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TEST REPORT For FCC

Test Report No.	:	2010120044
Date of Issue	:	December 13, 2010
FCC ID	:	WLFSTM-7700
Model/Type No.	:	STM-7700
Kind of Product	:	Industrial PDA
Applicant	:	Woongjin System & Technology Co., Ltd.
Applicant Address	:	18th Floor. Ace High-End Tower 3, 371-50, Gasan-dong, Geumcheon-gu, Seoul, Korea
Manufacturer	:	Woongjin System & Technology Co., Ltd.
Manufacturer Address	:	18th Floor. Ace High-End Tower 3, 371-50, Gasan-dong, Geumcheon-gu, Seoul, Korea
Contact Person	:	Ki Seung Jung / Principal Research Engineer
Telephone	:	+82-2-2081-9321
Received Date	:	November 24, 2010
Test period	:	Start : November 24, 2010 End : December 13, 2010
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: December 13, 2010

Reviewed by

Y. J. Park

Young-Joon, Park
Technical Manager
Date: December 13, 2010

REPORT REVISION HISTORY

Date	Revision	Page No
December 13, 2010	Issued (2010120044)	All

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1.0 General Product Description

Equipment model name	: STM-7700
Serial number	: Prototype
EUT condition	: Pre-production, not damaged
Antenna type	: Chip antenna Gain -0.77 dBi
Frequency Range	: 2412 Mhz – 2462 MHz (DSSS/OFDM)
RF output power	: 16.64 dBm Peak Conducted (802.11b) : 15.31 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 7.4 Vdc/1800 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	< 54 dBuV (at 3 m)	Radiated	C
15.207	AC Conducted Emissions	EN 55022	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

VBW = 100 kHz (VBW ≥ RBW)

Trace = max hold

Span = 40 MHz

Sweep = auto

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

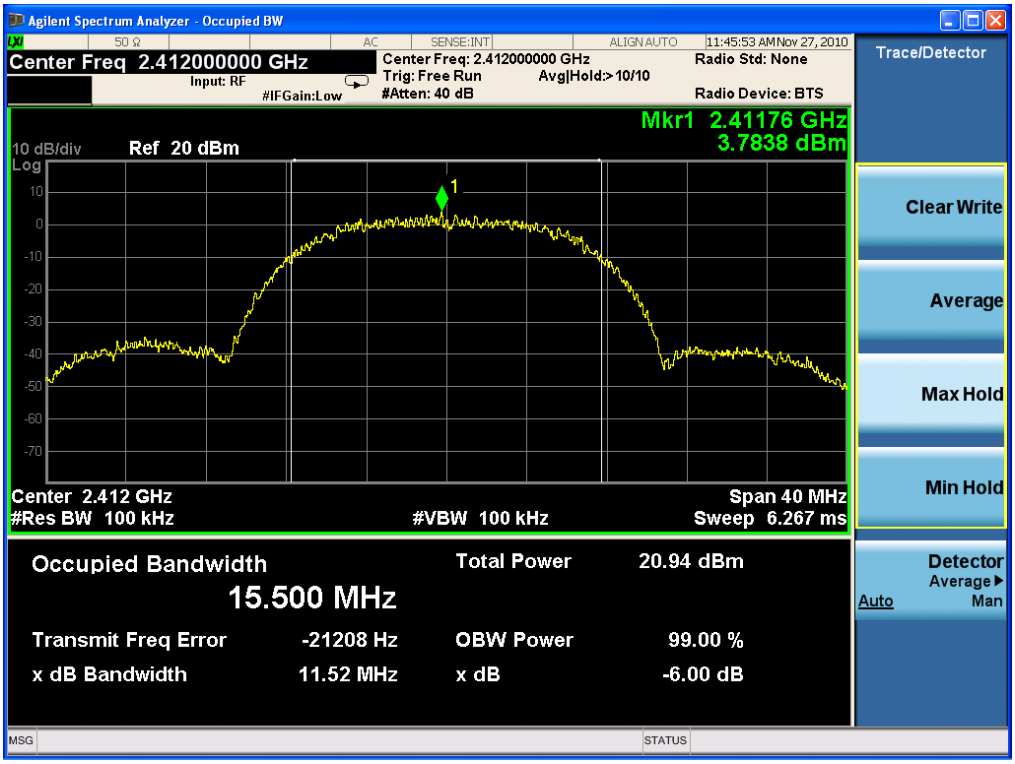
Mode	Frequency (MHz)	Channel No.	Test Results	
			Measured Bandwidth (MHz)	Result
802.11g	2412	1	16.49	Complies
	2437	6	16.49	Complies
	2462	11	16.49	Complies

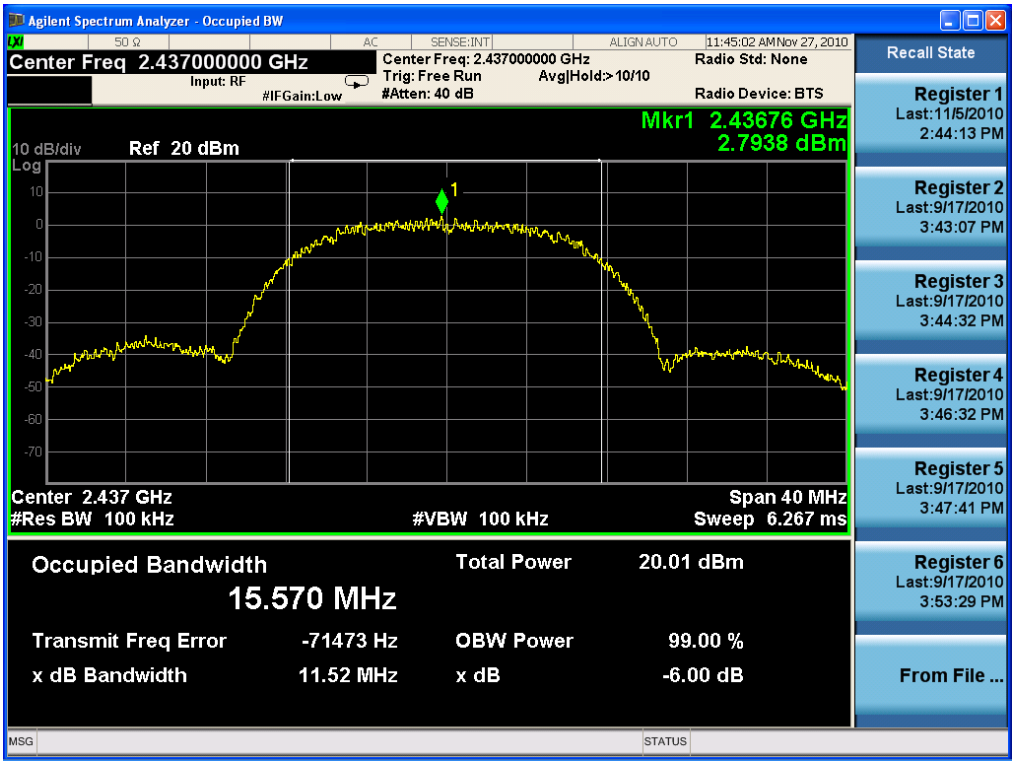
Minimum Standard:

6 dB Bandwidth > 500kHz

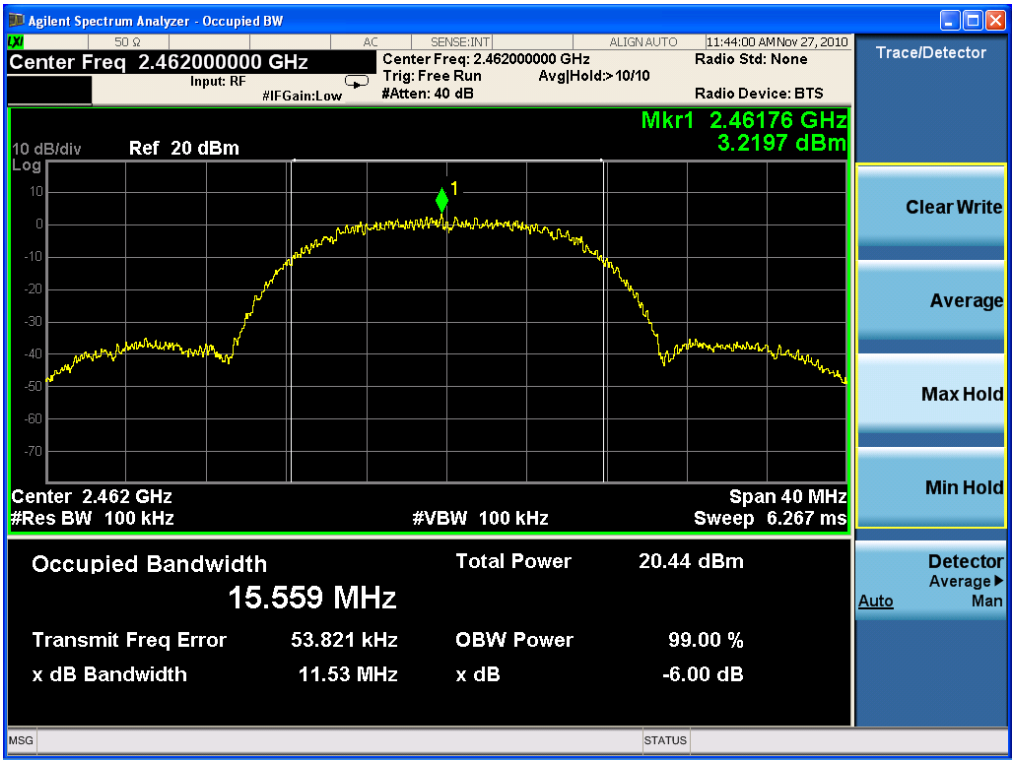
See next pages for actual measured spectrum plots.

