

## TEST REPORT For FCC

Test Report No. : 2011050053  
Date of Issue : May 23, 2011  
FCC ID : ZK9STM-8800  
Model/Type No. : STM-8800  
Kind of Product : Industrial PDA  
Applicant : Woongjin Holdings Co., Ltd.  
Applicant Address : 3F. Kukdong Bldg., Chungmuro 3-ga, Jung-gu, Seoul, Korea  
Manufacturer : Woongjin Holdings Co., Ltd.  
Manufacturer Address : 3F. Kukdong Bldg., Chungmuro 3-ga, Jung-gu, Seoul, Korea  
Contact Person : Hyong-Ju Kim / Principal Research Engineer  
Telephone : +82-2-2075-9370  
Received Date : November 27, 2010  
Test period : Start : April 11, 2011 End : April 29, 2011  
Test Results : ☒ In Compliance ☐ Not in Compliance

The test results presented in this report relate only to the object tested.

Tested by

Y. T. Lee

Young-taek, Lee  
Test Engineer  
Date: May 23, 2011

Reviewed by

Y. J. Park

Young-Joon, Park  
Technical Manager  
Date: May 23, 2011

## REPORT REVISION HISTORY

Date	Revision	Page No
May 23, 2011	Issued (2011050053)	All

*This report shall not be reproduced except in full, without the written approval of CTK Co., Ltd. This document may be altered or revised by CTK Co., Ltd. personnel only, and shall be noted in the revision section of the document. Any alteration of this document not carried out by CTK Co., Ltd. will constitute fraud and shall nullify the document.*

## TABLE OF CONTENTS

REPORT REVISION HISTORY .....	2
1.0 General Product Description .....	4
1.1 Tested Frequency .....	4
1.2 Model Differences .....	4
1.3 Device Modifications .....	5
1.4 Peripheral Devices .....	5
1.5 Calibration Details of Equipment Used for Measurement .....	5
1.6 Test Facility.....	5
1.7 Laboratory Accreditations and Listings .....	6
2.0 Summary of tests .....	7
2.1 Technical Characteristic Test .....	8
2.1.1 6dB Bandwidth .....	8
2.1.2 Maximum peak Conducted Output Power.....	14
2.1.3 Power Spectral Density .....	15
2.1.4 Band - edge .....	20
2.1.5 Field Strength of Emissions .....	29
2.1.6 AC Conducted Emissions.....	34
APPENDIX A – Test Equipment Used For Tests .....	37

## 1.0 General Product Description

Equipment model name	: STM-8800
Serial number	: Prototype
EUT condition	: Pre-production, not damaged
Antenna type	: Chip antenna      Gain 4.76 dBi
Frequency Range	: 2412 Mhz – 2462 MHz (DSSS/OFDM)
RF output power	: 8.45 dBm Peak Conducted (802.11b) : 8.24 dBm Peak Conducted (802.11g)
Number of channels	: 11 (DSSS/OFDM)
Type of Modulation	: CCK, DQPSK, DBPSK for DSSS : 64QAM, 16QAM, QPSK, BPSK for OFDM
Transfer Rate	: 11/5.5/2/1 Mbps for 802.11b : 54/48/36/24/18/12/9/6 Mbps for 802.11g
Power Source	: Rechargeable Li-ion Battery Pack 3.7 Vdc/1900 mAh

## 1.1 Tested Frequency

	LOW	MID	HIGH
Frequency (MHz) For 802.11b	2412	2437	2462
Frequency (MHz) For 802.11g	2412	2437	2462

## 1.2 Model Differences

Not applicable

### 1.3 Device Modifications

The following modifications were necessary for compliance:

Not applicable

### 1.4 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.	FCC ID or DoC
AC ADAPTER	NingBo ISO Electronics Co., Ltd.	KPA-045E	-	-
Cradle	Woongjin System & Technology Co., Ltd.	-	-	-
Personal Computer	Samsung Electronics Co., Ltd.	DB-A150	ZMSI96BSB0012 5F	DoC
LCD Monitor	VS17	Lite-ON Technology Corp.	CNN5130QMC	DoC
Keyboard(PS/2)	Samsung Electro-Mechanics Co., Ltd.	SEM-DT35	33008101	DoC
Mouse(USB)	Microsoft Corporation	Optical Mouse USB/PS2 Compatible	69657-492-4974533-40420	DoC





### 1.5 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

### 1.6 Test Facility

The measurement facility is located at 386-1, Ho-dong, Cheoin-gu, Yongin-si, Gyeonggi-do, 449-100, Korea. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

## 1.7 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3 & 10 meter Open Area Test Sites and one conducted site to perform FCC Part 15/18 measurements.	 805871
JAPAN	VCCI	10 meter Open Area Test Site and one conducted site.	 R-948, C-986, T-1843
KOREA	KCC	EMI (10 meter Open Area Test Site and two conducted sites) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 No. 51, KR0025
International	KOLAS	EMC	

## 2.0 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status (note 1)
15.247(a)	6 dB Bandwidth	> 500 kHz	Conducted	C
15.247(b)	Maximum Output Power	< 1 Watt		C
15.247(d)	Conducted Spurious emission	> 20 dBc		C
15.247(d)	Band Edge	> 20 dBc		C
15.247(e)	Transmitter Power Spectral Density	< 8 dBm @ 3 kHz		C
				C
15.209	Field Strength of Harmonics	15.209(a)	Radiated	C
15.207	AC Conducted Emissions	15.207(a)	Line Conducted	C

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

The sample was tested according to the following specification:  
- FCC Part 15.247, ANSI C63.4-2003

## 2.1 Technical Characteristic Test

### 2.1.1 6dB Bandwidth

**Procedure:**

The bandwidth at 6dB below the highest in-band spectral density was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 6dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is ( as close as possible to ) even with the reference marker level. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz

Span = 40 MHz

VBW = 100 kHz (VBW  $\geq$  RBW)

Sweep = auto

Trace = max hold

Detector function = peak



**Measurement Data:**

**Test mode : 802.11b, DSSS, 11Mbps**

Mode	Frequency (MHz)	Channel No.	Test Results	
			Measured Bandwidth (MHz)	Result
802.11b	2412	1	11.52	Complies
	2437	6	11.52	Complies
	2462	11	11.53	Complies

**Test mode : 802.11g, OFDM, 24Mbps**

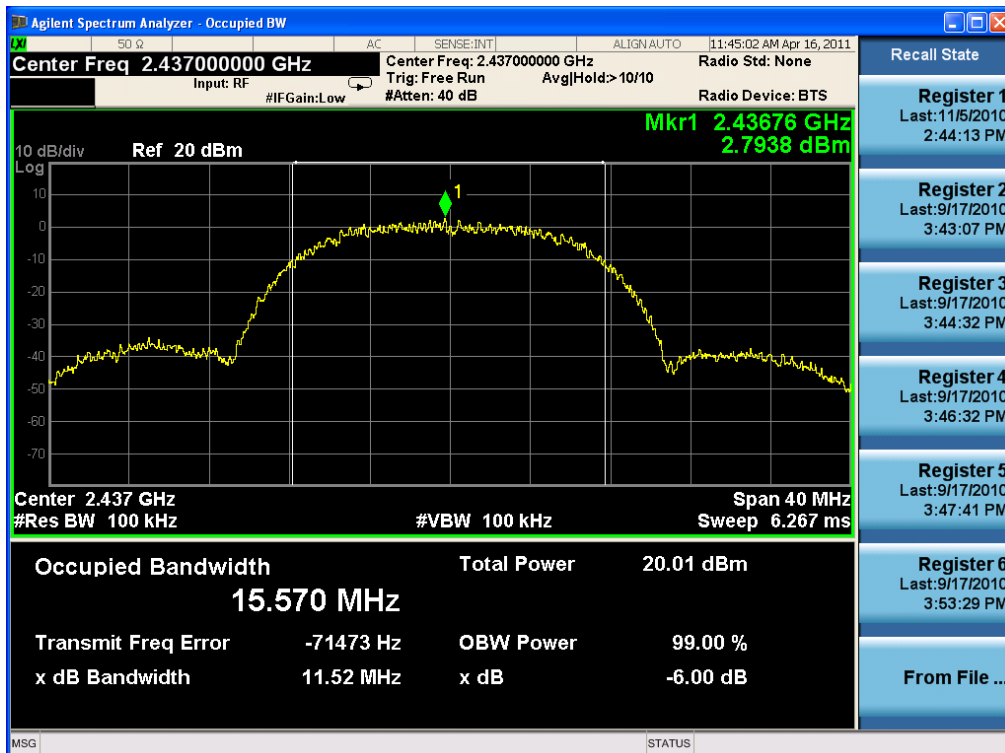
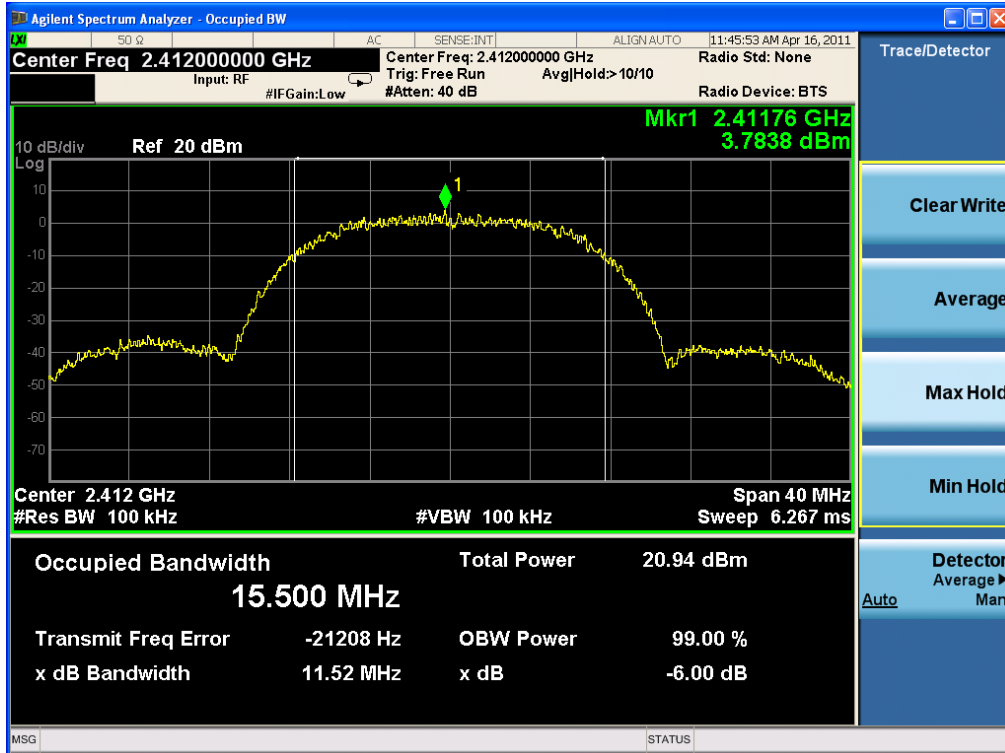
Mode	Frequency (MHz)	Channel No.	Test Results	
			Measured Bandwidth (MHz)	Result
802.11g	2412	1	16.49	Complies
	2437	6	16.49	Complies
	2462	11	16.49	Complies

