TEST REPORT

REPORT NUMBER: B08GE5152-FCC-BT1

ON

Type of Equipment: GSM/GPRS Mobile phone
Type of Designation: Mega4
Manufacturer: Ezze Mobile Tech

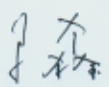
ACCORDING TO
FCC Part 15, FREQUENCY Hopping Spread Spectrum Transceiver

PART 15 subpart C 15.247

China Telecommunication Technology Labs.

Month date, year
June, 27, 2008

Signature



Ma Xin
Deputy Director

FCC ID:	RV2MEGA4
Report Date:	2008-06-27

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.

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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
Duration of the test:	2008-05-21
Signature:	

Name:	An Shaogeng
Position:	Engineer
Department:	Department of EMC test
Duration of the test:	2008-06-26
Signature:	

Editor of this test report:

Name:	Li Guoqing
Position:	Engineer
Department:	Department of EMC test
Date:	2008-06-27
Signature:	

Technical responsibility for area of testing:

Name:	Zou Dongyi
Position:	Manager
Department:	Department of EMC test
Date:	2008-06-27
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 for Laboratory (CNAL)
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:	Ezze Mobile Tech
Address:	1F, Bubmusa Bldg., 151-31,
	Nonhyun-dong, Kangnam-ku, Seoul
Country:	Korea
Telephone:	82-2-519-7805
Fax:	82-2-519-7882
Contact:	Anny
Telephone:	82-10-9265-2189
Email:	eosahn@ezzemobile.com

1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name:	--
Address:	--
City:	--
Country:	--

1.4.3 Manufactory (if different from applicant in section 1.4.1)

Name:	Ezze Mobile Tech
Address:	608 BL 17-1 LT, 633-6, Seonggok-Dong,
	Danwon-Gu, Ansan-City,Gyeonggi-Do(425-833)

2 Test Item

2.1 General Information

Manufacturer: Ezze Mobile Tech

Name: GSM/GPRS Mobile phone

Model Number: MEGA4

Serial Number: --

Production Status: Product

Receipt date of test item: 2008-05-12

2.2 Outline of EUT

E.U.T. is a GSM/GPRS Mobile phone with Bluetooth function.

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 Station	Ezze Mobile Tech	MEGA4	--	None
B	Adapter	Yu Feng	USB Type	--	None
C	Battery	Zhi-in	Li-ion	--	None
D	Headset	Rich star	Wire Type(stereo)	--	None

Cables:

Item	Cable Type	Manufacturer	Length	Shield	Quantity	Remarks
1	DC cable on Adapter	Unknown	1.0m	No	1	None

2.5 Other Information

None

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: NP: Not Performed.		

4 Test Results

4.1 Peak power

Specifications:	15.247 (b)(3)(i),(ii)and(iii)
Date of Tests	2008-06-26
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
020	EMC Analyzer	Agilent	E7405A	US41160321	2009-01-03	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	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.

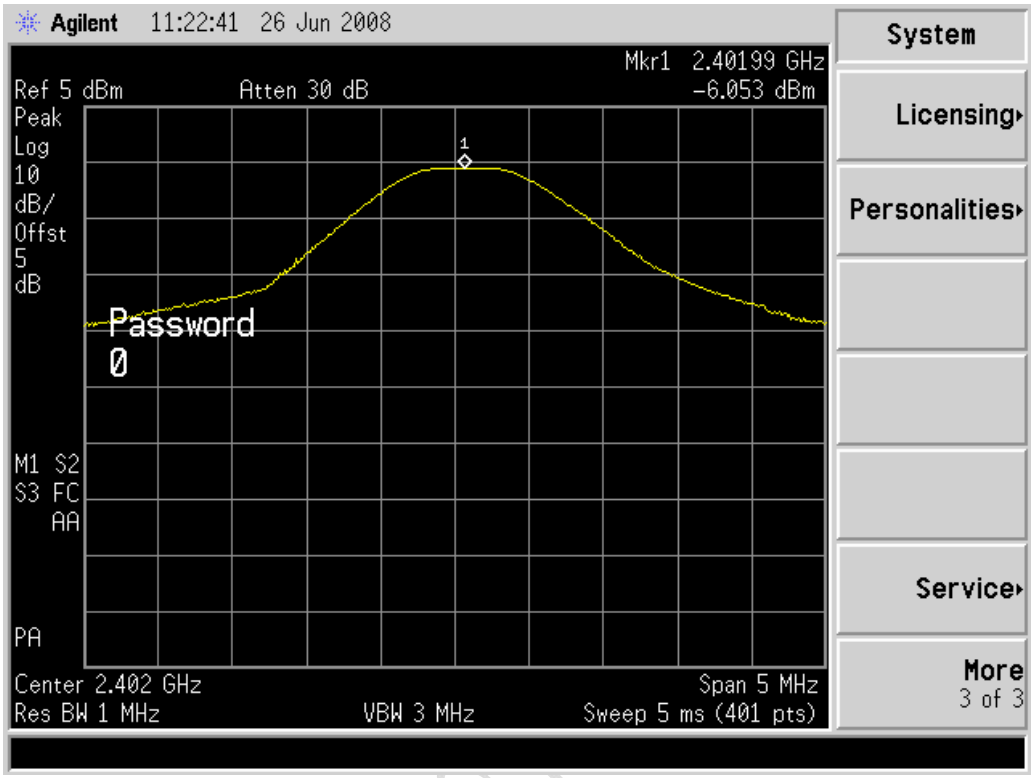
Test Results:

channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Result
0	2402	-2.053	30	Pass
39	2441	-1.167	30	Pass
78	2480	0.031	30	pass

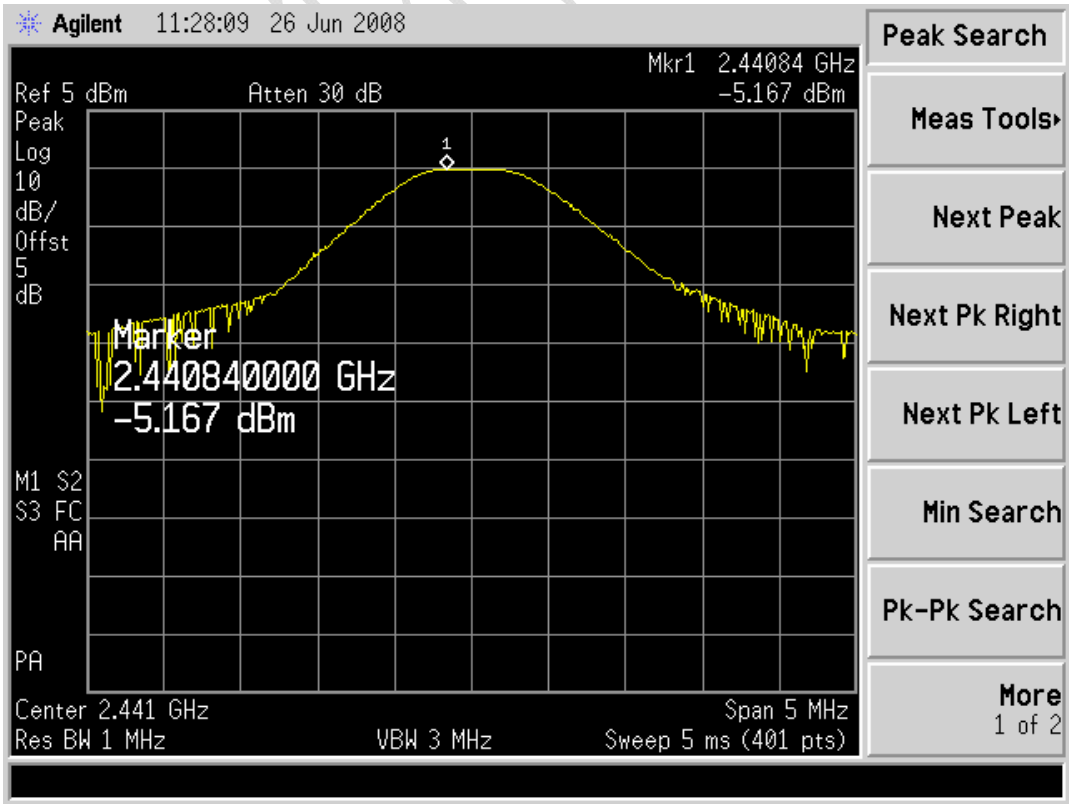
Note: cable loss: 4dB

Test Data:

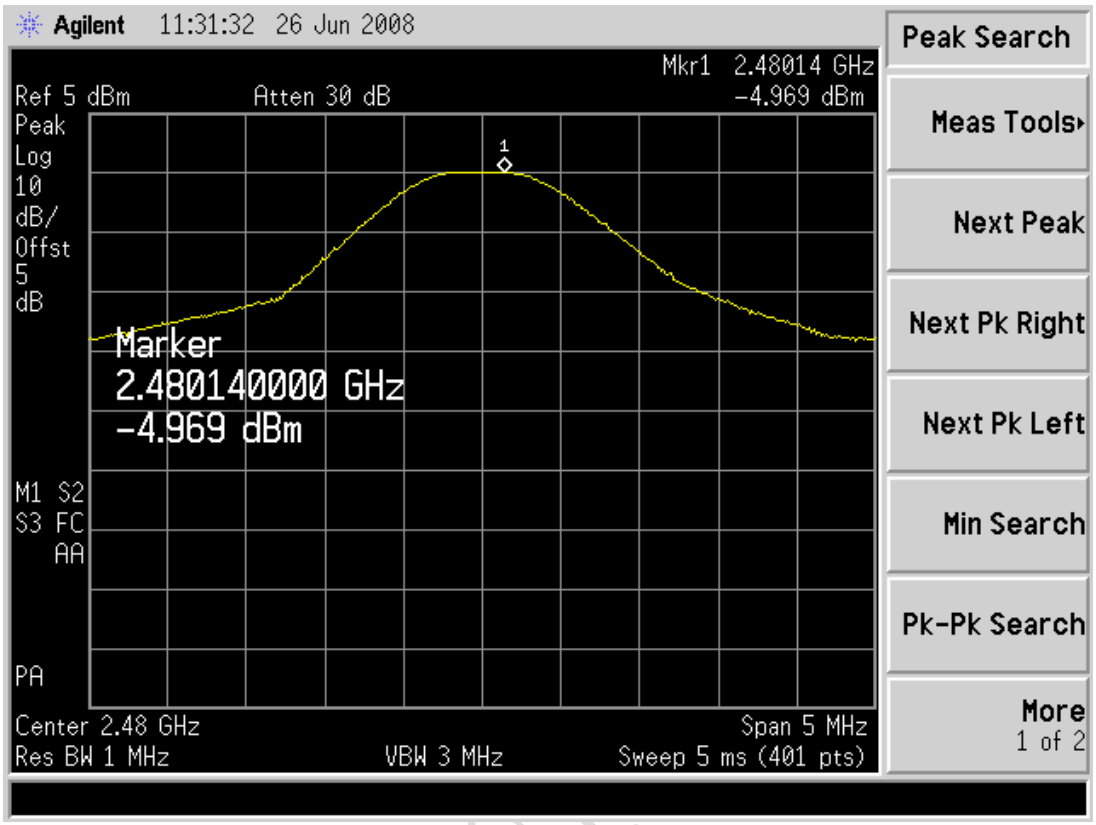
Channel 0:



Channel 39



Channel 78


Agilent 11:31:32 26 Jun 2008
Mkr1 2.48014 GHz
Ref 5 dBm
Atten 30 dB
-4.969 dBm
Peak
Log
10
dB/
Offst
5
dB
Marker
2.480140000 GHz
-4.969 dBm
M1 S2
S3 FC
AA
PA
Center 2.48 GHz
Span 5 MHz
Res BW 1 MHz
VBW 3 MHz
Sweep 5 ms (401 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

4.2 Band edges (conducted)

Specifications:	15.247 (d)
Date of Tests	2008-06-26
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:

