TEST REPORT

REPORT NUMBER: I10GC0429-FCC-BT

ON

Type of Equipment:	**GSM/GPRS/EGPRS mobile phone**
Type of Designation:	**Sonim XP1300-A-R1**
Type Name:	**P25B005AA**
Manufacturer:	**Sonim Technologies, Inc**

ACCORDING TO

FCC Part 15, FREQUENCY Hopping Spread Spectrum Transceiver, Oct, 1, 2009

PART 15 subpart C 15.247

China Telecommunication Technology Labs.

Month date, year
OCt, 09, 2010

Signature

He Guili
Director

FCC ID:	WYPP25B005AA
Report Date:	2010-10-09

Test Firm Name:	China Telecommunication Technology Labs
Registration Number:	840587

Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC Parts 15, subpart C 15.247. The sample tested was found to comply with the requirements defined in the applied rules.

CONTENTS

1 General Information

1.1 Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC Parts 15, subpart C 15.247.

The test results of this test report relate exclusively to the item(s) tested as specified in section 2.

The following deviation from, additions to, or exclusions from the test specifications have been made. See Annex B.

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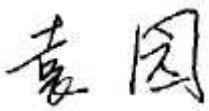
1.2 Testers

Name: Yuan Yuan

Position: Engineer

Department: Department of EMC test

Signature: 

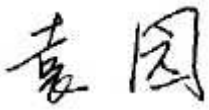
Editor of this test report:

Name: Yuan Yuan

Position: Engineer

Department: Department of EMC test

Date: 2010-10-09

Signature: 

Technical responsibility for area of testing:

Name: Zhang Xia

Position: Manager

Department: Department of EMC test

Date: 2010-10-09

Signature: 

1.3 Testing Laboratory information

1.3.1 Location

Name:	China Telecommunication Technology Labs.
Address:	No. 11, Yue Tan Nan Jie, Xi Cheng District BEIJING P. R. CHINA, 100083
Tel:	+86 10 68094053
Fax:	+86 10 68011404
Email:	emc@chinattl.com

1.3.2 Details of accreditation status

Accredited by:	China National Accreditation Service for Conformity Assessment (CNAS)
Registration number:	CNAL Registration No.L0570
Standard:	ISO/IEC 17025:2005

1.3.3 Test location, where different from section 1.3.1

Name:	------
Street:	------
City:	------
Country:	------
Telephone:	------
Fax:	------
Postcode:	------

1.4 Details of applicant or manufacturer

1.4.1 Applicant

Name:	Sonim Technologies, Inc
Address:	1875 S. Grant Street, Suite 800 San Mateo, CA 94402
Country:	United States
Telephone:	+1 650 504 4411
Fax:	+1 650 378 8190
Contact:	Jasen Kolev
Telephone:	+1 650 504 4411
Email:	jasen@sonimtech.com

1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name:	----
Address:	----

1.4.3 Manufactory (if different from applicant in section 1.4.1)

Name:	----
Address:	----

2 Test Item

2.1 General Information

Manufacturer:	Sonim Technologies, Inc
Name:	GSM/GPRS/EGPRS mobile phone
Model Number:	Sonim XP1300-A-R1
Serial Number:	--
Production Status:	Production
Receipt date of test item:	2010-09-01

2.2 Outline of EUT

E.U.T. is a GSM850/ PCS1900 Dual-band Terminal Equipment with Bluetooth.

2.3 Modifications Incorporated in EUT

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

2.4 Equipment Configuration

Equipment configuration list:

Item	Generic Description	Manufacturer	Type	Serial No.	Remarks
A	Mobile phone	Sonim Technologies, Inc	Sonim XP1300-A-R1	--	None
B	Battery	Sunwoda Electronic Co., Ltd.	XP-0001100	--	None
C	Adaptor	Dee Van Enterprises Co., Ltd.	DSA-3RNA-05 FUS 050065	--	None

2.5 Other Information

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3 Summary of Test Results

A brief summary of the tests carried out is shown as following.

	Name of Test	Result
1、	Peak power	Pass
2、	Band edge (conducted)	Pass
3、	Band edge (radiated)	Pass
4、	Frequency separation	Pass
5、	Number of hopping frequency	Pass
6、	Time of occupancy	Pass
7、	Spurious emission (conducted)	Pass
8、	Spurious emission (radiated)	Pass
9、	Power line Conducted Emissions	Pass
Note: none		

4 Test Results

4.1 Peak power

Specifications:	15.247 (b)(3)(i),(ii)and(iii)
Date of Tests	2010-09-06
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Fix channel transmit
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

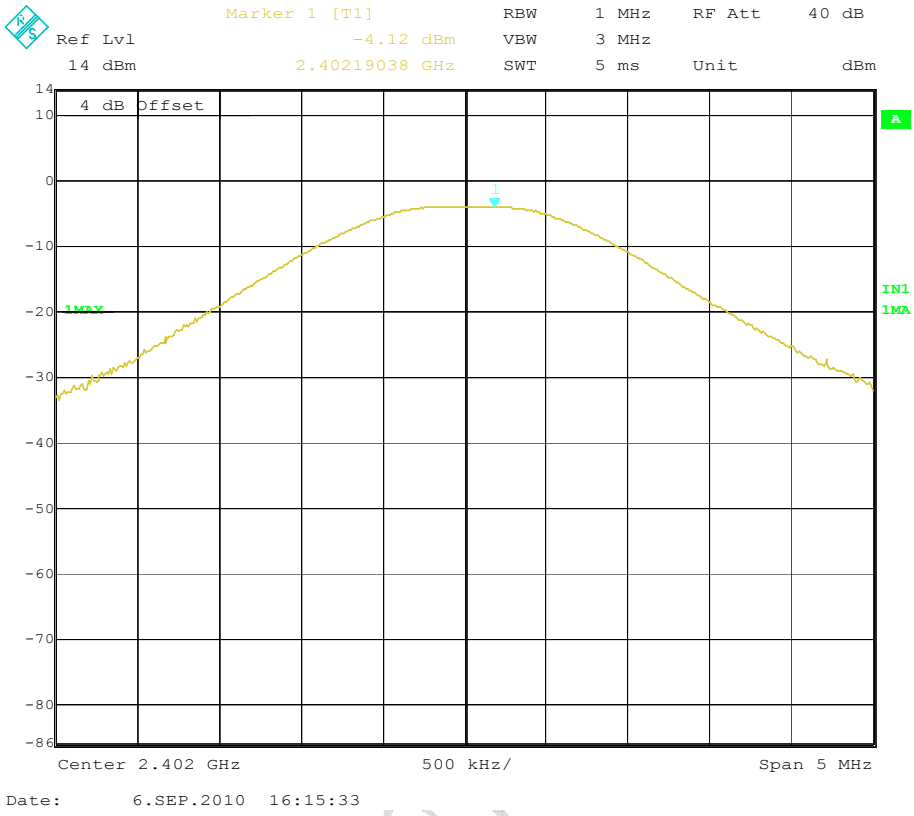
Test Setup:

The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

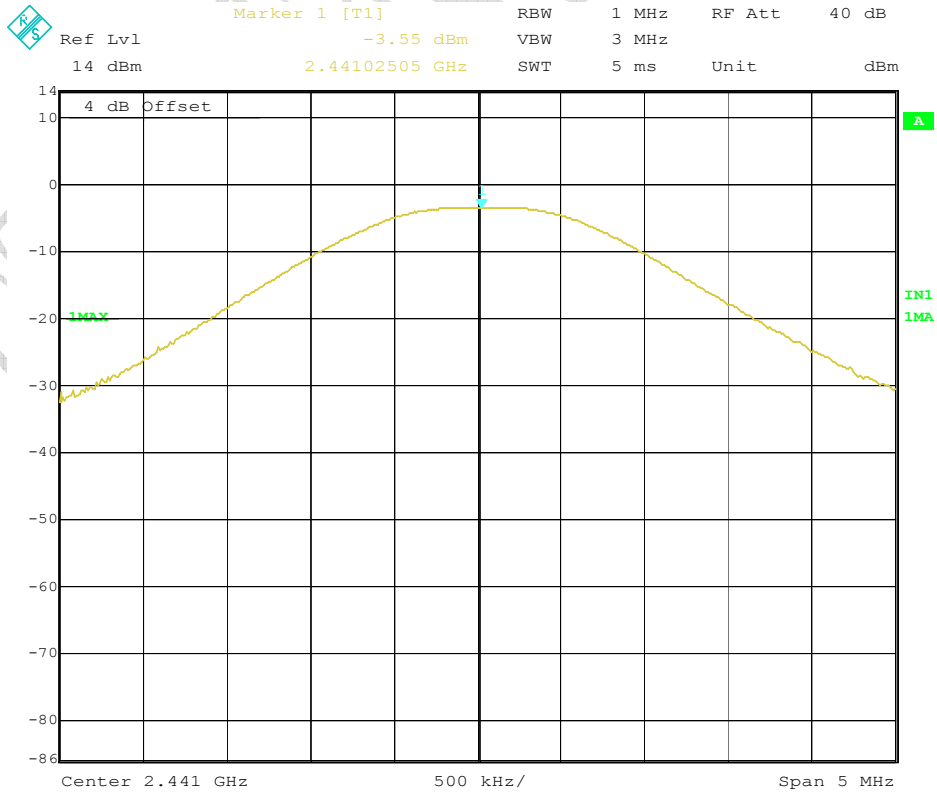
Test Results:

channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Result
0	2402	-4.06	30	Pass
39	2441	-3.55	30	Pass
78	2480	-3.36	30	pass

