EMC TEST REPORT

For

Digital Frame

Model Number: D8*****
FCC ID: KXYD8XXXXX

Report Number **:** WT078001686

Test Laboratory	:	Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory Guangdong EMC Compliance Test Center
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TEST REPORT DECLARATION

Applicant	:	China Great-Wall Computer Shenzhen Co., Ltd
Address	:	Great-Wall Bldg. Science & Industry Park, Shenzhen, China
Manufacturer	:	China Great-Wall Computer Shenzhen Co., Ltd
Address	:	Great-Wall Bldg. Science & Industry Park, Shenzhen, China
EUT Description	:	Digital Frame
Model Number	:	D8*****
FCC ID Number	:	KXYD8XXXXX

Test Standards:

FCC Part 15 15.207, 15.209, 15.247

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with FCC Rules Part 15.207, 15.209 and 15.247.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Tested by:	Winnie Hou (Winnie Hou)	Date:	Aug.18,2007
Checked by:	Louis Lin (Louis Lin)	Date:	Aug.18,2007
Approved by:	Peter (Peter Lin)	Date:	Aug.18,2007

1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results
Conducted Disturbance	15.207	Pass
Radiated disturbance	15.209	Pass
6dB Bandwidth	15.247(a)(2)	Pass
Maximum Peak Output Power	15.247(b)	Pass
Band Edge Measurement	15.247(d)	Pass
Power Spectral Density	15.247(e)	Pass
Antenna Requirement	15.203	Pass

2. GENERAL INFORMATION

2.1. Report information

2.1.1.This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

2.1.2.The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

2.1.3.Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at Bldg. of Metrology & Quality Inspection, Longzhu Road, Nanshan District, Shenzhen, Guangdong, China. At the time of testing, Laboratory is accredited by the following organizations:
China National Accreditation Committee for Laboratories (**CNAL**) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is L0579.

The Laboratory is listed in the United States of American Federal Communications Commission (**FCC**), and the registration number are **97379**(open area test site) and **274801**(semi anechoic chamber).
The Laboratory is listed in Voluntary Control Council for Interference by Information Technology Equipment (**VCCI**), and the registration number are **R-1974**(open area test site) , **R-1966**(semi anechoic chamber),**C-2117**(mains ports conducted interference measurement) and **T-180**(telecommunication ports conducted interference measurement).

The Laboratory is registered to perform emission tests with Industry Canada (**IC**), and the registration number is **IC4174**.

TUV Rhineland accredits the Laboratory for conformance to IEC and EN standards, the registration number is **E2024086Z02**.
Measurement Uncertainty

2.3. Measurement Uncertainty

Conducted Disturbance: 9kHz~30MHz 3.5dB

Radiated Disturbance: 30MHz~1000MHz 4.5dB
1GHz~18GHz 4.6dB

3. PRODUCT DESCRIPTION

3.1. EUT Description

Description	:	Digital Frame
Manufacturer	:	China Great-Wall Computer Shenzhen Co.，Ltd
Model Number	:	D8*****
Input	:	AC230V/50Hz
Input Power	:	AC Adaptor Model: FM120010-US Input : 100-240V~ 50/60Hz 0.6A Output: 12VDC, 1A
Operate Frequency	:	IEEE802.11 b/g 2412~2462MHz(11channel)
Antenna Designation	:	Non-User Replaceable (Integral)
Remark	:	The models D8***** are a series of product. The symbol "*" can be "A" to "Z" or "0" to "9" or none. Stands for different customs, ornament, colour and/or enclosure. They are identical in schematic, construction and critical components, so, D8111W are selected as representative model, all tests are performed on D8111W only.

Table 2 The working Frequency List

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: KXYD8XXXXX filing to comply with Section 15.207，15.209，15.247 of the FCC Part 15, Subpart C Rules.

