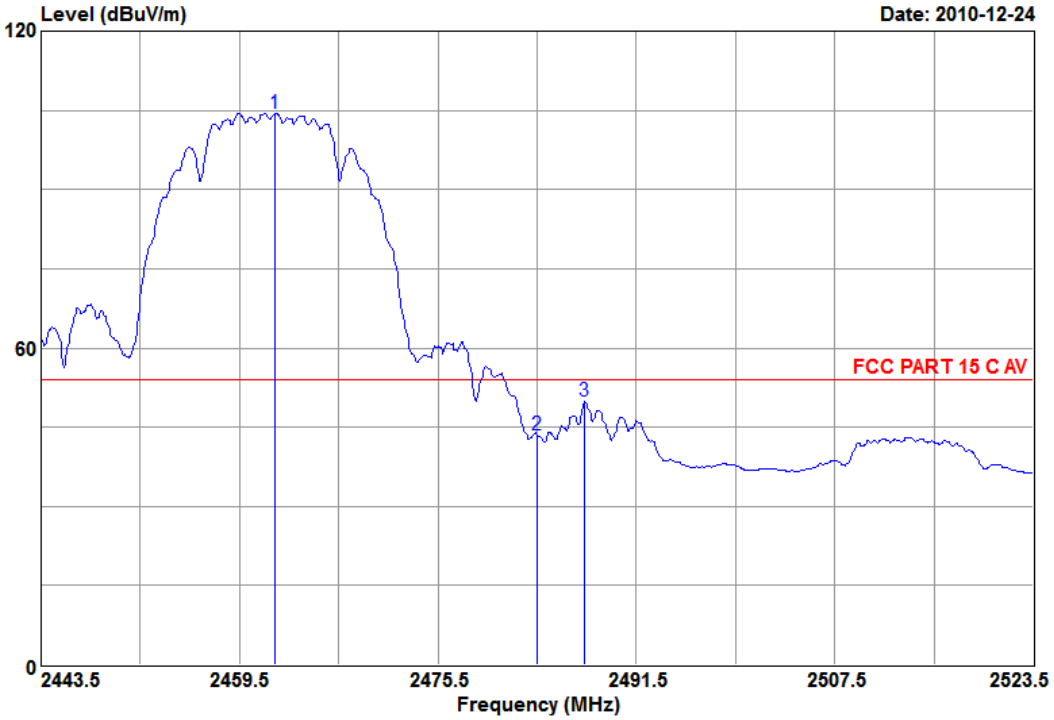
Data: 6 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH11

Data NO. : 6
Ant. pol. : HORIZONTAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.38	28.71	7.68	103.26	104.46	54.00	-50.46	Average
2	2483.50	28.76	7.73	42.34	43.63	54.00	10.37	Average
3	2487.34	28.76	7.73	48.57	49.86	54.00	4.14	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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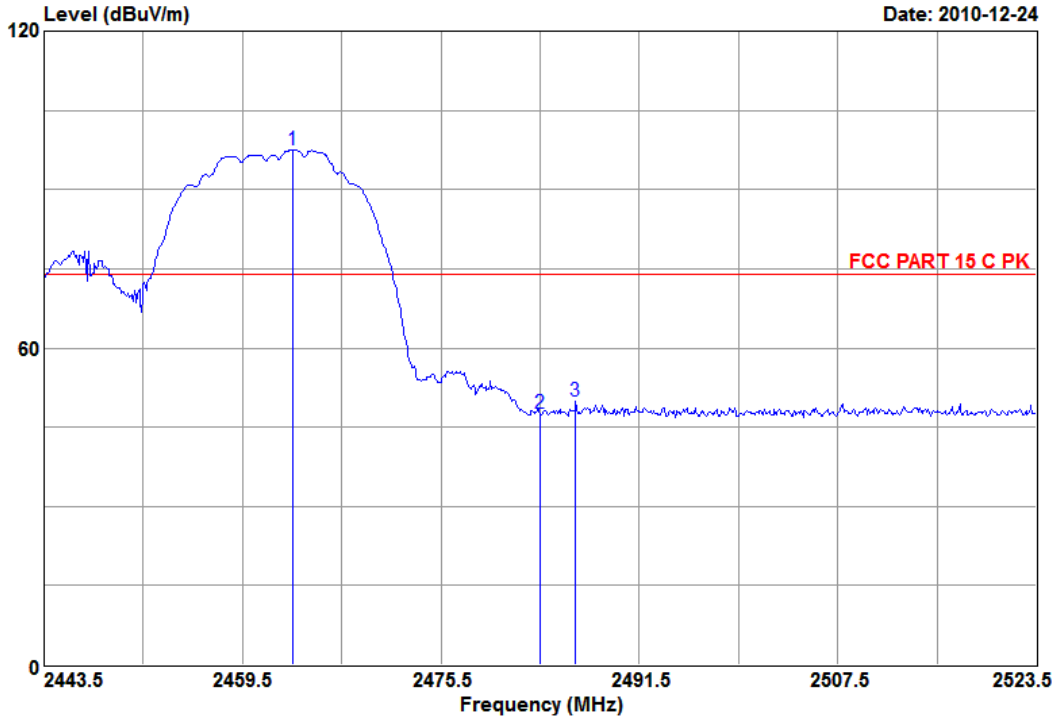
Data: 7 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH11

Data NO. : 7
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.58	28.71	7.68	96.28	97.48	74.00	-23.48	Peak
2	2483.50	28.76	7.73	46.27	47.56	74.00	26.44	Peak
3	2486.38	28.76	7.73	48.53	49.82	74.00	24.18	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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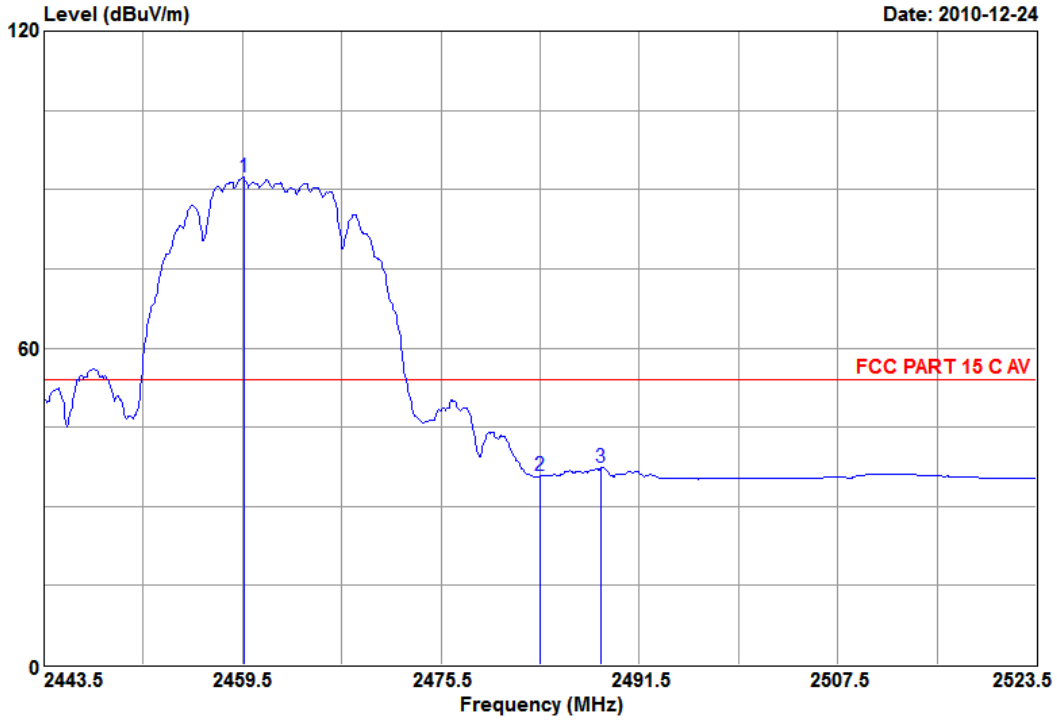
Data: 8 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11b
Memo : CH11

Data NO. : 8
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.58	28.71	7.68	91.06	92.26	54.00	-38.26	Average
2	2483.50	28.76	7.73	34.42	35.71	54.00	18.29	Average
3	2488.38	28.80	7.77	36.09	37.46	54.00	16.54	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3.7.2. IEEE 802.11g

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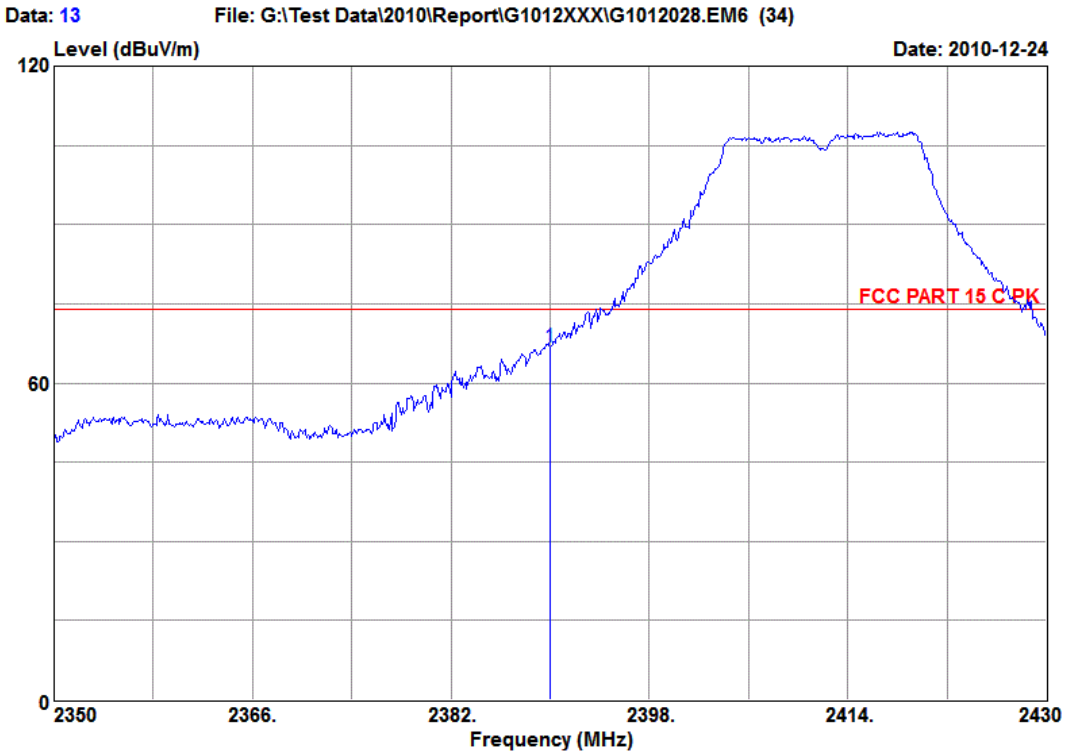

Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH1

Data NO. : 13
Ant. pol. : HORIZONTAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.53	7.51	65.94	66.80	74.00	7.20	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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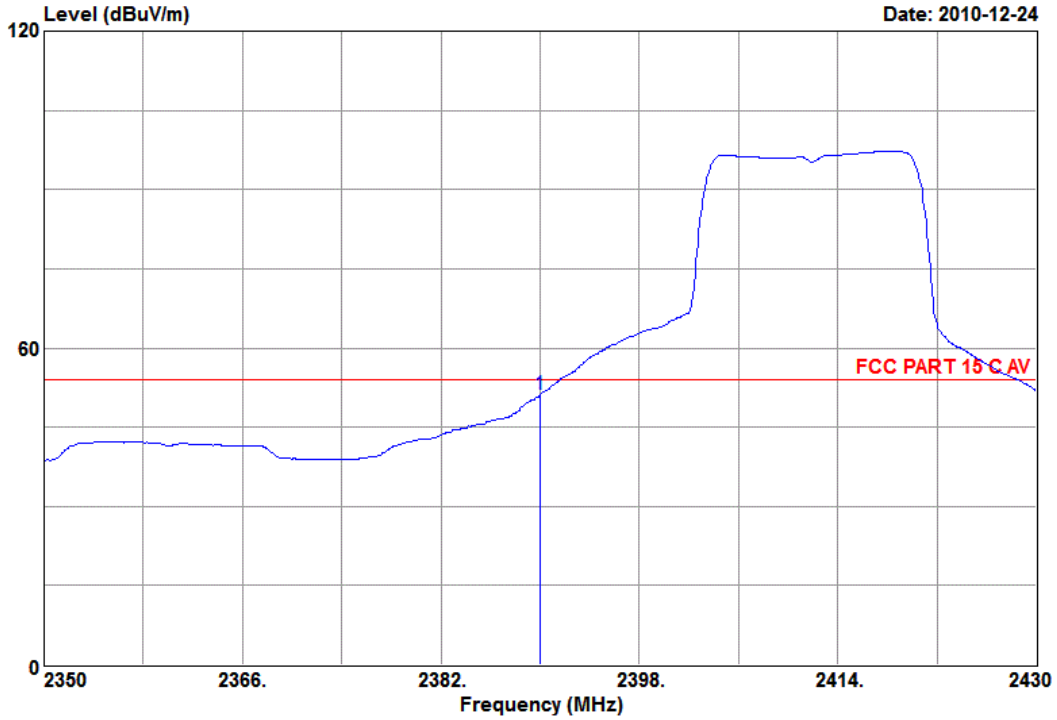
Data: 11 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH1