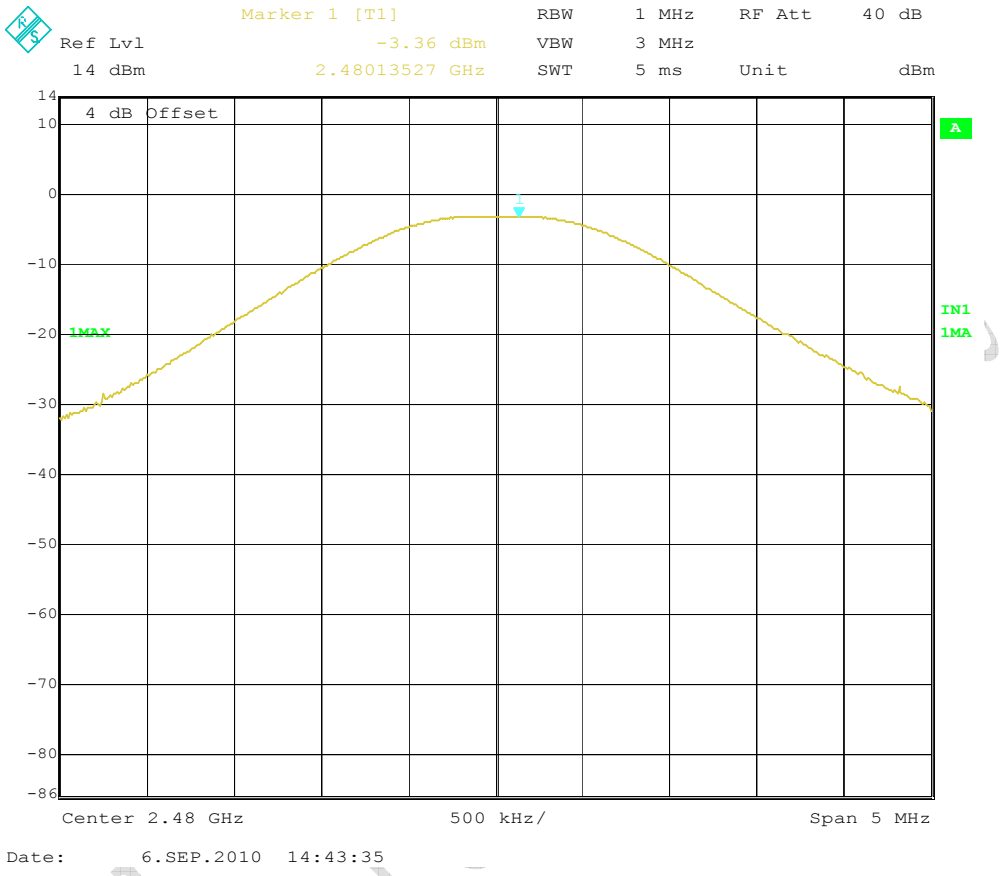
Test Data:



Channel 0



Channel 39



Channel 78

4.2 Band edges (conducted)

Specifications:	15.247 (d)
Date of Tests	2010-09-06
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Fix channel transmit
Test Results:	Pass

Test equipment Used:

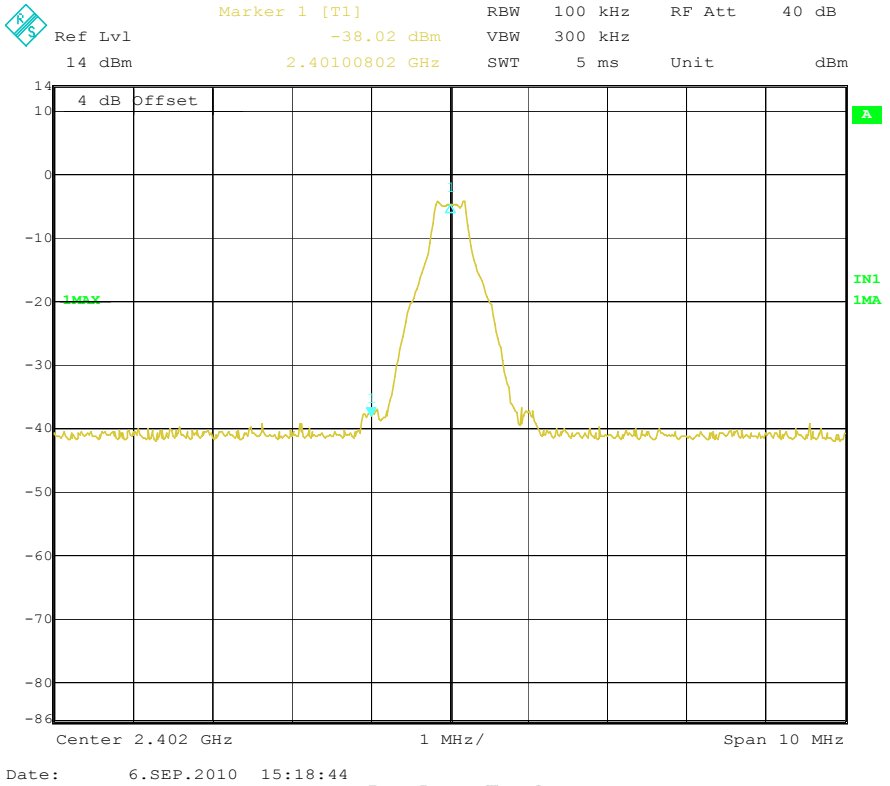
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup:

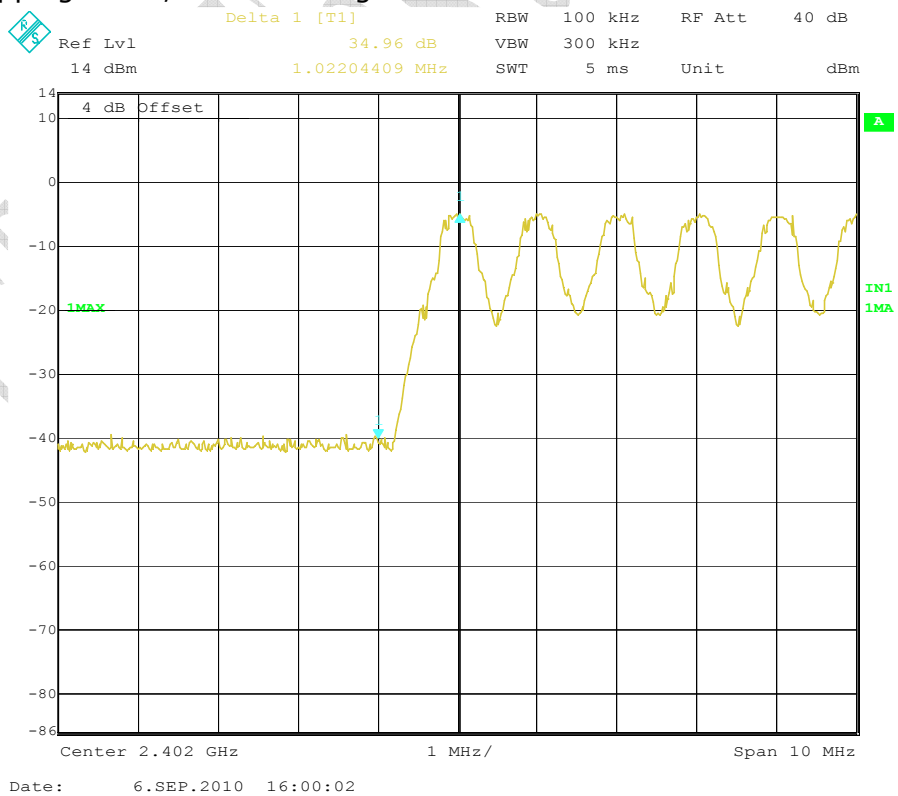
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test data:

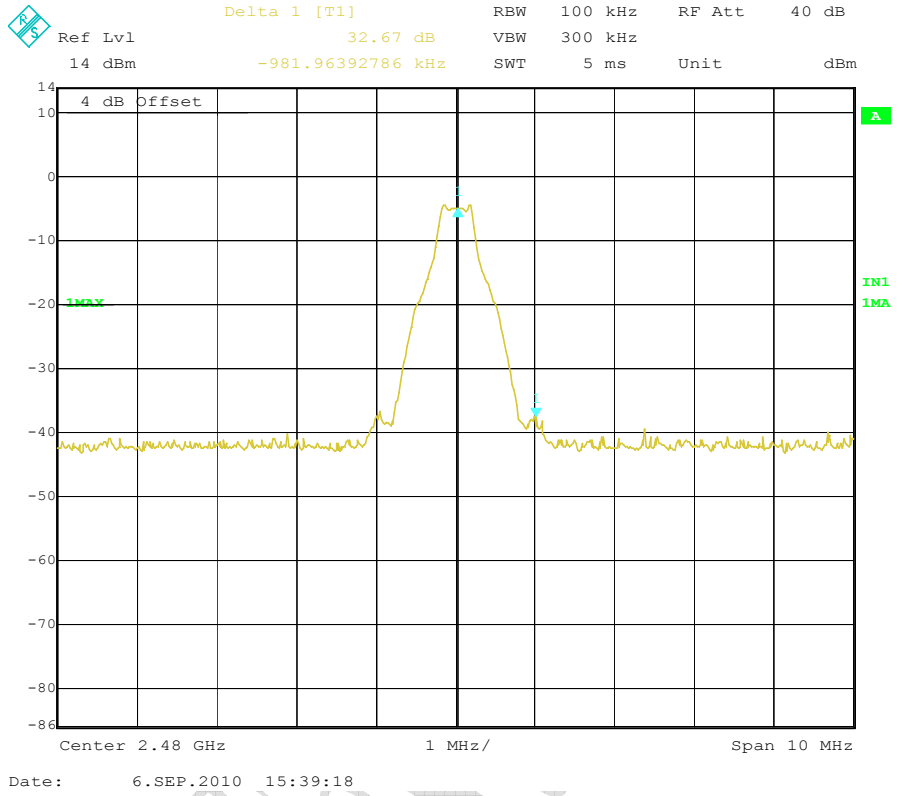
Channel 0, fixed mode, left band-edge



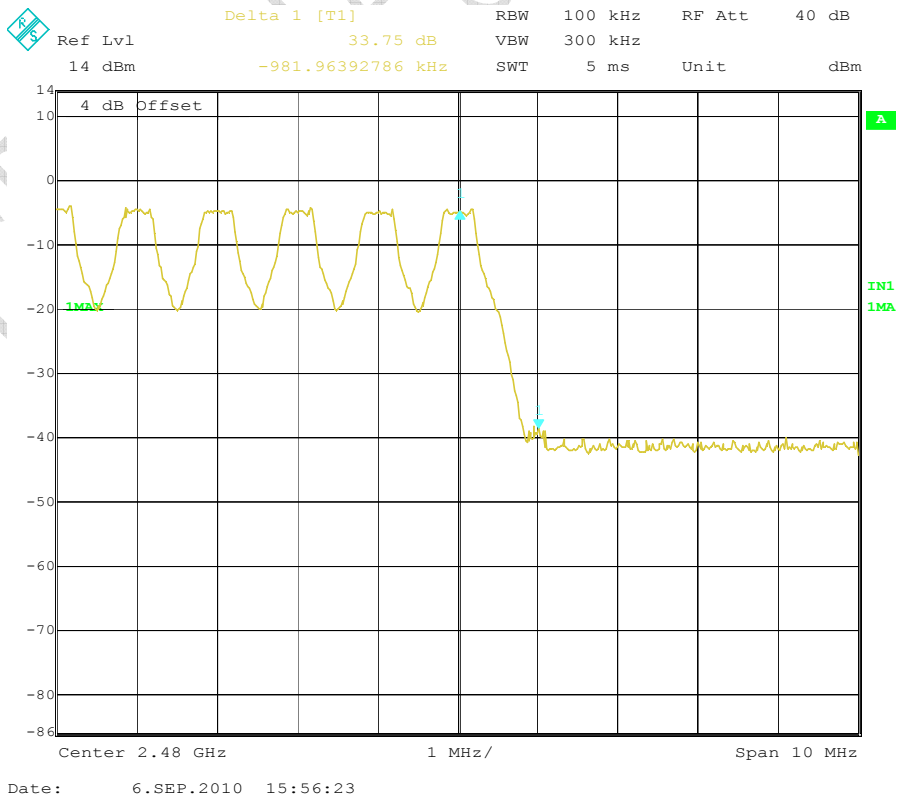
Hopping mode, left band-edge



Channel 78, fixed mode, right band-edge



Hopping mode, right band-edge



4.3 Band edges measurement (Radiated)

Specifications:	15.247 (c); 15.205(a) and 15.209(a)
Date of Tests	2010-09-06
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Fix channel transmit
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Double-Ridged Horn Antenna	R/S	HF906	100037	2011-01-08	Normal
713	Fully-Anechoic Chamber	ETS	11.8m×6.5m×6.3m	--	2010-11-16	Normal
111835	Wireless Communications Test Set	R&S	CMU200	1100000802	2011-06-08	Normal

Test Setup:

The EUT was placed in an anechoic chamber. The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a Horn antenna.

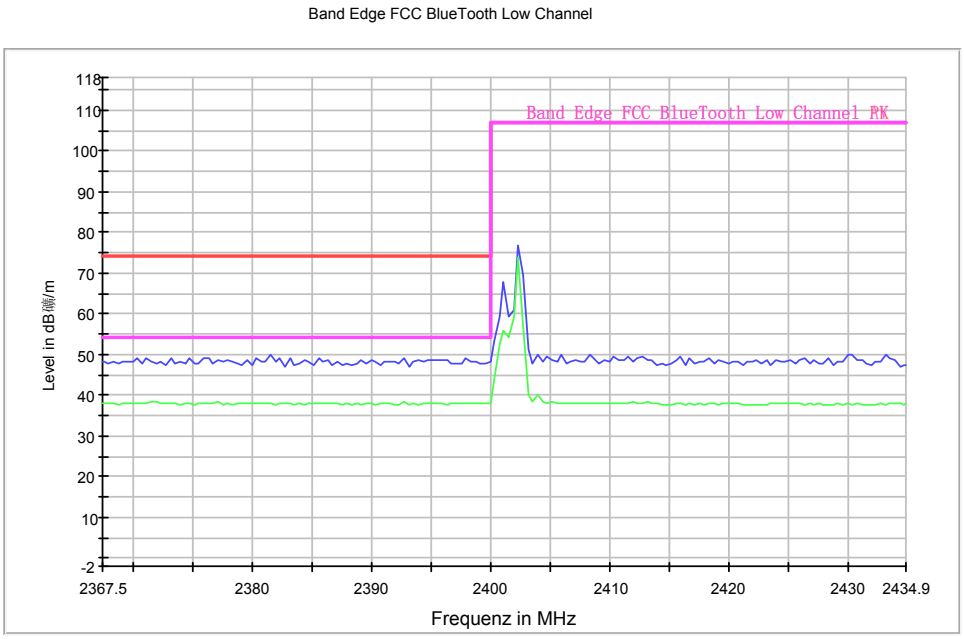
Test method:

Use peak and average detector to measure band edges.
Test should be performing under Vertical and Horizontal modes.

Test data:

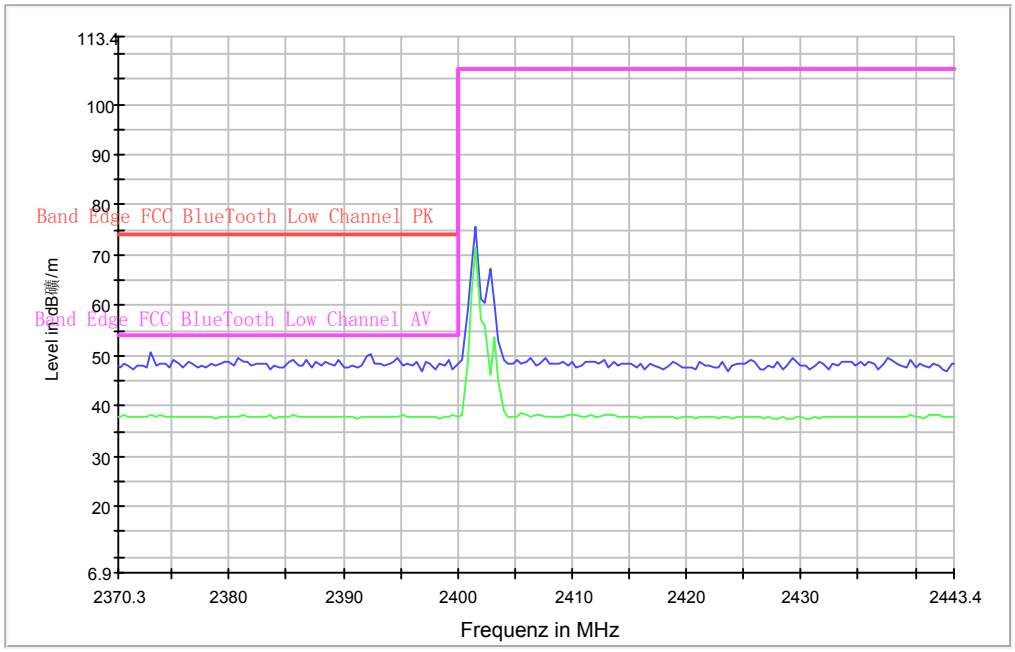
Channel 0

Vertical:

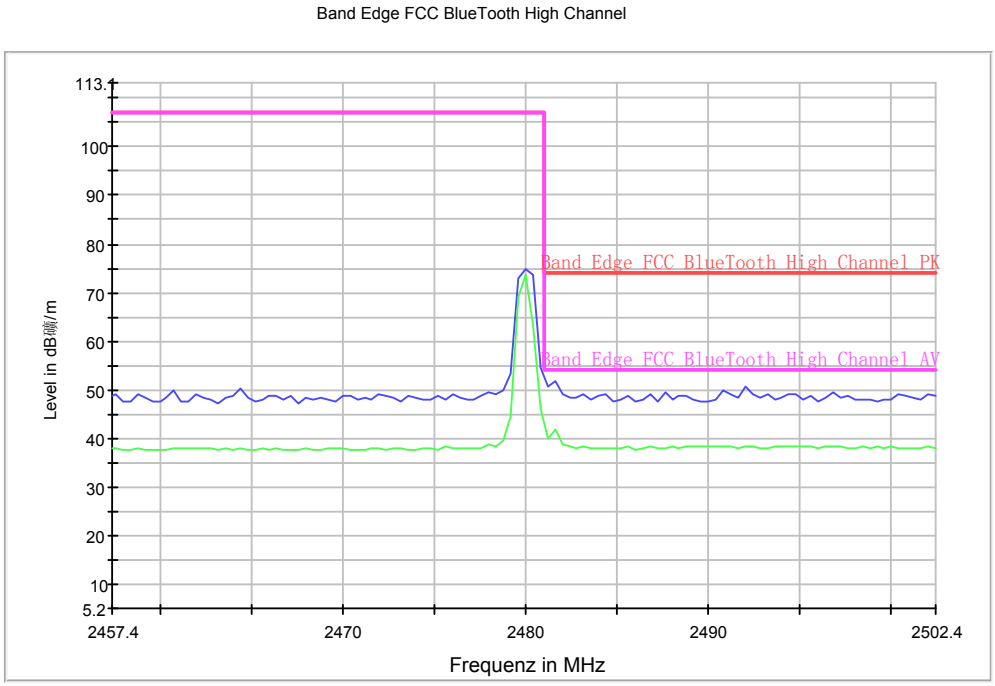


Channel 0

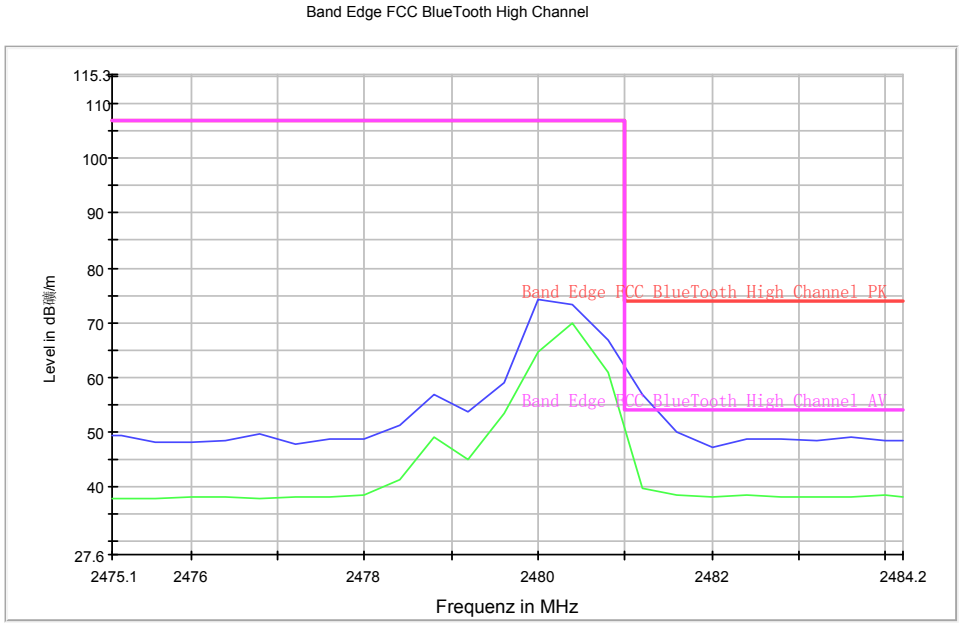
Horizontal:



Channel 78
Vertical:



Channel 78
Horizontal:



4.4 Frequency separation

Specifications:	15.247(a)(1)
Date of Test	2010-09-06
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Fix channel transmit
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

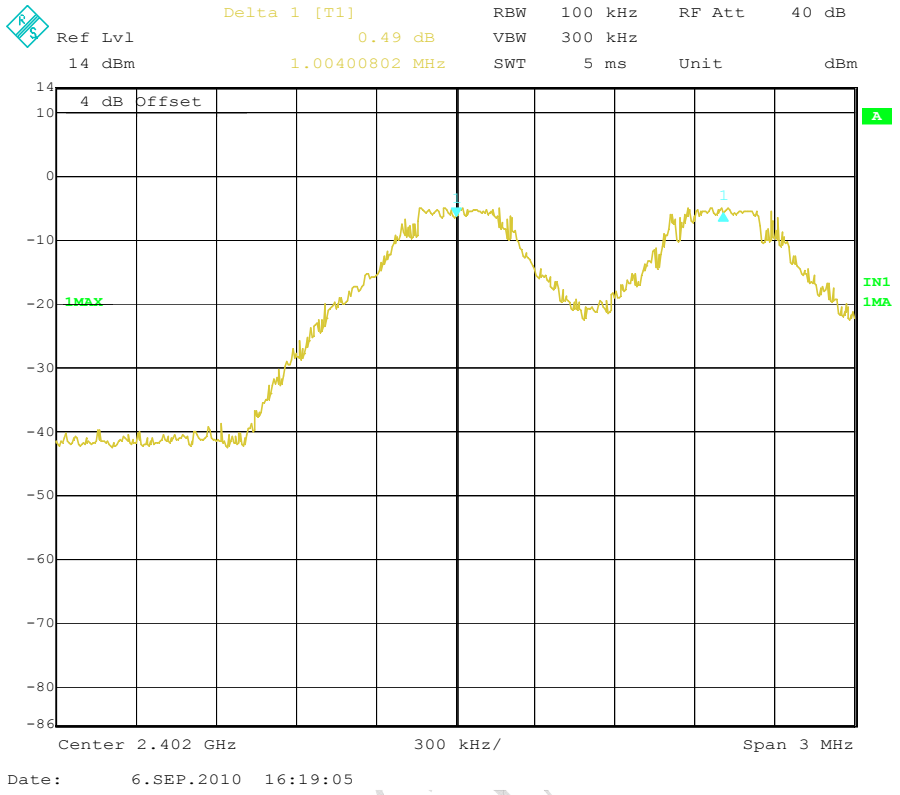
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test Result:

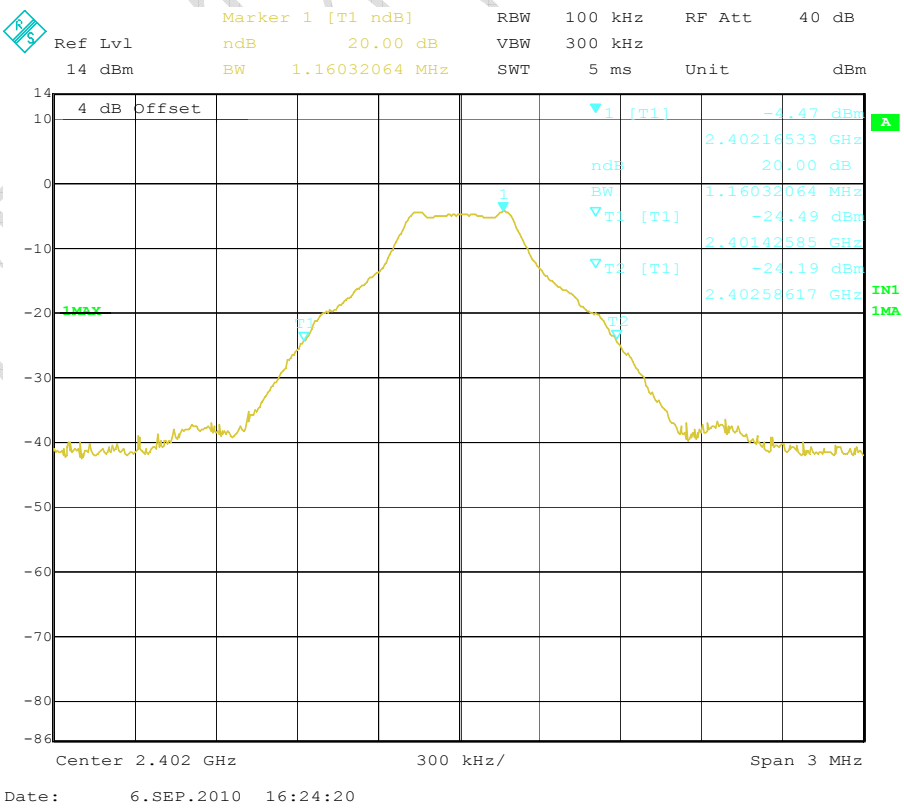
Channel separation (kHz)	20dB Bandwidth (kHz)		Limit (kHz)	Result
1004	Ch 0	1160.3	>25	Pass
	Ch 39	1160.3	>25	Pass
	Ch 78	1160.3	>25	Pass