802.11b

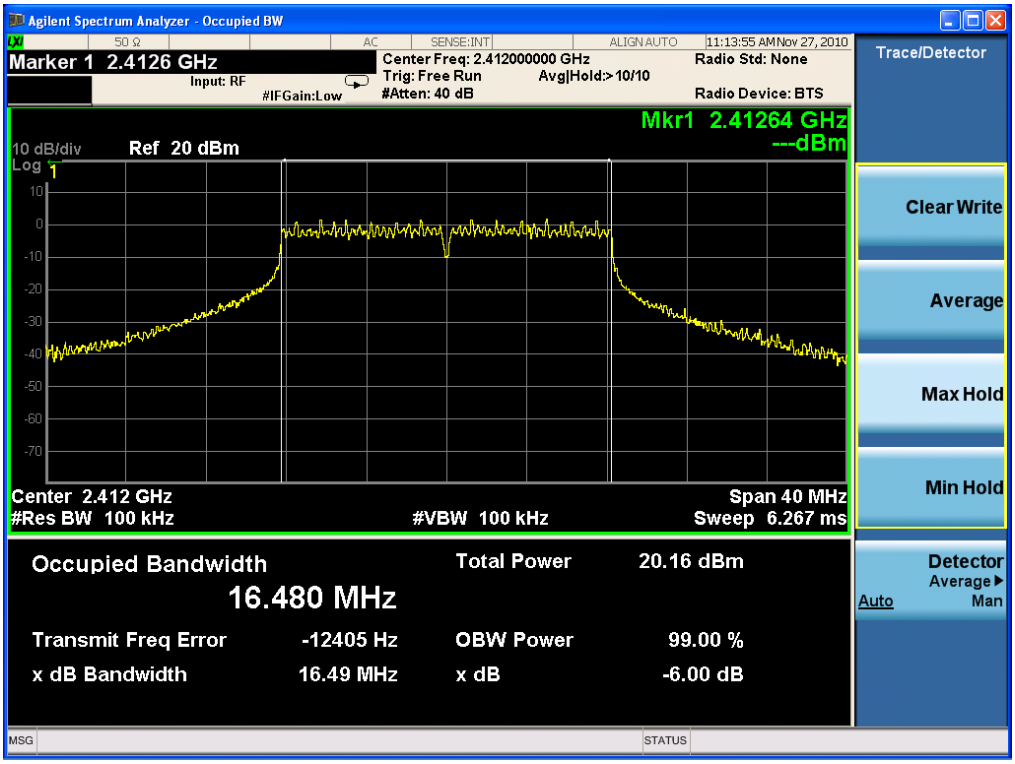


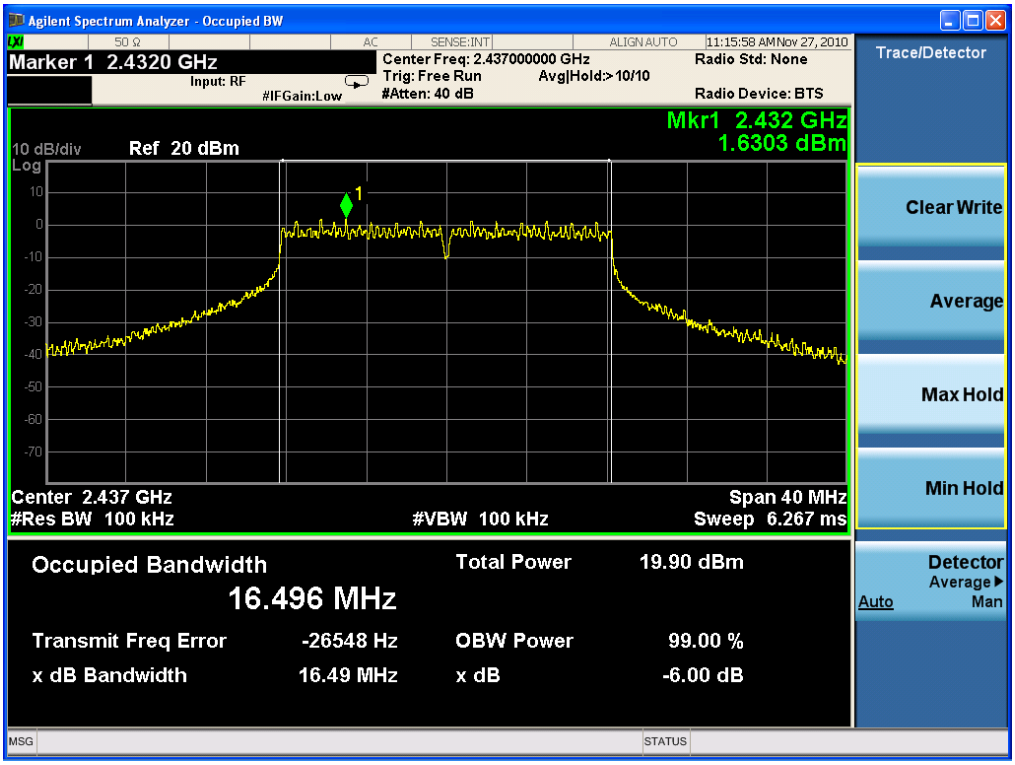


802.11b

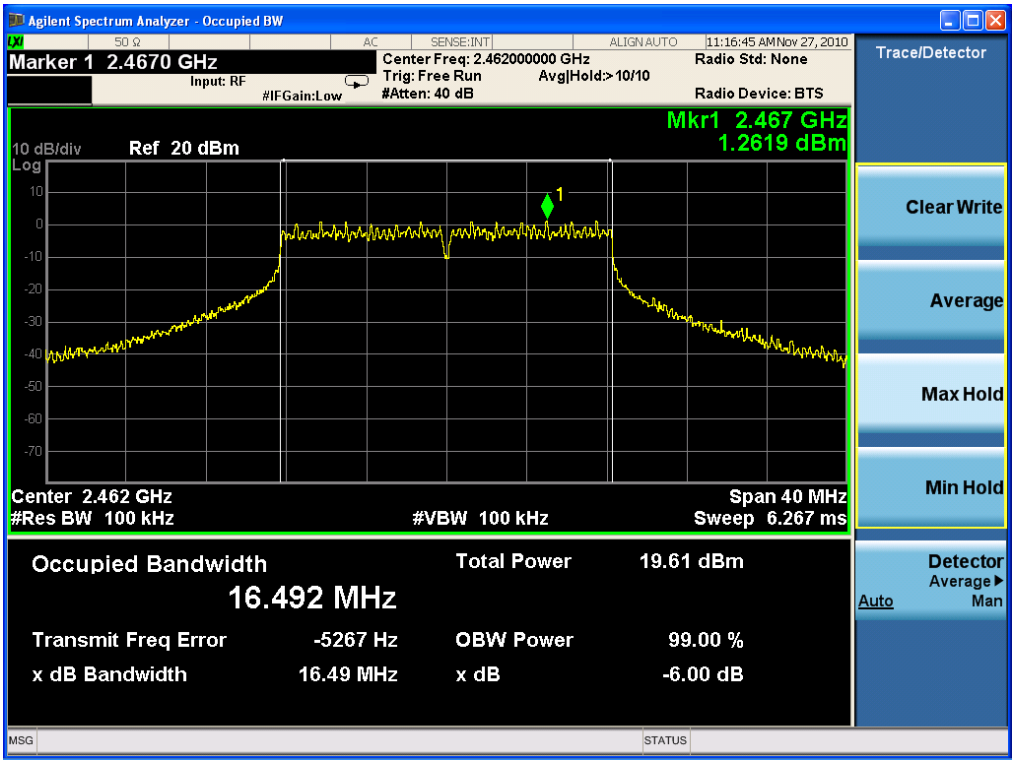


802.11g





802.11g



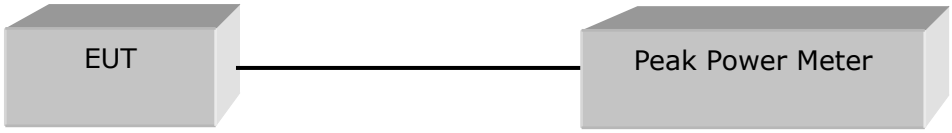
2.1.2 Maximum peak Conducted Output Power

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	16.64	30dBm	Complies
2437	Middle	15.75	30dBm	Complies
2462	High	15.87	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	15.31	30dBm	Complies
2437	Middle	14.92	30dBm	Complies
2462	High	14.74	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

ode	Frequency (MHz)	Ch.	Test Results	
			dBm	Result
802.11b	2412	1	-7.946	Complies
	2437	6	-8.889	Complies
	2462	11	-8.366	Complies