Data NO. : 11
Ant. pol. : HORIZONTAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.53	7.51	50.28	51.14	54.00	2.86	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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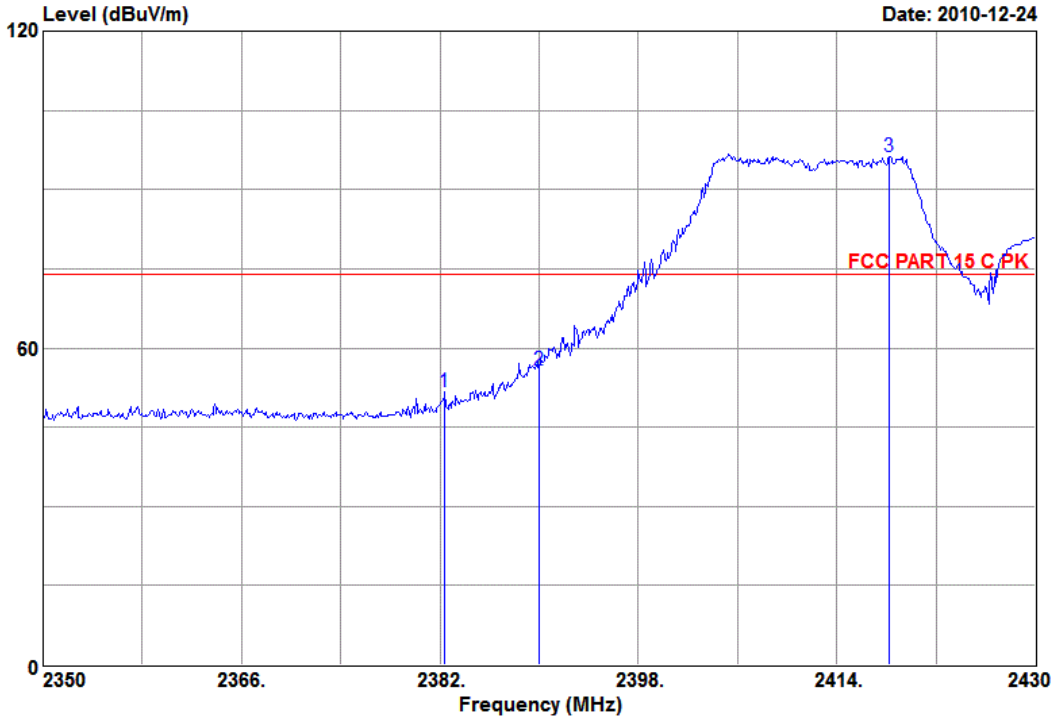
Data: 14 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH1

Data NO. : 14
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2382.40	28.49	7.47	50.82	51.60	74.00	22.40	Peak
2	2390.00	28.53	7.51	54.82	55.68	74.00	18.32	Peak
3	2418.24	28.58	7.55	95.34	96.29	74.00	-22.29	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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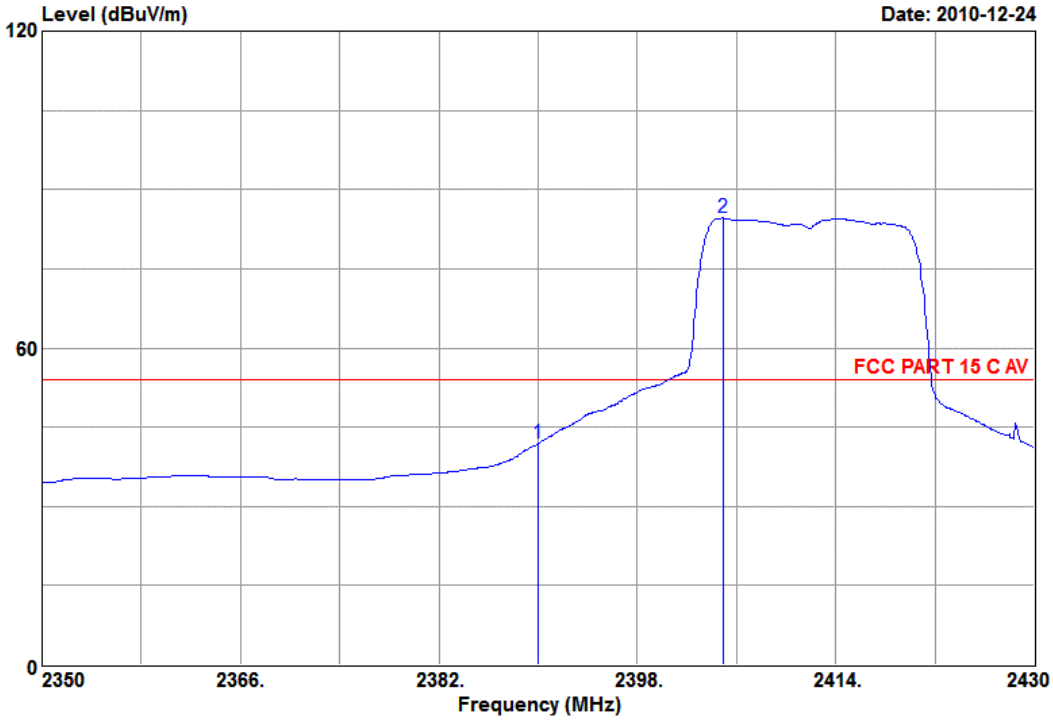
Data: 15 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH1

Data NO. : 15
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.53	7.51	41.07	41.93	54.00	12.07	Average
2	2404.88	28.58	7.55	83.63	84.58	54.00	-30.58	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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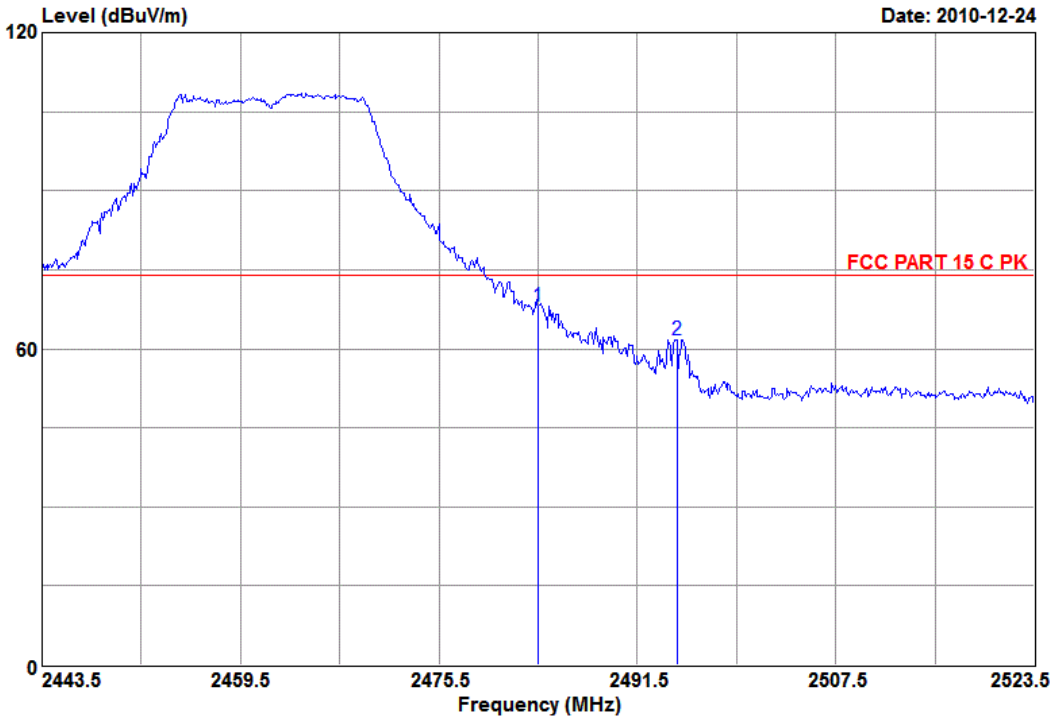
Data: 20 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH11

Data NO. : 20
Ant. pol. : HORIZONTAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2483.50	28.76	7.73	66.68	67.97	74.00	6.03	Peak
2	2494.70	28.80	7.77	60.35	61.72	74.00	12.28	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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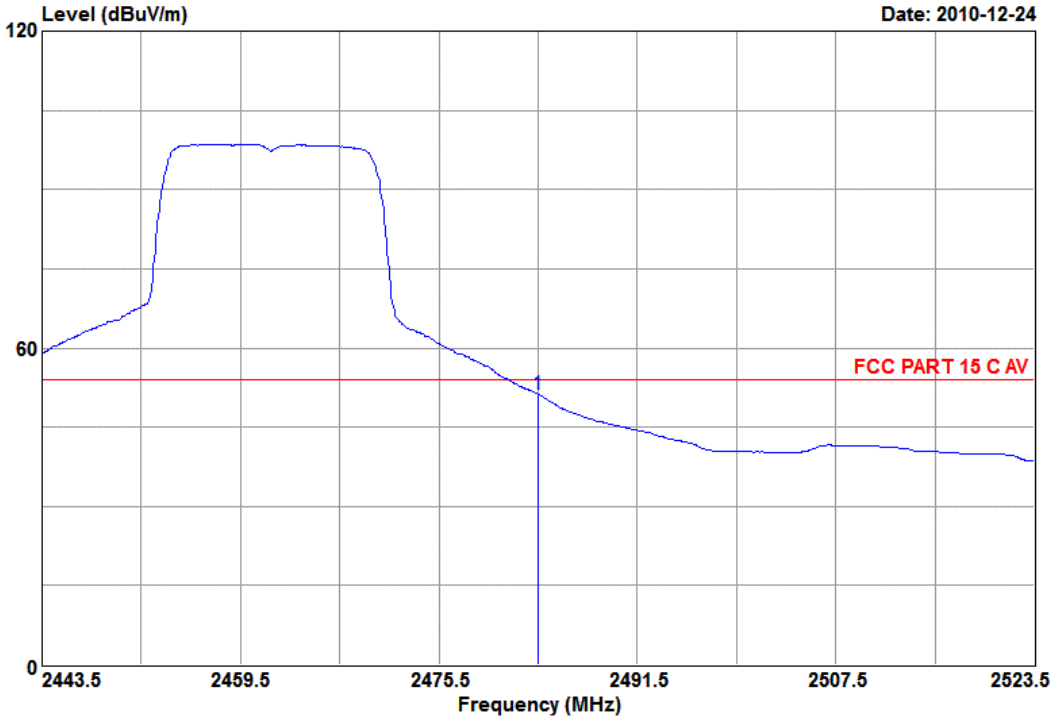
Tel:(0512)63403993 Fax:(0512)63403993

Data: 18 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH11

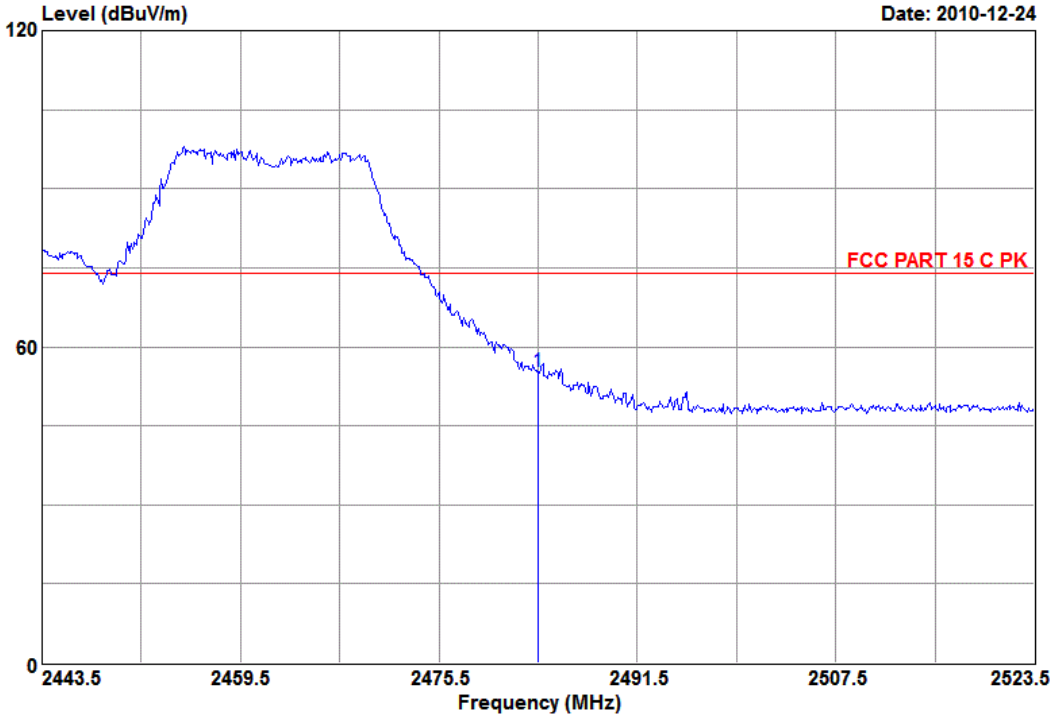
Data NO. : 18
Ant. pol. : HORIZONTAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2483.50	28.76	7.73	49.95	51.24	54.00	2.76	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Audix Technology(Wujiang)Co.,Ltd.
No.1289,Jiang Xing East Road,The Eastern Part of Wu Jiang
Economic Development Zone,JiangSu,China
Tel:(0512)63403993 Fax:(0512)63403993

Data: 21 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C PK
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH11