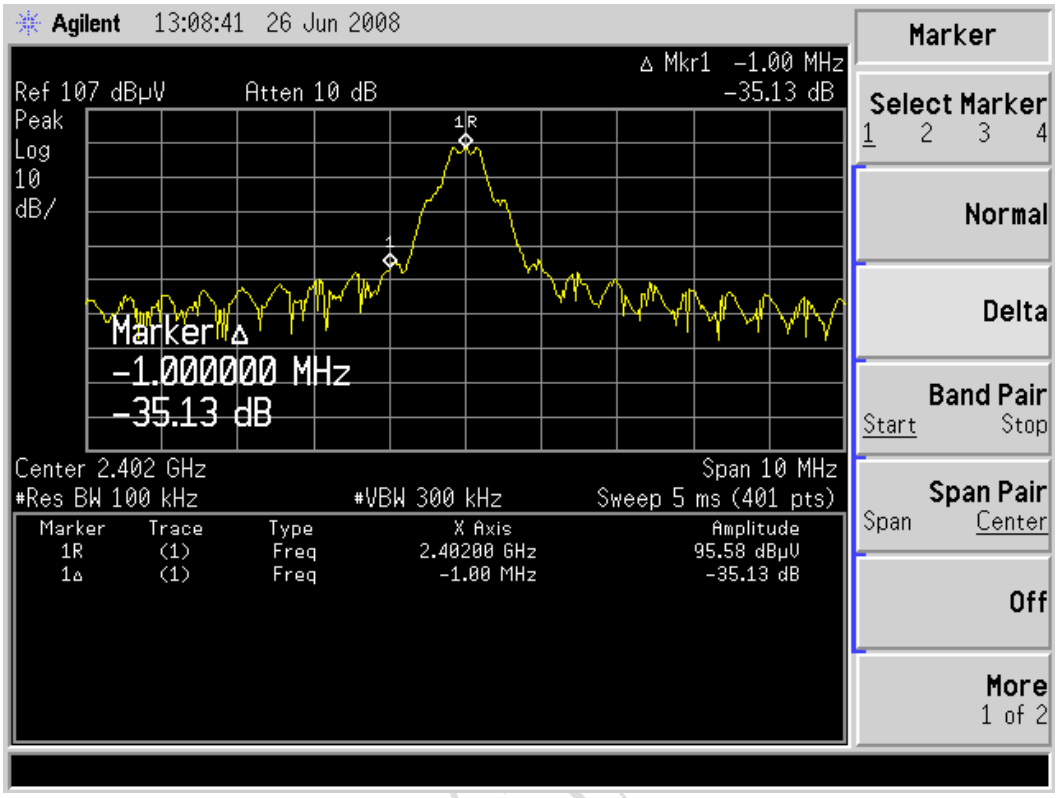
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
020	EMC Analyzer	Agilent	E7405A	US41160321	2009-01-03	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	Normal

Test Setup:

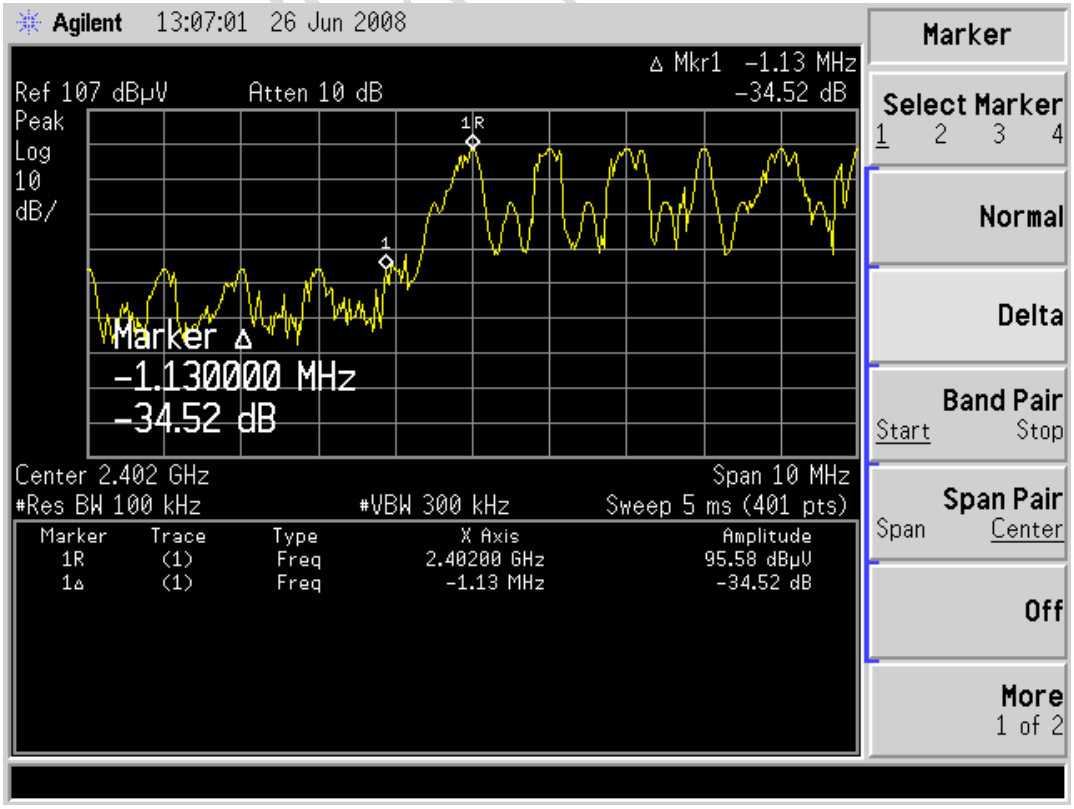
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test data:

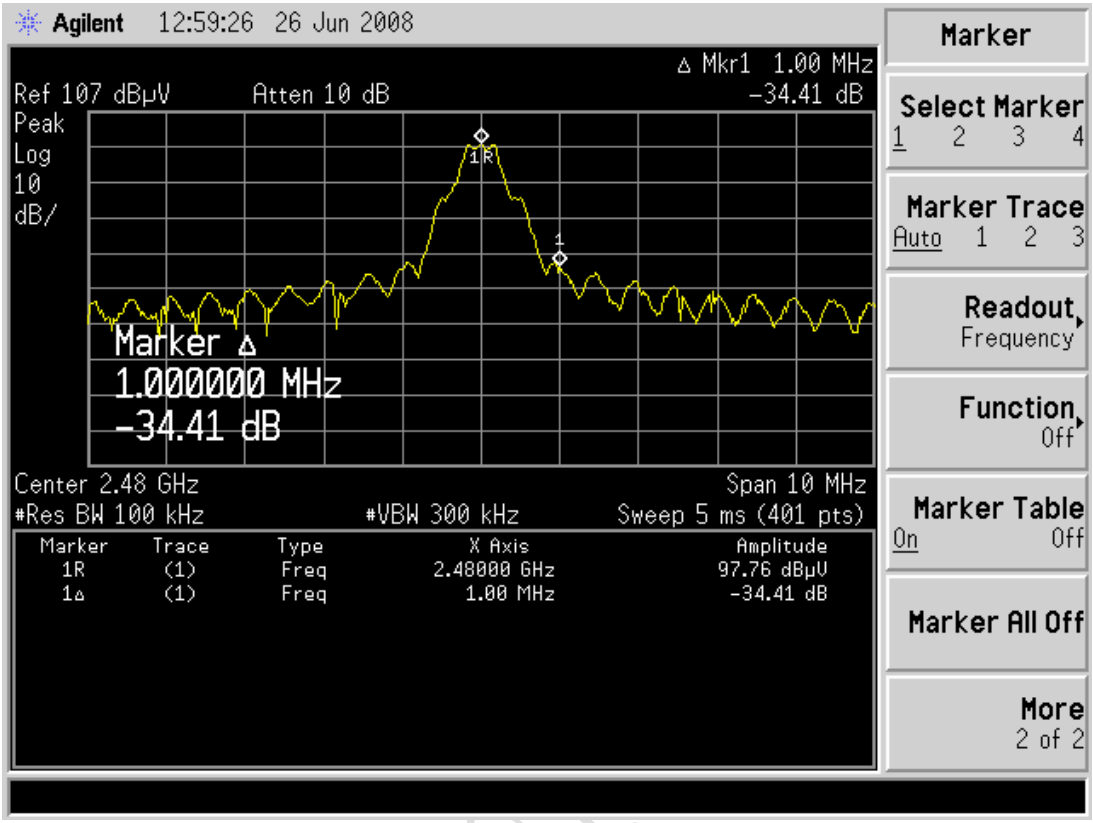
Channel 0, fixed mode, left band-edge



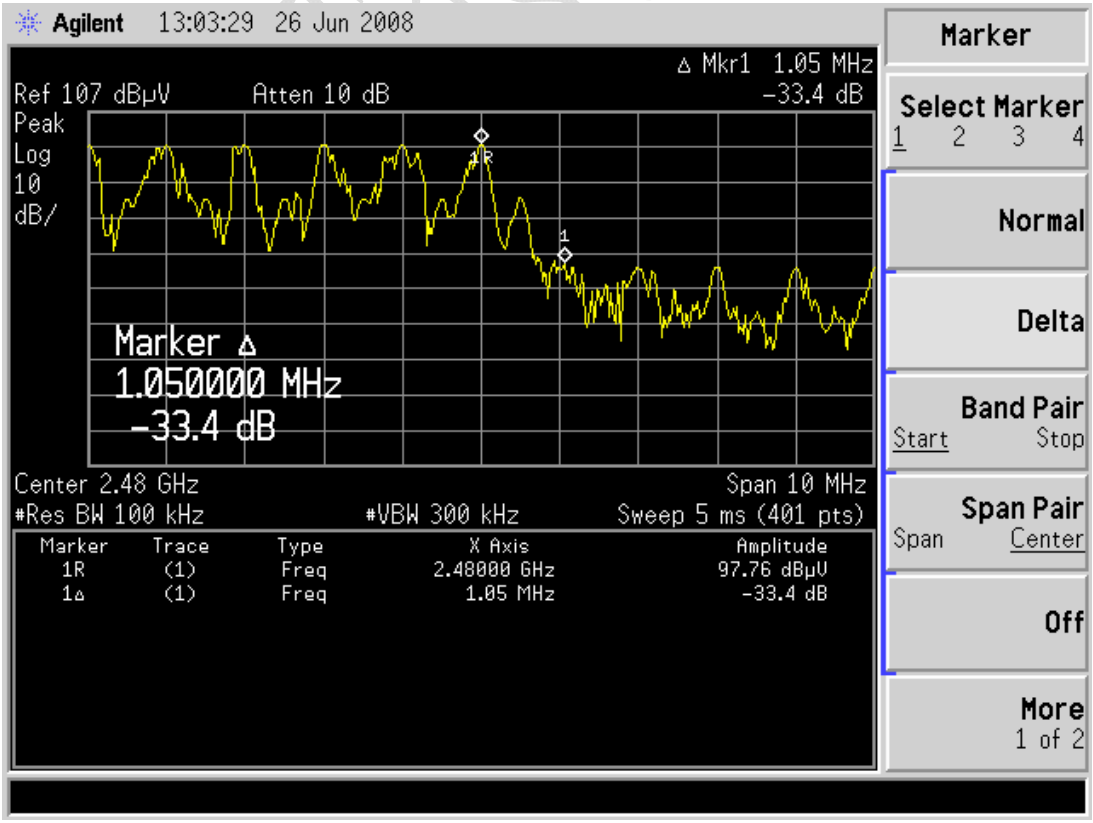
Hopping mode, left band-edge



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	2008-06-25
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	2009-01-03	Normal
7330	Horn Antenna	R/S	HF906	100037	2010-01-09	Normal
713	Fully-Anechoic Chamber	ETS	11.8m×6.5m×6.3m	--	2010-11-16	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	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:

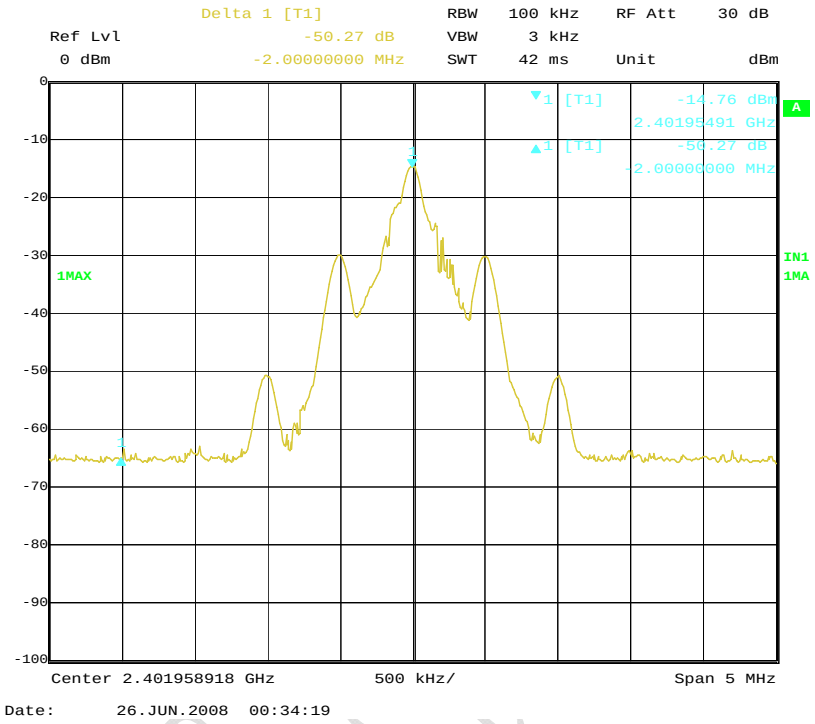
Use peak and average detector to measure band edges.
Test should be performing under Vertical and Horizontal modes.