Test mode : 802.11g, OFDM, 24 Mbps

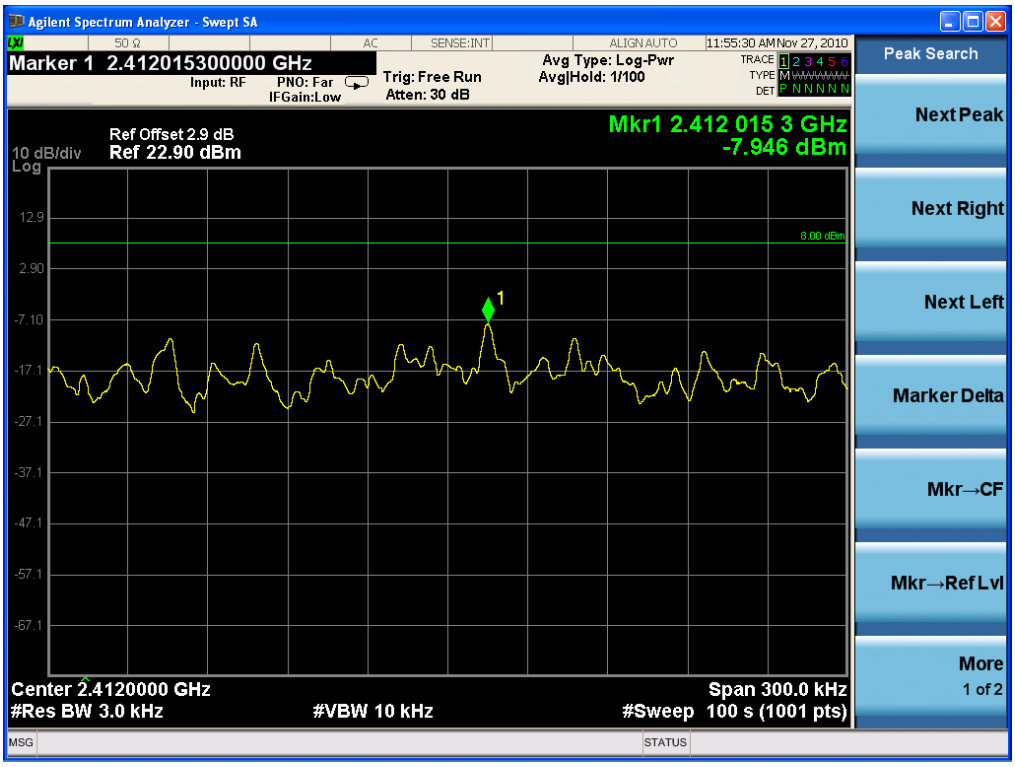
Mode	Frequency (MHz)	Ch.	Test Results	
			dBm	Result
802.11g	2412	1	-16.904	Complies
	2437	6	-16.086	Complies
	2462	11	-15.638	Complies

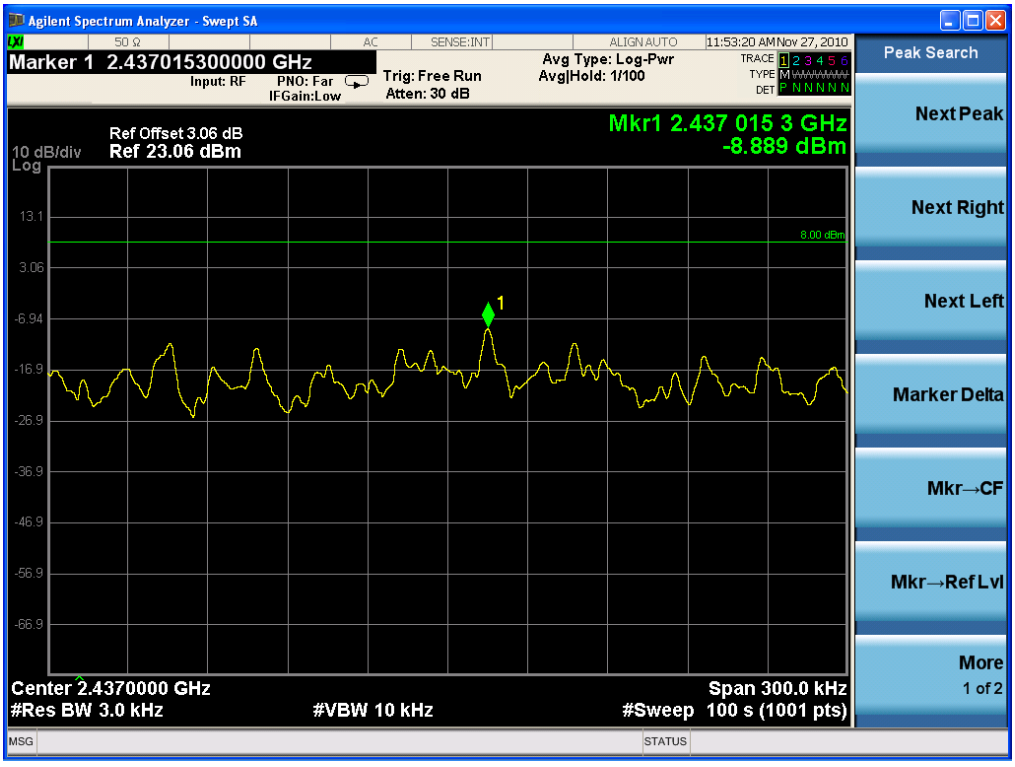
Minimum Standard:

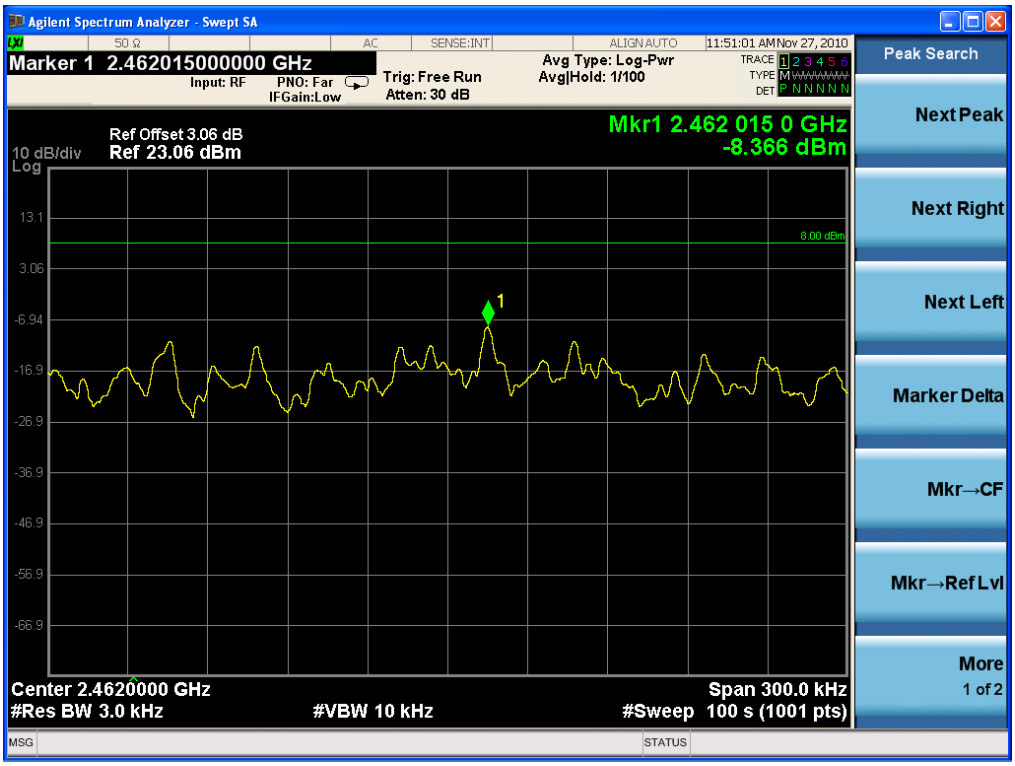
Power Spectral Density	< 8dBm @ 3 kHz BW

See next pages for actual measured spectrum plots.