Data NO. : 21
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2483.50	28.76	7.73	53.90	55.19	74.00	18.81	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Audix Technology(Wujiang)Co.,Ltd.
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Economic Development Zone,JiangSu,China
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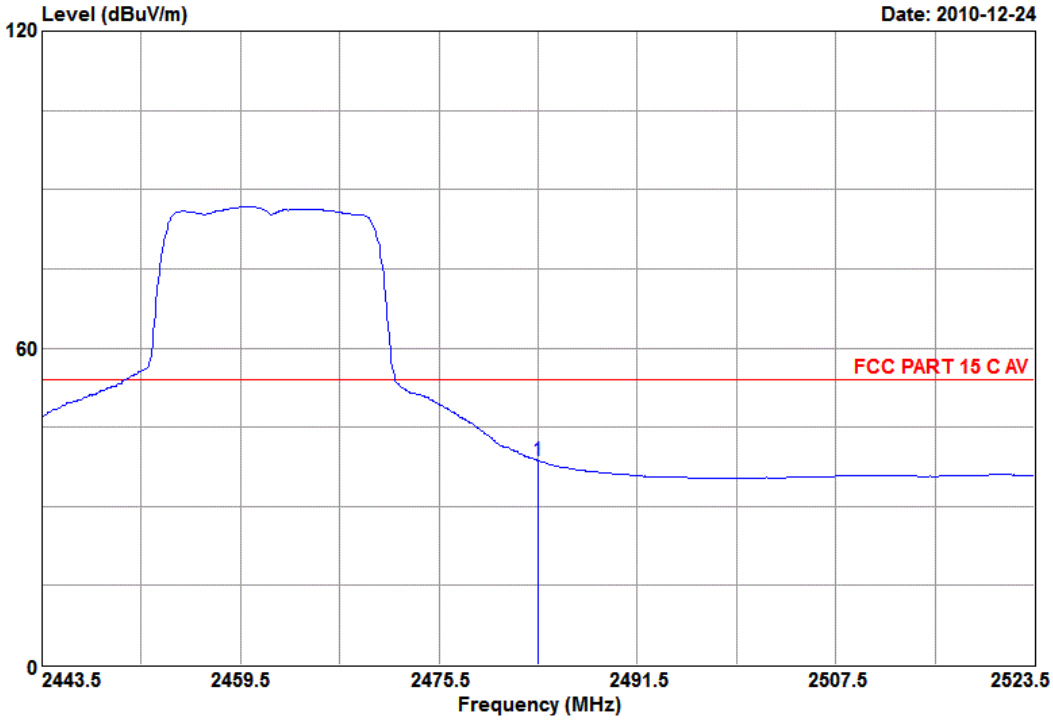
Data: 22 File: G:\Test Data\2010\Report\G1012XXX\G1012028.EM6 (34)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m HORN 3115(62961)
Limit : FCC PART 15 C AV
Env. / Ins. : 18.0*C&49%/Agilent E4447A
EUT : TI-NspirTM Wireless Network Adapter
M/N : TINAVWNA
Power Rating : 120Vac/60Hz
Test Mode : TX 802.11g
Memo : CH11

Data NO. : 22
Ant. pol. : VERTICAL
Engineer : venus

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2483.50	28.76	7.73	37.44	38.73	54.00	15.27	Average

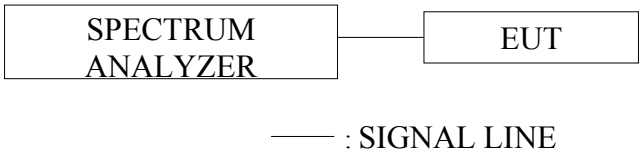
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

4. 6 dB BANDWIDTH MEASUREMENT

4.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4447A	MY45300136	2010-01-08	2011-01-07

4.2. Block Diagram of Test Setup



4.3. Specification Limits (§15.247(a)(2))

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

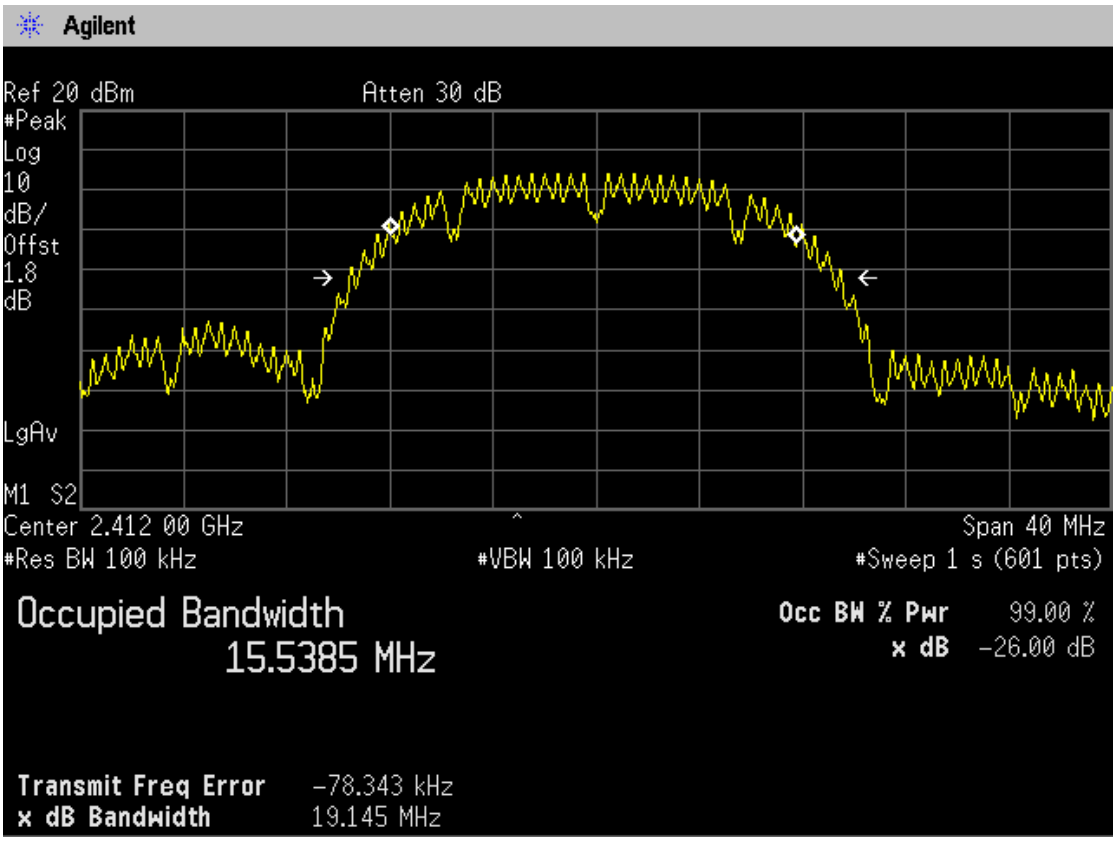
4.4. Test Results

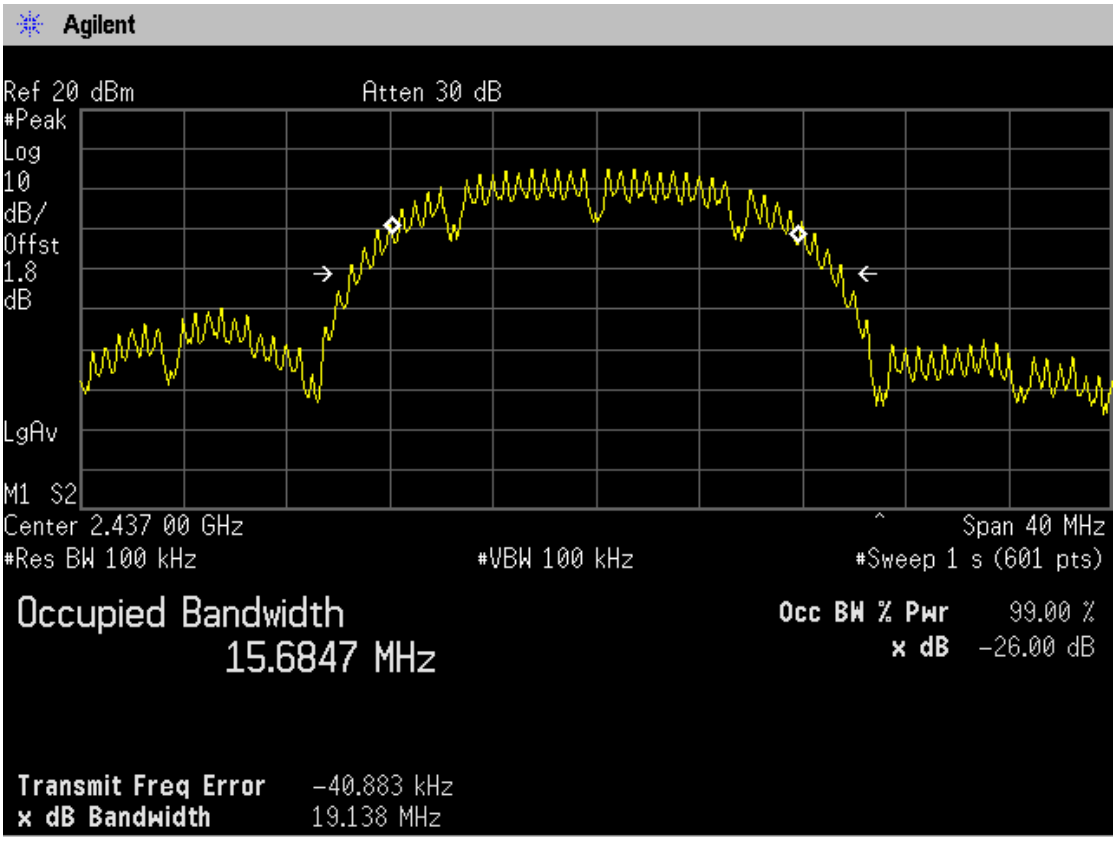
PASSED. All the test results are attached in next pages.

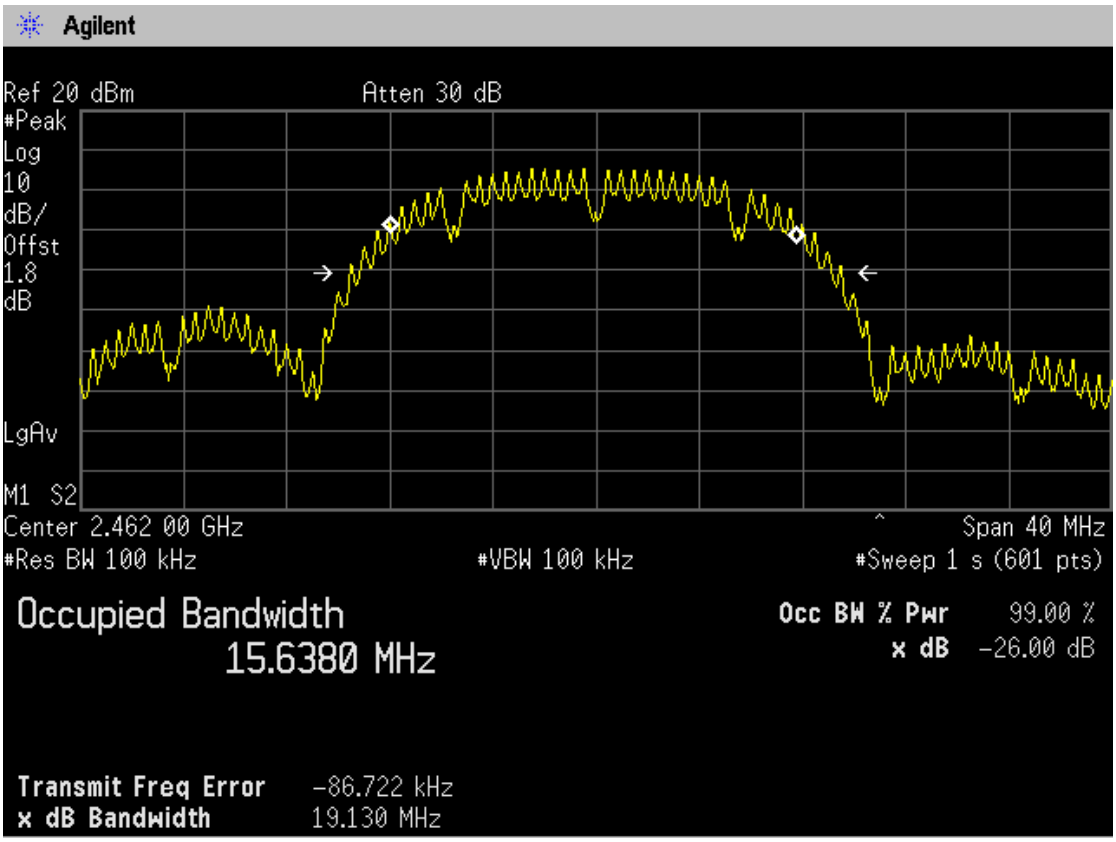
Test Date: Dec.22, 2010 Temperature: 17℃ Humidity: 40 %

Item	Channel	Test Frequency	**6dB Bandwidth**
802.11b	1	2412MHz	**15.5385MHz**
	6	2437MHz	**15.6847MHz**
	11	2462MHz	**15.6380MHz**
802.11g	1	2412MHz	**16.5025MHz**
	6	2437MHz	**16.6914MHz**
	11	2462MHz	**16.5188MHz**