3.3. Block Diagram of EUT Configuration

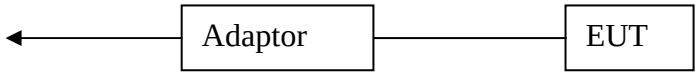


Figure 1 EUT setup 1

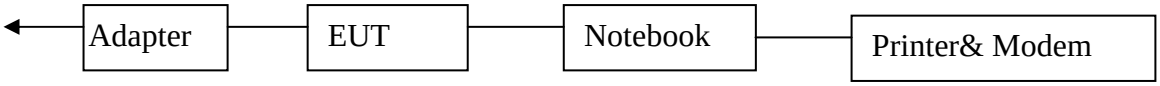


Figure 2 EUT setup 2

3.4. Operating Condition of EUT

Mode1: Transmitting at 2412MHz
Mode2: Transmitting at 2442MHz
Mode3: Transmitting at 2462MHz
Mode4: Play
Mode5: Read Card
Mode6: Connect to PC (wire network)

3.5. Special Accessories

Not available for this EUT intended for grant.

3.6. Equipment Modifications

Not available for this EUT intended for grant.

3.7. Support Equipment List

Table 3 Support Equipment

Name	Model Number	S/N	Manufacture
Notebook	2647	99-F48C0	IBM
Adaptor for notebook	AA21070	--	IBM
Printer	BJC-265SP	EVX81604	CANON
Adapter for Printer	AD-300	--	CANON
Modem	56000BPS	200060057	KPT
Adapter for Modem	AM-1280AV	--	KPT

3.8. Test Conditions

Date of test：July 20, 2007
Date of EUT Receive：July 16, 2007
Temperature: 25 ℃
Relative Humidity: 58%

4. TEST EQUIPMENT USED

Table 4 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB2603	EMI Test Receiver	Rohde & Schwarz	ESCS30	Jan.25, 2007	1 Year
SB3321	AMN	Rohde & Schwarz	ESH2-Z5	Jan.25, 2007	1 Year
SB2604	AMN	Rohde & Schwarz	ESH3-Z5	Jan.25, 2007	1 Year
SB3436	EMI Test Receiver	Rohde & Schwarz	ESI26	Jan.25, 2007	1 Year
SB3440	Bilog Antenna	Chase	CBL6112B	Jan.25, 2007	1 Year
SB3435	Horn Antenna	Rohde & Schwarz	HF906	Jan.25, 2007	1 Year
SB3435/01	Amplifier(1-18GHz)	Rohde & Schwarz	---	Jan.25, 2007	1 Year
SB3435/02	Amplifier(18-40GHz)	Rohde & Schwarz	---	May.05, 2007	1 Year
SB3435/03	Horn Antenna	Rohde & Schwarz	AT4560	May.05, 2007	1 Year
SB3450/01	3m Semi-anechoic chamber	Albatross Projects	9X6X6	Jan.25, 2007	1 Year

5. CONDUCTED DISTURBANCE TEST

5.1. Test Standard and Limit

5.1.1.Test Standard

FCC Part 15 15.207

5.1.2.Test Limit

Table 5 Conducted Disturbance Test Limit (Class B)

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

- Decreasing linearly with logarithm of the frequency
- The lower limit shall apply at the transition frequency.

5.2. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. According to the requirements in Section 7 and 13 of ANSI C63.4-2003.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.
The bandwidth of EMI test receiver is set at 9kHz.

5.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

5.4. Test Data

The emissions don't show in below are too low against the limits. Refer to the test curves.
Test mode: Connect to PC(wire network) (the worst case)

Table 6 Conducted Disturbance Test Data

Model：D8111W

Mode: 6

Line							
Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
		Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)
13.360	10.0	42.0	52.1	60	39.1	49.1	50
24.002	10.2	49.4	59.6	60	38.3	48.5	50

REMARKS: 1. Emission level(dBuV)=Read Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB) =LISN Factor (dB) + Cable Factor (dB)+Limiter Factor(dB)
3. The other emission levels were very low against the limit.