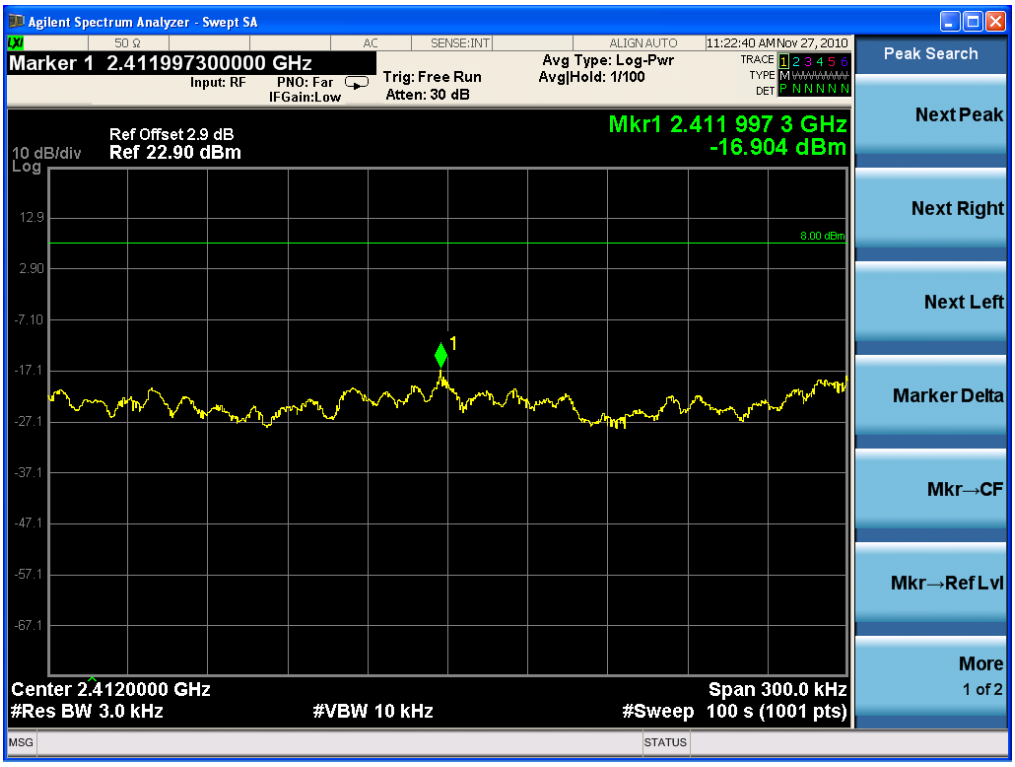
802.11b Power Density Measurement

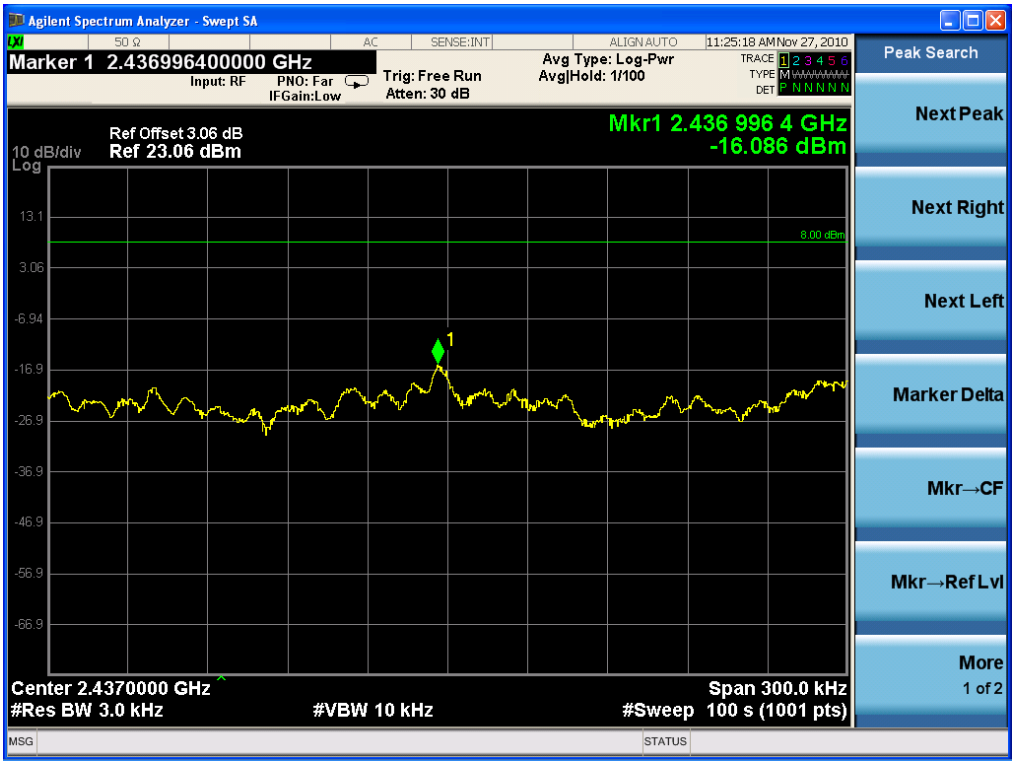


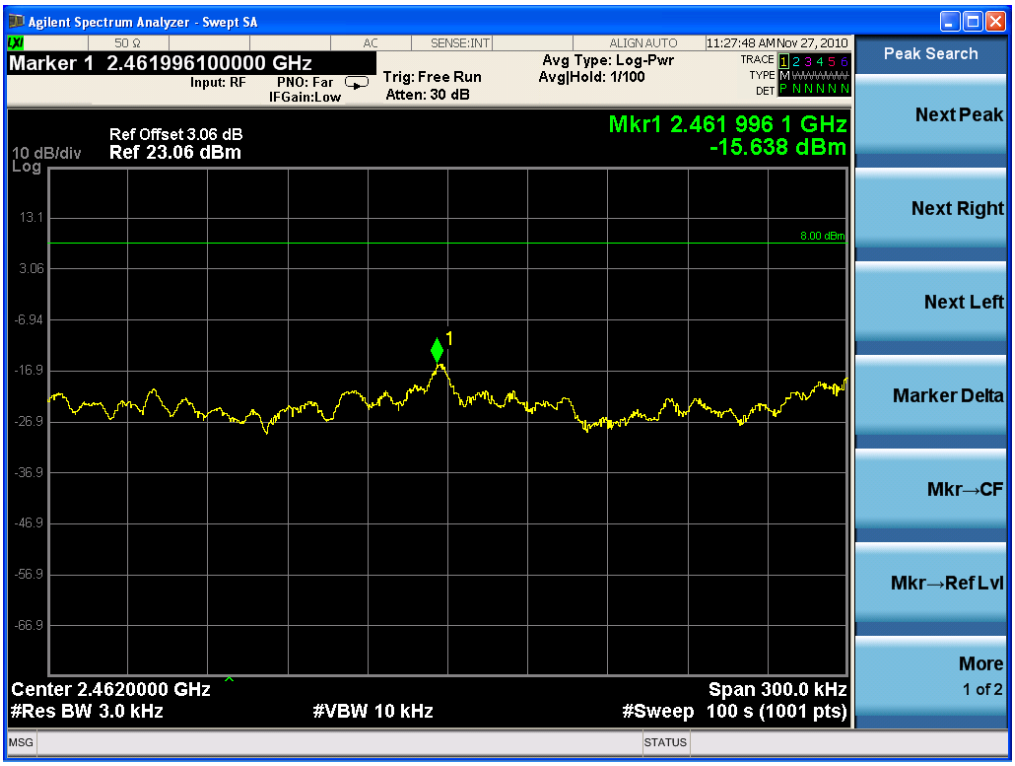




802.11g Power Density Measurement







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

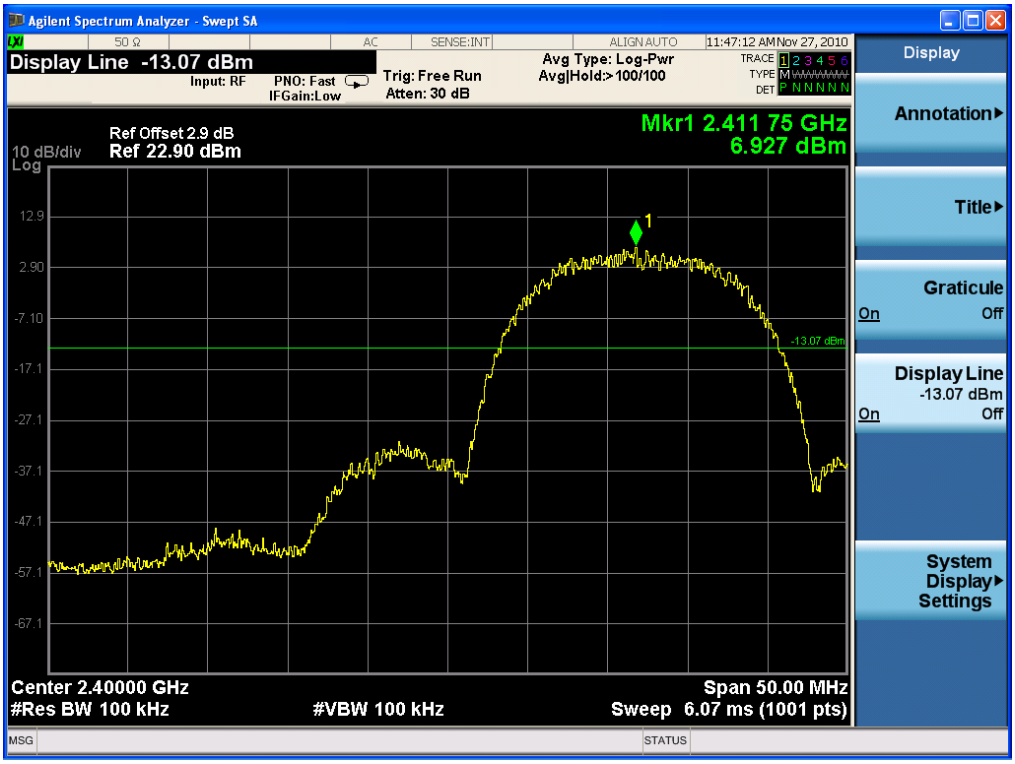
Measurement Data: Complies

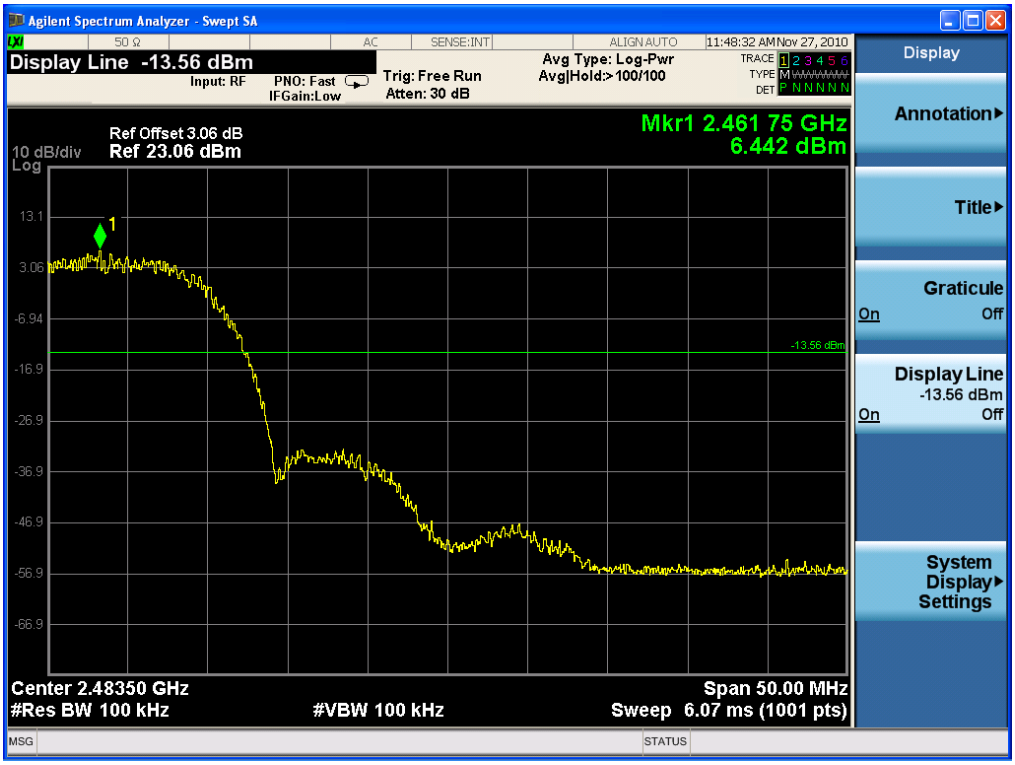
- All conducted emission in any 100kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.