Test data:

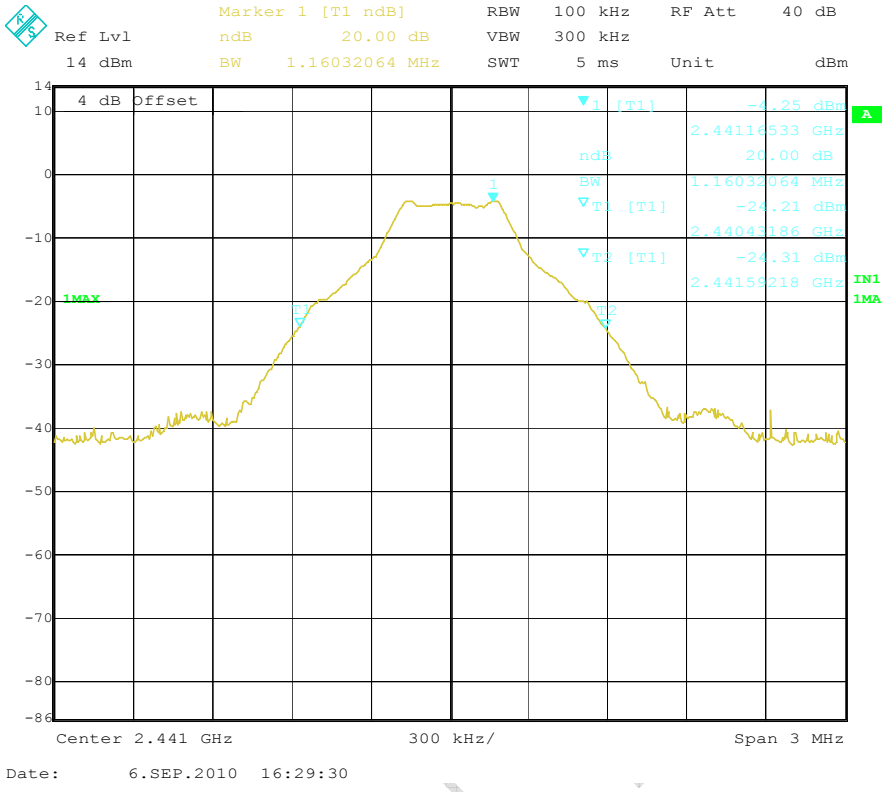
Channel Separation



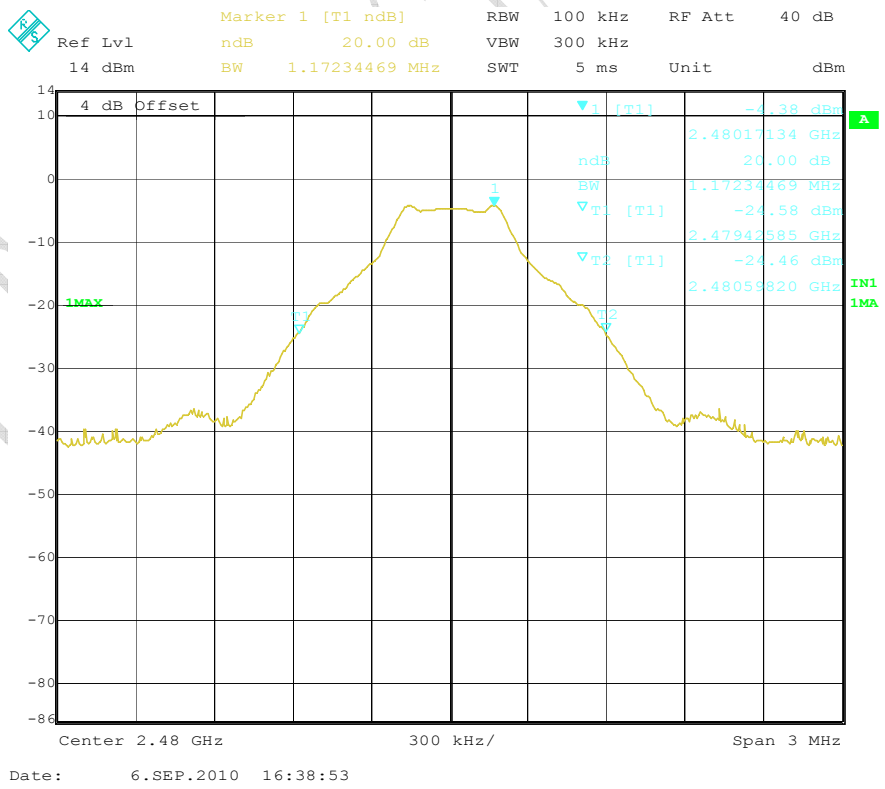
20dB Bandwidth (Ch 0)



20dB Bandwidth (Ch 39)



20dB Bandwidth (Ch 78)



4.5 Number of hopping frequency

Specifications:	15.247(a)(1)(ii)
Date of Test	2010-09-06
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	hopping
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

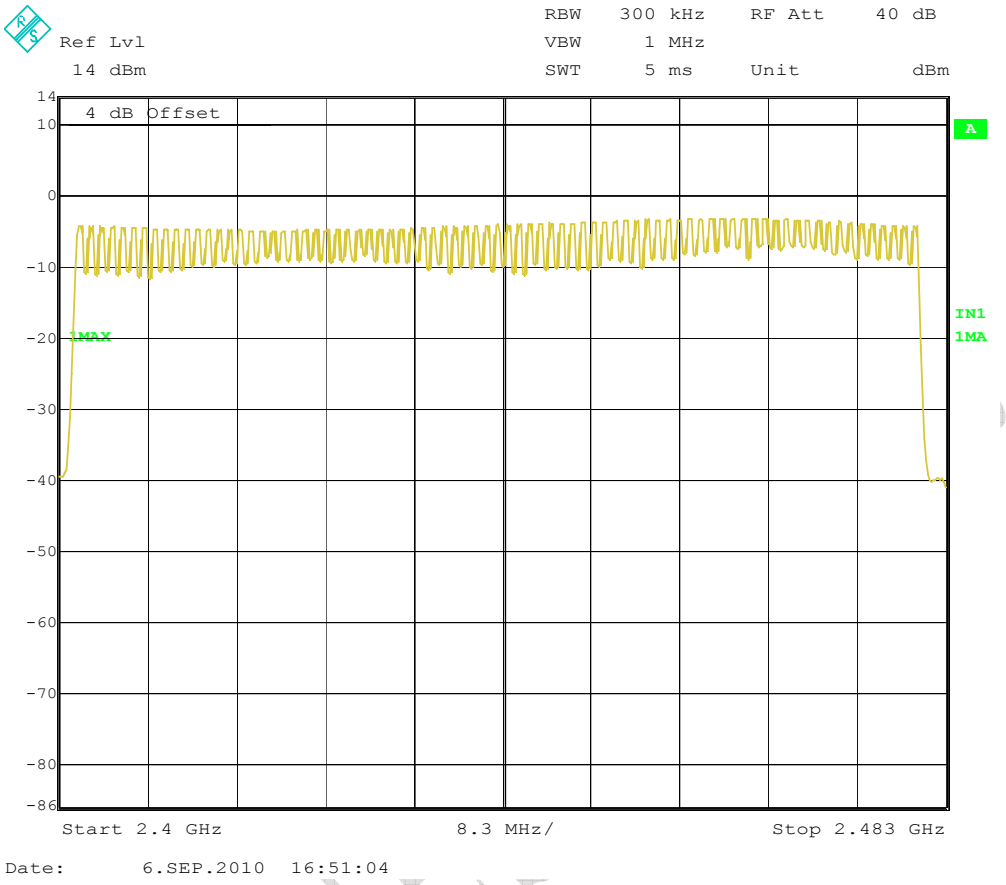
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test Result:

Result (No. of Ch)	Limit (No. of Ch)	Result
79	>75	Pass

Test data:

Channel Number



4.6 Time of occupancy

Specifications:	15.247(a)(1)(iii)
Date of Test	2010-09-06
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Fix channel
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test Result:

DH1 channel 39:

0.396*(1600/2)/79*31.6=127ms

Pulse time[ms]	Total dwell[ms]	Period time[s]	result
0.396	127	31.6	PASS

DH3 channel 39:

1.64*(1600/4)/79*31.6=262ms

Pulse time[ms]	Total dwell[ms]	Period time[s]	result
1.64	262	31.6	PASS

DH5 for channel 39:

2.91*(1600/6)/79*31.6=310ms

Pulse time[ms]	Total dwell[ms]	Period time[s]	result
2.91	310	31.6	PASS

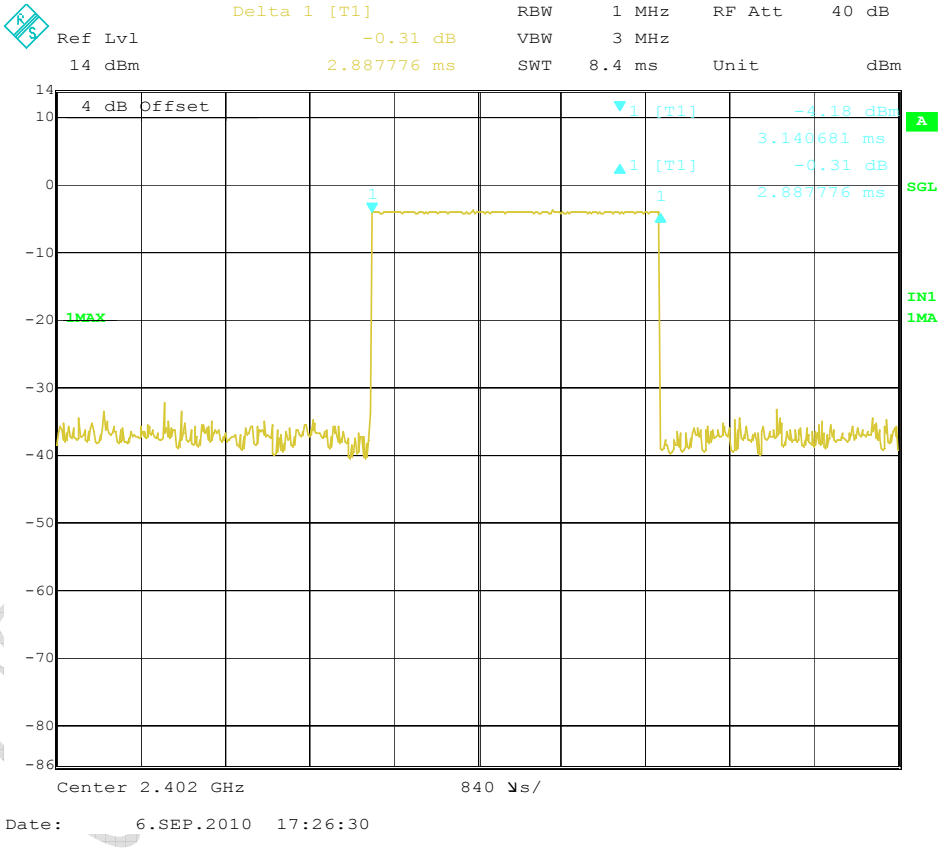
DH5 has the maximum dwell time, so only lowest and highest channel of DH5 are demonstrated as following.

Function for DH5:

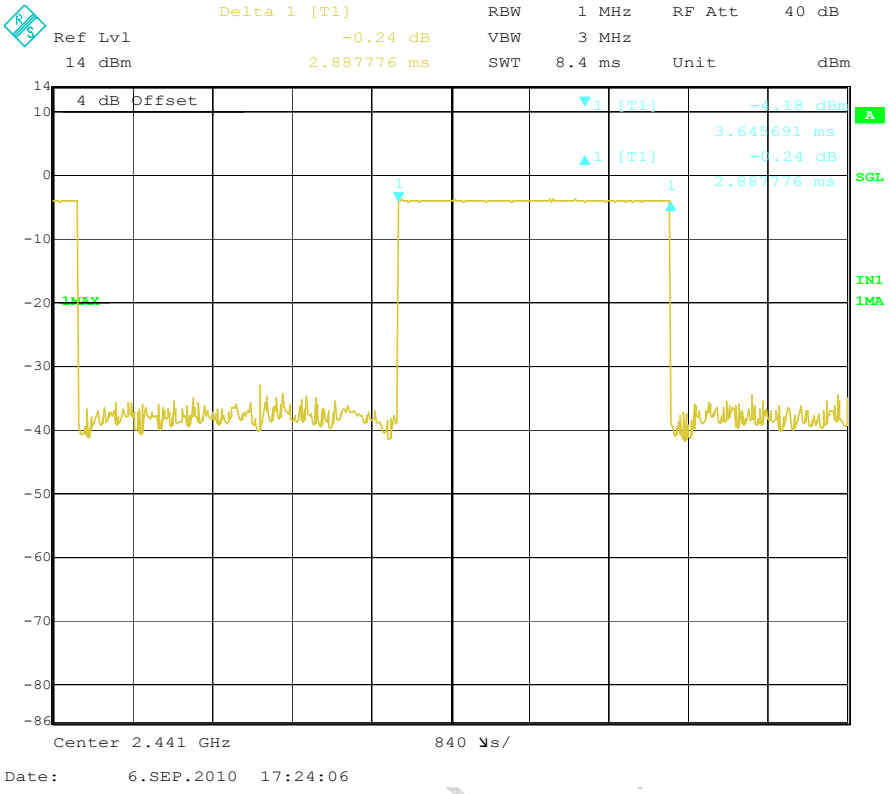
Total Dwell Time= $pulsetime \times \left(1600/6\right)/79 \times 31.6$

Channel	Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
0	2.887	308.8	31.6	400	Pass
39	2.887	310.6	31.6		Pass
78	2.878	307.1	31.6		Pass

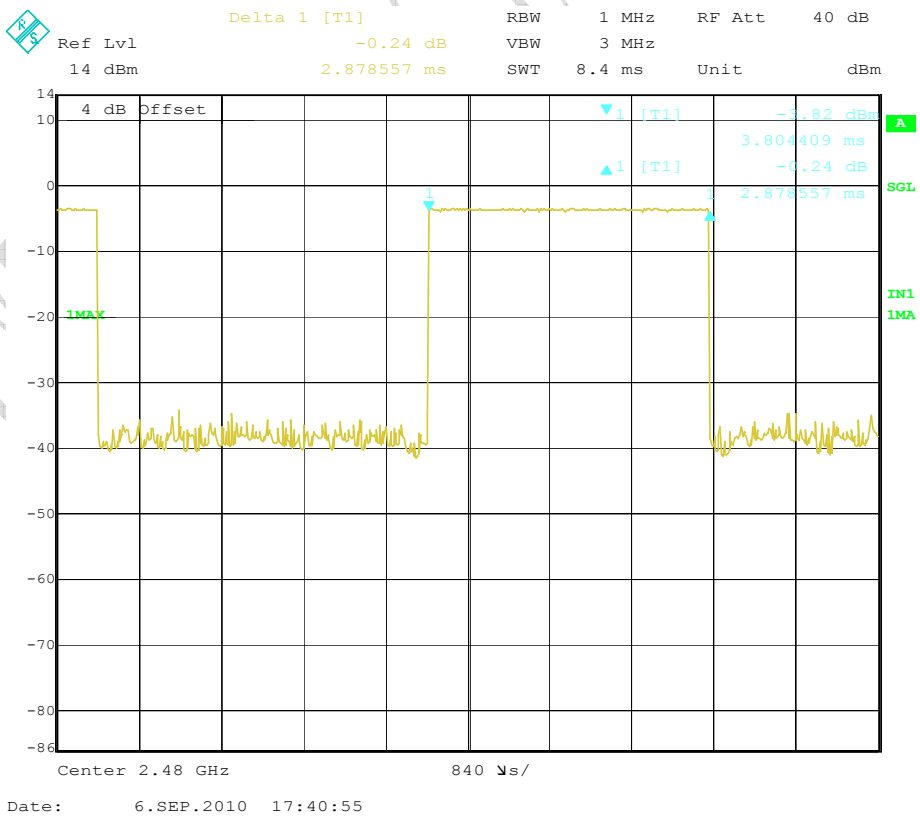
Test data:
Channel 0



Channel 39



Channel 78



4.7 Spurious Measurement (Conducted)

Specifications:	15.209(a) and 15.205(a)
Date of Test	2010-09-06
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Fix channel transmit
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