Test data:

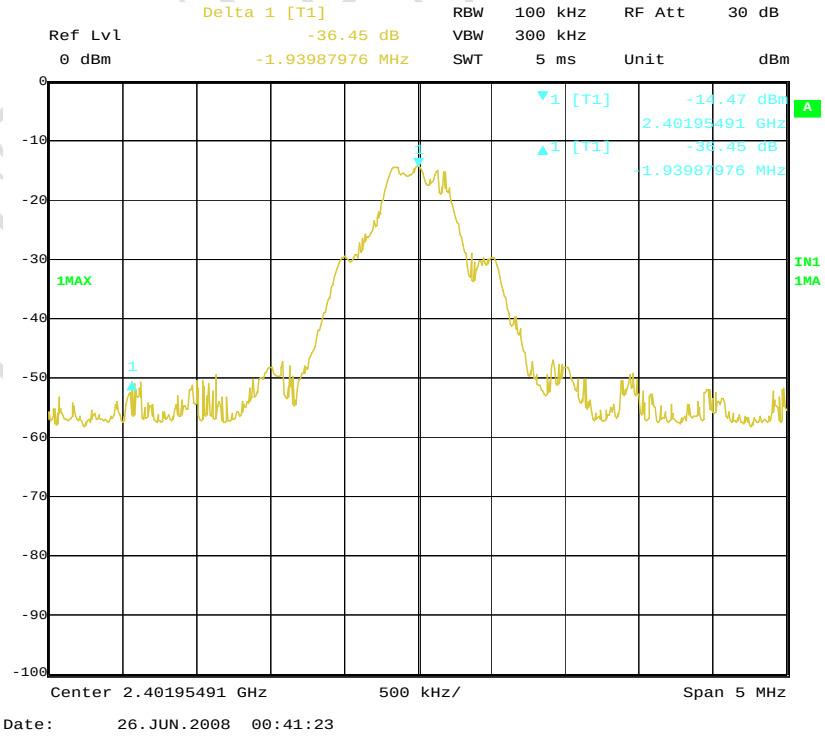
Channel 0

Vertical

Peak mode:



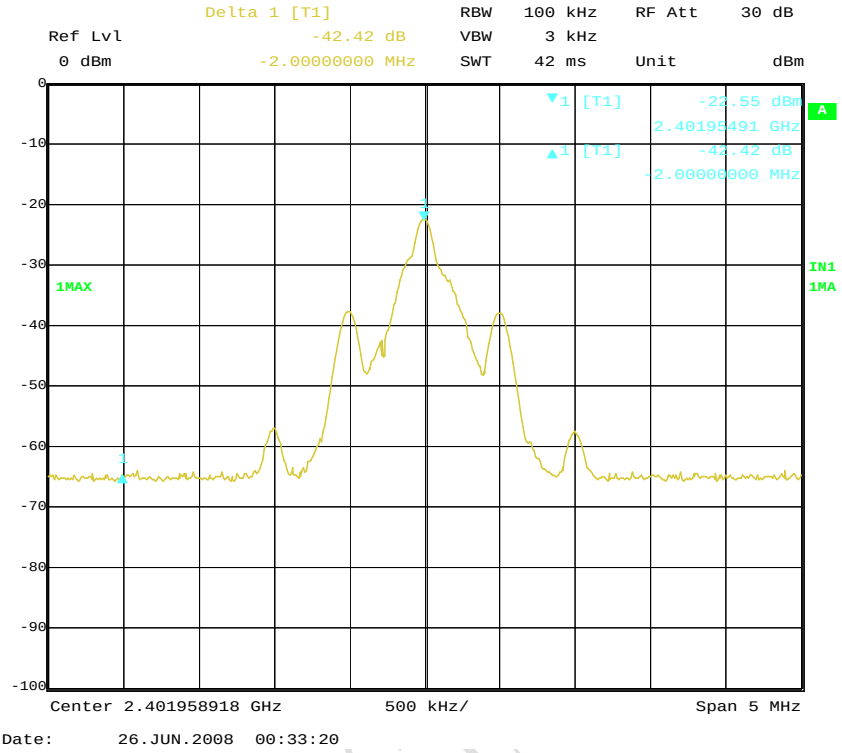
Average mode:



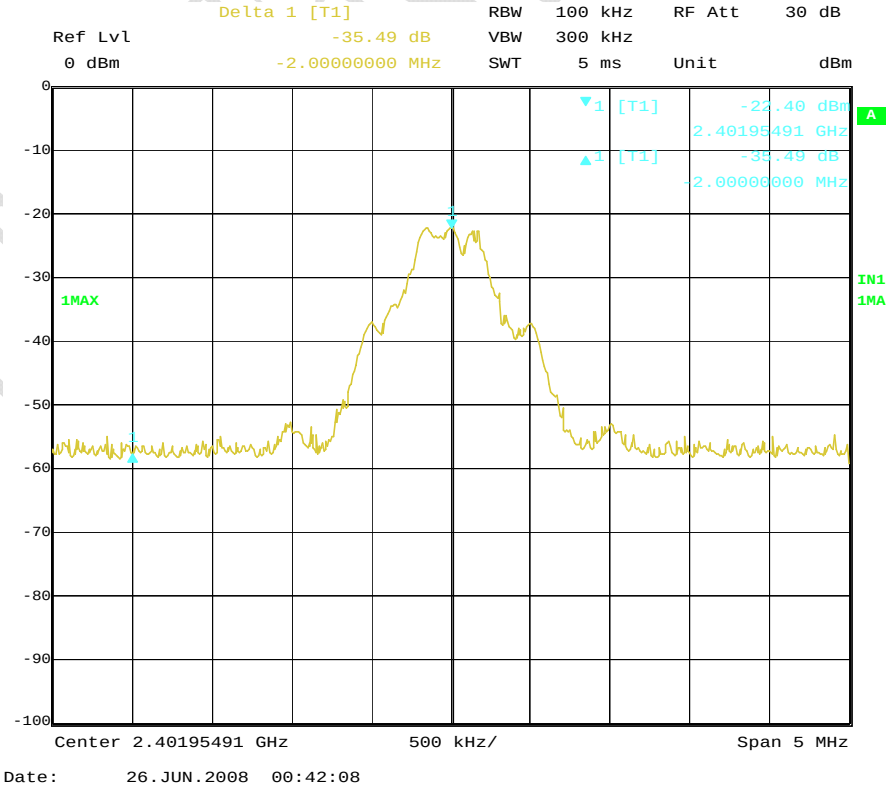
Channel 0

Horizontal

Peak mode:



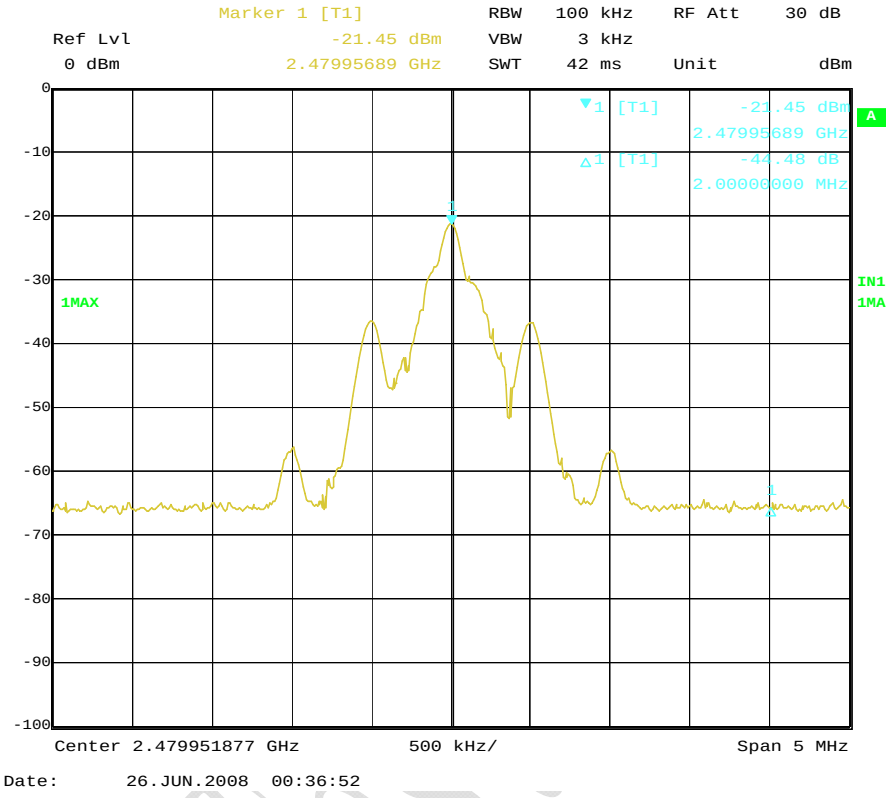
Average mode:



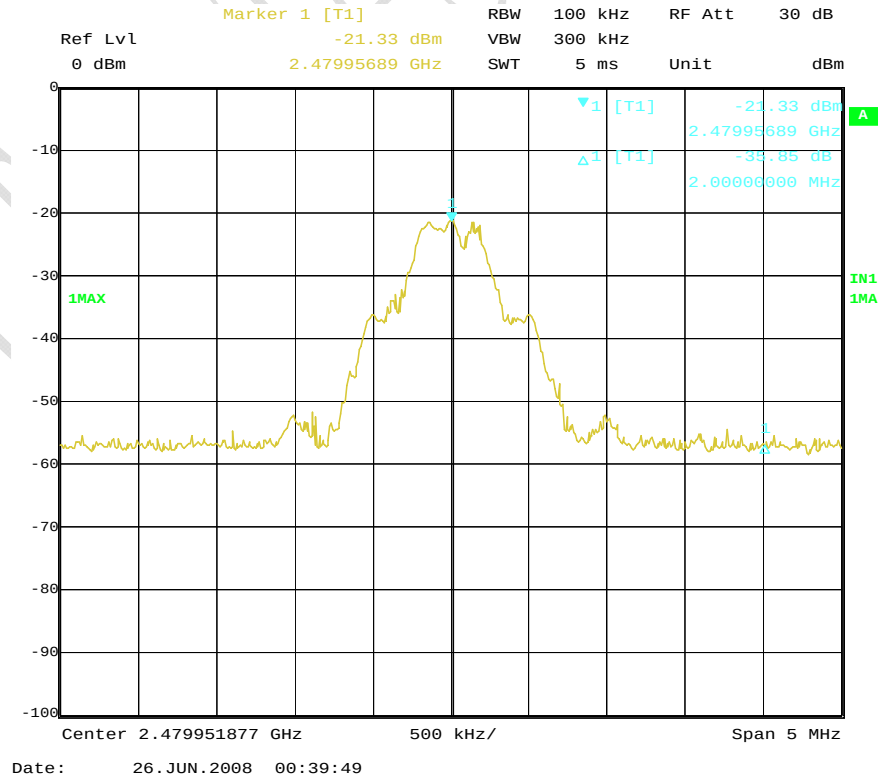
Channel 78

Vertical

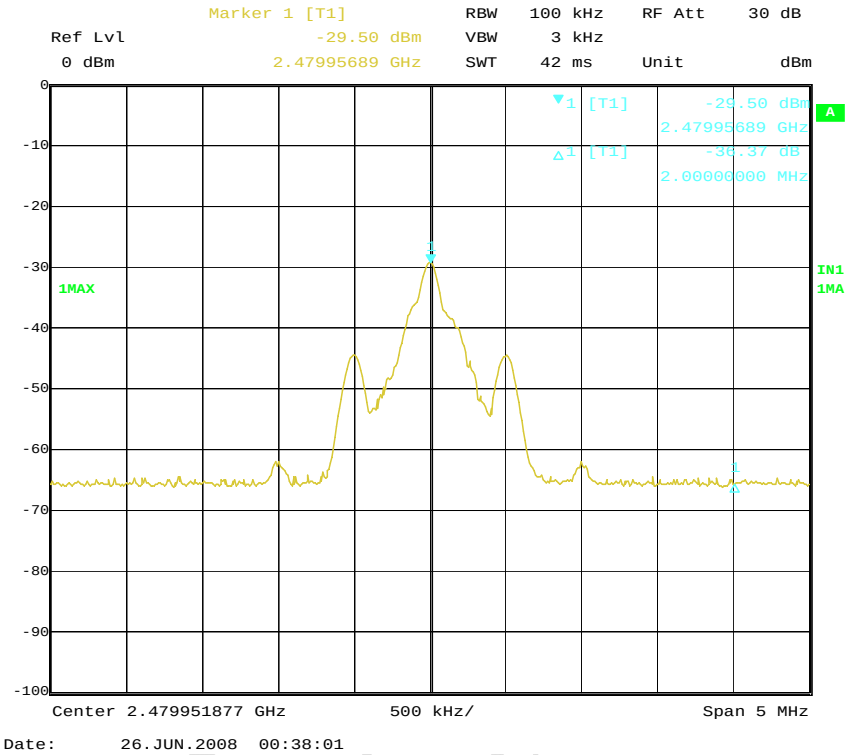
Peak mode:



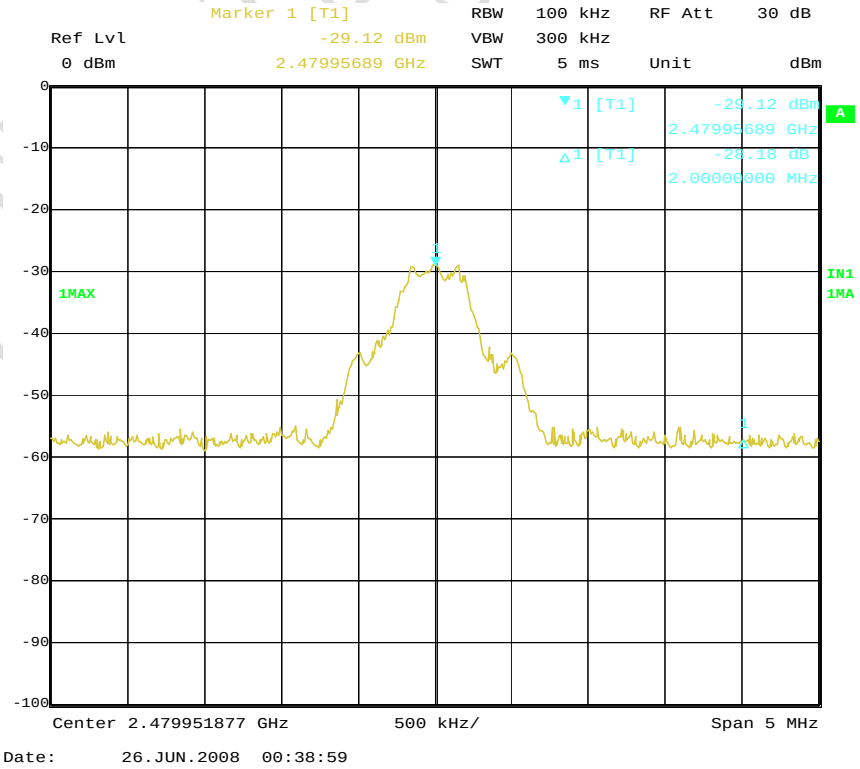
Average mode:



Channel 78
Horizontal
Peak mode:



Average mode:



4.4 Frequency separation

Specifications:	15.247(a)(1)
Date of Test	2008-06-26
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
020	EMC Analyzer	Agilent	E7405A	US41160321	2009-01-03	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	Normal

Test Setup

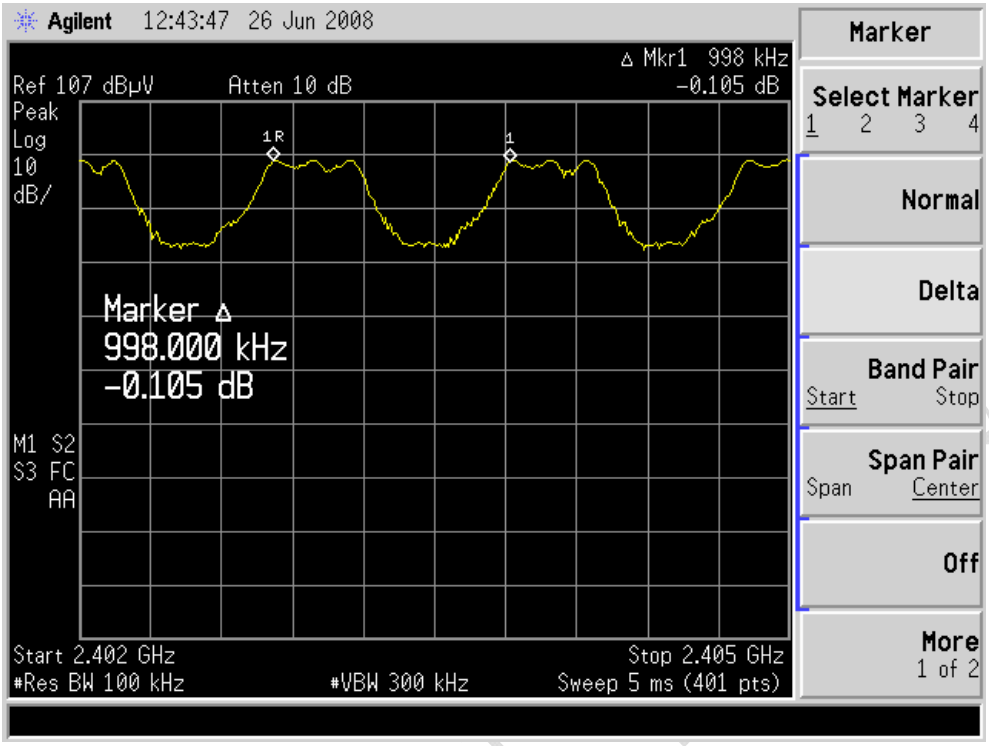
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test Result:

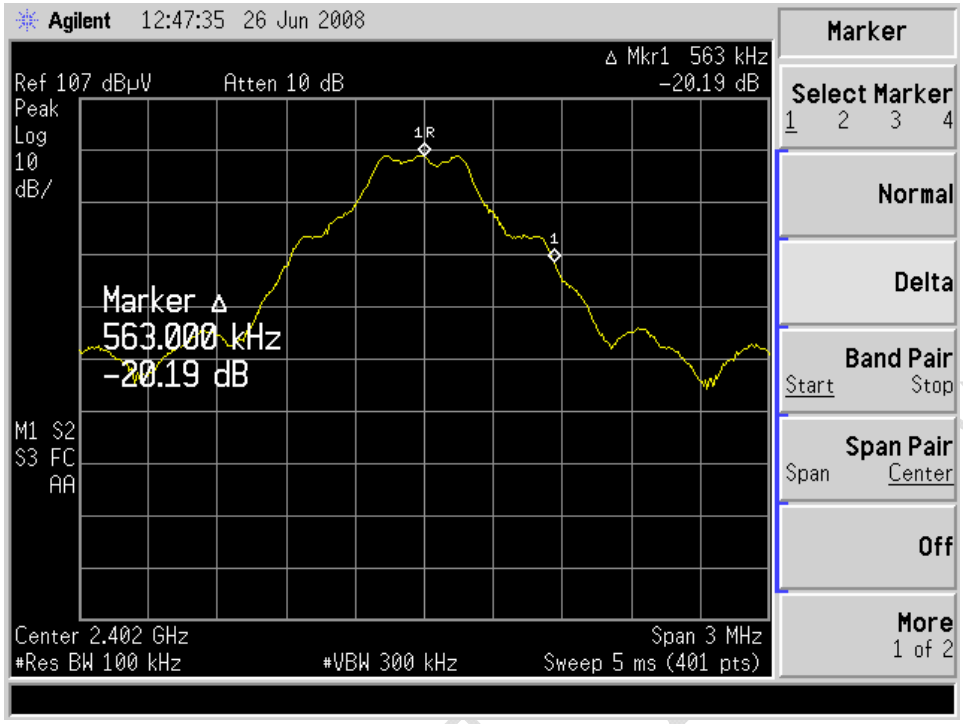
Channel separation (kHz)	20dB Bandwidth (kHz)		Limit (kHz)	Result
998	Ch 0	1156	>25	Pass
	Ch 39	1156	>25	Pass
	Ch 78	1156	>25	Pass

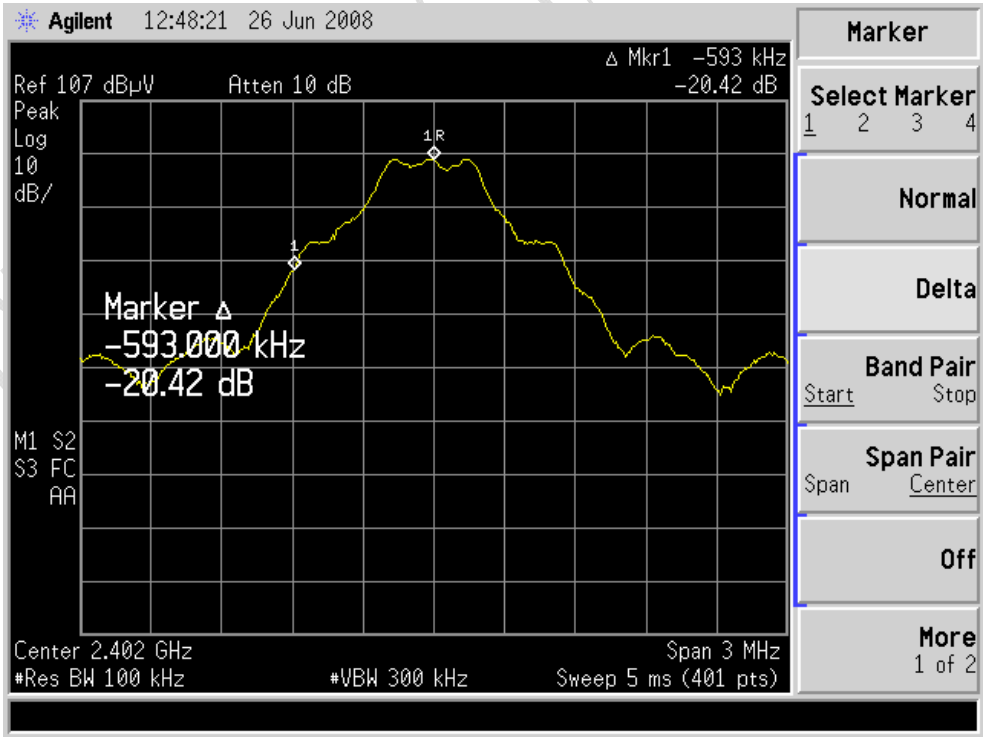
Test data:

Channel Separation

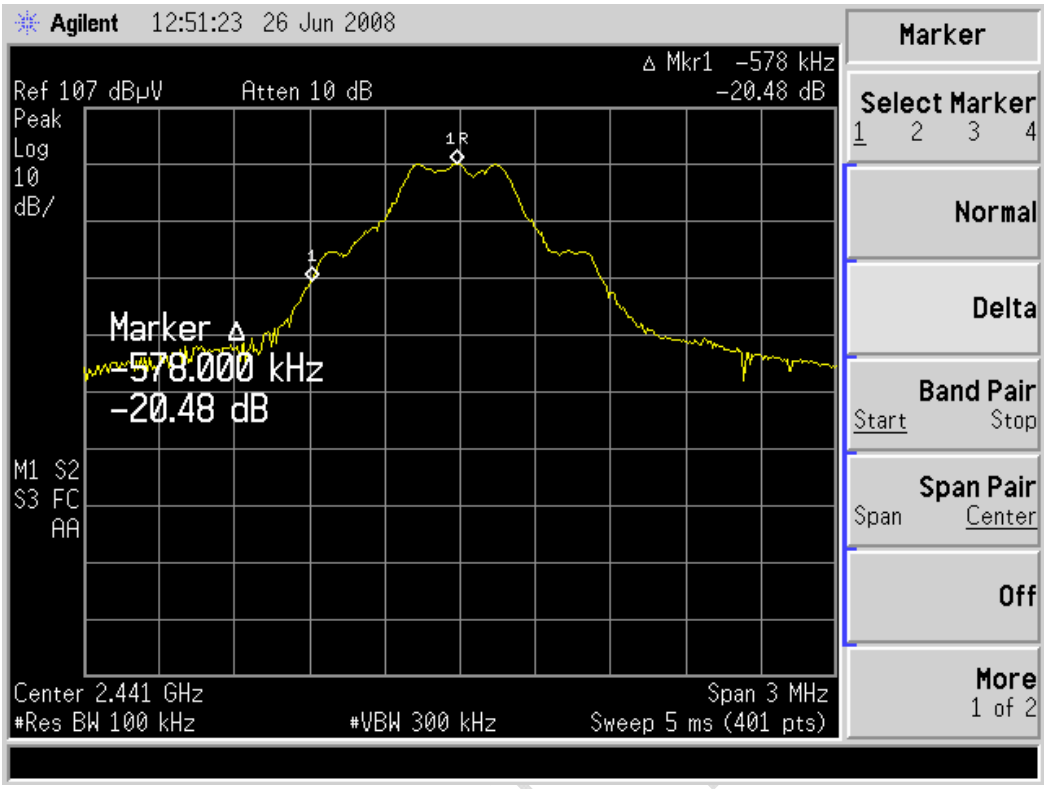


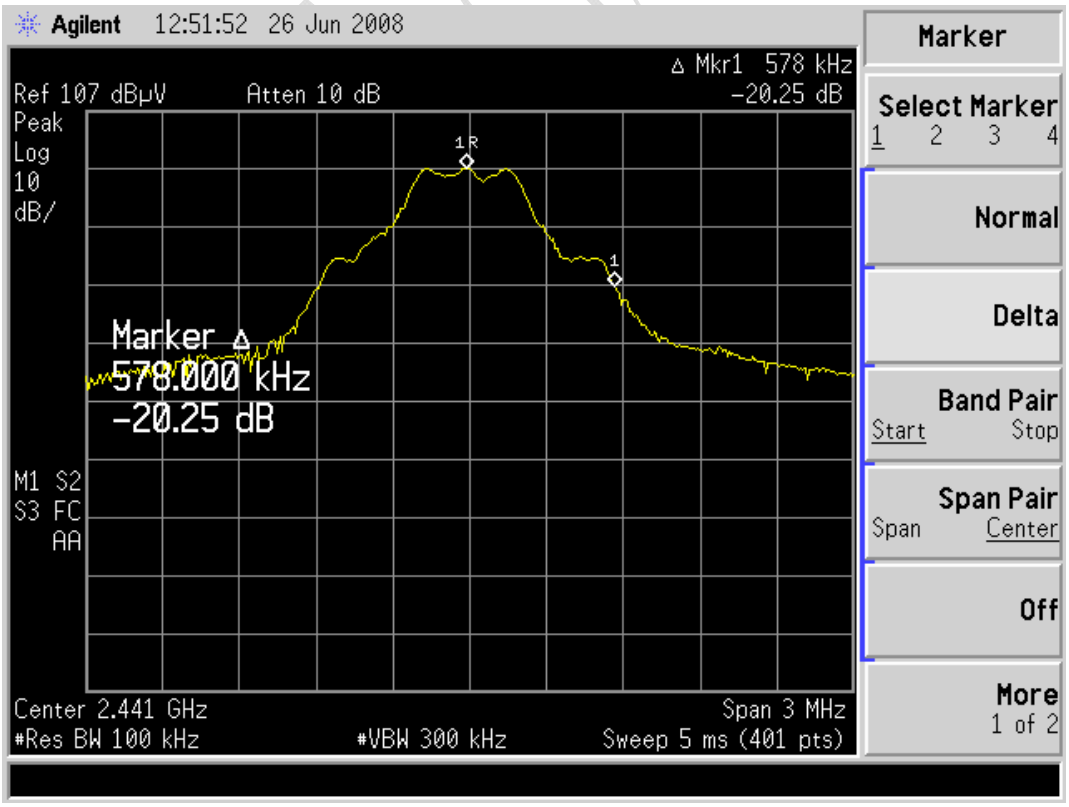
20dB Bandwidth (Ch 0)



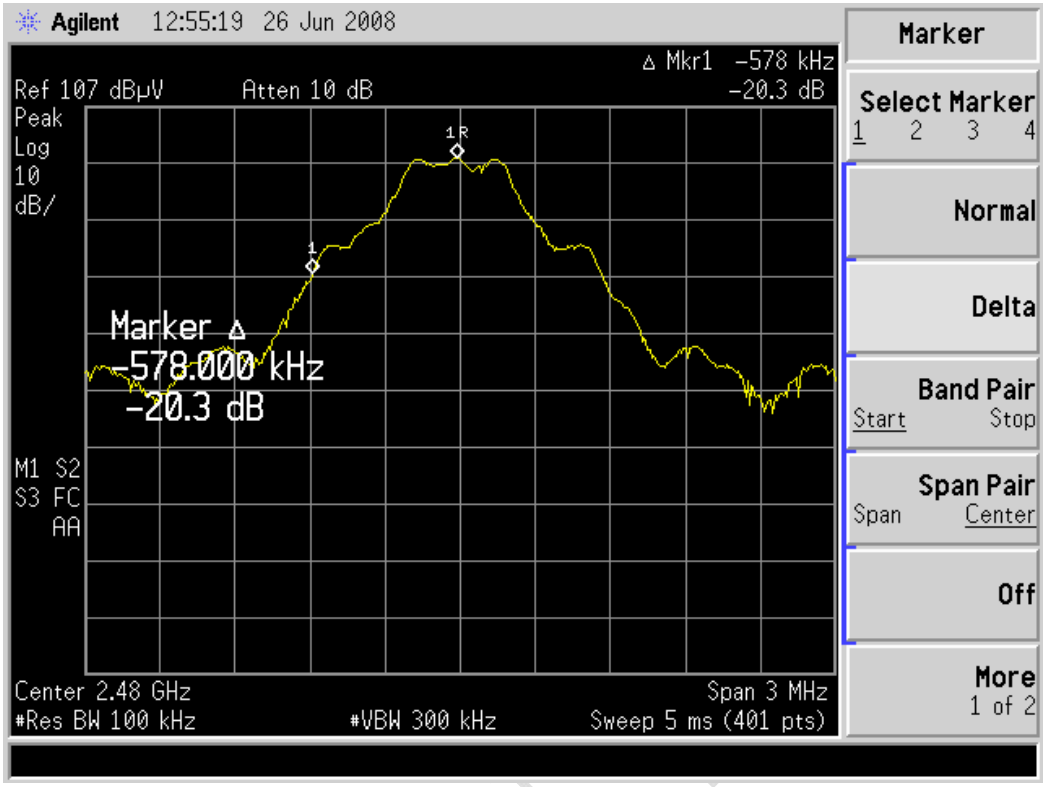


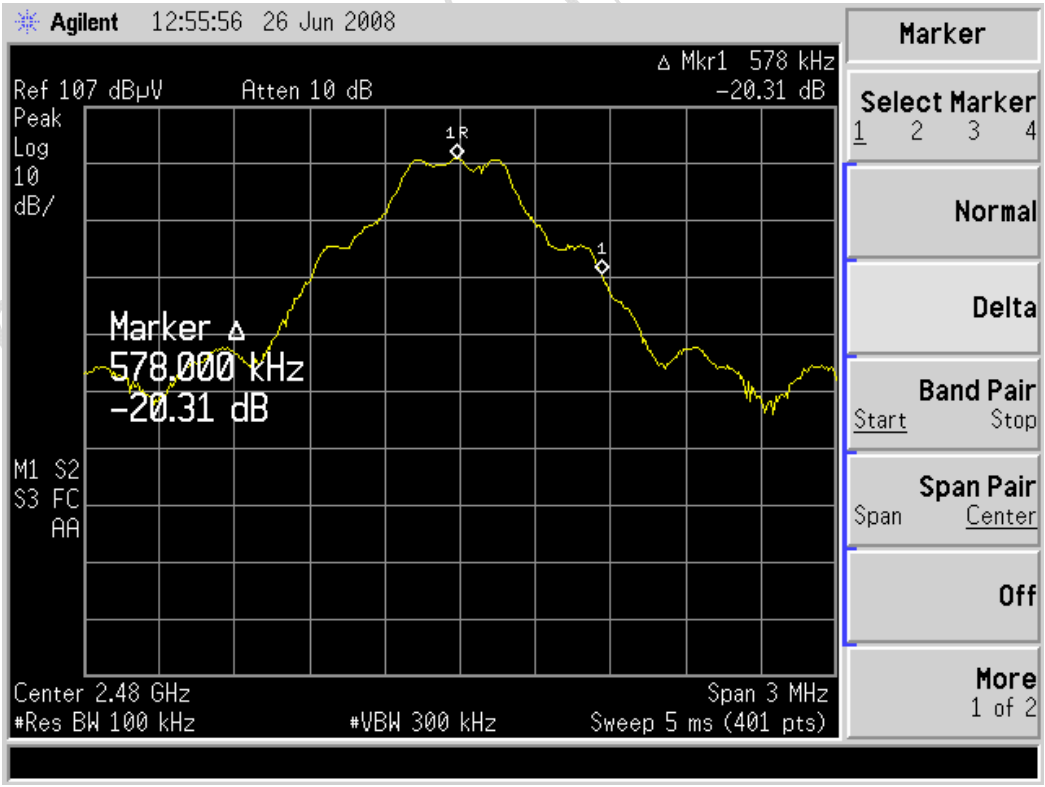
20dB Bandwidth (Ch 39)





20dB Bandwidth (Ch 78)





4.5 Number of hopping frequency

Specifications:	15.247(a)(1)(ii)
Date of Test	2008-06-26
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
020	EMC Analyzer	Agilent	E7405A	US41160321	2009-01-03	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	Normal

Test Setup

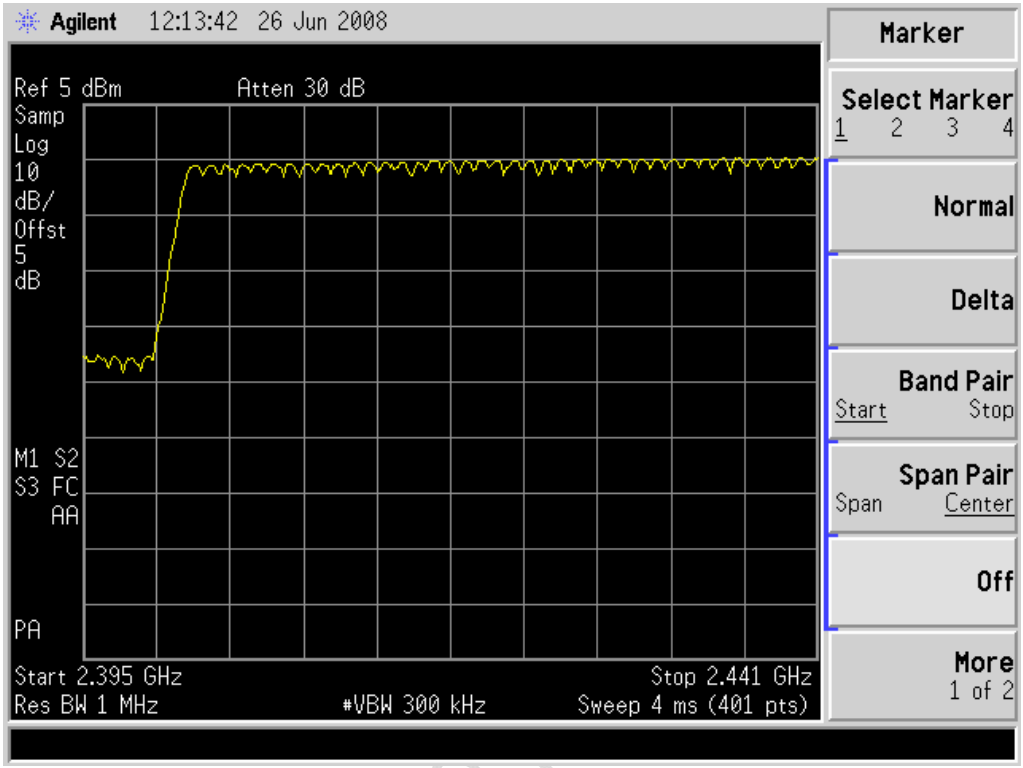
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

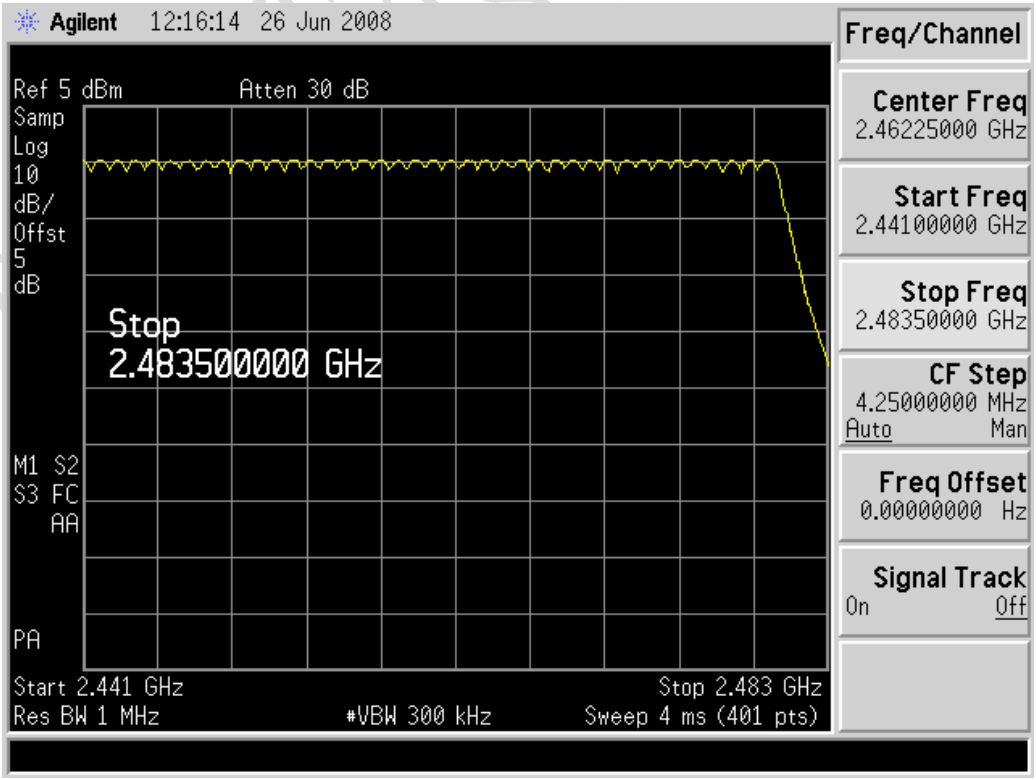
Test Result:

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	2008-06-26
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
020	EMC Analyzer	Agilent	E7405A	US41160321	2009-01-03	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	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:

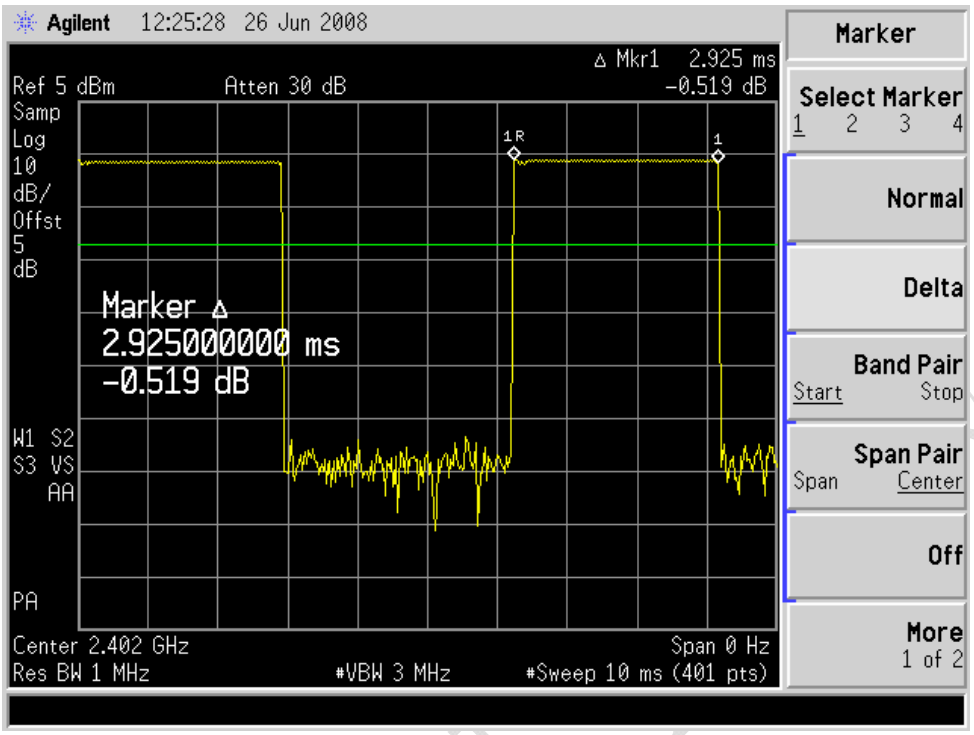
Function for DH5:

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

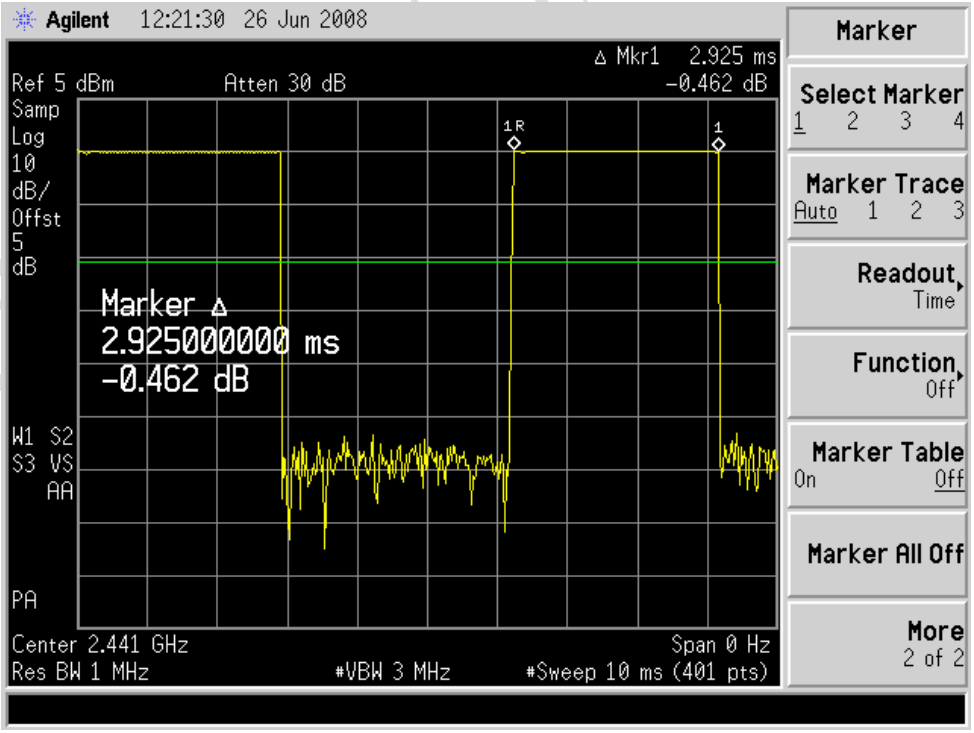
Channel	Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
0	2.925	312.0	31.6	400	Pass
39	2.925	312.0	31.6		Pass
78	2.925	312.0	31.6		Pass

Test data:

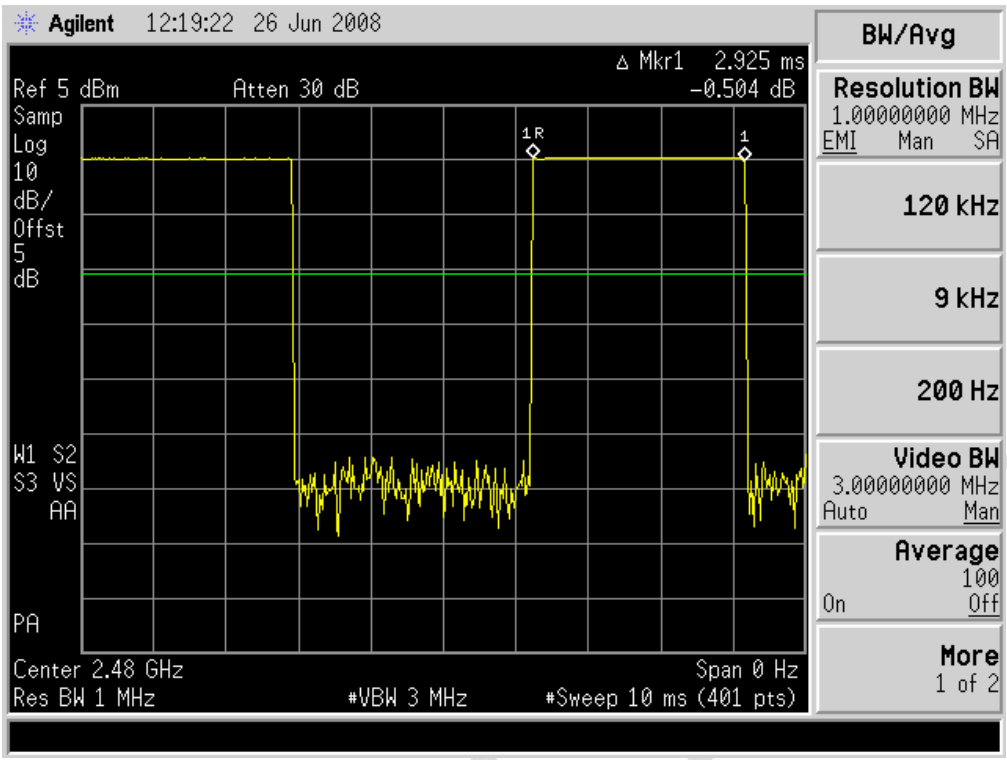
Channel 0



Channel 39



Channel 78


Agilent 12:19:22 26 Jun 2008
Δ Mkr1 2.925 ms
-0.504 dB
Ref 5 dBm
Atten 30 dB
Samp
Log
10
dB/
Offst
5
dB
1R
1
W1 S2
S3 VS
AA
PA
Center 2.48 GHz
Res BW 1 MHz
#VBW 3 MHz
Span 0 Hz
#Sweep 10 ms (401 pts)
BW/Avg
Resolution BW
1.00000000 MHz
EMI Man SA
120 kHz
9 kHz
200 Hz
Video BW
3.00000000 MHz
Auto Man
Average
100
On Off
More
1 of 2

4.7 Spurious Measurement (Conducted)

Specifications:	15.209(a) and 15.205(a)
Date of Test	2008-06-26
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
020	EMC Analyzer	Agilent	E7405A	US41160321	2009-01-03	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	Normal

Test Setup

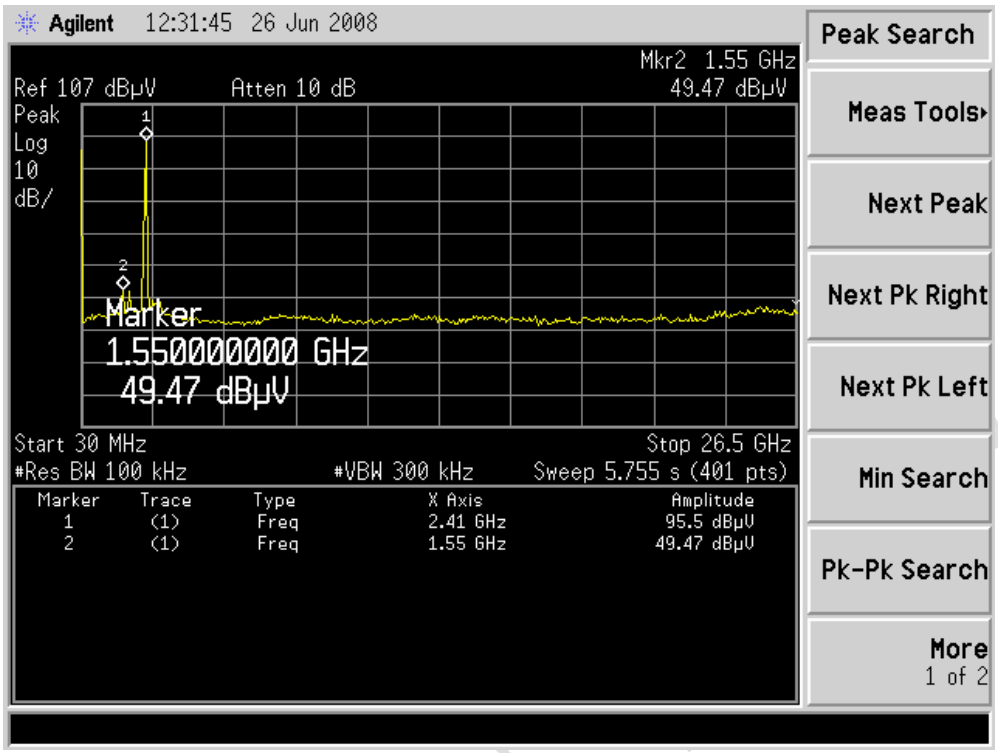
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test Result:

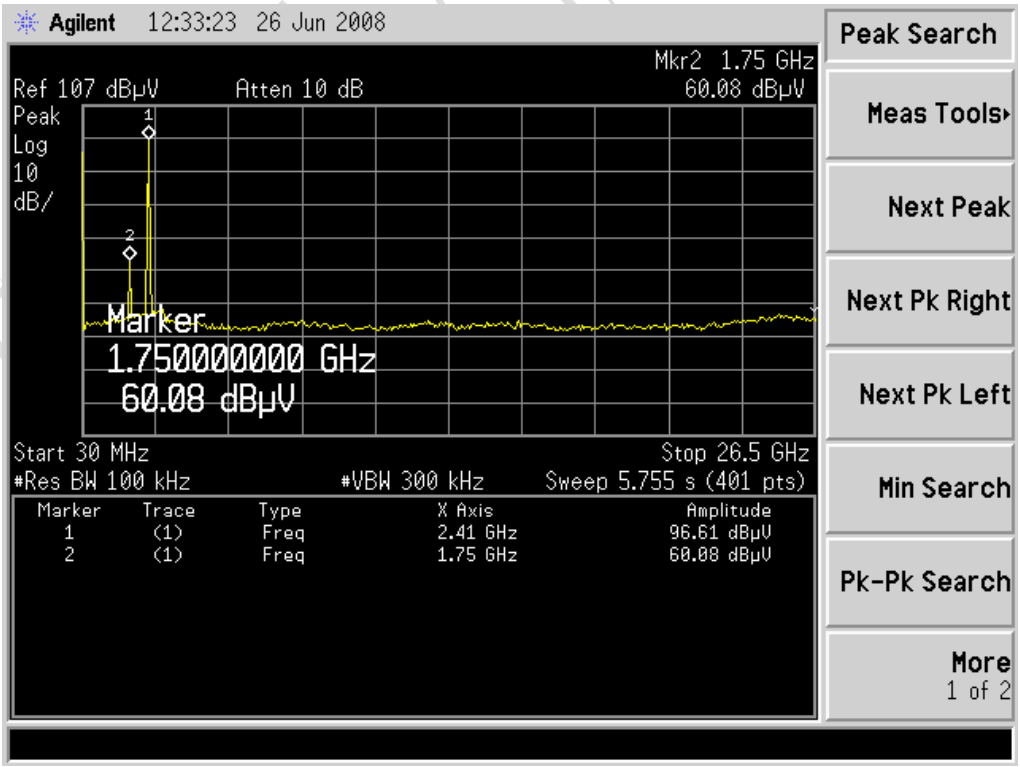
Channel	Result
0	Pass
39	Pass
78	Pass

Test data:

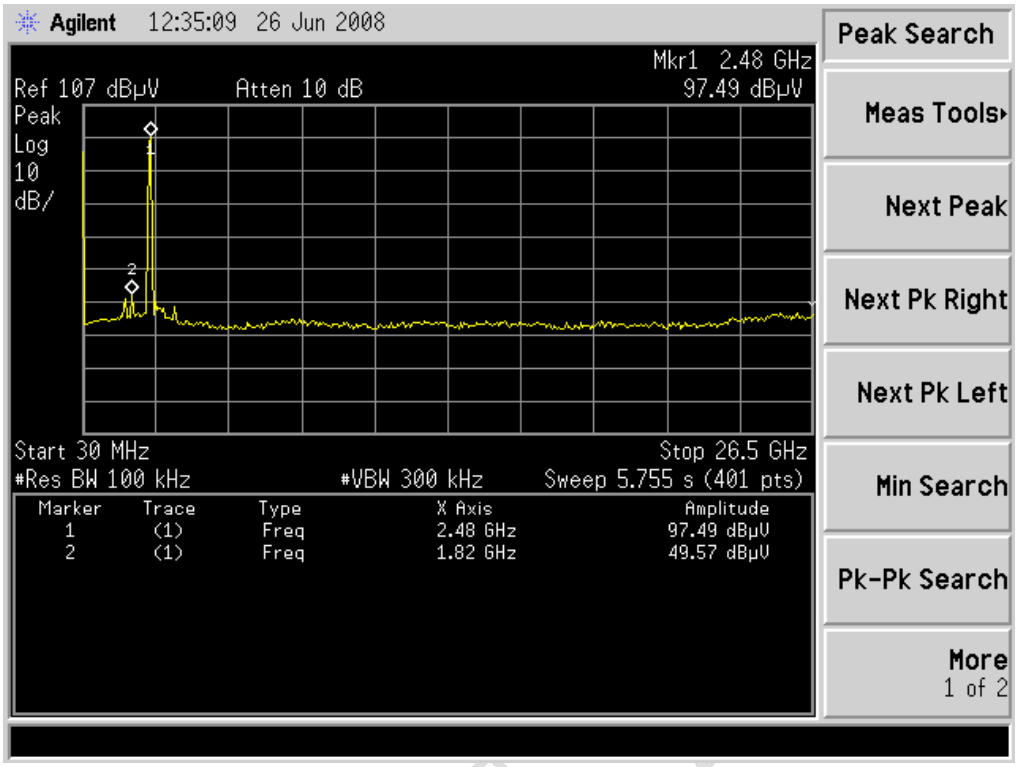
Channel 0



Channel 39



Channel 78


Agilent 12:35:09 26 Jun 2008
Mkr1 2.48 GHz
Ref 107 dBµV
Atten 10 dB
97.49 dBµV
Peak
Log
10
dB/
Start 30 MHz
Stop 26.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.755 s (401 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.48 GHz 97.49 dBµV
2 (1) Freq 1.82 GHz 49.57 dBµV
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

4.8 Radiated Spurious Measurement

Specifications:	15.209(a) and 15.205(a)
Date of Test	2008.5.21
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	2009-01-03	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	2009-02-22	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:

Limits for spurious radiated emissions measurements (3 m measurement distance)

Frequency range [MHz[	Limit [µV/m]	Limit [dBµV/m]	Detector
30 – 88	100	40	Quasi peak
88 – 216	150	43.5	Quasi peak
216 – 960	200	46	Quasi peak
960 – 1000	500	54	Quasi peak
Above 1000	500	54	Average
Above 1000	5000	74	Peak

Test result:

30MHz-1GHz:

frequency	level	limit	Antenna height	Turntable azimuth	Antenna polarization
44.880000	20.4	40.0	200	134	VERTICAL
86.700000	16.5	40.0	167	135	VERTICAL
208.020000	30.0	43.5	199	104	VERTICAL
312.000000	34.1	46.0	100	135	HORIZONTAL
415.980000	34.7	46.0	300	328	HORIZONTAL
877.440000	27.1	46.0	200	135	VERTICAL

Note:--

Above 1GHz:

Channel 0:

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

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

Channel 39:

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

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

Channel 78:

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

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

Note:

1. Test from 1GHz up to 10th harmonic of operating frequency.
2. 2.4~2.4835GHz band is the operating frequency.

4.9 Power line Conducted Emissions

Specifications:	ANSI C63.4 voltage mains test
Date of Test	2008-06-26
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	2009-01-03	Normal
7330	Artificial Mains Network	R/S	ESH2-Z5	837480/002	2009-01-9	Normal
714	Shielding Room	ETS	--	19003	2010-11-16	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2009-02-22	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).

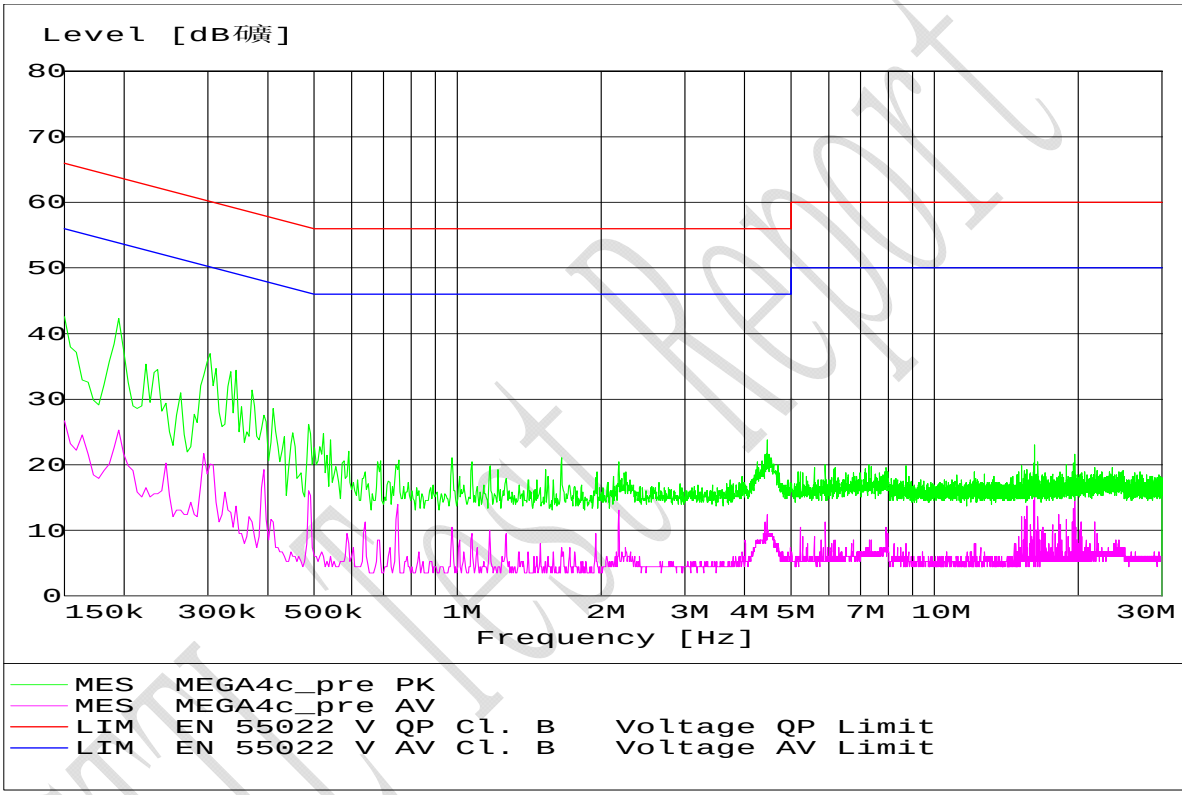
Limits of the conducted disturbance at the AC mains ports:

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**
--	--	--	--	--	--
Remarks: No frequency exceeds the limit.					

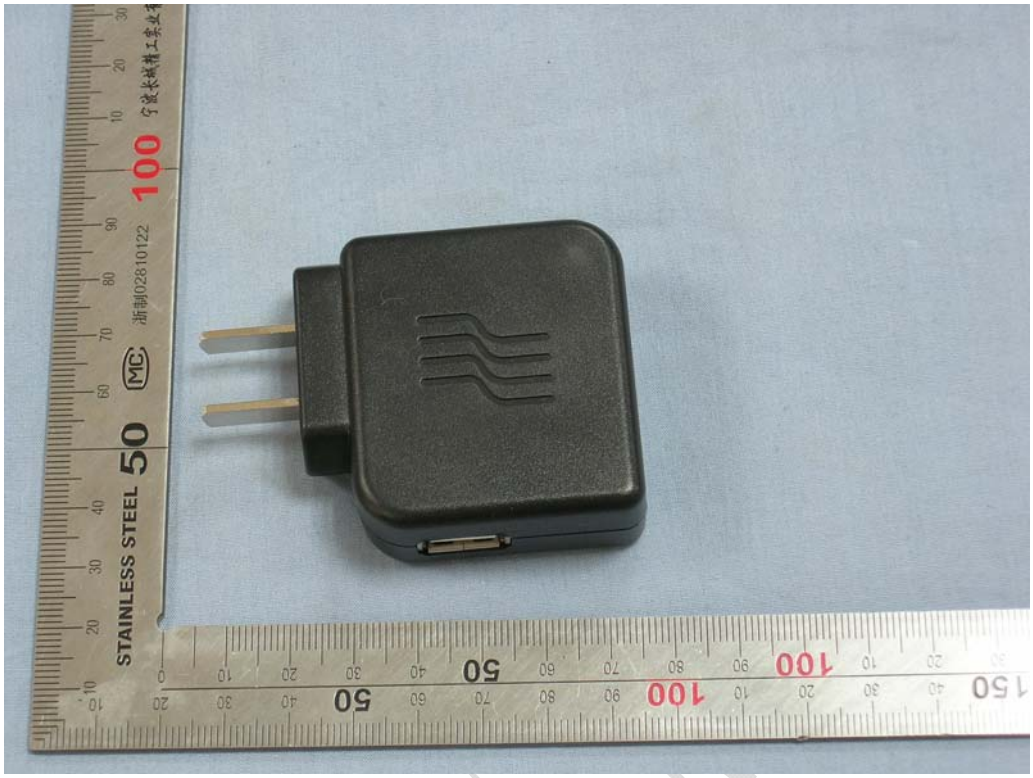
Test data:



Annex A EUT External Photos

Face view

Back view

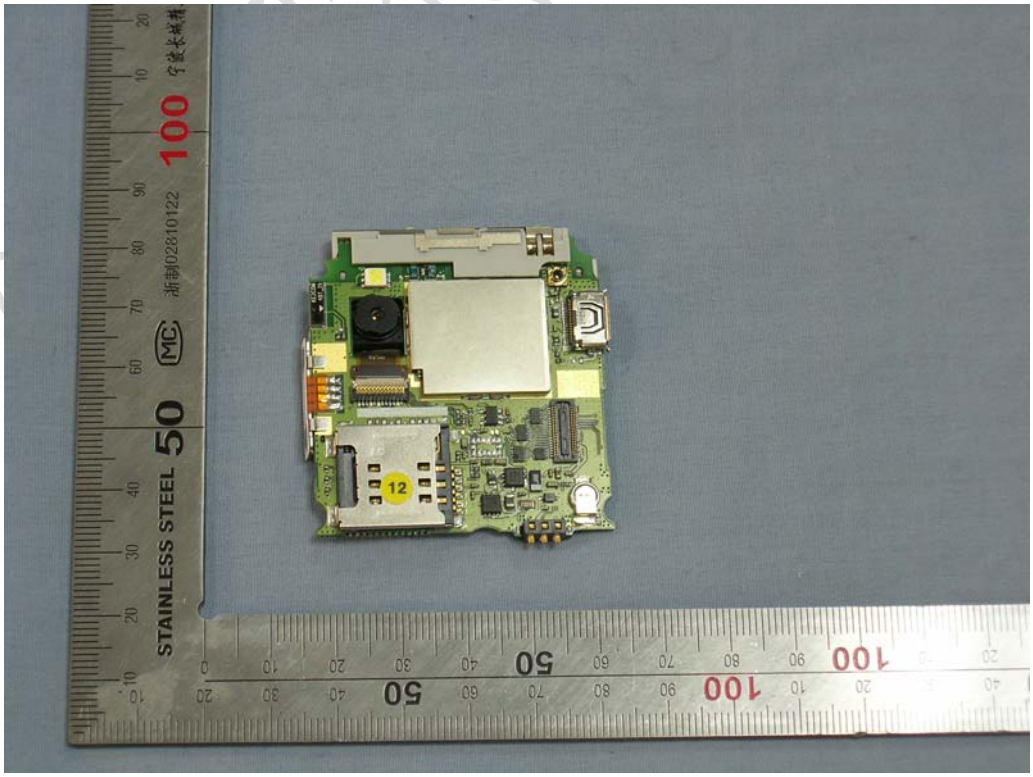


Adaptor

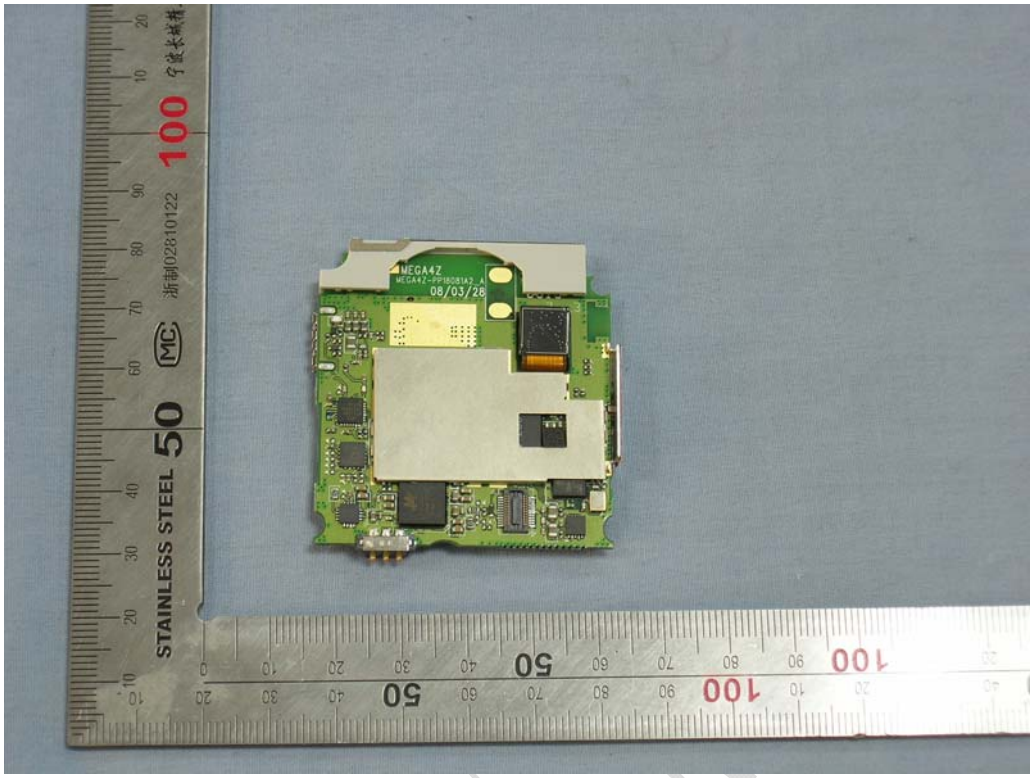
Headset

Annex B Internal Photos

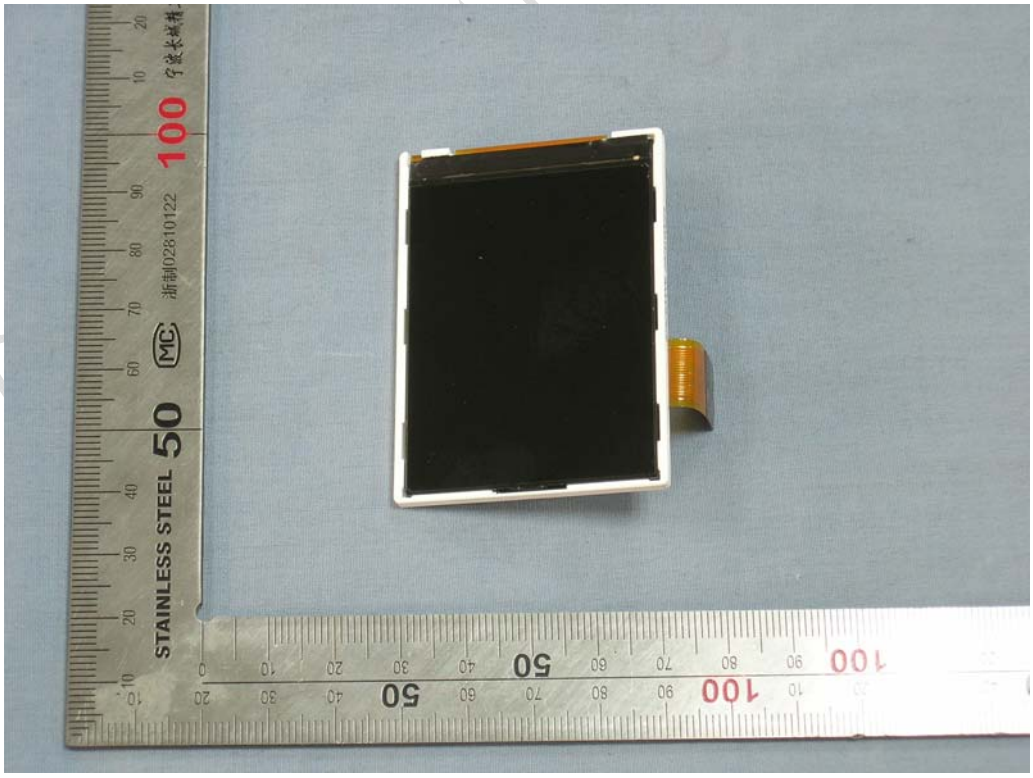
Back view without battery



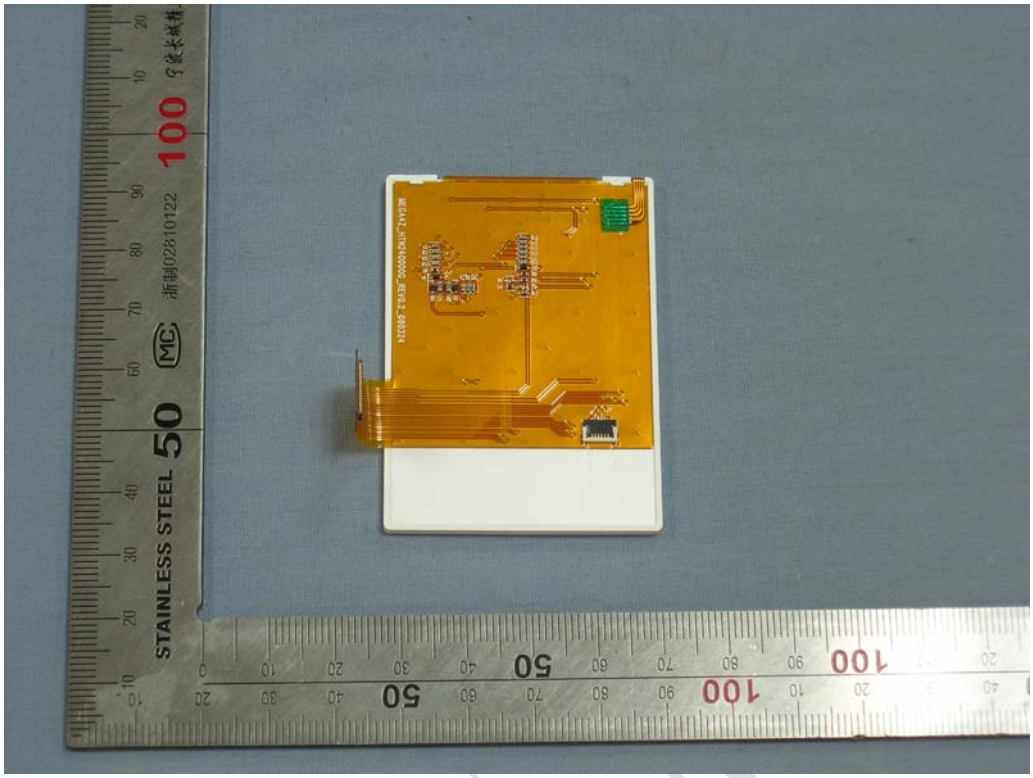
Main board 1(face)



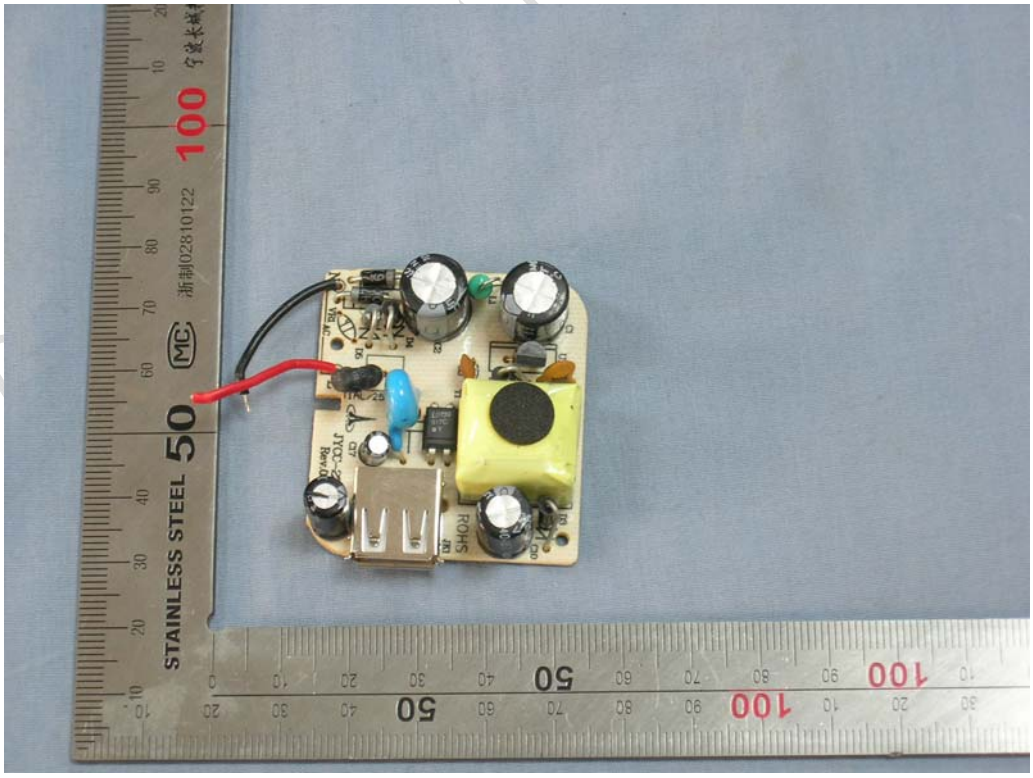
Main borar 1(back)



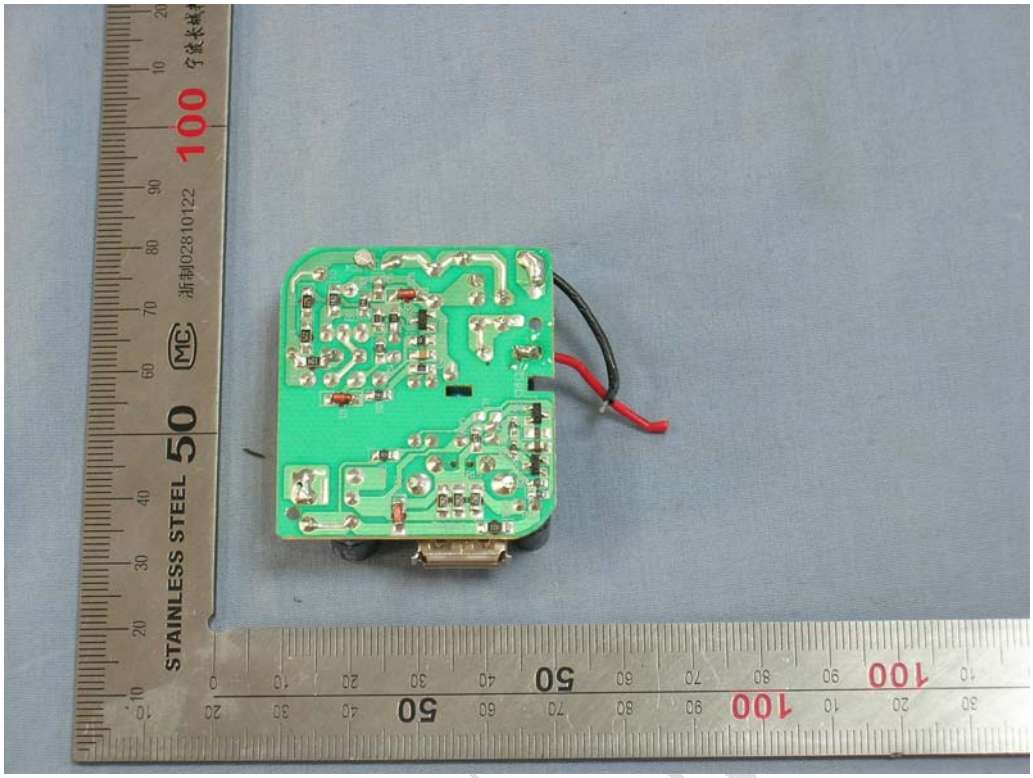
LCD (face)



LCD (back)



Adaptor face



Adaptor back

ANNEX C Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

The End of this Report