Minimum Standard:	> 20 dBc

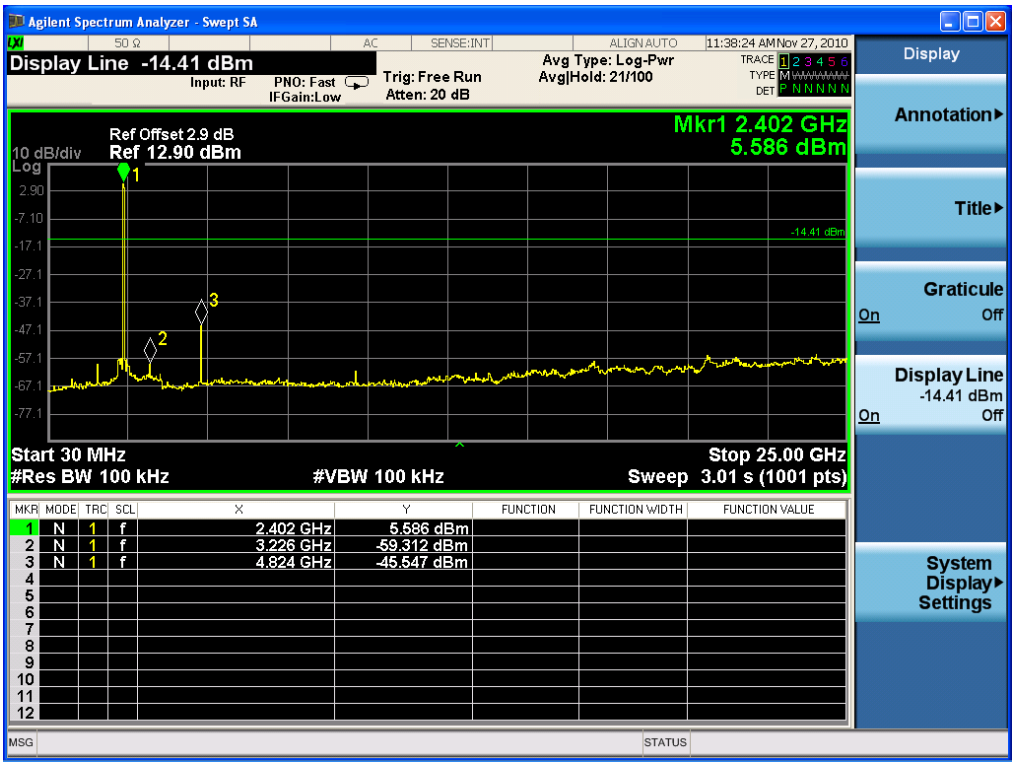
See next pages for actual measured spectrum plots.

802.11b Band–edge Measurements

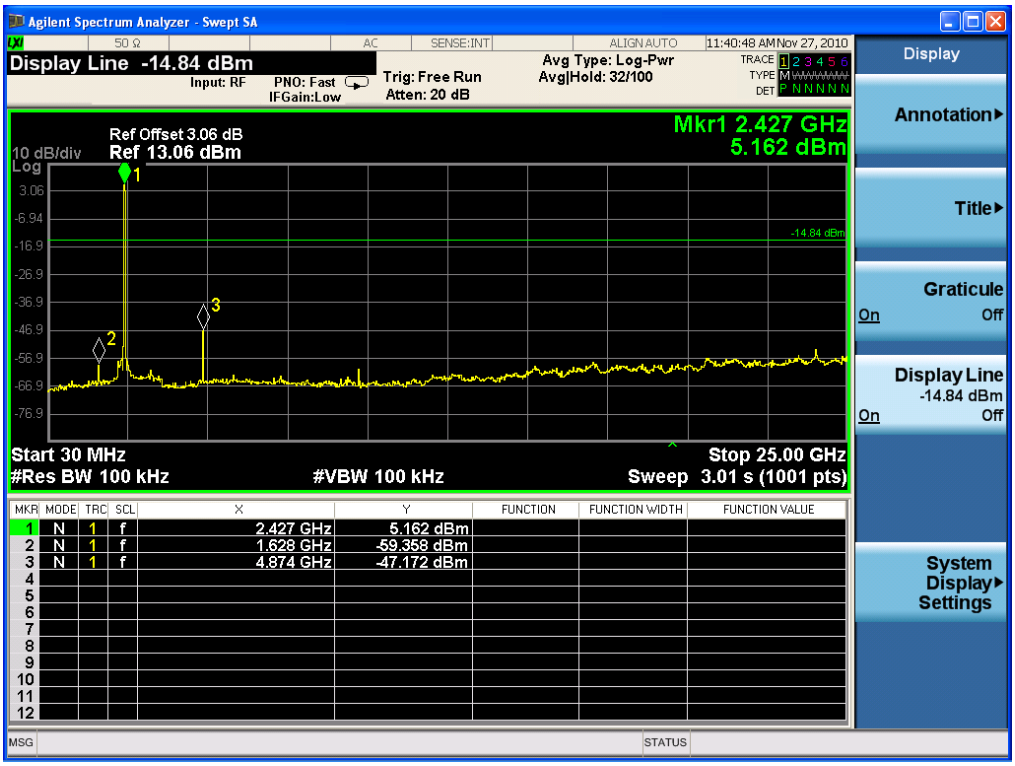




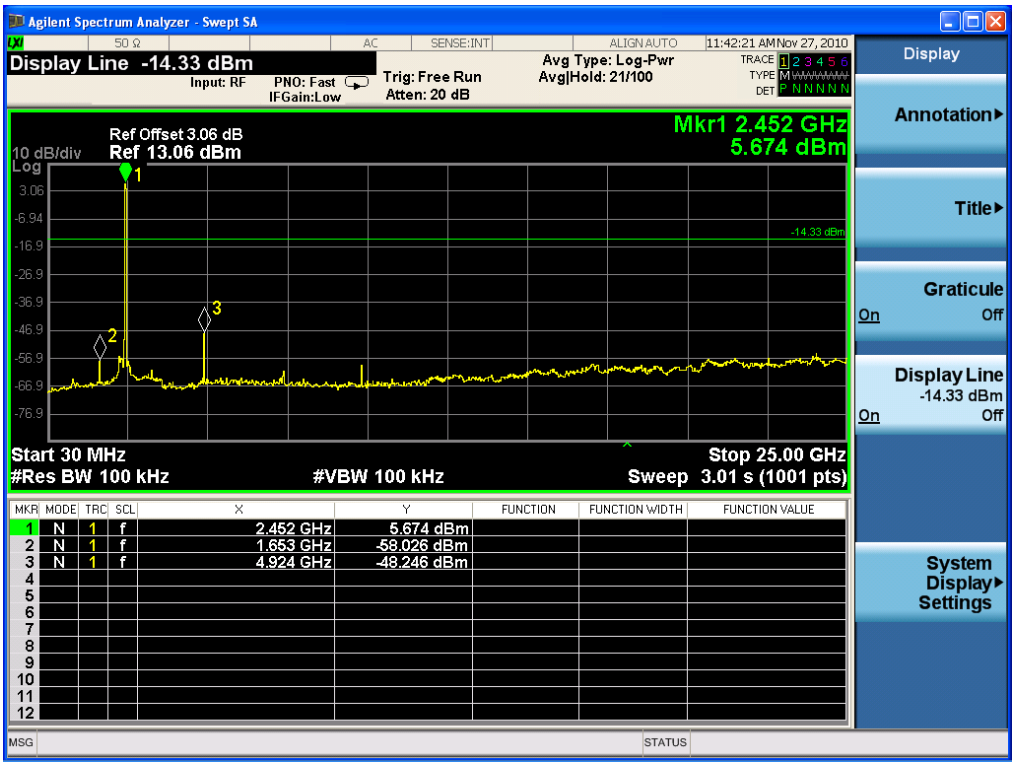
Band – edge (at 20 dB blow) – Low channel(802.11b)
Frequency Range = 30 MHz ~ 10th harmonic