**Minimum Standard:**

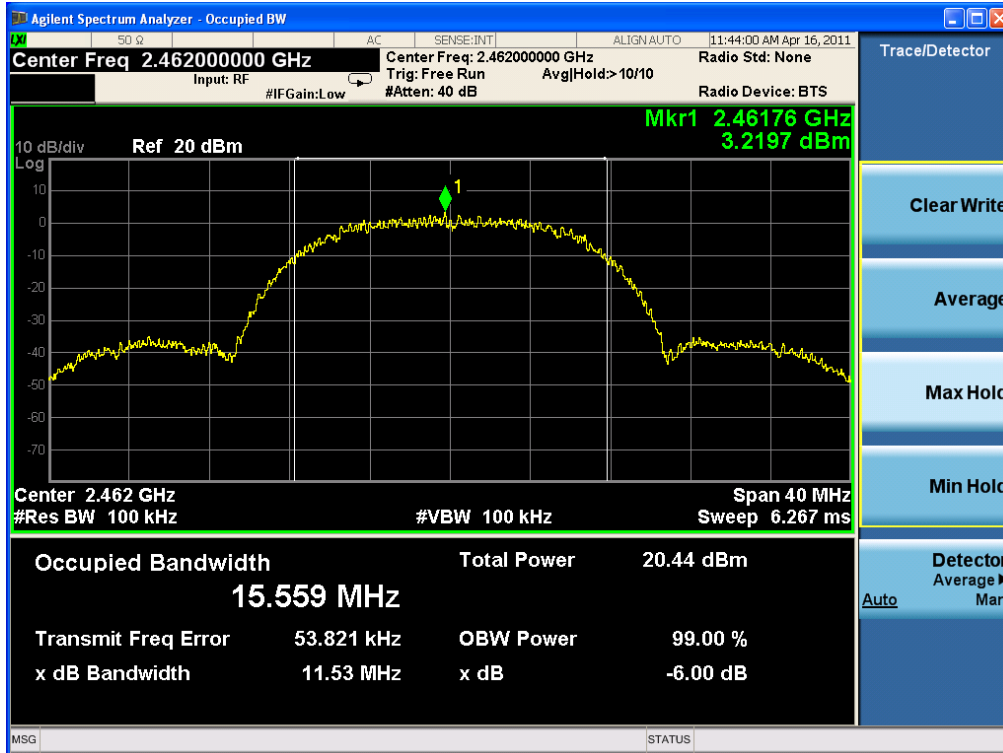
6 dB Bandwidth > 500kHz

See next pages for actual measured spectrum plots.

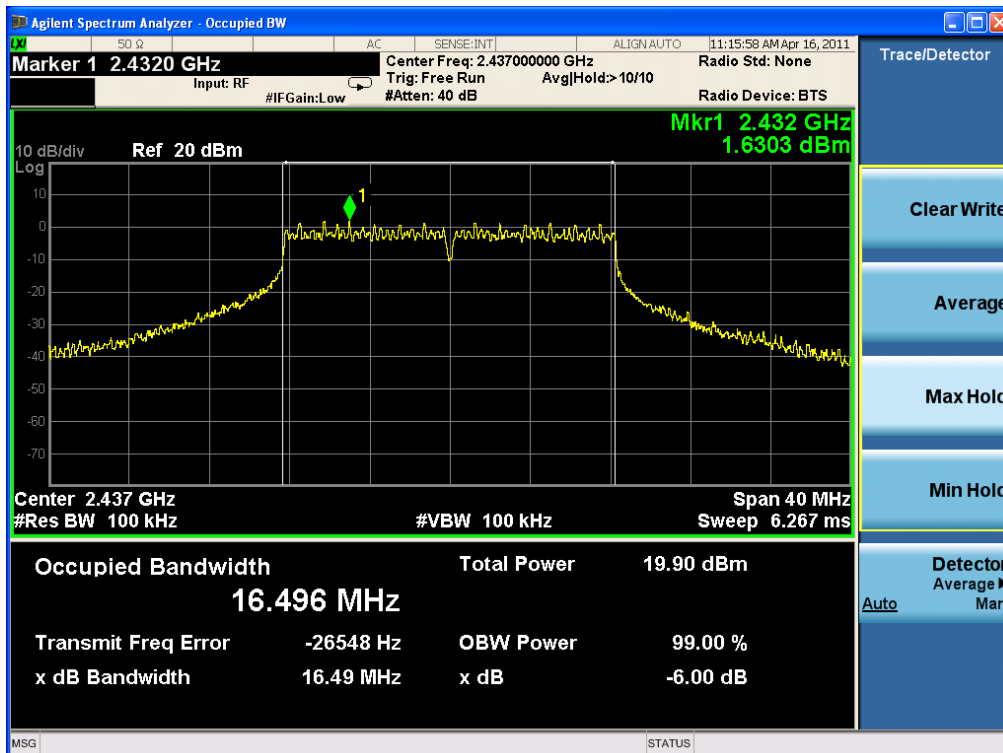
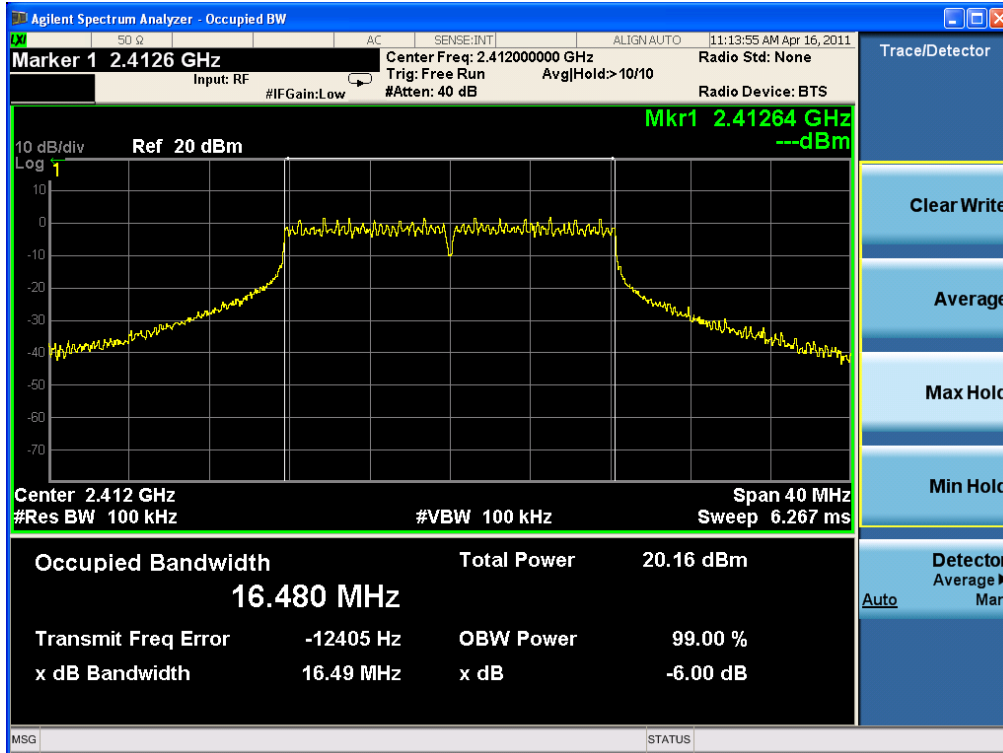
## 802.11b



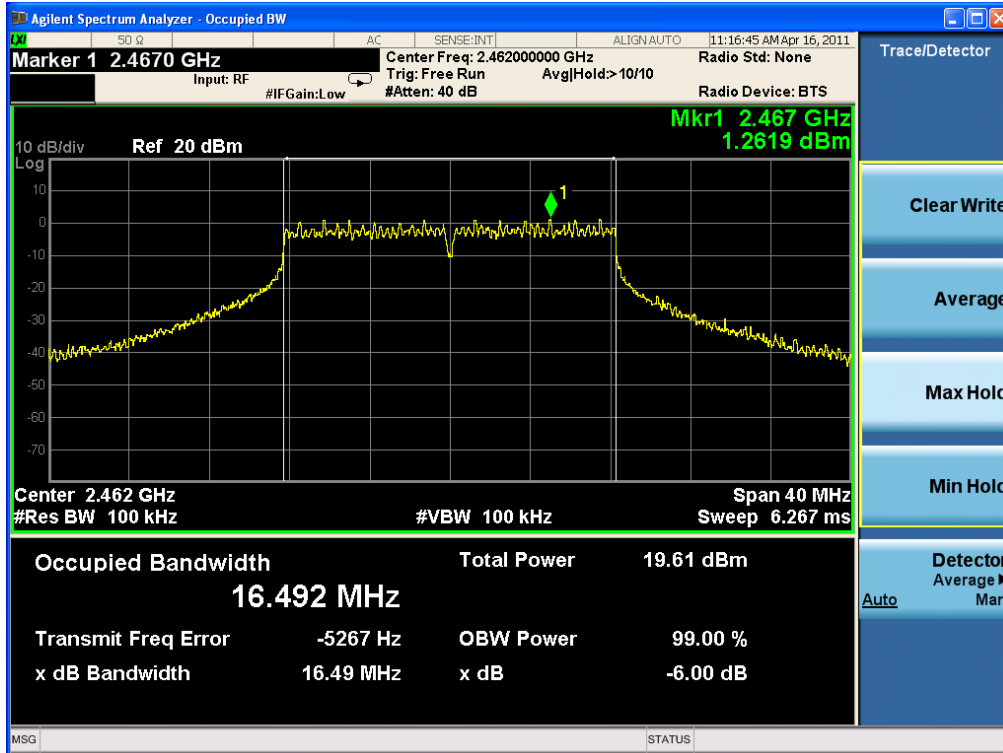
## 802.11b



## 802.11g



## 802.11g



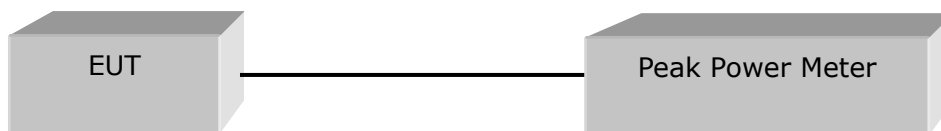
## 2.1.2 Maximum peak Conducted Output Power

### Test Location

RF Test Room

### Test Procedures

The transmitter output is connected to a spectrum analyzer and the analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth.