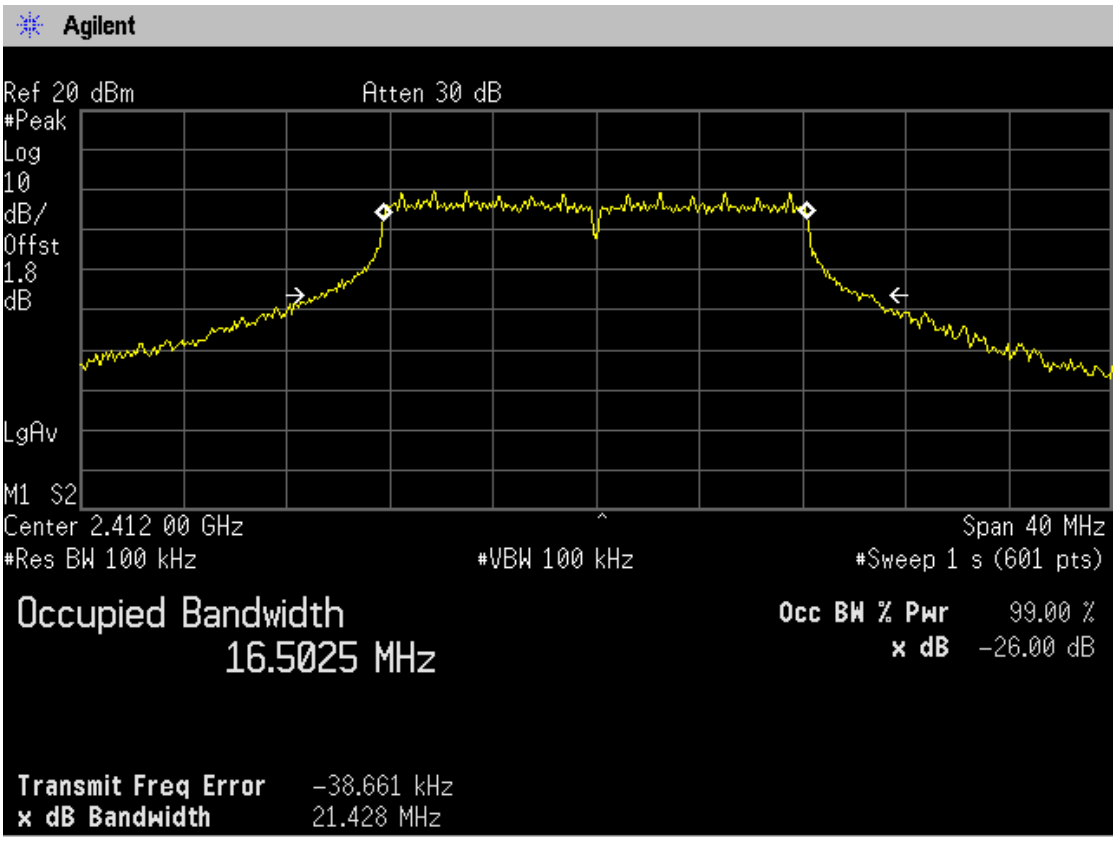
4.4.1.802.11b

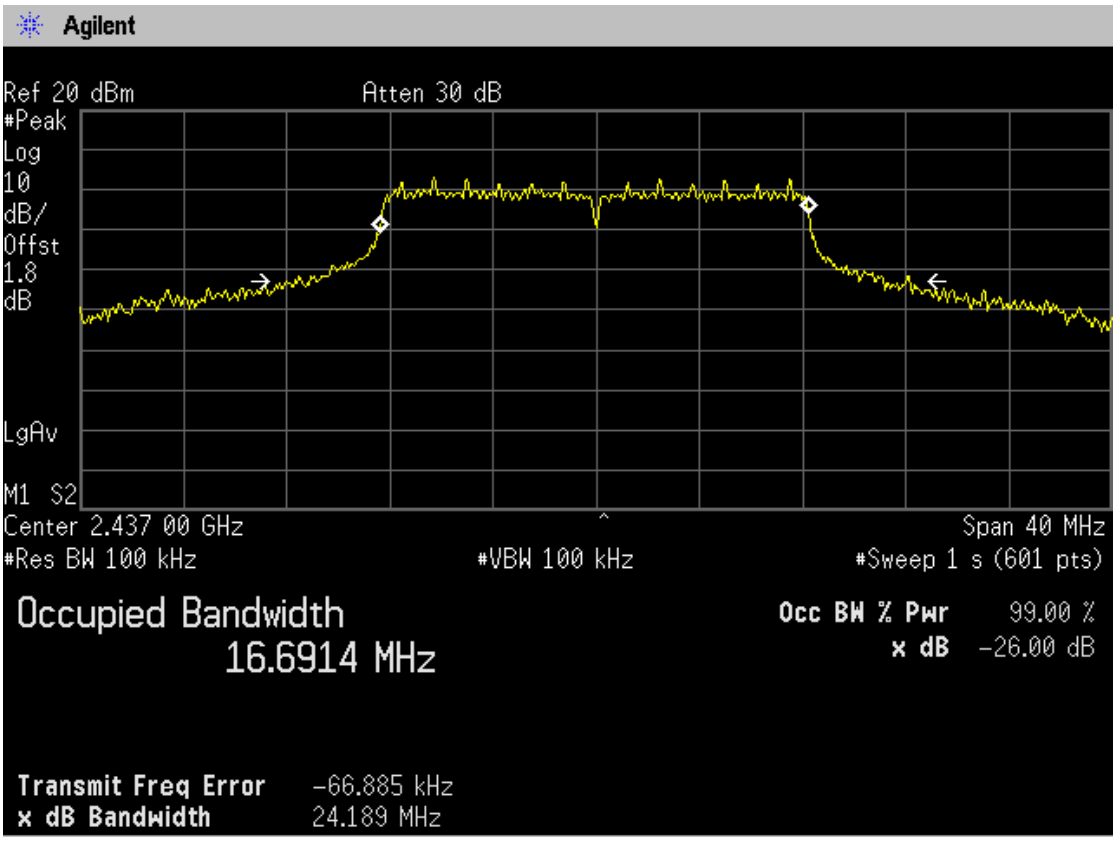

Agilent
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
Center 2.412 00 GHz
Span 40 MHz
#Res BW 100 kHz
#VBW 100 kHz
#Sweep 1 s (601 pts)
Occupied Bandwidth
15.5385 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -78.343 kHz
x dB Bandwidth 19.145 MHz

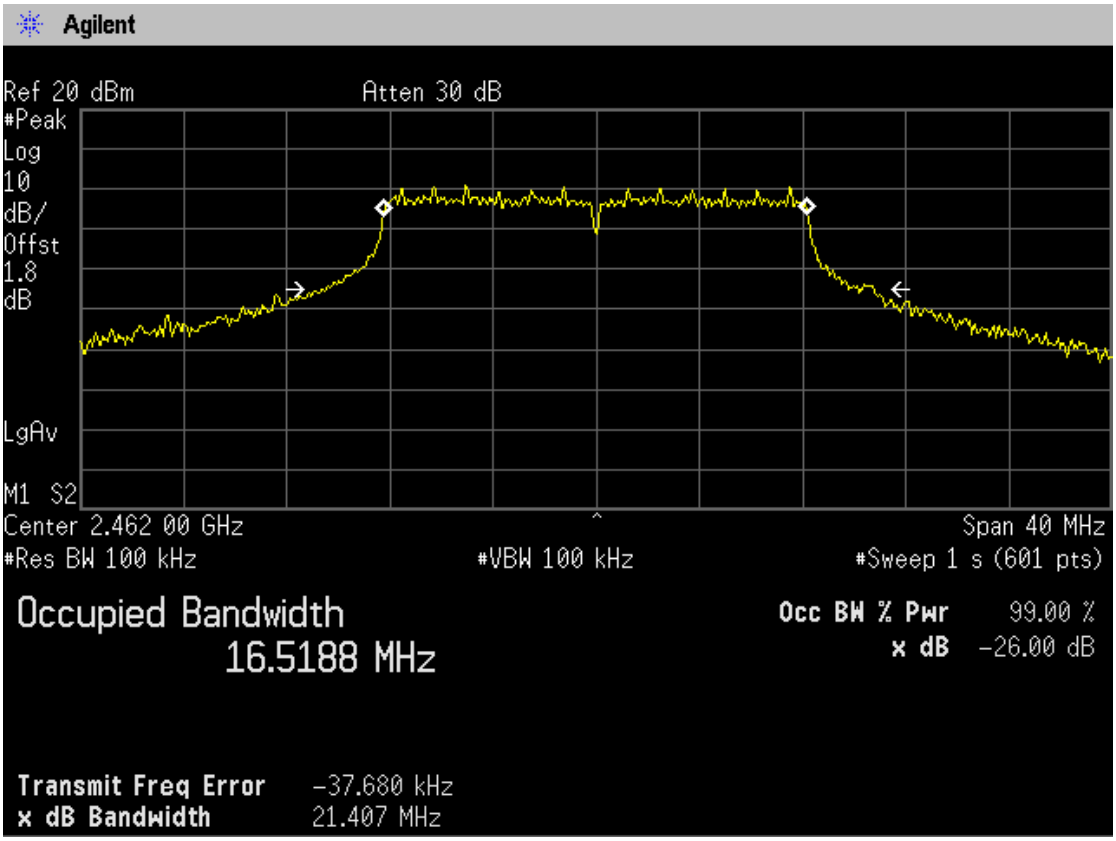

Agilent
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
Center 2.437 00 GHz
Span 40 MHz
#Res BW 100 kHz
#VBW 100 kHz
#Sweep 1 s (601 pts)
Occupied Bandwidth
15.6847 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -40.883 kHz
x dB Bandwidth 19.138 MHz


Agilent
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
Center 2.462 00 GHz
Span 40 MHz
#Res BW 100 kHz
#VBW 100 kHz
#Sweep 1 s (601 pts)
Occupied Bandwidth
15.6380 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -86.722 kHz
x dB Bandwidth 19.130 MHz

4.4.2.802.11g


Agilent
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
Center 2.412 00 GHz
Span 40 MHz
#Res BW 100 kHz
#VBW 100 kHz
#Sweep 1 s (601 pts)
Occupied Bandwidth
16.5025 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -38.661 kHz
x dB Bandwidth 21.428 MHz


Agilent
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
Center 2.437 00 GHz
Span 40 MHz
#Res BW 100 kHz
#VBW 100 kHz
#Sweep 1 s (601 pts)
Occupied Bandwidth
16.6914 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -66.885 kHz
x dB Bandwidth 24.189 MHz

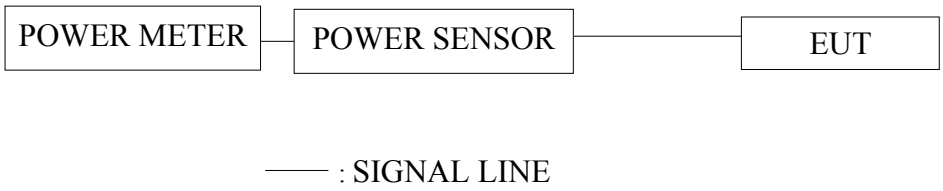

Agilent
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
Center 2.462 00 GHz
Span 40 MHz
#Res BW 100 kHz
#VBW 100 kHz
#Sweep 1 s (601 pts)
Occupied Bandwidth
16.5188 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -37.680 kHz
x dB Bandwidth 21.407 MHz

5. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

5.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Power Meter	Agilent	N1911A	MY45100361	2010-01-05	2011-01-04
2.	Power Sensor	Agilent	N1921A	MY45240521	2010-01-05	2011-01-04

5.2. Block Diagram of Test Setup



5.3. Specification Limits (§15.247(b)(3))

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the *maximum conducted output power* is the highest total transmit power occurring in any mode.

5.4. Test Results

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

Test Date: Dec.22, 2010 Test Mode: 802.11b

Test Condition			Peak Power (dBm)		
Temperature (*C)	Voltage (V)	Data rate (Mbps)	CH 1 2412 MHz	CH 6 2437 MHz	CH 11 2462 MHz
25	3.7	1	17.04	17.78	17.55
25	3.7	2	16.83	17.52	17.06
25	3.7	5.5	16.90	17.56	16.87
25	3.7	11	16.38	16.94.	16.65

Test Date: Nov.22, 2010 Test Mode: 802.11g

Test Condition			Peak Power (dBm)		
Temperature (*C)	Voltage (V)	Data rate (Mbps)	CH 1 2412 MHz	CH 6 2437 MHz	CH 11 2462 MHz
25	3.7	6	19.94	20.89	19.95
25	3.7	9	19.87	20.77	19.82
25	3.7	12	19.74	20.68	19.78
25	3.7	18	19.68	20.65	19.75
25	3.7	24	19.86	20.60	19.68
25	3.7	36	19.75	20.53	19.59
25	3.7	48	19.76	20.55	19.46
25	3.7	54	19.93	20.39	19.48

6. BAND EDGES MEASUREMENT

6.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4447A	MY45300136	2010-01-08	2011-01-07

6.2. Block Diagram of Test Setup

The same as section 5.2.