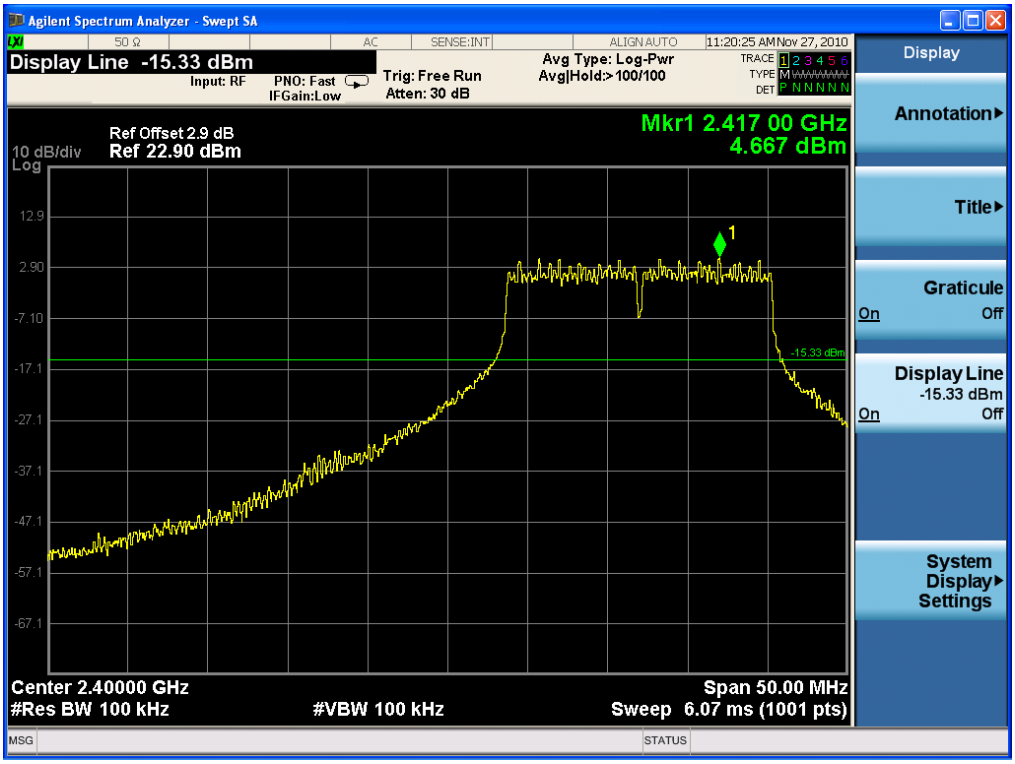
Band – edge (at 20 dB blow) – Mid channel(802.11b)
Frequency Range = 30 MHz ~ 10th harmonic

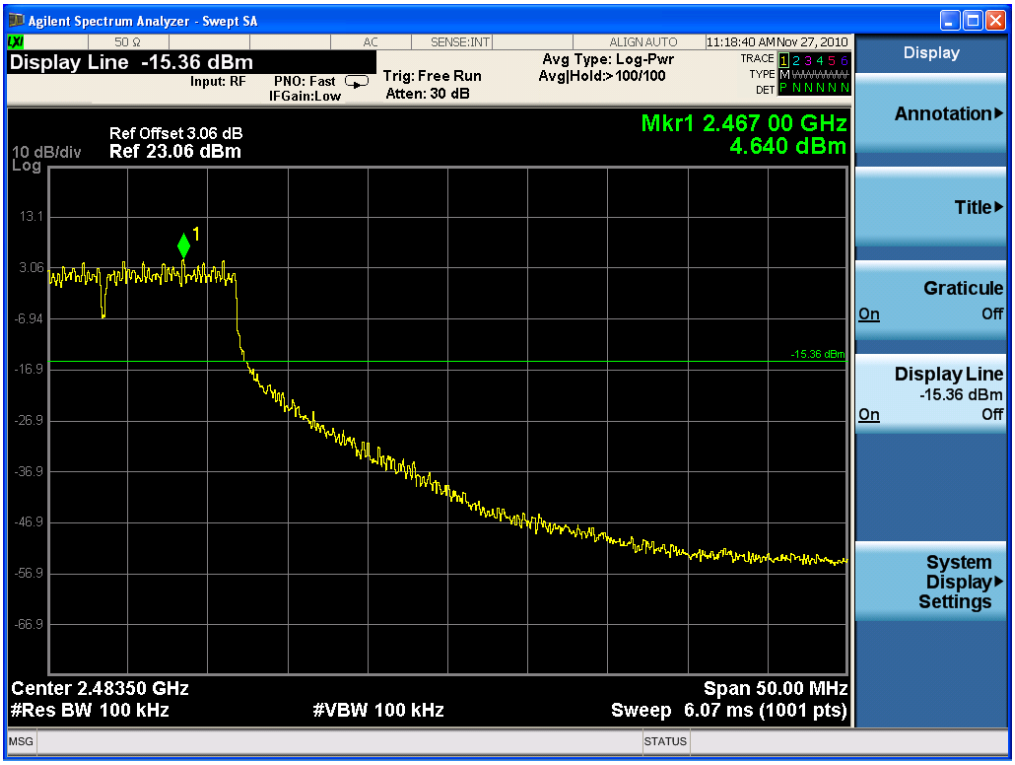


Band – edge (at 20 dB blow) – High channel(802.11b)
Frequency Range = 30 MHz ~ 10th harmonic