### Limit

< 1 W

### Test Results

#### Test mode : 802.11b, DSSS, 11Mbps

Frequency (MHz)	Channel No.	Peak output power(dBm)	Limit	Result
2412	Low	7.54	30dBm	Complies
2437	Middle	8.45	30dBm	Complies
2462	High	7.45	30dBm	Complies

#### Remark.

The 802.11b data rate were set in 11Mbps, due to the highest RF output power.

#### Test mode : 802.11g, OFDM, 24Mbps

Frequency (MHz)	Channel No.	Peak output power(dBm)	Limit	Result
2412	Low	7.34	30dBm	Complies
2437	Middle	8.24	30dBm	Complies
2462	High	7.33	30dBm	Complies

#### Remark.

The 802.11g data rate were set in 24Mbps, due to the highest RF output power.

### 2.1.3 Power Spectral Density

#### Procedure:

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

The spectrum analyzer is set to:

RBW = 3 kHz

VBW = (VBW ≥ RBW)

Sweep = 100 s (Span/3 kHz)

Span = 300 kHz

Detector function = peak

Trace = max hold

#### Test mode : 802.11b, DSSS, 11 Mbps

Mode	Frequency (MHz)	Ch.	Test Results	
			dBm	Result
802.11b	2412	1	-7.945	Complies
	2437	6	-8.887	Complies
	2462	11	-8.365	Complies

#### Test mode : 802.11g, OFDM, 24 Mbps

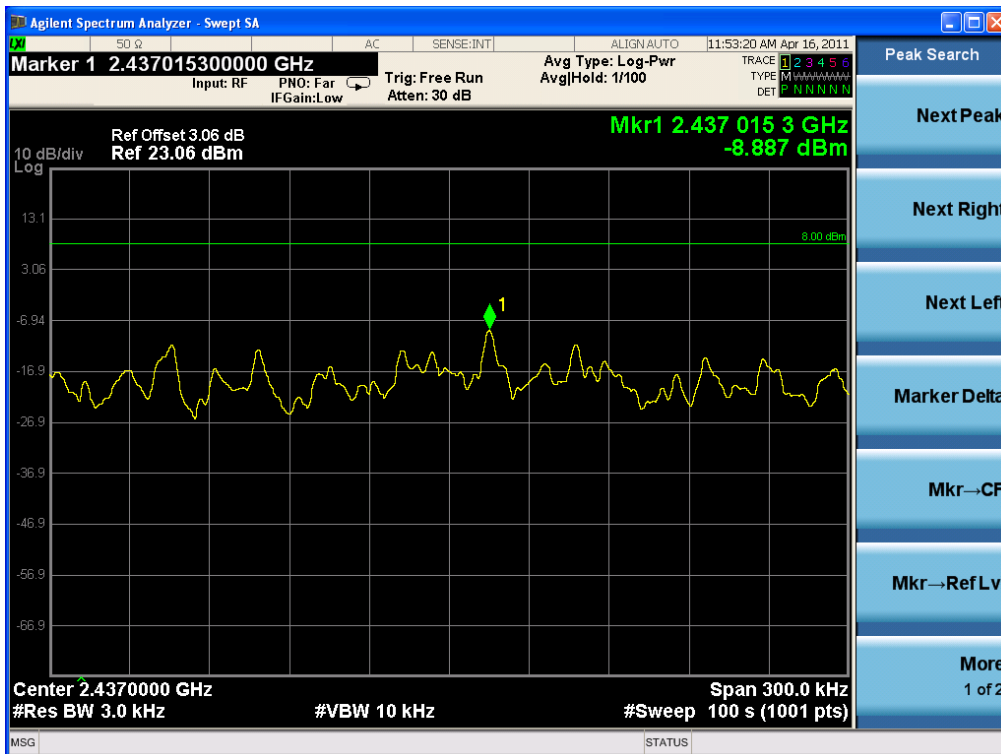
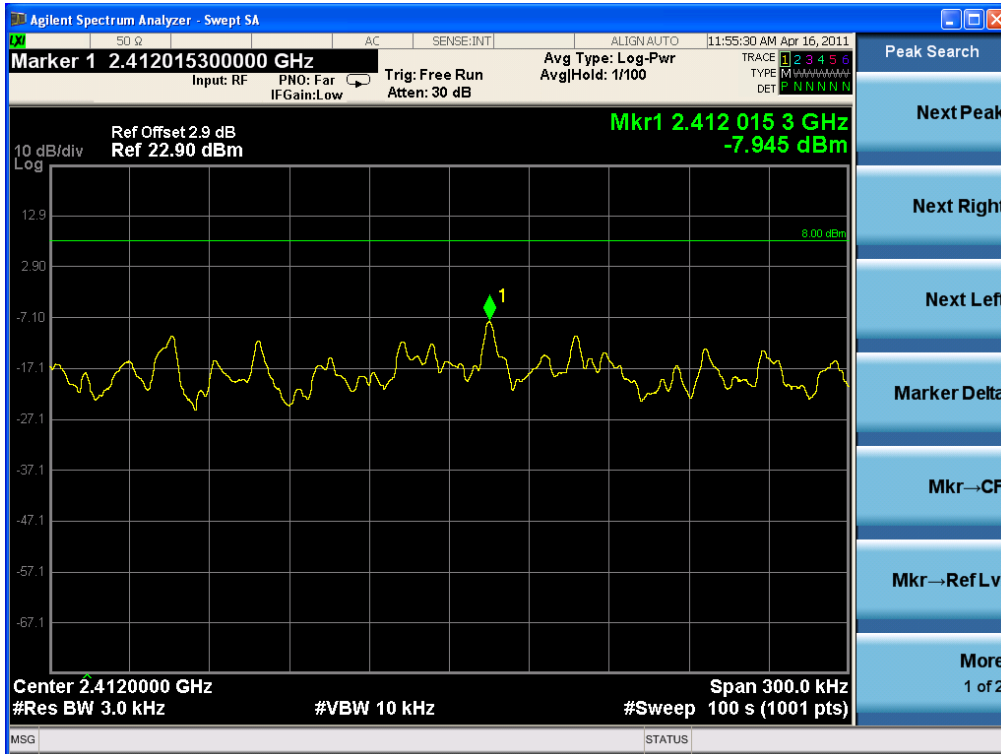
Mode	Frequency (MHz)	Ch.	Test Results	
			dBm	Result
802.11b	2412	1	-16.903	Complies
	2437	6	-16.084	Complies
	2462	11	-15.636	Complies

#### Minimum Standard:

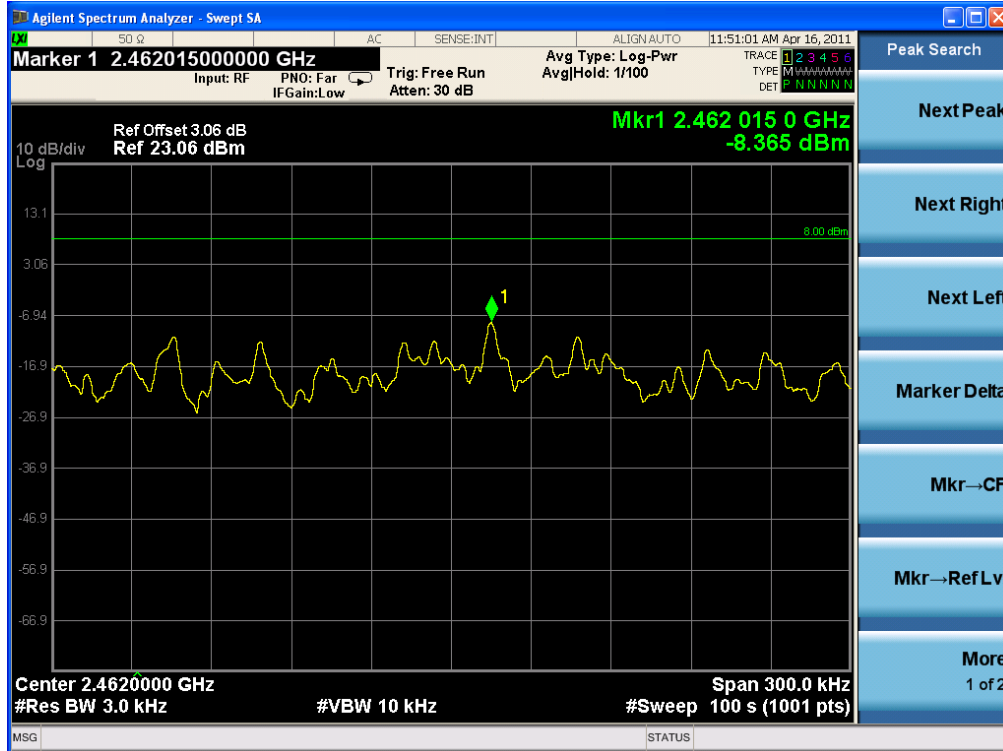
Power Spectral Density	< 8dBm @ 3 kHz BW
------------------------	-------------------

See next pages for actual measured spectrum plots.