6.3. Specification Limits (§15.247(d))

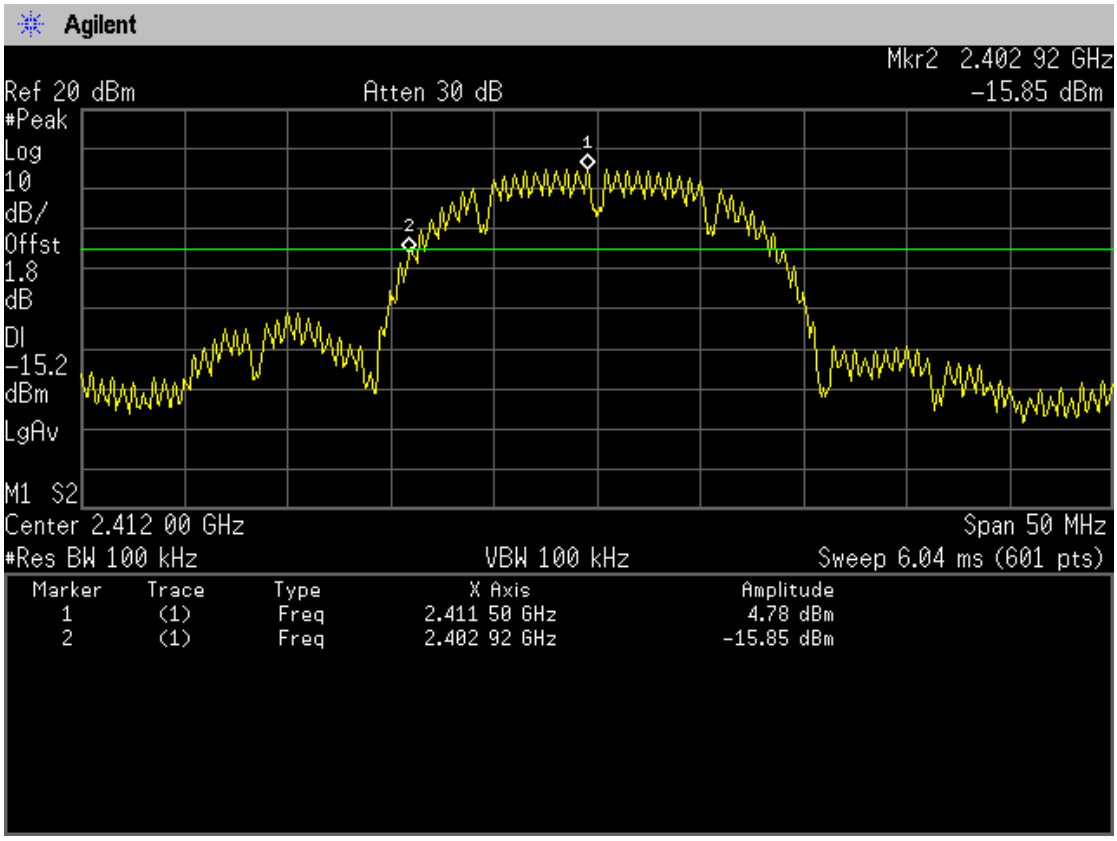
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. 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)).

6.4. Test Results

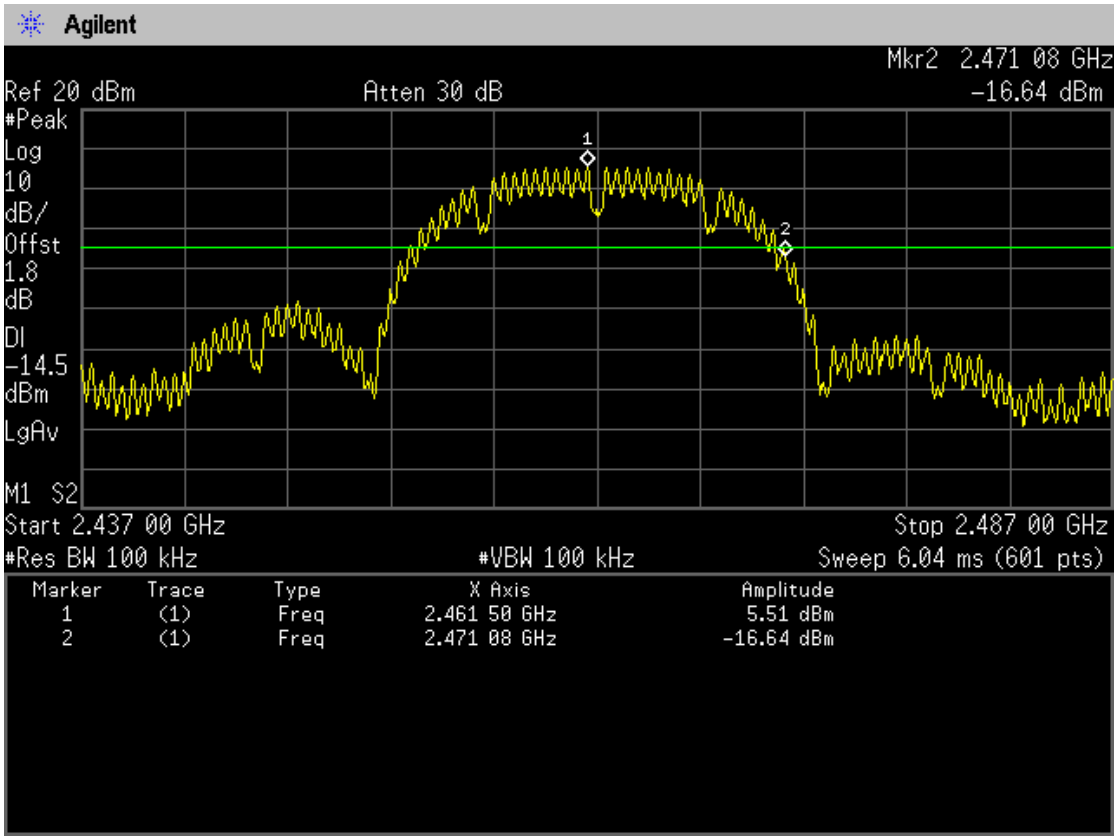
PASSED. The testing data was attached in the next pages.

6.4.1.802.11b

CH1

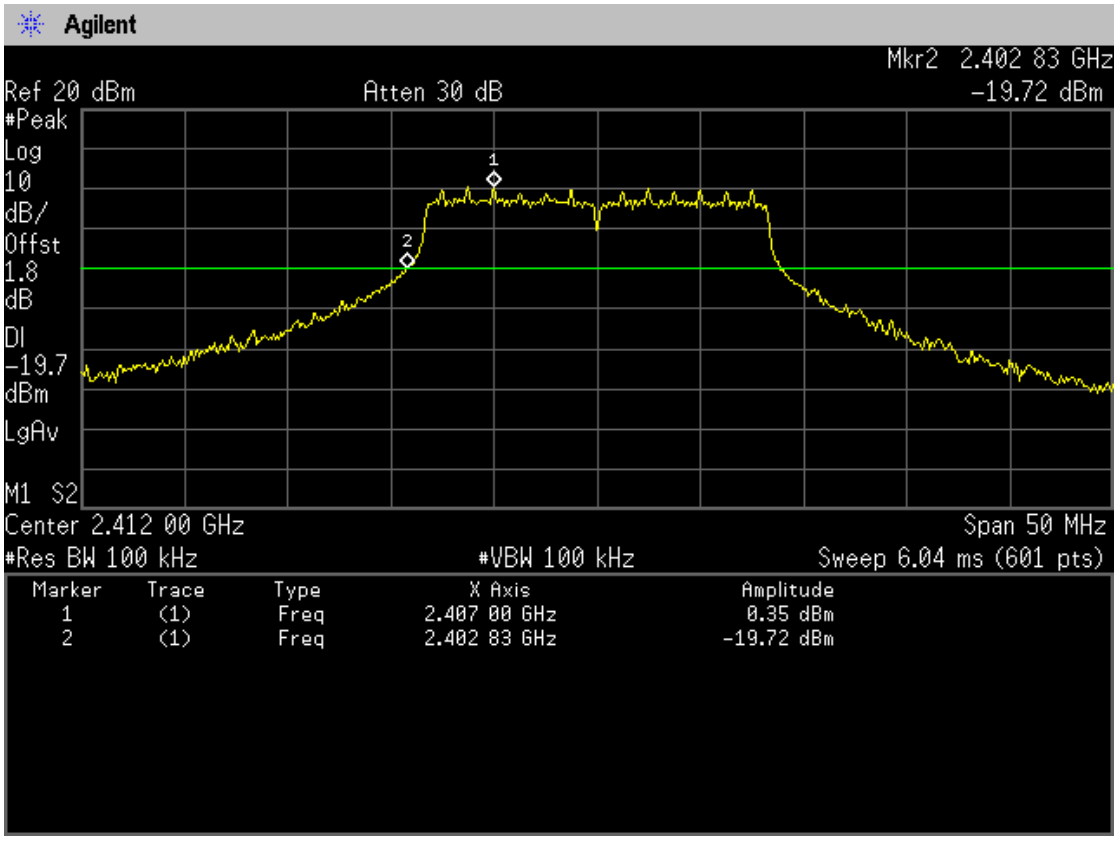


CH11

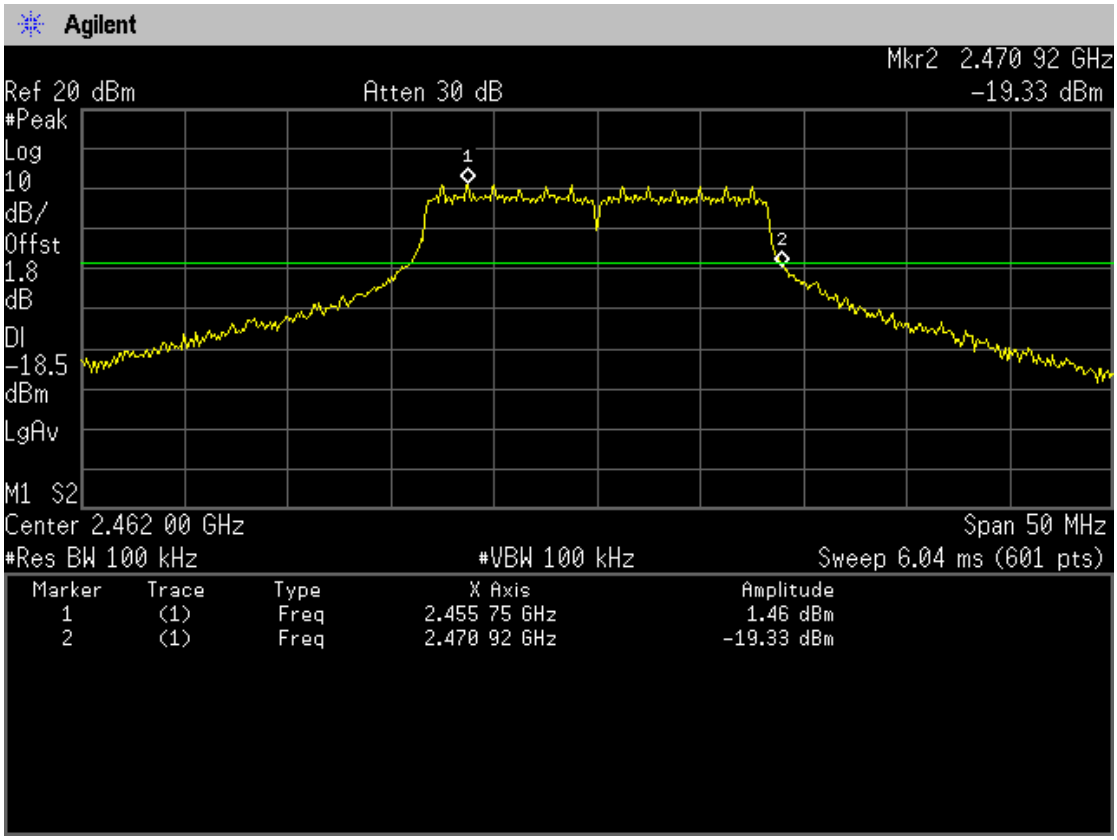


6.4.2.802.11g

CH1



CH11



7. POWER SPECTRAL DENSITY MEASUREMENT

7.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4447A	MY45300136	2010-01-08	2011-01-07

7.2. Block Diagram of Test Setup

The same as section 5.2.