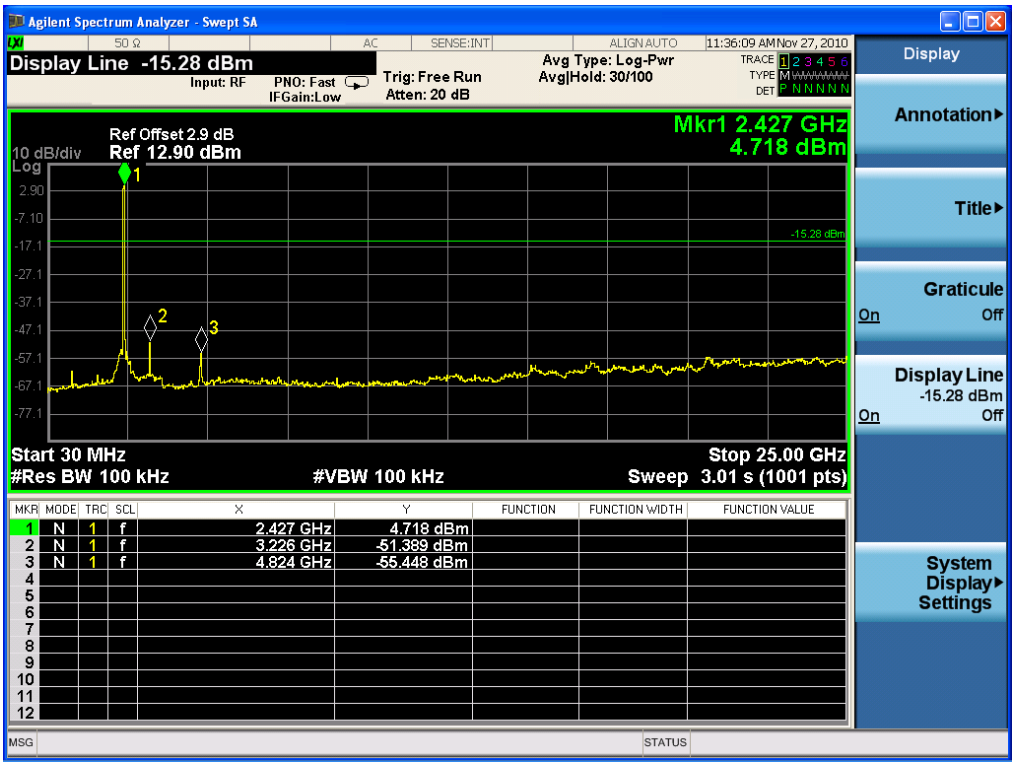


802.11g Band–edge Measurements

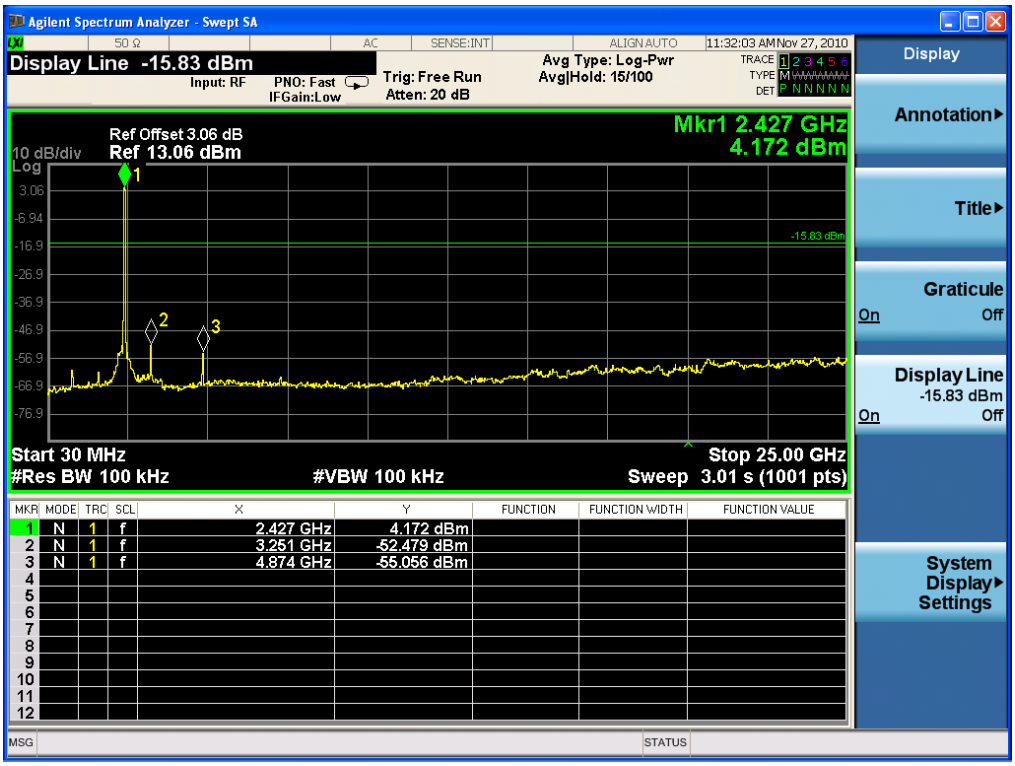




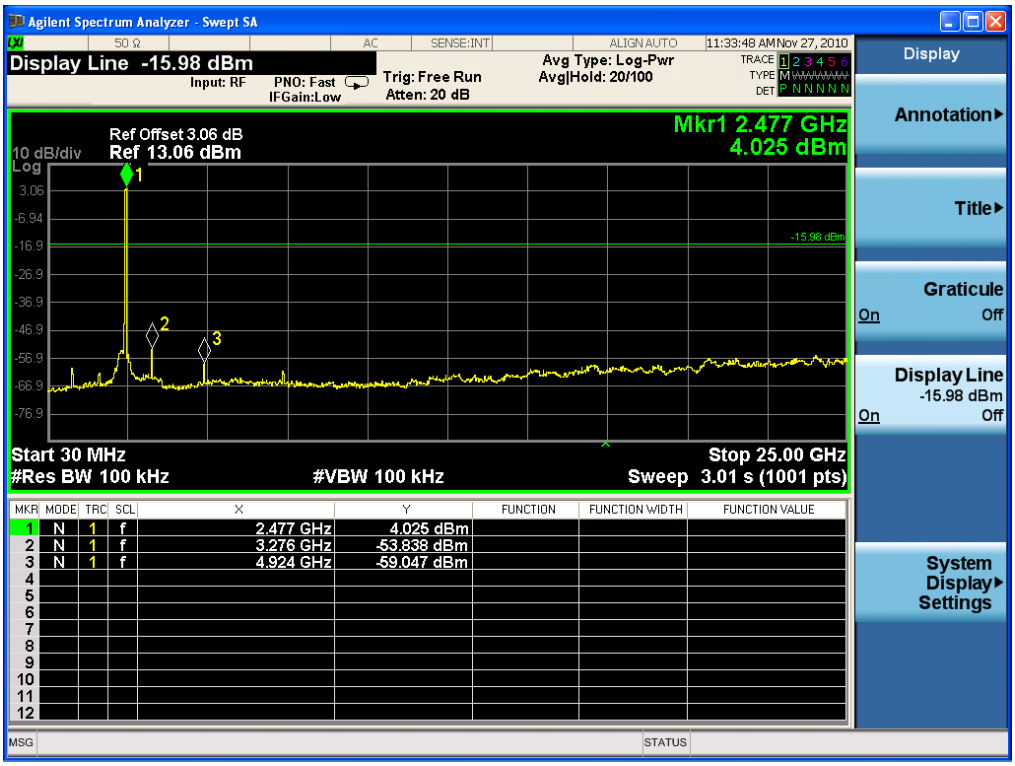
Band – edge (at 20 dB blow) – Low channel(802.11g)
Frequency Range = 30 MHz ~ 10th harmonic



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



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



2.1.5 Field Strength of Emissions

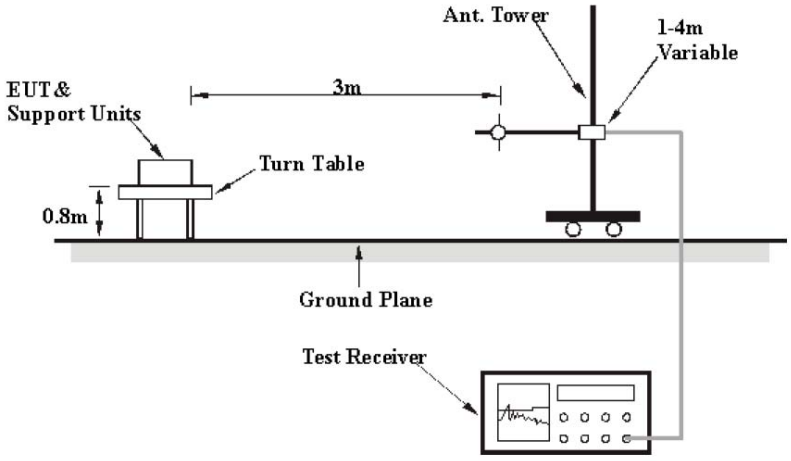
Test Location

☒ 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 ~ 10th harmonic
RBW = 120 kHz (30 MHz ~ 1 GHz) VBW ≥ RBW
= 1 MHz (1 GHz ~ 10th 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-7700	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
197.36	37.6	5.9	Quasi-peak

Test Data

Frequency	Reading	Pol.	Height	Correction Factor			Limits	Result	Margin
[㎒]	[dBμV/m]		[m]	Antenna	Cable	Amp. Gain	[dBμV/m]	[dBμV/m]	[dB]
88.29	58.4	V	1.2	8.9	0.7	31.4	43.5	36.6	6.9
197.36	59.8	H	2.3	7.6	1.5	31.3	43.5	37.6	5.9
202.29	59.2	V	1.0	7.8	1.6	31.3	43.5	37.3	6.2
272.56	54.7	V	1.1	10.5	2.1	31.3	46.0	36.0	10.0
718.75	45.9	H	2.0	18.8	4.0	31.3	46.0	37.4	8.6
750.21	46.9	V	1.5	19.3	4.1	31.3	46.0	39.0	7.0

H : Horizontal, V : Vertical

Result = Reading + Antenna + Cable - Amp.Gain

Test Results

EUT	INDUSTRIAL PDA	Measurement Detail	
Model	STM-7700	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	49.2	4.8	Average

Test Data – 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV	Reading [dBuV/m] Peak	Pol.	Height [m]	Correction Factor Antenna	Amp. Gain	Cable	Limits [dBuV/m] AV	Limits [dBuV/m] Peak	Result [dBuV/m] AV	Result [dBuV/m] Peak	Margin [dB] AV	Margin [dB] Peak
4824.00	40.0	52.1	H	1.0	32.7	34.9	11.4	54.0	74.0	49.2	61.3	4.8	12.7
7242.00	16.5	28.9	H	1.0	37.7	34.8	14.3	54.0	74.0	33.7	46.1	20.3	27.9

Test Data – 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV	Reading [dBuV/m] Peak	Pol.	Height [m]	Correction Factor Antenna	Amp. Gain	Cable	Limits [dBuV/m] AV	Limits [dBuV/m] Peak	Result [dBuV/m] AV	Result [dBuV/m] Peak	Margin [dB] AV	Margin [dB] Peak
4831.00	34.1	50.1	H	1.1	32.7	34.9	11.4	54.0	74.0	43.3	59.3	10.7	14.7
7237.00	17.4	31.1	H	1.1	37.7	34.8	14.3	54.0	74.0	34.6	48.3	19.4	25.7

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 Antenna / Amp. Gain / Cable	Limits [dBuV/m] AV / Peak	Result [dBuV/m] AV / Peak	Margin [dB] AV / Peak
No emission were detected at a level greater than 20dB belolow limit.							

802.11g, OFDM, 24Mbps

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

Test Results

EUT	INDUSTRIAL PDA	Measurement Detail	
Model	STM-7700	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	46.7	7.3	Average

Test Data – 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV	Reading [dBuV/m] Peak	Pol.	Height [m]	Correction Factor Antenna	Correction Factor Amp. Gain	Correction Factor Cable	Limits [dBuV/m] AV	Limits [dBuV/m] Peak	Result [dBuV/m] AV	Result [dBuV/m] Peak	Margin [dB] AV	Margin [dB] Peak
4874.00	37.5	49.4	H	1.0	32.7	34.9	11.4	54.0	74.0	46.7	58.6	7.3	15.4

Test Data – 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV	Reading [dBuV/m] Peak	Pol.	Height [m]	Correction Factor Antenna	Correction Factor Amp. Gain	Correction Factor Cable	Limits [dBuV/m] AV	Limits [dBuV/m] Peak	Result [dBuV/m] AV	Result [dBuV/m] Peak	Margin [dB] AV	Margin [dB] Peak
4868.00	36.3	50.8	H	1.0	32.7	34.9	11.4	54.0	74.0	45.5	60.0	8.5	14.0
7303.00	18.5	33.2	H	1.1	37.7	34.8	14.3	54.0	74.0	35.7	50.4	18.3	23.6

Test Results

EUT	INDUSTRIAL PDA	Measurement Detail	
Model	STM-7700	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	42.2	11.8	Average

Test Data – 802.11b, DSSS, 11Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak		Pol.	Height [m]	Correction Factor Antenna	Amp. Gain	Cable	Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
4924.00	33.0	45.0	H	1.1	32.7	34.9	11.4	54.0	74.0	42.2	54.2	11.8	19.9
7393.00	18.6	30.7	H	1.0	37.7	34.8	14.3	54.0	74.0	35.8	47.9	18.2	26.1

Test Data – 802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak		Pol.	Height [m]	Correction Factor Antenna	Amp. Gain	Cable	Limits [dBuV/m] AV / Peak		Result [dBuV/m] AV / Peak		Margin [dB] AV / Peak	
4929.00	30.2	44.6	H	1.0	32.7	34.9	11.4	54.0	74.0	39.4	53.8	14.6	20.2
7378.00	19.9	34.3	H	1.0	37.7	34.8	14.3	54.0	74.0	37.1	51.5	16.9	22.5

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 Antenna	Amp. Gain	Cable	Limits [dBuV/m] AV / Peak	Result [dBuV/m] AV / Peak	Margin [dB] AV / Peak
No emission were detected at a level greater than 20dB belolow limit.									