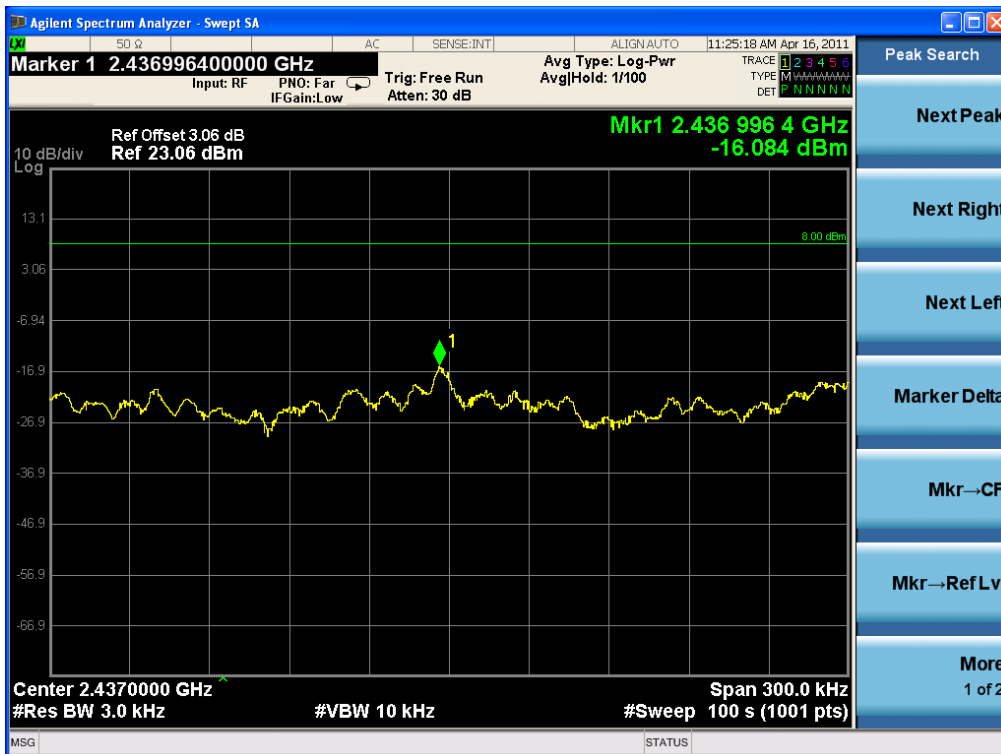
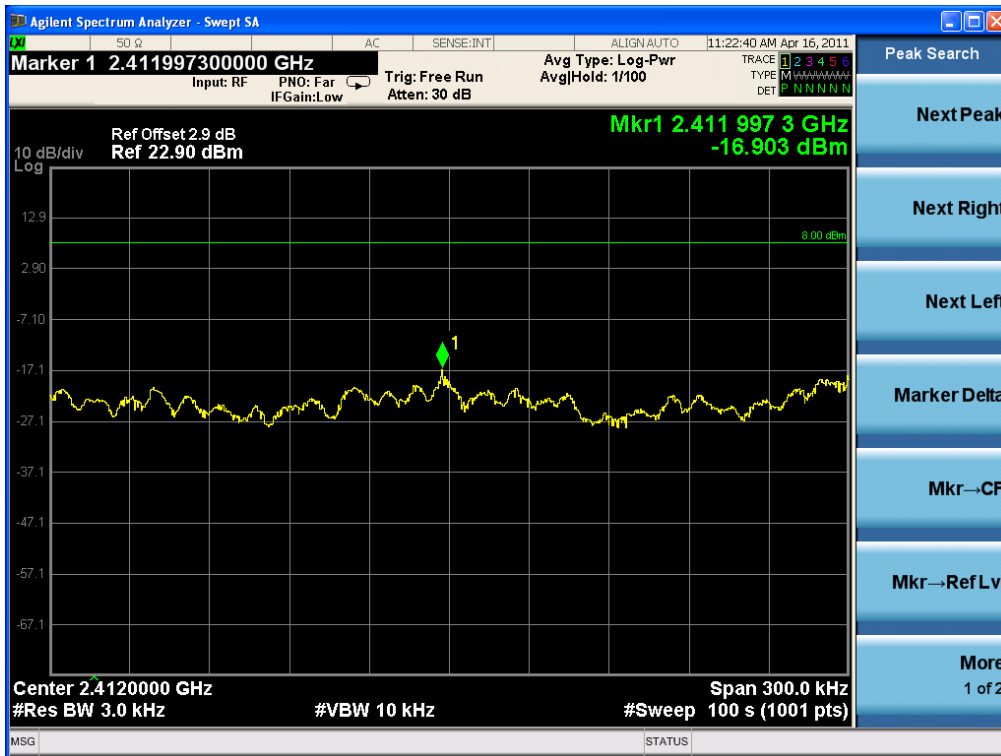
## 802.11b Power Density Measurement

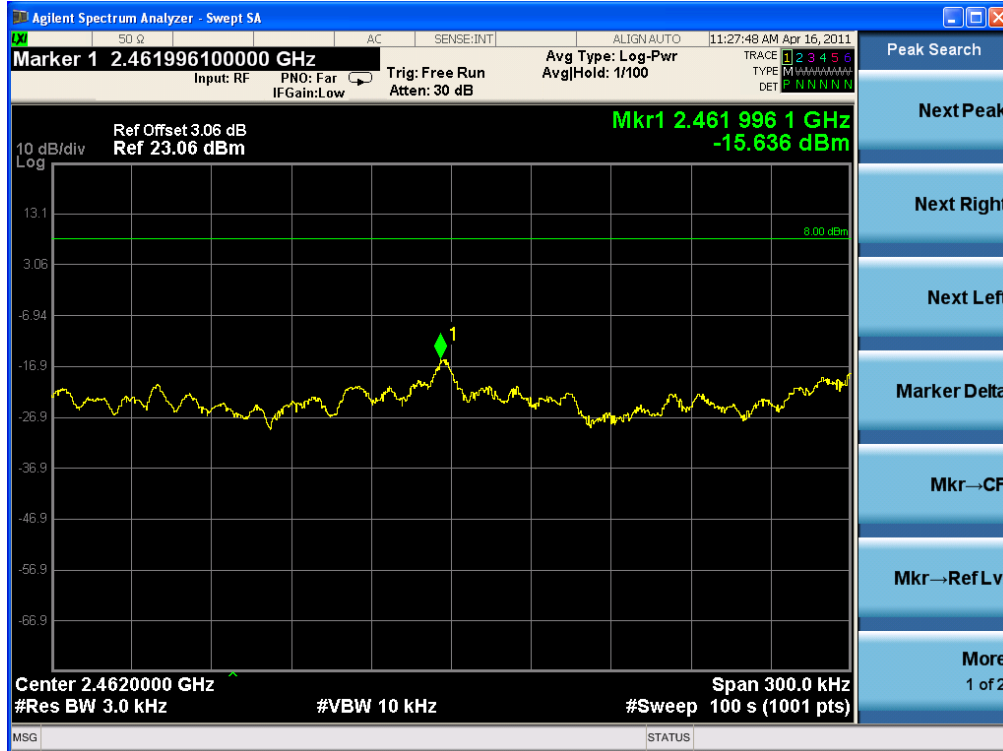






## 802.11g Power Density Measurement





## 2.1.4 Band - edge

### Procedure:

The bandwidth at 20dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz

VBW = 100 kHz

Span = 50 MHz

Detector function = peak

Trace = max hold

Sweep = auto

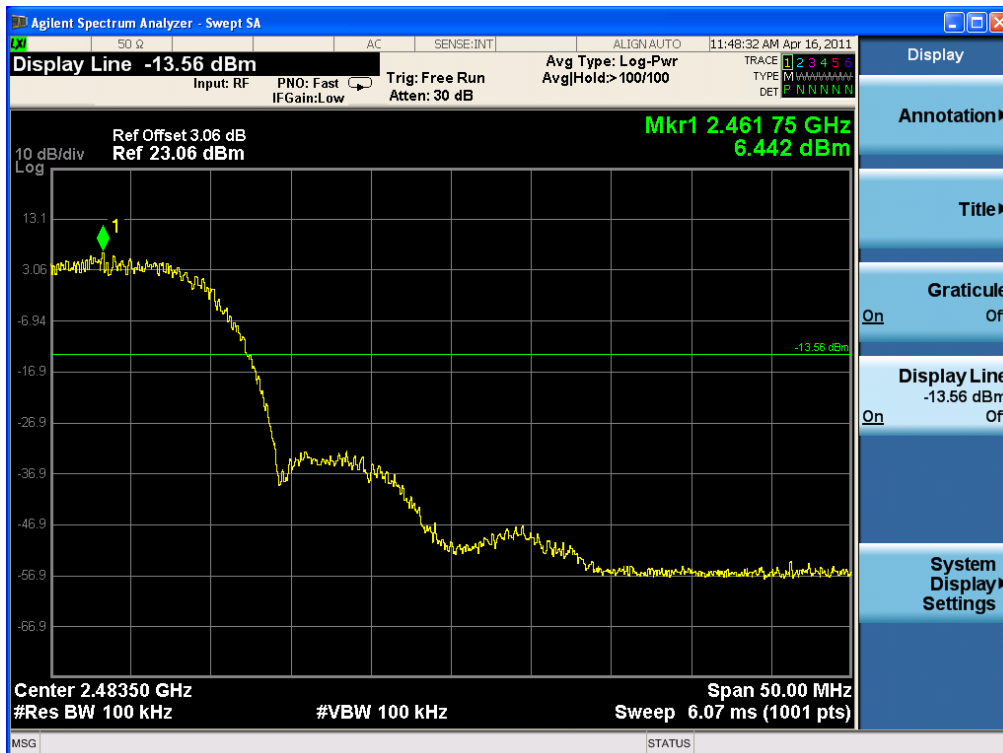
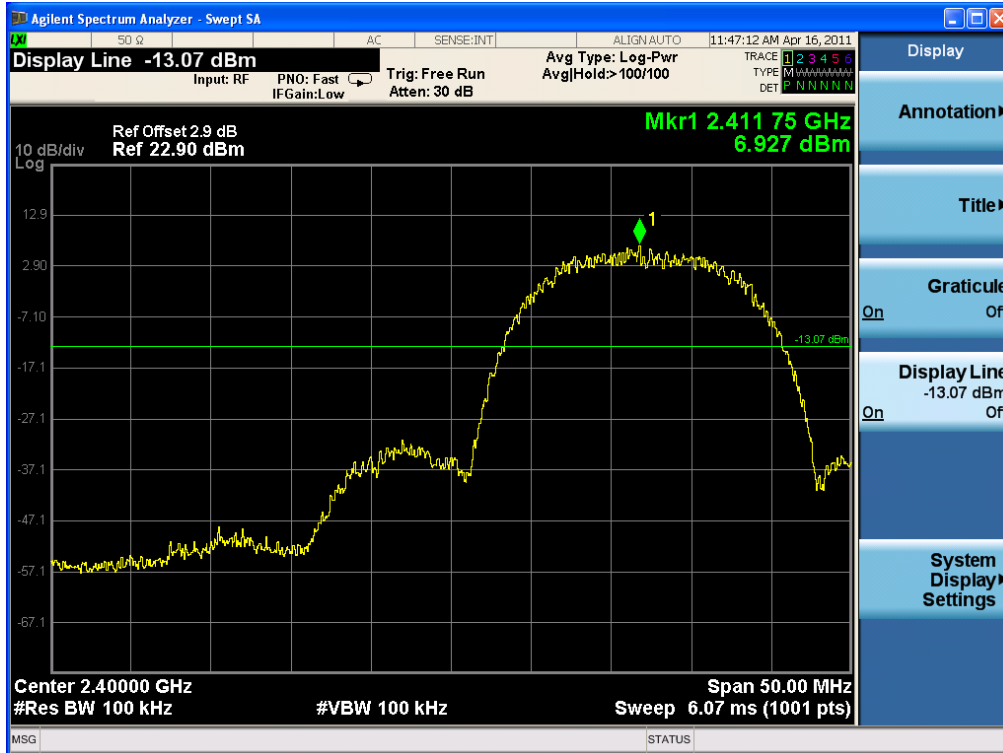
### Measurement Data: Complies