7.3. Specification Limits (§15.247(e))

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

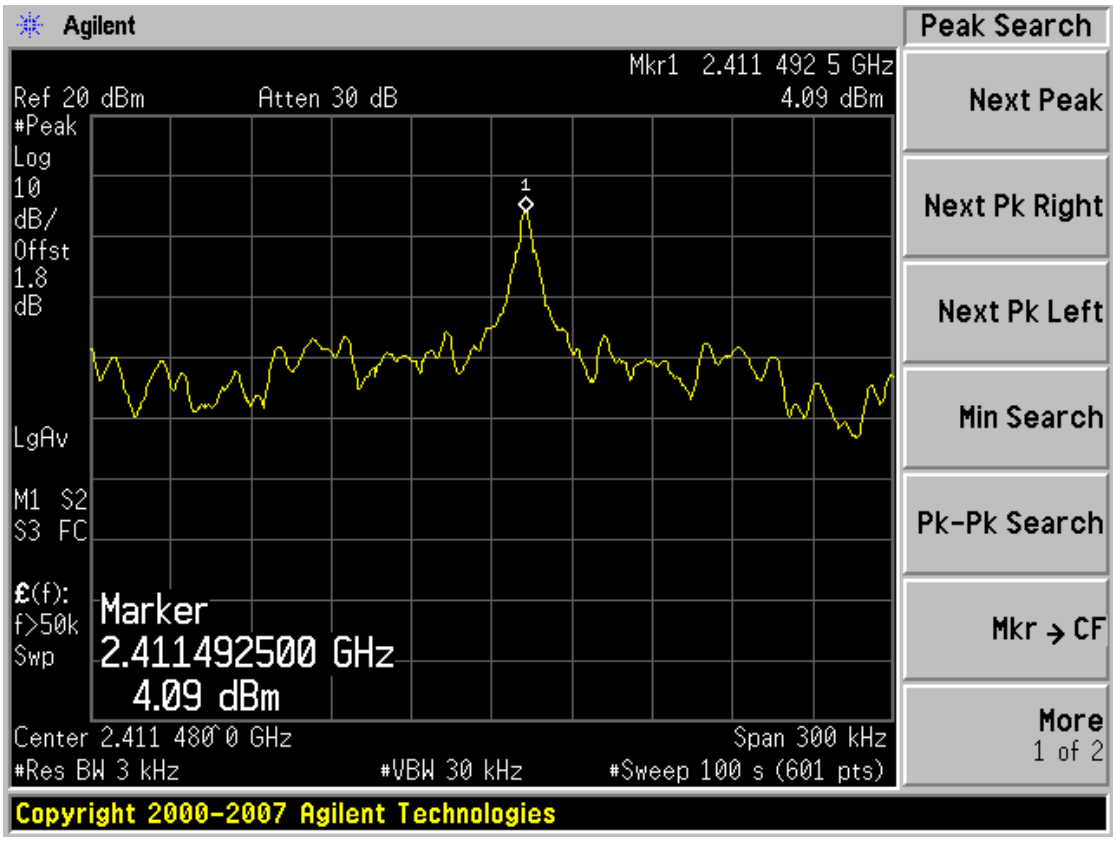
7.4. Test Results

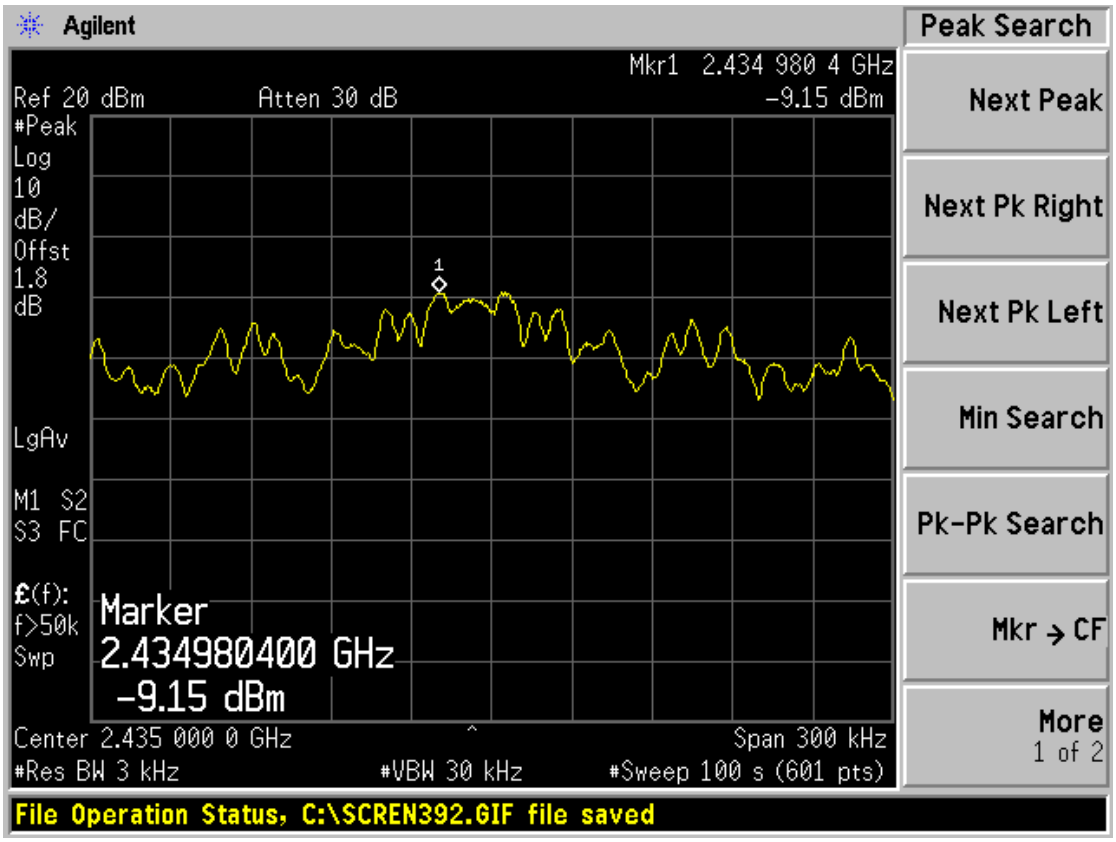
PASSED. All the test results are attached in next page.

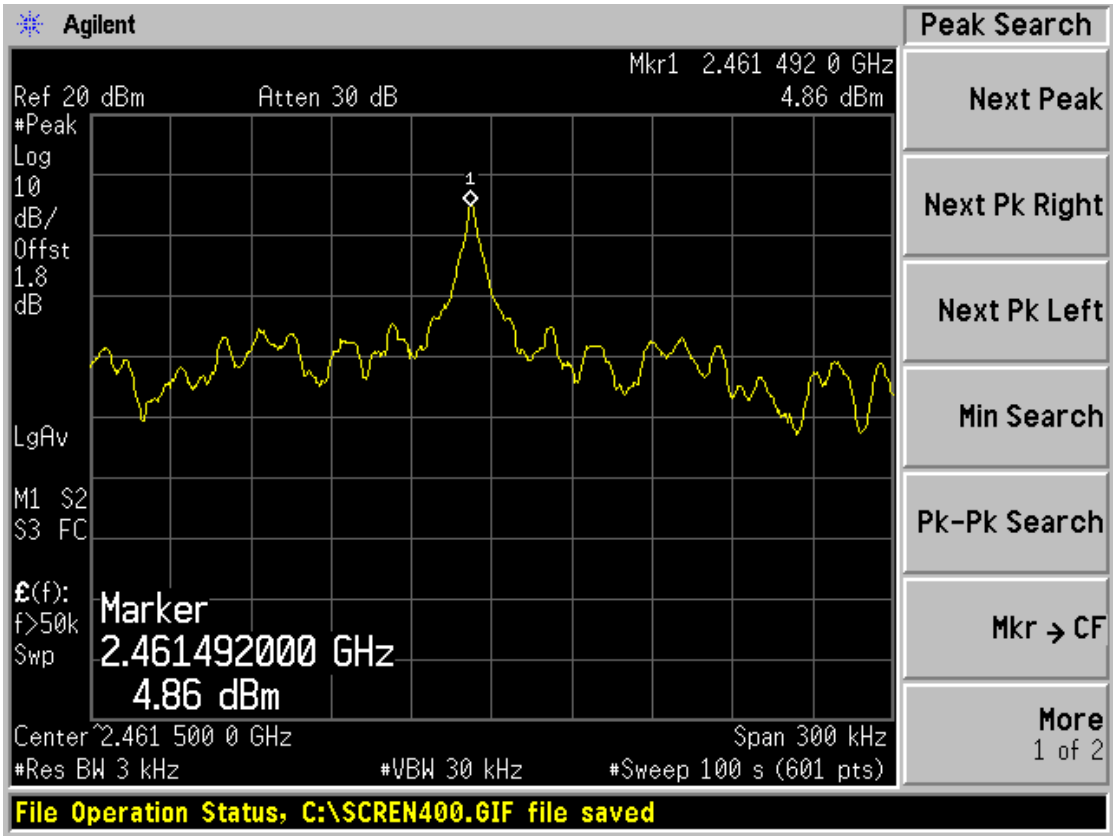
Test Date: Dec.22 Temperature: 17℃ Humidity: 40 %

Item	Channel	Frequency(GHz)	**Value(dBm)**
802.11b	1	2411.4925MHz	**4.09**
	6	2434.9804MHz	**-9.15**
	11	2461.4920MHz	**4.86**
802.11g	1	2405.6988 MHz	**-13.67**
	6	2434.8151MHz	**-12.78**
	11	2456.9955MHz	**-12.58**

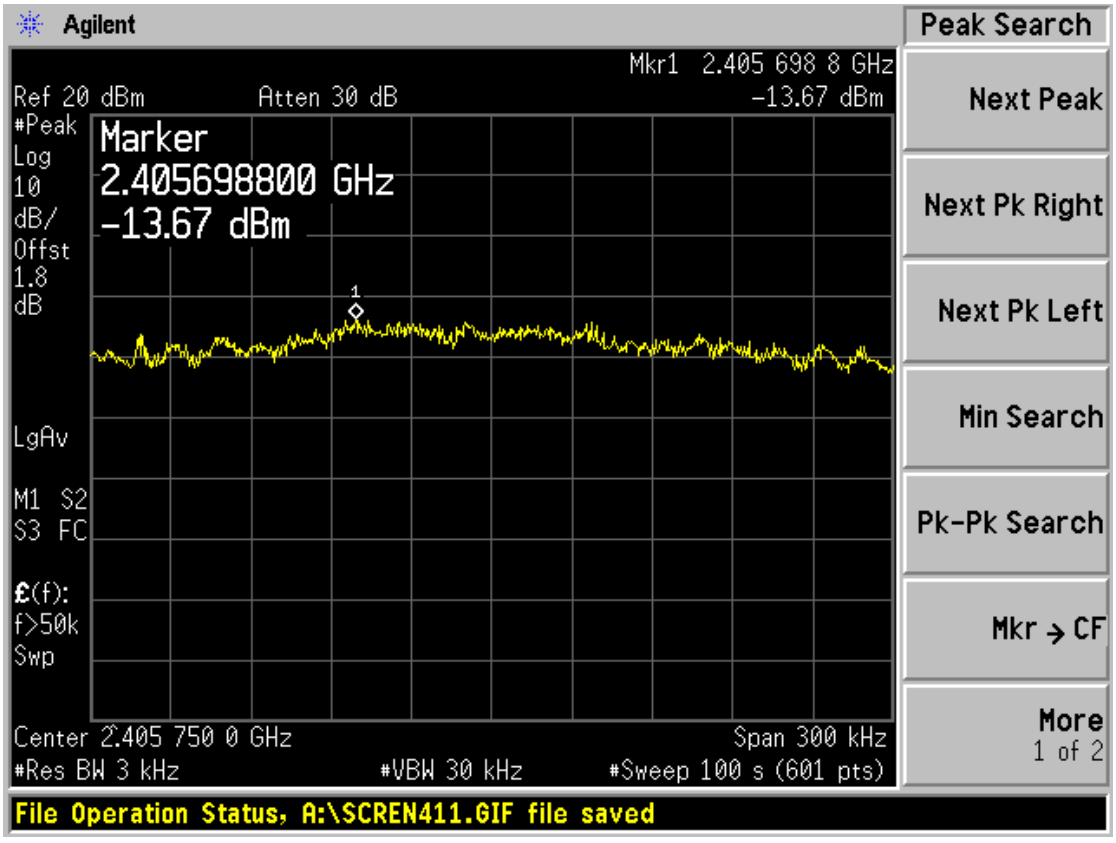
7.4.1.802.11b

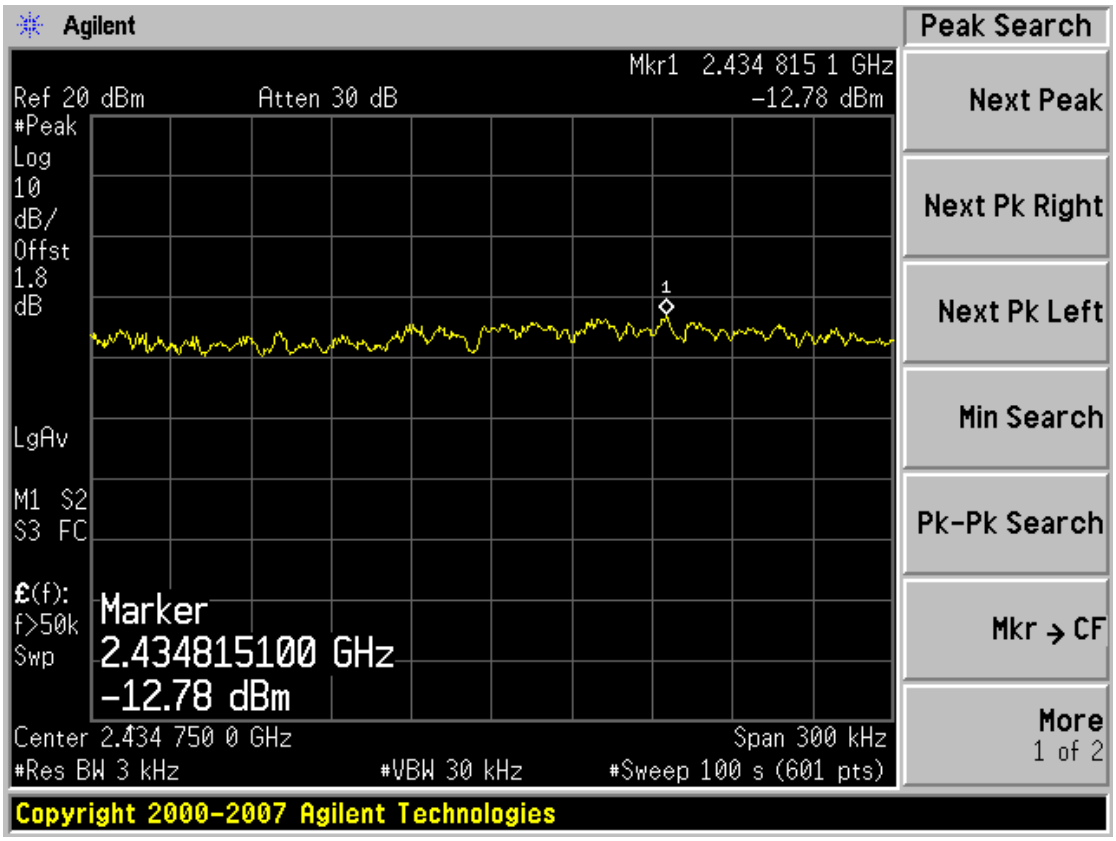

Agilent
Peak Search
Mkr1 2.411 492 5 GHz
Ref 20 dBm
Atten 30 dB
4.09 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Marker
2.411492500 GHz
4.09 dBm
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 2.411 480 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 30 kHz
#Sweep 100 s (601 pts)
Copyright 2000-2007 Agilent Technologies