802.11g, OFDM, 24Mbps

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Height [m]	Correction Factor Antenna	Amp. Gain	Cable	Limits [dBuV/m] AV / Peak	Result [dBuV/m] AV / Peak	Margin [dB] AV / Peak
No emission were detected at a level greater than 20dB belolow 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
0.4515	44.4	12.4	Quasi-peak

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	50.4	1000.0	9.000	On	L1	10.1	15.6	66.0
0.163500	48.6	1000.0	9.000	On	L1	10.3	16.7	65.3
0.163500	50.6	1000.0	9.000	On	L1	10.3	14.7	65.3
0.406500	36.3	1000.0	9.000	On	L1	10.1	21.4	57.7
0.415500	39.2	1000.0	9.000	On	L1	10.1	18.3	57.5
0.438000	43.9	1000.0	9.000	On	L1	10.2	13.2	57.1
9.271500	36.1	1000.0	9.000	On	L1	9.8	23.9	60.0
18.496500	42.4	1000.0	9.000	On	L1	9.9	17.6	60.0
21.057000	34.0	1000.0	9.000	On	L1	10.0	26.0	60.0
29.463000	32.4	1000.0	9.000	On	L1	10.1	27.6	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	22.9	1000.0	9.000	On	L1	10.1	33.1	56.0
0.451500	26.8	1000.0	9.000	On	L1	10.2	20.0	46.8
0.456000	26.5	1000.0	9.000	On	L1	10.2	20.3	46.8
3.664500	16.0	1000.0	9.000	On	L1	9.8	30.0	46.0
7.431000	12.4	1000.0	9.000	On	L1	9.8	37.6	50.0
9.334500	25.7	1000.0	9.000	On	L1	9.8	24.3	50.0
15.855000	22.2	1000.0	9.000	On	L1	9.9	27.8	50.0
18.487500	34.7	1000.0	9.000	On	L1	9.9	15.3	50.0
21.052500	30.0	1000.0	9.000	On	L1	10.0	20.0	50.0
29.458500	27.1	1000.0	9.000	On	L1	10.1	22.9	50.0

[NEUTRAL]

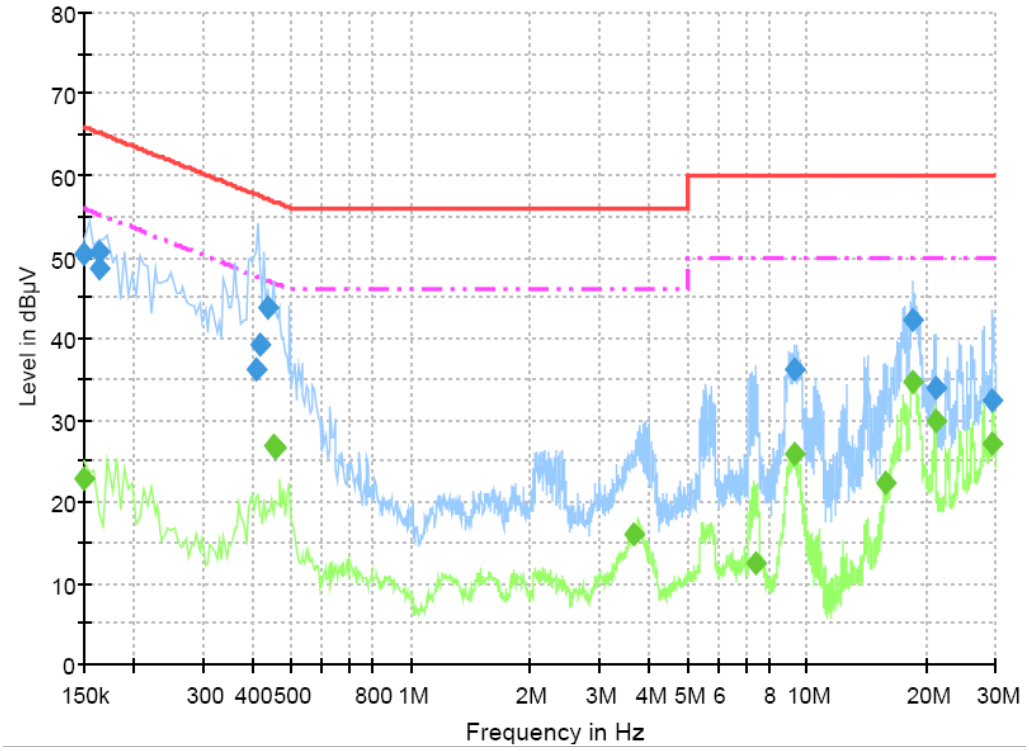
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	45.6	1000.0	9.000	On	N	10.2	19.9	65.5
0.163500	50.8	1000.0	9.000	On	N	10.3	14.5	65.3
0.168000	49.2	1000.0	9.000	On	N	10.3	15.9	65.1
0.217500	39.8	1000.0	9.000	On	N	10.0	23.1	62.9
0.424500	42.4	1000.0	9.000	On	N	10.1	15.0	57.4
0.433500	44.0	1000.0	9.000	On	N	10.1	13.2	57.2
0.451500	44.4	1000.0	9.000	On	N	10.2	12.4	56.8
9.334500	33.9	1000.0	9.000	On	N	9.8	26.1	60.0
18.379500	41.2	1000.0	9.000	On	N	10.0	18.8	60.0
29.791500	31.3	1000.0	9.000	On	N	10.2	28.7	60.0

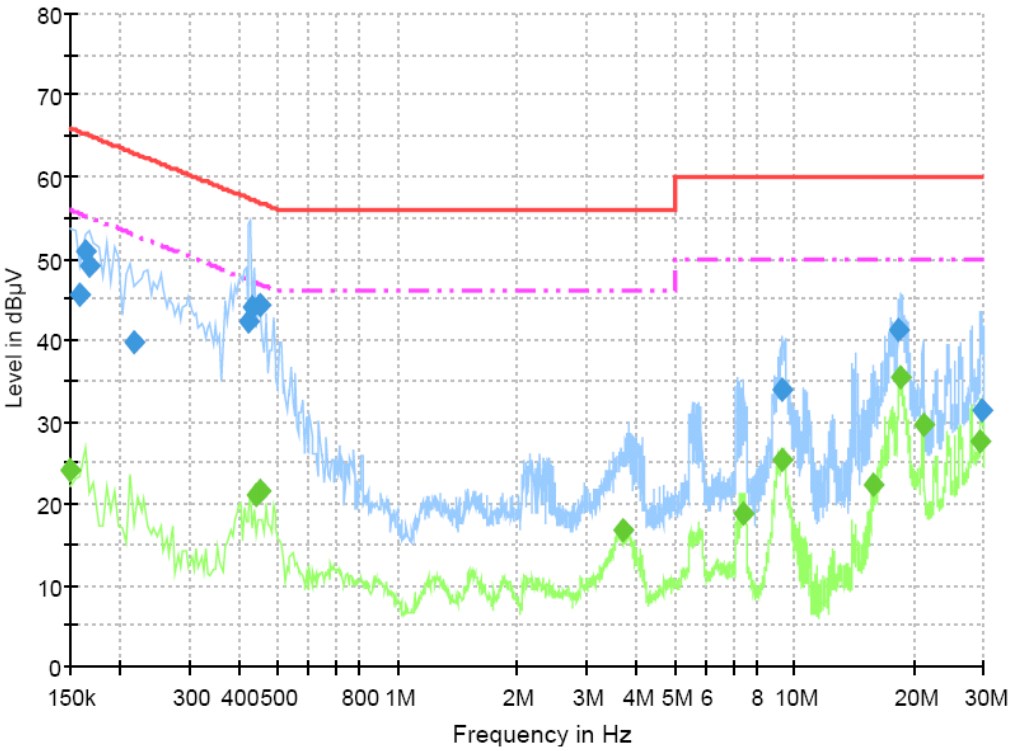
Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	23.9	1000.0	9.000	On	N	10.1	32.1	56.0
0.442500	20.9	1000.0	9.000	On	N	10.1	26.1	47.0
0.451500	21.5	1000.0	9.000	On	N	10.2	25.3	46.8
3.696000	16.8	1000.0	9.000	On	N	9.8	29.2	46.0
7.422000	18.8	1000.0	9.000	On	N	9.8	31.2	50.0
9.361500	25.2	1000.0	9.000	On	N	9.8	24.8	50.0
15.841500	22.2	1000.0	9.000	On	N	9.9	27.8	50.0
18.483000	35.4	1000.0	9.000	On	N	10.0	14.6	50.0
21.052500	29.5	1000.0	9.000	On	N	10.0	20.5	50.0
29.481000	27.5	1000.0	9.000	On	N	10.2	22.5	50.0

[Hot]



[NEUTRAL]



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	KP-1000	2002KP050041	2011-01-25
15	DC POWER SUPPLY	Agilent	E3632A	MY40011638	2011-11-12
16	EMC Analyzer	Agilent	E7405A	MY45110859	2011-01-25
17	Horn Antenna	ETS-Lindgren	3115	00078894	2010-12-18
18	Horn Antenna	ETS-Lindgren	3115	00078895	2010-12-18
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	2011-03-31
22	PREAMPLIFIER	Agilent	8449B	3008A02307	2011-11-16
23	Radio Communication Tester	Rohde & Schwarz	CMU200	106765	2011-02-23
24	Field Strength Meter	Rohde & Schwarz	ESHS30	862024/001	2011-03-08
25	LISN	Rohde & Schwarz	ESH3-Z5	100207	2011-11-15
26	LISN	Rohde & Schwarz	ENV216	101151	2011-02-27
27	DC POWER SUPPLY	Agilent	E3632A	MY40011638	2011-11-12
28	EMI Test Receiver	Rohde & Schwarz	ESCI3	100032	2011-01-27