Table 7 Conducted Disturbance Test Data

Model：D8111W

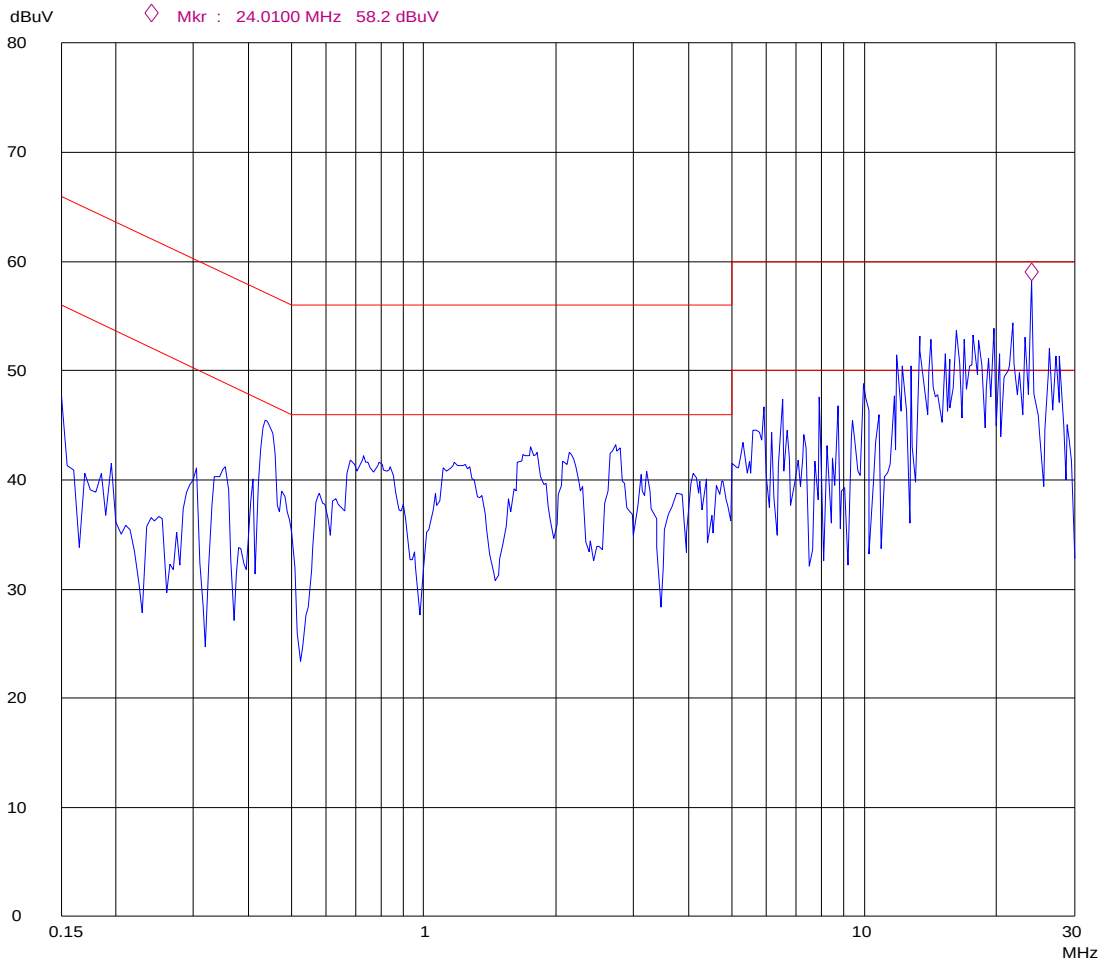
Mode: 6

Neutral							
Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
		Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)
20.667	10.2	34.0	44.2	60	30.4	40.6	50
24.120	10.2	43.5	53.7	60	38.6	48.8	50

REMARKS: 1. Emission level(dBuV)=Read Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB) =LISN Factor (dB) + Cable Factor (dB)+Limiter Factor(dB)
3. The other emission levels were very low against the limit.