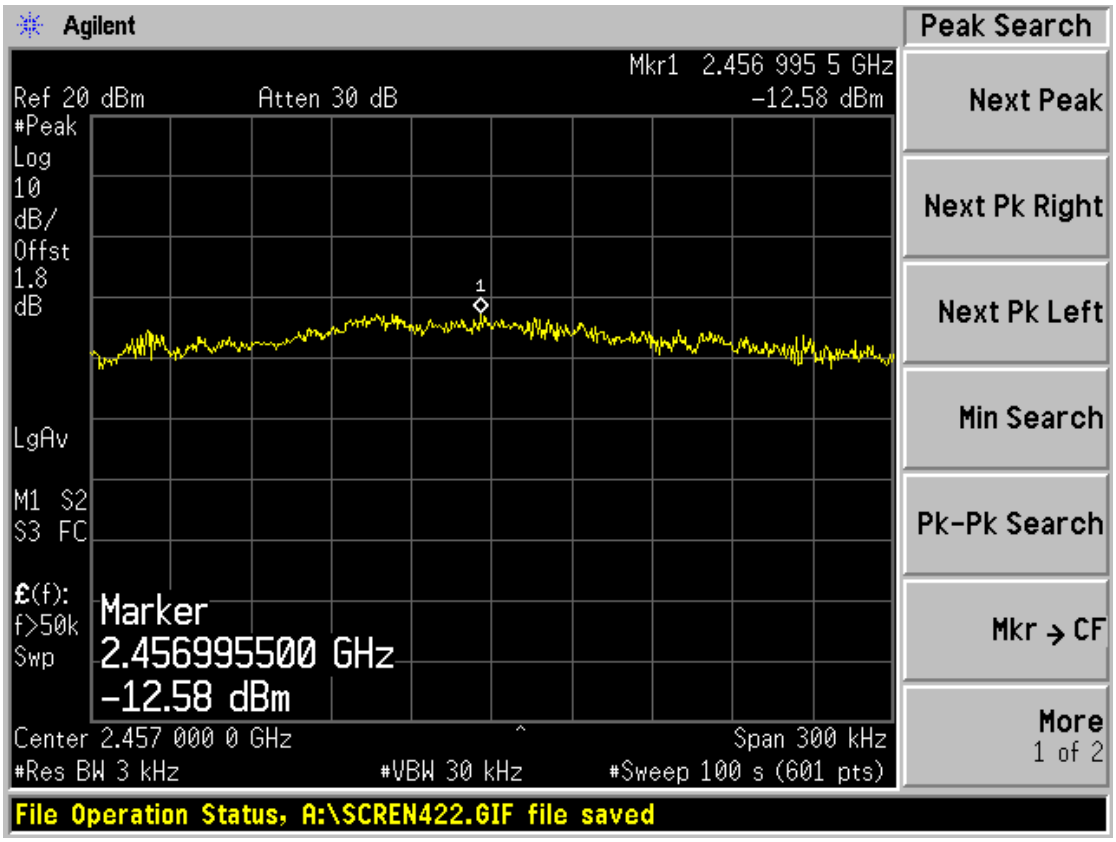

Agilent
Peak Search
Mkr1 2.434 980 4 GHz
Ref 20 dBm
Atten 30 dB
-9.15 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Marker
2.434980400 GHz
-9.15 dBm
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 2.435 000 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 30 kHz
#Sweep 100 s (601 pts)
File Operation Status, C:\SCREN392.GIF file saved


Agilent
Peak Search
Mkr1 2.461 492 0 GHz
Ref 20 dBm
Atten 30 dB
4.86 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Marker
2.461492000 GHz
4.86 dBm
Center 2.461 500 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 30 kHz
#Sweep 100 s (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, C:\SCREN400.GIF file saved

7.4.2.802.11g


Agilent
Peak Search
Mkr1 2.405 698 8 GHz
Ref 20 dBm
Atten 30 dB
-13.67 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
Marker
2.405698800 GHz
-13.67 dBm
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.405 750 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 30 kHz
#Sweep 100 s (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN411.GIF file saved


Agilent
Peak Search
Mkr1 2.434 815 1 GHz
Ref 20 dBm
Atten 30 dB
-12.78 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
Next Peak
Next Pk Right
Next Pk Left
Min Search
LgAv
M1 S2
S3 FC
Pk-Pk Search
£(f):
f>50k
Swp
Marker
2.434815100 GHz
-12.78 dBm
Mkr → CF
More
1 of 2
Center 2.434 750 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 30 kHz
#Sweep 100 s (601 pts)
Copyright 2000-2007 Agilent Technologies


Agilent
Peak Search
Mkr1 2.456 995 5 GHz
Ref 20 dBm
Atten 30 dB
-12.58 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
Next Peak
Next Pk Right
Next Pk Left
Min Search
LgAv
M1 S2
S3 FC
Pk-Pk Search
£(f):
f>50k
Swp
Marker
2.456995500 GHz
-12.58 dBm
Mkr → CF
More
1 of 2
Center 2.457 000 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 30 kHz
#Sweep 100 s (601 pts)
File Operation Status, A:\SCREN422.GIF file saved

8. EMISSION LIMITATIONS MEASUREMENT

8.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4447A	MY45300136	2010-01-08	2011-01-07

8.2. Block Diagram of Test Setup

The same as section 5.2.

8.3. Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. 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)).

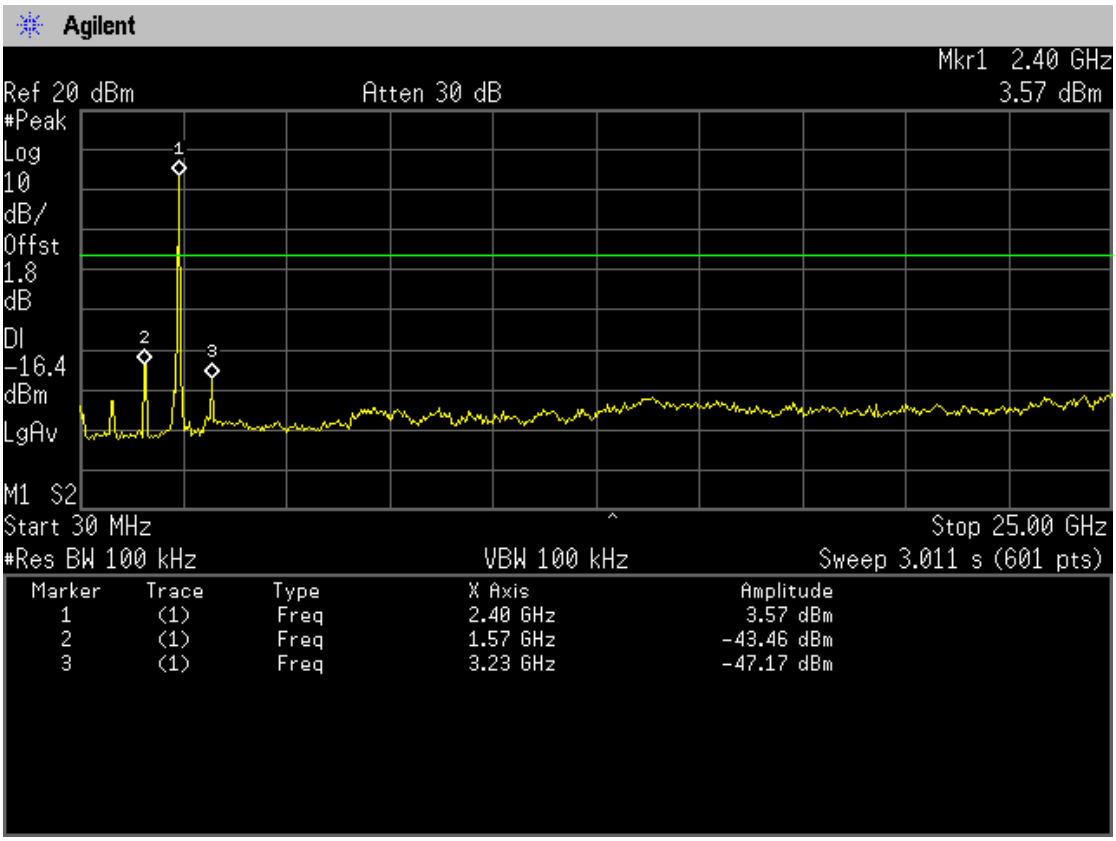
8.4. Test Results

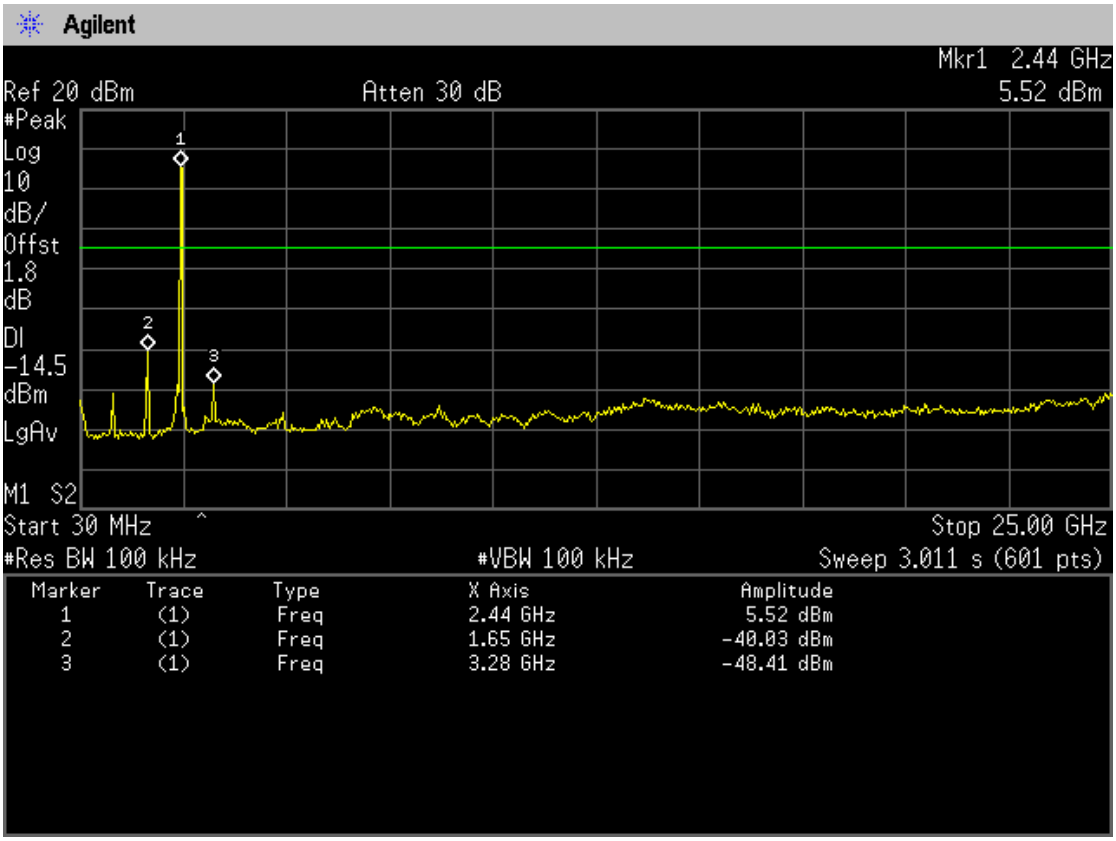
PASSED. All the test results are attached in next pages.