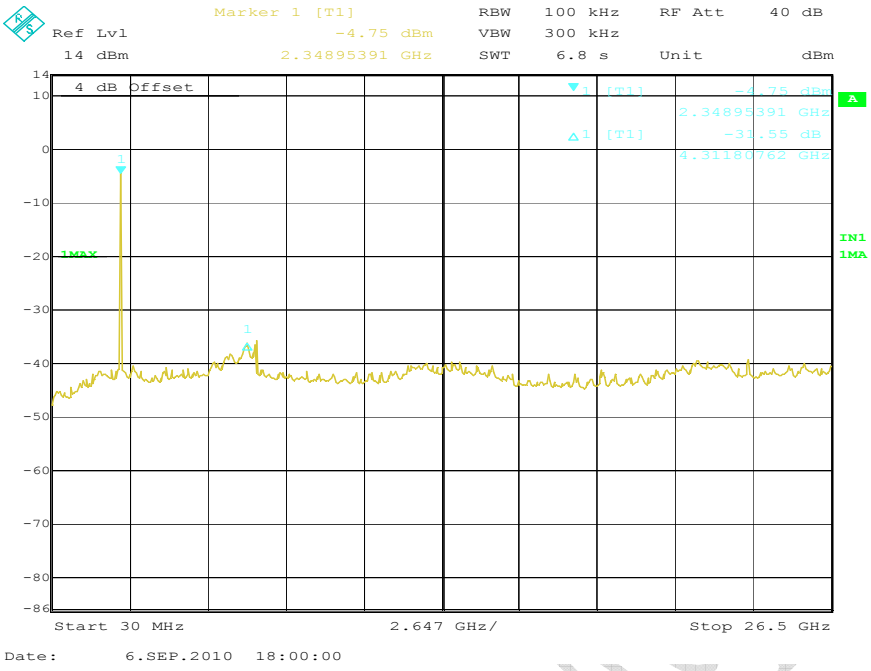
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test Result:

Channel	Result
0	Pass
39	Pass
78	Pass

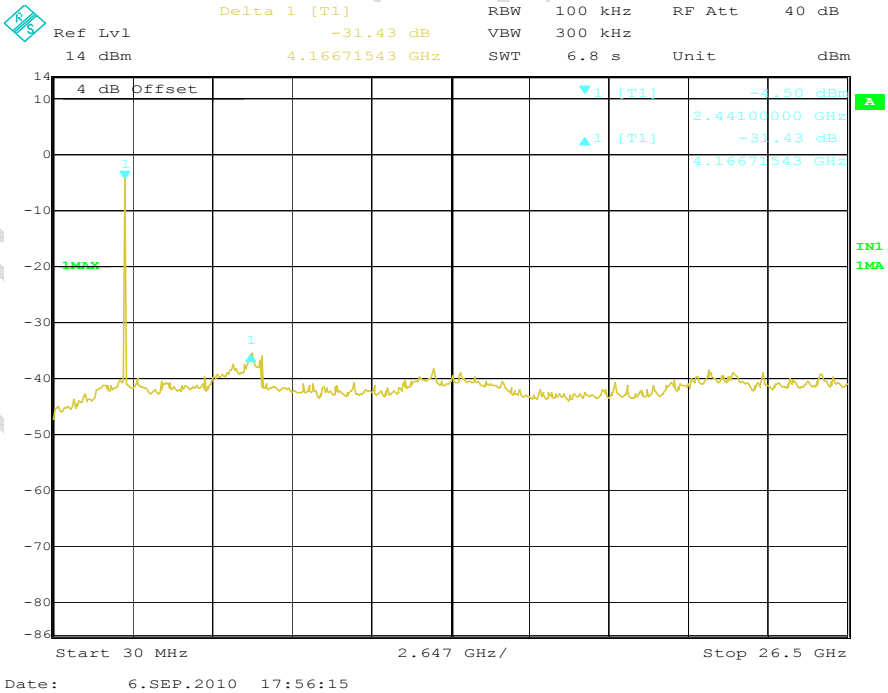
T est data:

Channel 0



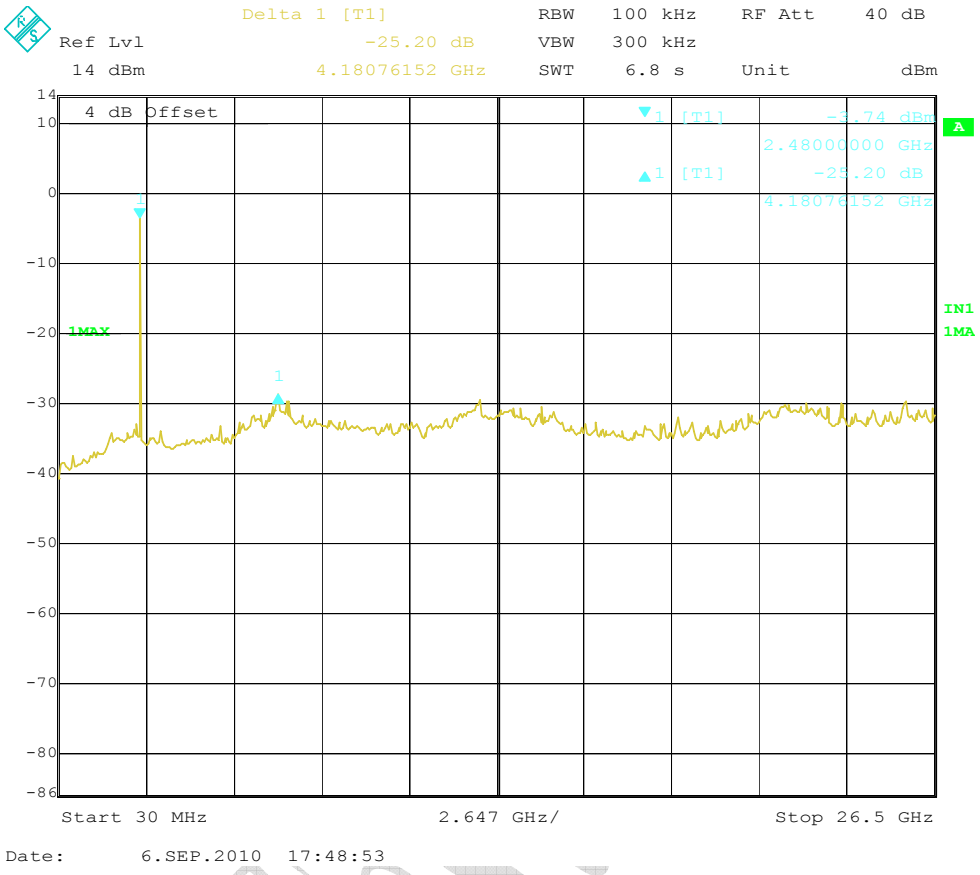
Note: The peak marker is the Bluetooth transmitting power.

Channel 39



Note: The peak marker is the Bluetooth transmitting power.

Channel 78



Note: The peak marker is the Bluetooth transmitting power.

4.8 Radiated Spurious Measurement

Specifications:	15.209(a) and 15.205(a)
Date of Test	2010-09-08
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Fix channel transmit
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R&S	ESI26	100211	2011-01-11	Normal
713	Fully-Anechoic Chamber	ETS	11.8m×6.5m×6.3 m	--	2010-11-16	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal
7330	Loop Antenna	R&S	HFH2-Z2	836553/001	2012-08-23	Normal
7330	Double-Ridged Horn Antenna	R&S	HF906	100037	2010-11-17	Normal
7330	SHF-EHF Horn Antenna	Schwarzbeck	BBHA 9170	BBHA917004 10	2013-04-06	Normal

Test Setup

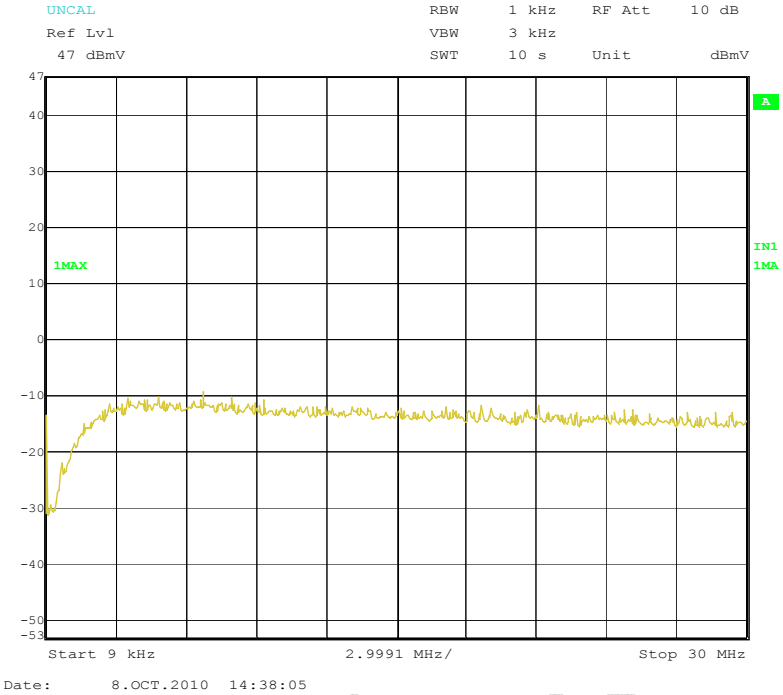
The EUT was placed in an anechoic chamber. The CMU 200 was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a Bilog antenna (for frequency under 1GHz) or a horn antenna (for frequency above 1GHz).