- All conducted emission in any 100kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.

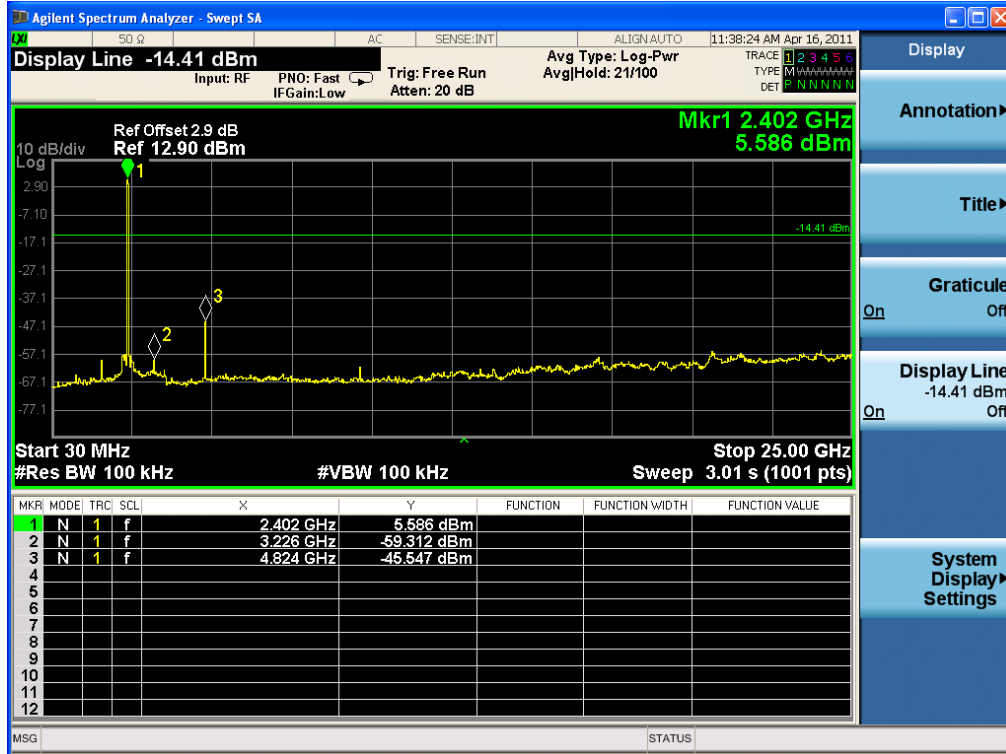
Minimum Standard:	> 20 dBc
-------------------	----------

See next pages for actual measured spectrum plots.

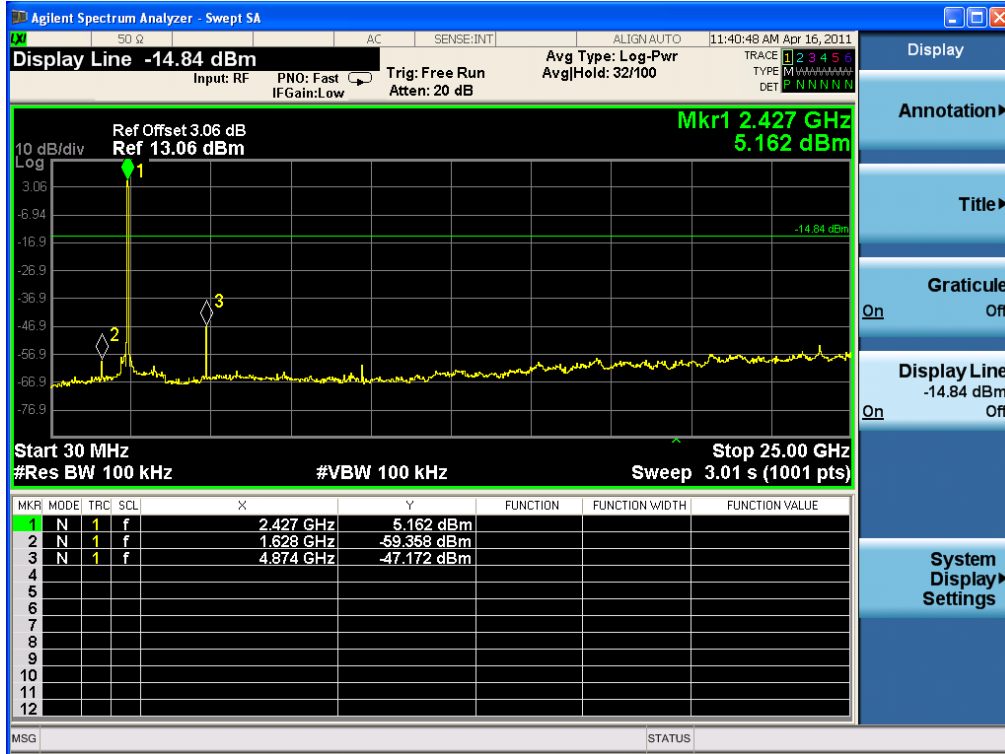
## 802.11b Band-edge Measurements



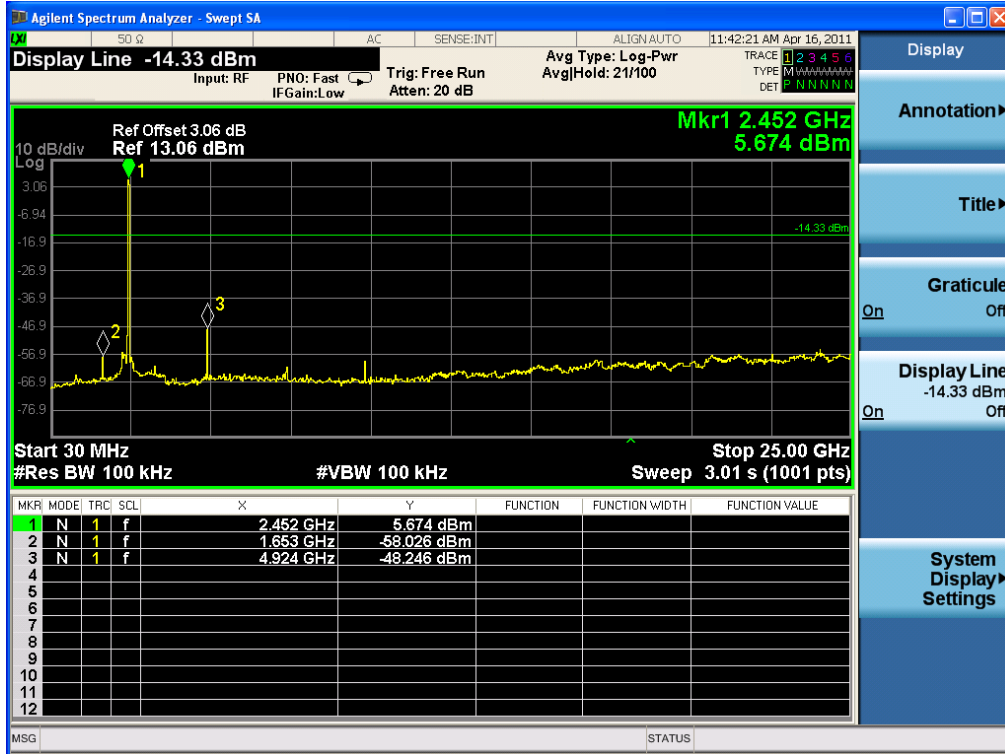
**Band – edge (at 20 dB blow) – Low channel(802.11b)**  
**Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic**



Band – edge (at 20 dB blow) – Mid channel(802.11b)  
Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic