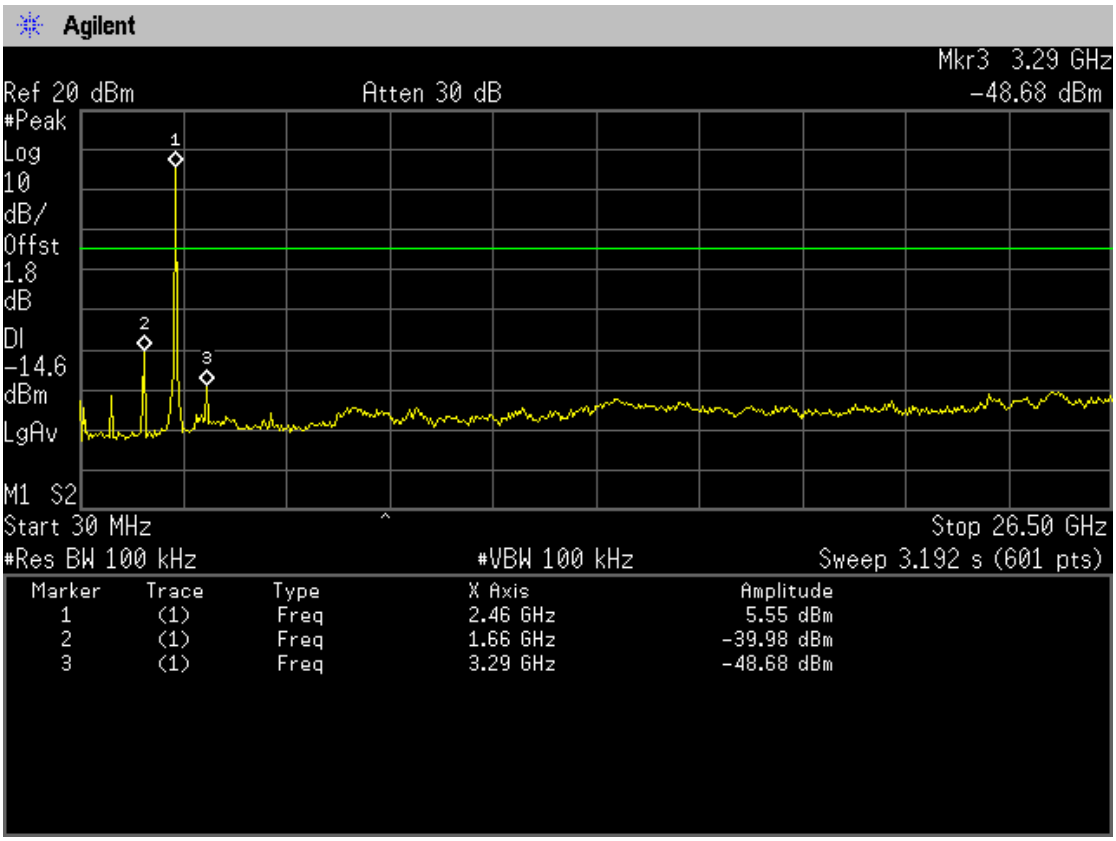
Test Date: Dec.22, 2010 Temperature: 17℃ Humidity: 40 %

Item	Channel	Frequency(GHz)	**Amplitude(dBm)**
802.11b	1	2.4	**3.57**
		1.57	**-43.46**
		3.23	**-47.17**
	6	2.44	**5.52**
		1.65	**-40.03**
		3.28	**-48.41**
	11	2.46	**5.55**
		1.66	**-39.98**
		3.29	**-48.68**
802.11g	1	2.41	**-1.27**
		1.62	**-51.01**
		3.21	**-43.59**
	6	2.44	**0.10**
		1.61	**-41.21**
		3.23	**-42.40**
	11	2.44	**-0.05**
		1.65	**-44.20**
		3.28	**-41.85**

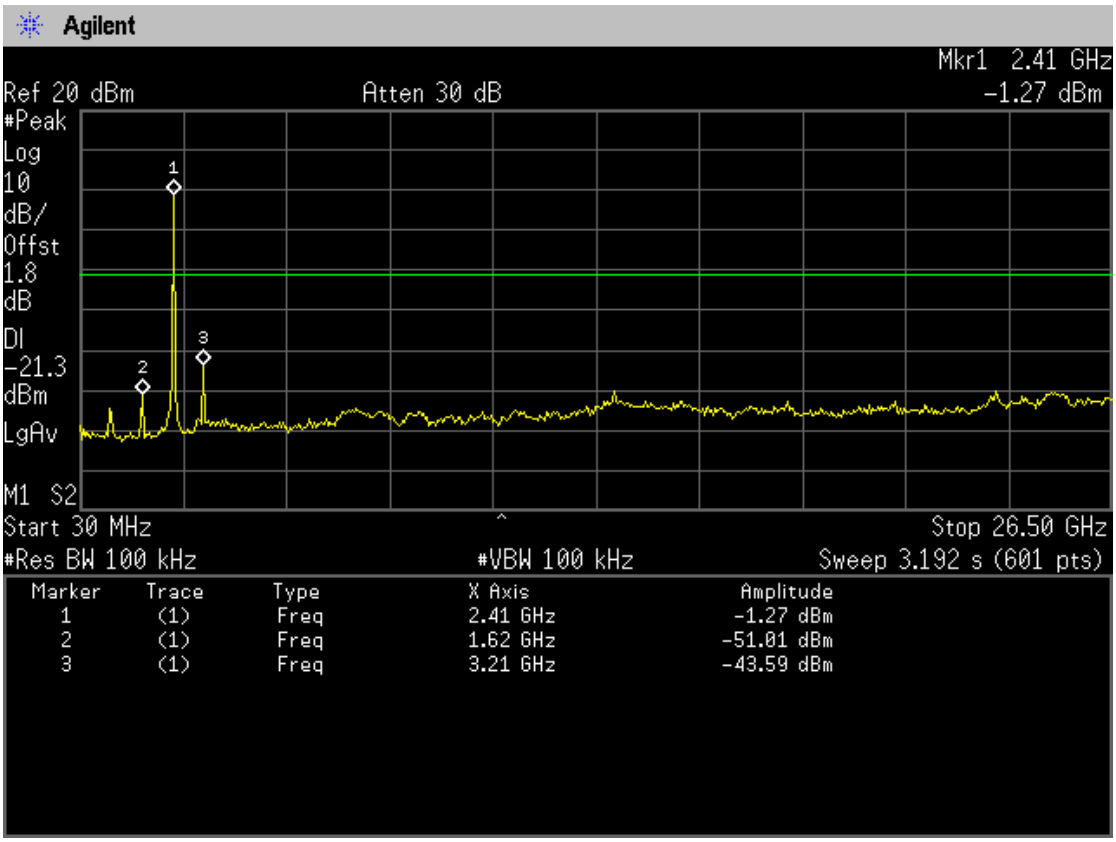
8.4.1.802.11b

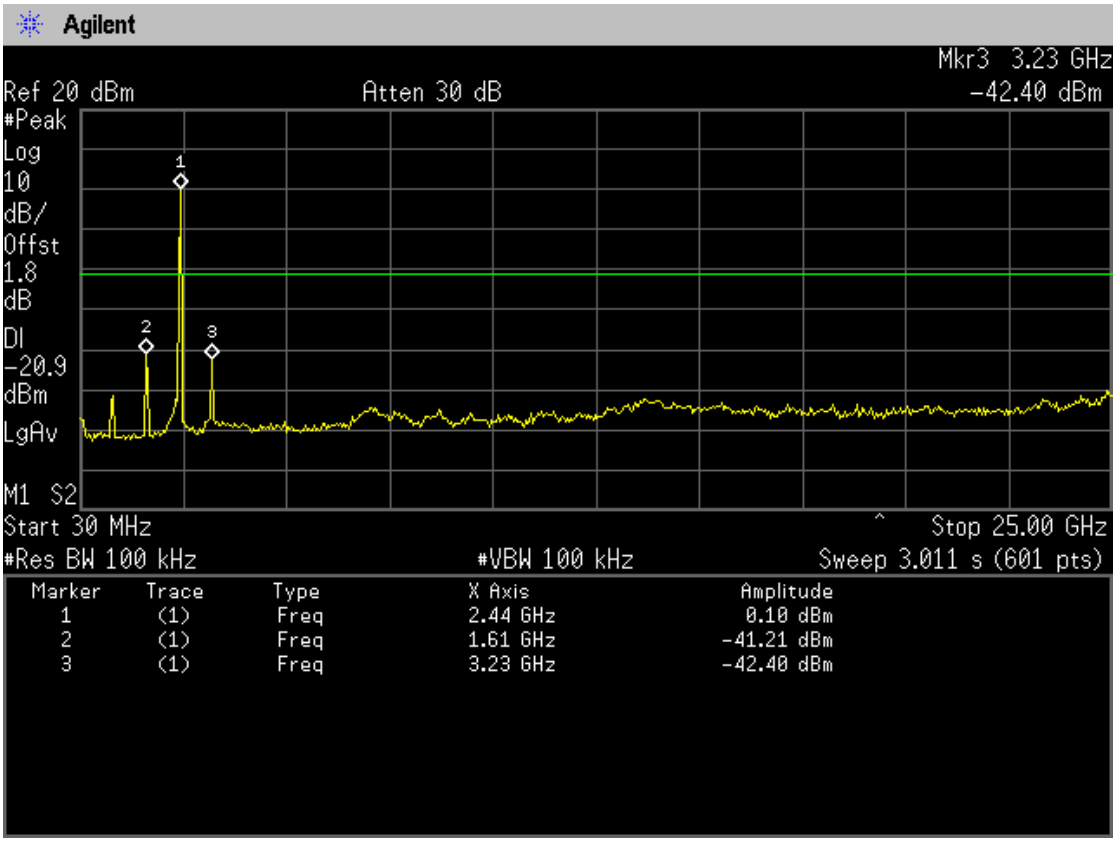

Agilent
Mkr1 2.40 GHz
3.57 dBm
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
Dl
-16.4
dBm
LgAv
M1 S2
Start 30 MHz
Stop 25.00 GHz
#Res BW 100 kHz
VBW 100 kHz
Sweep 3.011 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.40 GHz 3.57 dBm
2 (1) Freq 1.57 GHz -43.46 dBm
3 (1) Freq 3.23 GHz -47.17 dBm

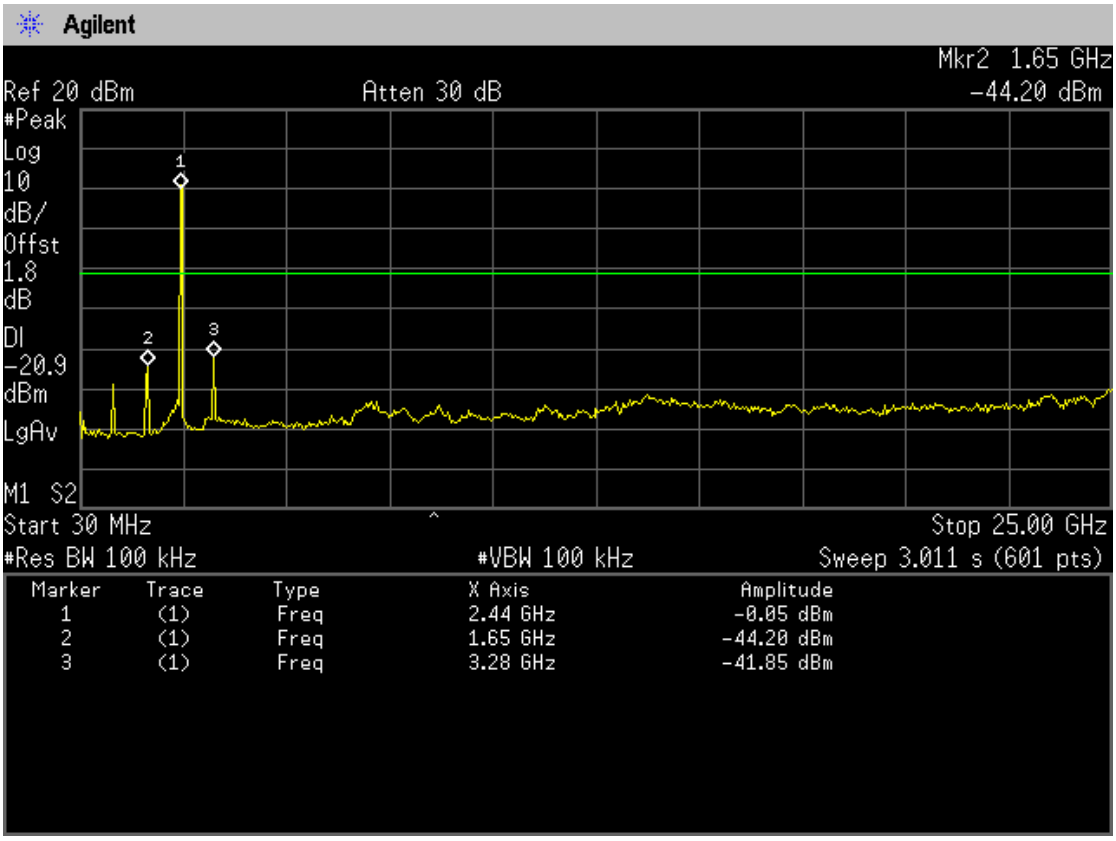

Agilent
Mkr1 2.44 GHz
5.52 dBm
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.8
dB
Dl
-14.5
dBm
LgAv
M1 S2
Start 30 MHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 3.011 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.44 GHz 5.52 dBm
2 (1) Freq 1.65 GHz -40.03 dBm
3 (1) Freq 3.28 GHz -48.41 dBm



8.4.2.For 802.11g




Agilent
Mkr3 3.23 GHz
Ref 20 dBm
Atten 30 dB
-42.40 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
Dl
-20.9
dBm
LgAv
M1 S2
Start 30 MHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 3.011 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.44 GHz 0.10 dBm
2 (1) Freq 1.61 GHz -41.21 dBm
3 (1) Freq 3.23 GHz -42.40 dBm


Agilent
Mkr2 1.65 GHz
Ref 20 dBm
Atten 30 dB
-44.20 dBm
#Peak
Log
10
dB/
Offst
1.8
dB
Dl
-20.9
dBm
LgAv
M1 S2
Start 30 MHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 100 kHz
Sweep 3.011 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.44 GHz -0.05 dBm
2 (1) Freq 1.65 GHz -44.20 dBm
3 (1) Freq 3.28 GHz -41.85 dBm

9. DEVIATION TO TEST SPECIFICATIONS

【NONE】