Limit:

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test result:

9kHz-30MHz



Frequency [MHz]	Level [dBuV/m]	Limit [dBuV/m]	Antenna height [cm]	Turntable azimuth [degree]
--	--	--	--	--

Note: There is No frequency exceeds and near limit line in 20dB scope blow.

30MHz-1GHz:

Frequency [MHz]	Level [dBuV/m]	Limit [dBuV/m]	Antenna height [cm]	Turntable azimuth [degree]	Antenna polarization [V/H]
--	--	--	--	--	--

Note: There is No frequency exceeds and near limit line in 20dB scope blow.

1GHz~26GHz:

Channel 0:

Frequency[GHz]	Level[dBuV/m]	Limit[dBuV/m]	Antenna Polarization[V/H]	Detector
--	--	--	--	Peak
--	--	--	--	Average

Channel 39:

Frequency[GHz]	Level[dBuV/m]	Limit[dBuV/m]	Antenna Polarization[V/H]	Detector
--	--	--	--	Peak
--	--	--	--	Average

Channel 78:

Frequency[GHz]	Level[dBuV/m]	Limit[dBuV/m]	Antenna Polarization[V/H]	Detector
--	--	--	--	Peak
--	--	--	--	Average

Note:

1. Test from 1GHz up to 10th harmonic of operating frequency.
2. 2.4~2.4835GHz band is the operating frequency.
3. The maximum radiated spurious emission point is lower than 20dB compared with the limits, so no data was listed.

4.9 Power line Conducted Emissions

Specifications:	ANSI C63.4 voltage mains test
Date of Test	2010-09-17
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Operation Mode	Hopping
Test Results:	Pass

Test equipment Used:

Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Artificial Mains Network	R/S	ESH2-Z5	837480/002	2011-01-08	Normal
714	Shielding Room	ETS	--	19003	2010-11-16	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	22011-06-08	Normal

Test Setup

The EUT was placed in a shielding room. The Universal Radio Communications Tester was used to set the TX channel and power level. The ac adapter output is connected to Spectrum analyzer through an AMN (Artificial Mains Network).

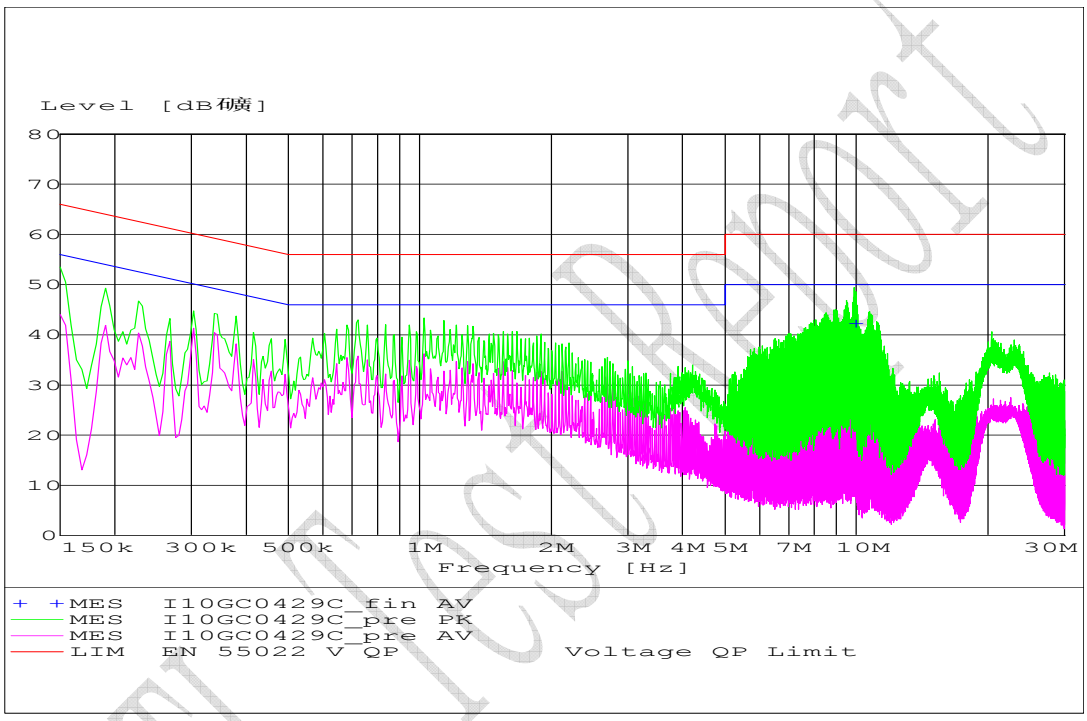
Limits of the conducted disturbance at the AC mains ports:

Frequency range	Limit(Quasi-peak)	Limit(Average)
0.15 MHz to 0.5 MHz	66 dBμV – 56 dBμV	56 dBμV – 46 dBμV
>0.5 MHz to 5MHz	56 dBμV	46 dBμV
>5 MHz to 30 MHz	60 dBμV	50 dBμV
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

Test Result:

Pass					
Detector (QP/AV)	**Frequency (MHz)**	**Level (dBμV)**	**Limit (dBμV)**	**Line**	**PE**
AV	9.888000	42.2	50	L1	GND
Remarks: No frequency exceeds the limit.					

Test data:



Annex A External Photos

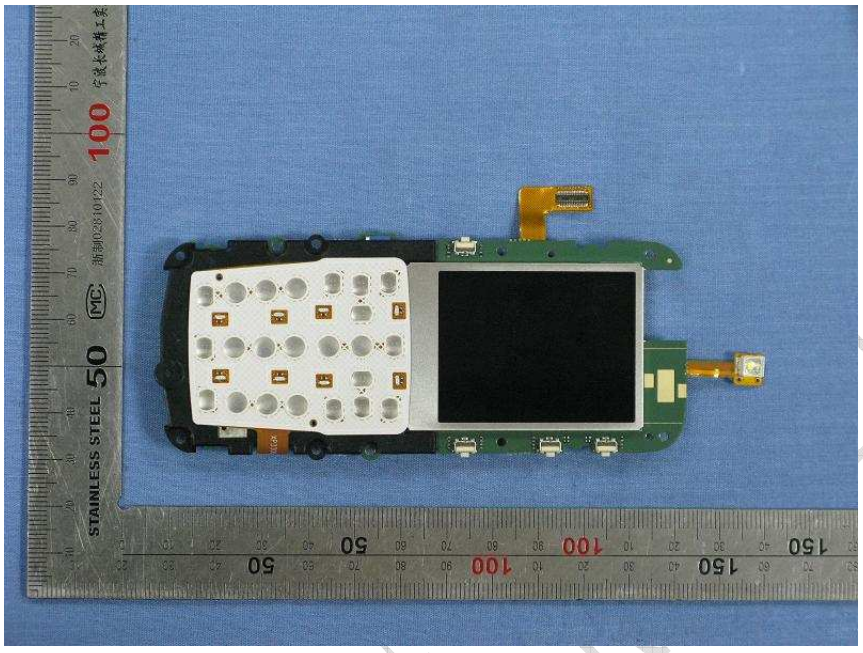
Front view

Back view

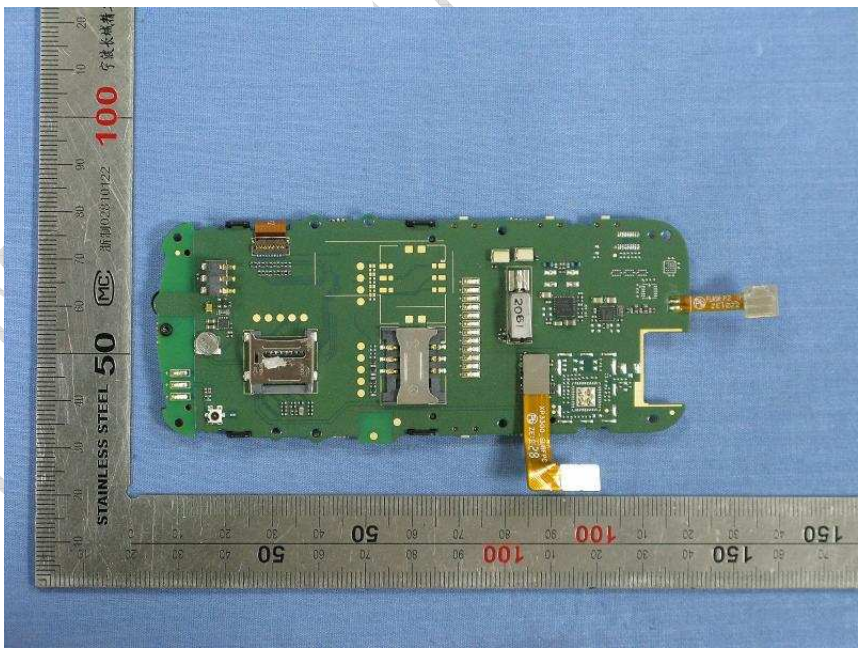
Adaptor and Cable

Battery

Annex B Internal Photos



Main board (face)



Main board (back)

ANNEX C Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

The End of this Report