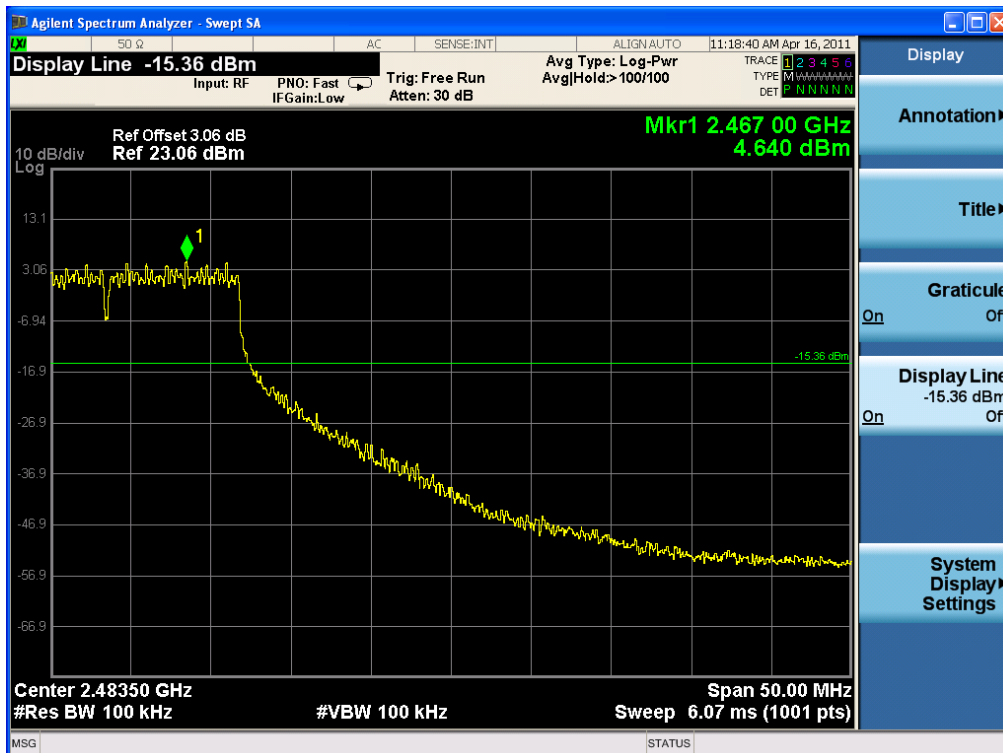
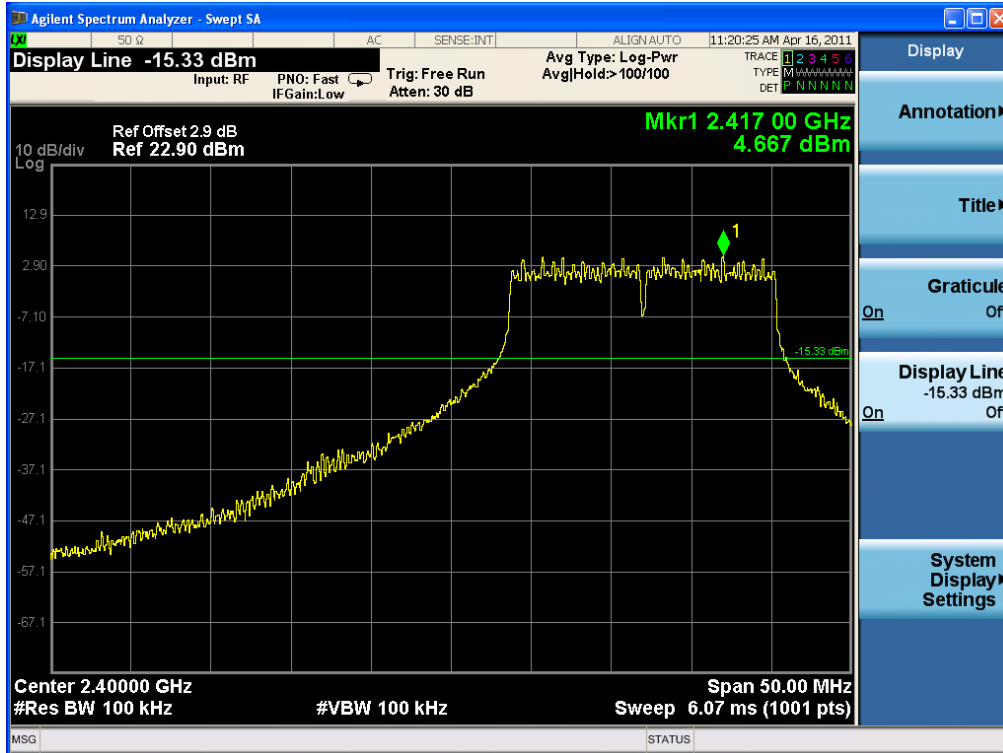


**Band – edge (at 20 dB blow) – High channel(802.11b)**  
**Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic**

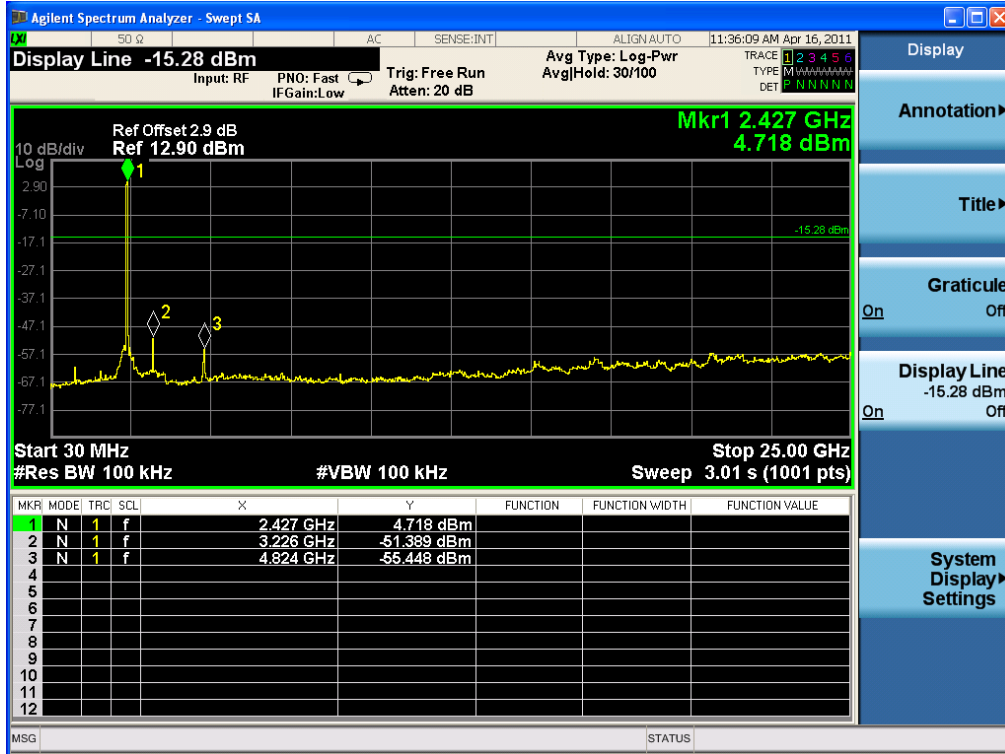




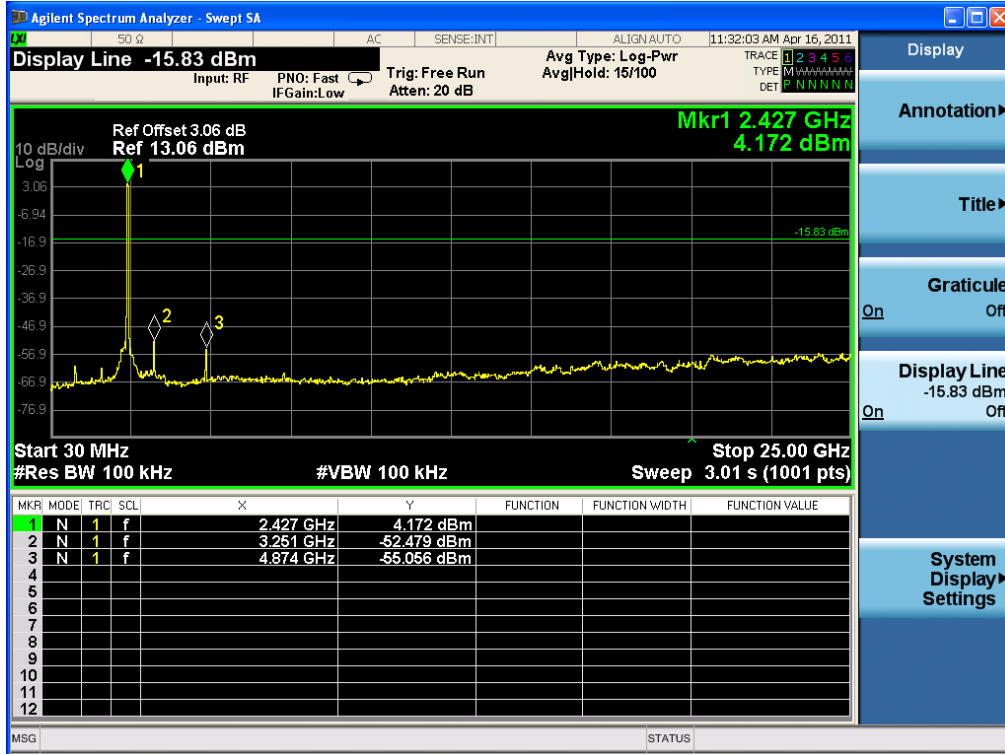
## 802.11g Band-edge Measurements



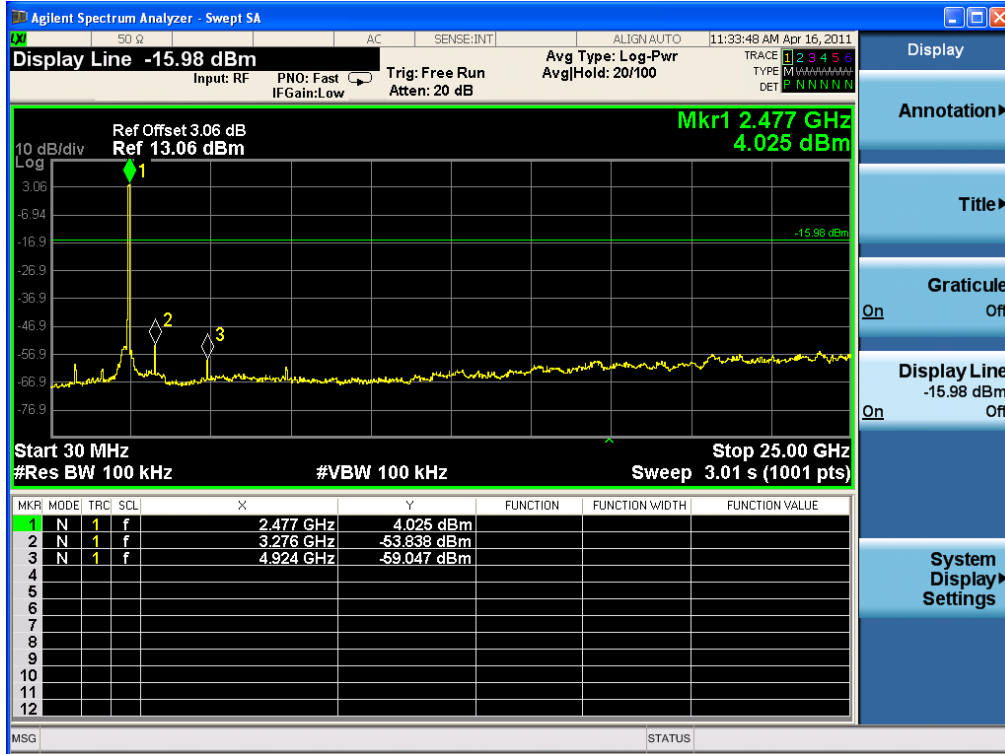
**Band – edge (at 20 dB blow) – Low channel(802.11g)**  
**Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic**



Band – edge (at 20 dB blow) – Mid channel(802.11g)  
Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



Band – edge (at 20 dB blow) – High channel(802.11g)  
Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



## 2.1.5 Field Strength of Emissions

### Test Location

☒ Testing was performed at a test distance of 3 meter Open Area Test Site

### Test Procedures

The height of the measuring antenna was varied between 1 to 4 m and the table was rotated a full revolution in order to obtain maximum values of the electric field intensity. The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

The spectrum analyzer is set to:

Center frequency = the worst channel

Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic

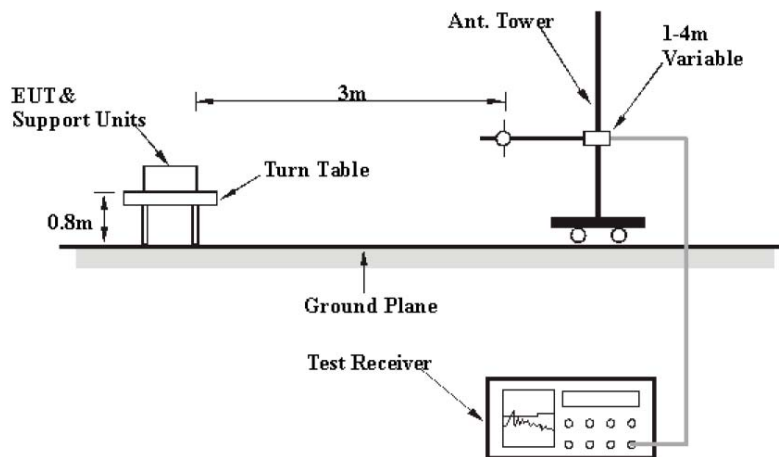
RBW = 120 kHz (30 MHz ~ 1 GHz) VBW ≥ RBW

= 1 MHz (1 GHz ~ 10<sup>th</sup> harmonic)

Span = 100 MHz

Detector function = Quasi-peak

Trace = max hold



### Limit

#### - 15.209(a)

Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m
30-88	100**	40
88-216	150**	43.5
216-960	200**	46
Above 960	500	54

\*\* Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

## Test Results

**Test mode : 802.11b, DSSS, 11Mbps**

EUT	INDUSTRIAL PDA	Measurement Detail	
Model	STM-8800	Frequency Range	Below 1000MHz
Mode	802.11b(Worst Case)	Detector function	Quasi-Peak

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
47.06	34.3	5.7	Quasi-peak

## Test Data

Frequency [MHz]	Reading [dBμV/m]	Pol.	Height [m]	Correction Factor			Limits [dBμV/m]	Result [dBμV/m]	Margin [dB]
				Antenna	Cable	Amp. Gain			
47.06	55.7	V	1.0	9.7	0.3	31.4	40.0	34.3	5.7
241.06	55.6	H	4.0	9.4	1.9	31.3	46.0	35.6	10.4
308.97	54.7	H	4.0	11.7	2.5	31.3	46.0	37.6	8.4
325.97	50.0	V	1.8	12.2	2.6	31.3	46.0	33.5	12.5
393.89	48.4	V	2.0	13.7	2.8	31.3	46.0	33.6	12.4
716.35	42.7	H	2.0	18.8	4.0	31.3	46.0	34.2	11.8

H : Horizontal, V : Vertical

Result = Reading + Antenna + Cable - Amp.Gain

## Test Results

EUT	INDUSTRIAL PDA	Measurement Detail	
Model	STM-8800	Frequency Range	1-25GHz
Channel	Channel 1	Detector function	Peak

## Remarks

We have tested three mode (X, Y, Z). The worst mode (X axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
4824.00	47.1	6.9	Average

### Test Data – 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
				Antenna	Amp. Gain	Cable						
4824.00	37.9 50.2	H	1.0	32.7	34.9	11.4	54.0	74.0	47.1	59.4	6.9	14.6
7242.00	18.7 31.0	H	1.0	37.7	34.8	14.3	54.0	74.0	35.9	48.2	18.1	25.8

### Test Data – 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
				Antenna	Amp. Gain	Cable						
4831.00	32.2 48.0	H	1.1	32.7	34.9	11.4	54.0	74.0	41.4	57.2	12.6	16.8
7237.00	19.0 32.9	H	1.1	37.7	34.8	14.3	54.0	74.0	36.2	50.1	17.8	23.9

## Restricted band edge test data

Measured frequency range : 2310-2390 MHz, 2483.5-2500 MHz

### 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak	Result [dBuV/m] AV / Peak	Margin [dB] AV / Peak
				Antenna	Amp. Gain	Cable			
No emission were detected at a level greater than 20dB below limit.									

### 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak	Result [dBuV/m] AV / Peak	Margin [dB] AV / Peak
				Antenna	Amp. Gain	Cable			
No emission were detected at a level greater than 20dB below limit.									

## Test Results

EUT	INDUSTRIAL PDA	Measurement Detail	
Model	STM-8800	Frequency Range	1-25GHz
Channel	Channel 6	Detector function	Peak

## Remarks

We have tested three mode (X, Y, Z). The worst mode (X axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
4874	44.6	9.4	Average

## Test Data – 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak		Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
					Antenna	Amp. Gain	Cable						
4874.00	35.4	47.3	H	1.0	32.7	34.9	11.4	54.0	74.0	44.6	56.5	9.4	17.5

## Test Data – 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak		Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
					Antenna	Amp. Gain	Cable						
4868.00	34.2	48.9	H	1.0	32.7	34.9	11.4	54.0	74.0	43.4	58.1	10.6	15.9
7303.00	18.9	30.9	H	1.1	37.7	34.8	14.3	54.0	74.0	36.1	48.1	17.9	25.9



## Test Results

EUT	INDUSTRIAL PDA	Measurement Detail	
Model	STM-8800	Frequency Range	1-25GHz
Channel	Channel 11	Detector function	Peak

## Remarks

We have tested three mode (X, Y, Z). The worst mode (X axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
4924.00	40.9	13.1	Average

## Test Data – 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak		Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
					Antenna	Amp. Gain	Cable						
4924.00	31.7	43.1	H	1.1	32.7	34.9	11.4	54.0	74.0	40.9	52.3	13.1	21.7
7393.00	16.7	28.6	H	1.0	37.7	34.8	14.3	54.0	74.0	33.9	45.8	20.1	28.2

## Test Data – 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak		Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
					Antenna	Amp. Gain	Cable						
4929.00	28.4	42.5	H	1.0	32.7	34.9	11.4	54.0	74.0	37.6	51.7	16.4	22.3
7378.00	18.4	31.9	H	1.0	37.7	34.8	14.3	54.0	74.0	35.6	49.1	18.4	24.9

## Restricted band edge test data

Measured frequency range : 2310-2390 MHz, 2483.5-2500 MHz

### 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak	Result [dBuV/m] AV / Peak	Margin [dB] AV / Peak
				Antenna	Amp. Gain	Cable			
No emission were detected at a level greater than 20dB below limit.									

### 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Height [m]	Correction Factor			Limits [dBuV/m] AV / Peak	Result [dBuV/m] AV / Peak	Margin [dB] AV / Peak
				Antenna	Amp. Gain	Cable			
No emission were detected at a level greater than 20dB below limit.									

## 2.1.6 AC Conducted Emissions

### Test Location

Shielded Room

### Frequency Range of Measurement

150 kHz to 30 MHz

### Instrument Settings

IF Band Width: 9 kHz

### Test Procedures

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

### Limit

#### - 15.207(a)

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56*	56 to 46*
0.5 ~ 5	56	46
5 ~ 30	60	50

\* Decreases with the logarithm of the frequency.

### Test Results

The requirements are:

☒ Complies

Test mode : 802.11b, DSSS, 11Mbps(Worst Case)

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
0.546	42.4	3.6	Average

**Test Data – 802.11b(Worst Case)**

[HOT]

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	48.1	1000.0	9.000	On	L1	10.1	17.9	66.0
0.249000	43.9	1000.0	9.000	On	L1	10.1	17.9	61.8
0.460500	44.9	1000.0	9.000	On	L1	10.2	11.8	56.7
0.514500	47.5	1000.0	9.000	On	L1	10.2	8.5	56.0
0.541500	49.5	1000.0	9.000	On	L1	10.1	6.5	56.0
0.789000	39.5	1000.0	9.000	On	L1	10.0	16.5	56.0
0.892500	41.8	1000.0	9.000	On	L1	10.0	14.2	56.0
1.365000	39.6	1000.0	9.000	On	L1	9.9	16.4	56.0
1.954500	37.8	1000.0	9.000	On	L1	9.9	18.2	56.0
1.977000	38.0	1000.0	9.000	On	L1	9.9	18.0	56.0

**Final Result 2**

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.343500	34.3	1000.0	9.000	On	L1	10.1	14.8	49.1
0.546000	42.4	1000.0	9.000	On	L1	10.1	3.6	46.0
0.550500	42.0	1000.0	9.000	On	L1	10.1	4.0	46.0
0.843000	33.5	1000.0	9.000	On	L1	10.0	12.5	46.0
0.870000	32.7	1000.0	9.000	On	L1	10.0	13.3	46.0
1.333500	31.0	1000.0	9.000	On	L1	9.9	15.0	46.0
1.923000	30.9	1000.0	9.000	On	L1	9.9	15.1	46.0
1.981500	31.3	1000.0	9.000	On	L1	9.9	14.7	46.0
2.467500	30.2	1000.0	9.000	On	L1	9.9	15.8	46.0
3.075000	29.8	1000.0	9.000	On	L1	9.8	16.2	46.0

[NEUTRAL]

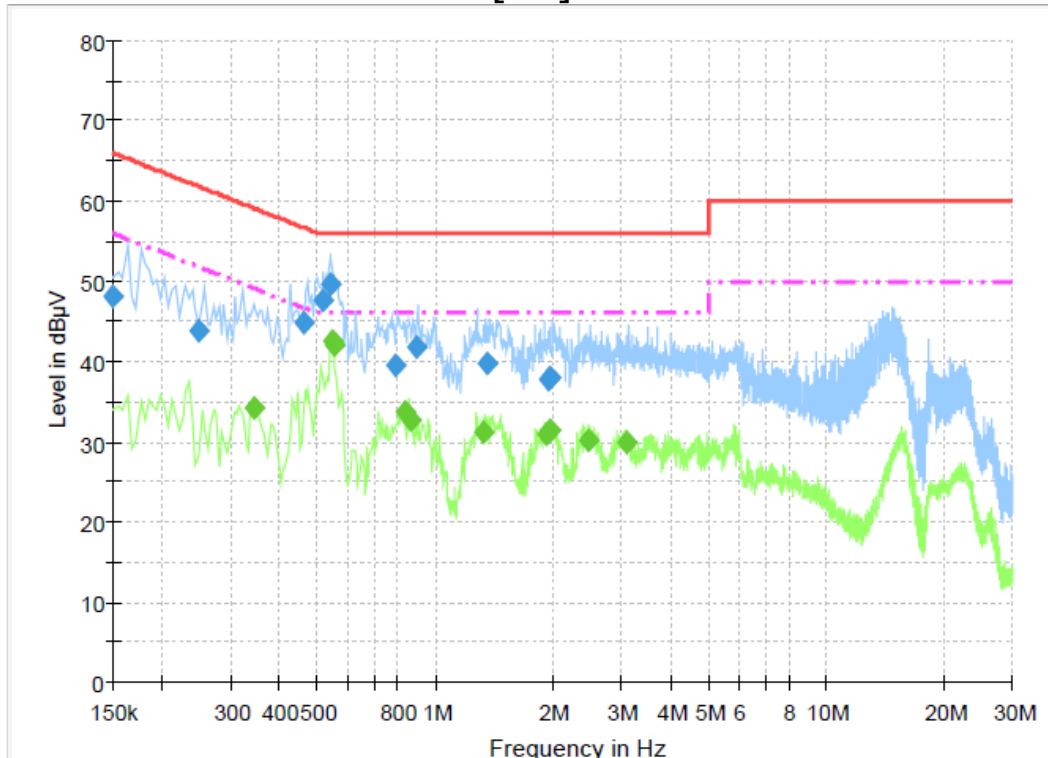
**Final Result 1**

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.501000	39.6	1000.0	9.000	On	N	10.2	16.4	56.0
0.505500	41.5	1000.0	9.000	On	N	10.2	14.5	56.0
0.789000	38.3	1000.0	9.000	On	N	10.0	17.7	56.0
0.807000	38.5	1000.0	9.000	On	N	10.0	17.5	56.0
1.266000	35.9	1000.0	9.000	On	N	9.9	20.1	56.0
1.509000	38.3	1000.0	9.000	On	N	9.9	17.7	56.0
1.576500	37.9	1000.0	9.000	On	N	9.9	18.1	56.0
2.040000	37.7	1000.0	9.000	On	N	9.9	18.3	56.0
2.742000	36.1	1000.0	9.000	On	N	9.9	19.9	56.0
3.228000	36.3	1000.0	9.000	On	N	9.9	19.7	56.0

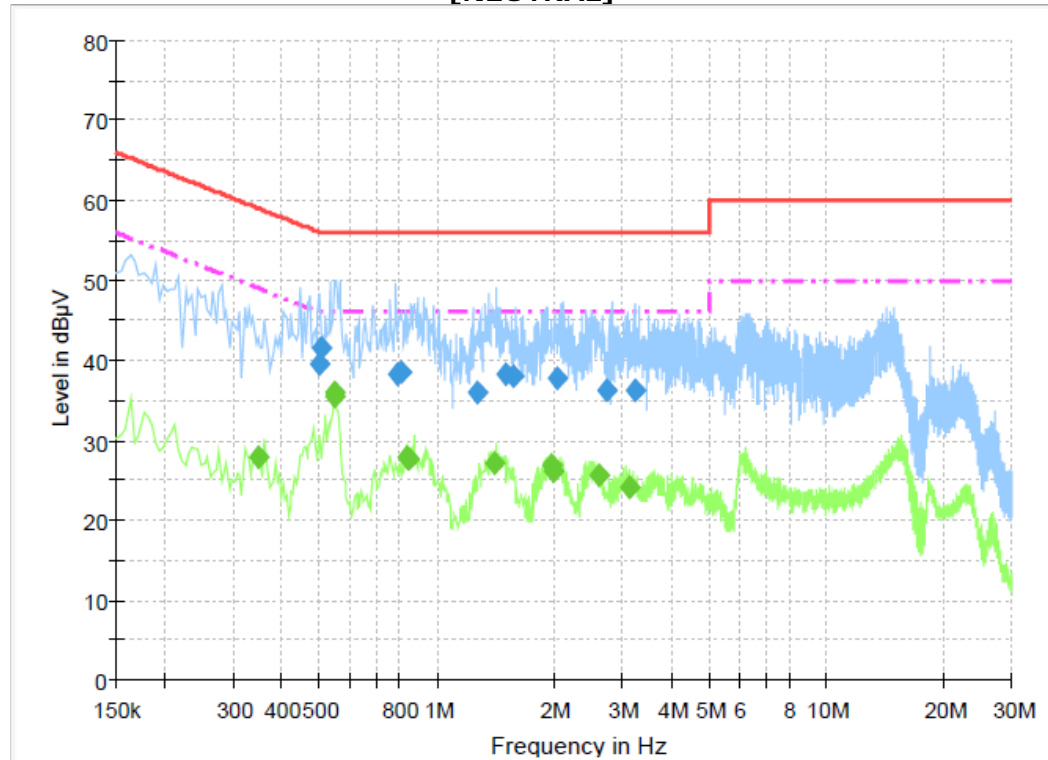
**Final Result 2**

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.348000	27.9	1000.0	9.000	On	N	10.1	21.1	49.0
0.546000	35.9	1000.0	9.000	On	N	10.2	10.1	46.0
0.546000	35.4	1000.0	9.000	On	N	10.2	10.6	46.0
0.843000	27.9	1000.0	9.000	On	N	10.0	18.1	46.0
0.847500	27.7	1000.0	9.000	On	N	10.0	18.3	46.0
1.414500	27.2	1000.0	9.000	On	N	9.9	18.8	46.0
1.981500	26.8	1000.0	9.000	On	N	9.9	19.2	46.0
1.990500	26.0	1000.0	9.000	On	N	9.9	20.0	46.0
2.607000	25.5	1000.0	9.000	On	N	9.9	20.5	46.0
3.133500	24.0	1000.0	9.000	On	N	9.9	22.0	46.0

[Hot]



[NEUTRAL]





CTK Co., Ltd.  
The Power Leader of Global Regulatory Compliance

## CTK Co., Ltd.

386-1, Ho-dong, Cheoin-gu, Yongin-si, Gyeonggi-do, 449-100, Korea

Tel: +82-31-339-9970

Fax: +82-31-339-9855

www.e-ctk.com

### APPENDIX A – Test Equipment Used For Tests

	Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
1	Signal Analyzer	Agilent	N9020A	MY48011598	2011-11-12
2	Spectrum Analyzer	Rohde & Schwarz	FSP-30	100994	2011-11-12
3	EMI Test Receiver	Rohde & Schwarz	ESVS30	826638/008	2011-07-12
4	ULTRA Broadband Antenna	Rohde & Schwarz	HL562	361324/014	2011-11-18
5	LOOP ANTENNA	EMCO	6502	9107-2652	2012-10-29
6	Attenuator	HP	8498A	1801A06913	2011-11-15
7	EPM Series Power Meter	HP	E4418A	GB38272734	2011-11-12
8	Power Sensor	HP	8487A	3318A03524	2011-07-12
9	Audio Analyzer	HP	8903B	2747A03432	2011-11-12
10	ESG-D Series Signal Generator	Agilent	E4432B	US40054094	2011-11-12
11	SYNTHESIZED SWEEPER	HP	8341B	2819A01563	2011-11-12
12	Modulation Analyzer	HP	8901B	3438A05228	2011-11-16
13	Attenuator	HP	8494A	3308A33351	2011-11-15
14	Temp&Humi Chamber	Kunpoong	JT-TH-556-1	9QE5-002	2012-11-14
15	DC POWER SUPPLY	Agilent	E3632A	MY40011638	2011-11-12
16	EMC Analyzer	Agilent	E7405A	MY45110859	2012-02-11
17	Horn Antenna	ETS-Lindgren	3115	00078894	2013-03-22
18	Horn Antenna	ETS-Lindgren	3115	00078895	2013-03-22
19	Dipole Antenna	SCHWARZBECK	VHA 9103	VHA91032557	2011-09-18
20	Dipole Antenna	SCHWARZBECK	UHA 9105	UHA91052417	2011-09-18
21	OPT H64 AMPLIFIER	HP	8447F	3113A06814	2012-03-31
22	PREAMPLIFIER	Agilent	8449B	3008A02307	2011-11-16
23	Radio Communication Tester	Rohde & Schwarz	CMU200	106765	2012-02-09
24	LISN	Rohde & Schwarz	ESH3-Z5	100207	2011-11-15
25	LISN	Rohde & Schwarz	ENV216	101151	2012-03-09
26	DC POWER SUPPLY	Agilent	E3632A	MY40011638	2011-11-12
27	EMI Test Receiver	Rohde & Schwarz	ESCI3	100032	2012-02-09