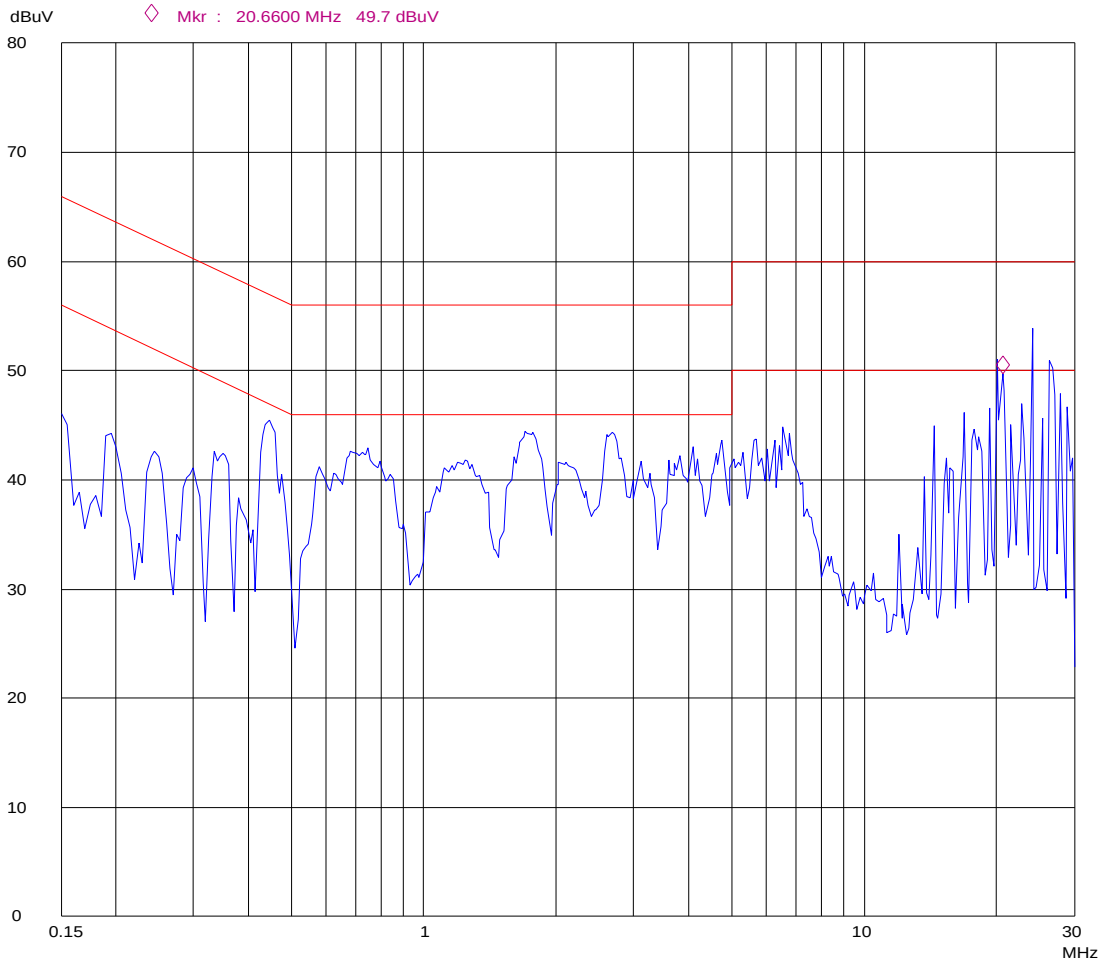
Conducted Disturbance

EUT:	D8111W
Op Cond:	Connect to PC
Test Spec:	L
Comment:	AC120V/60Hz



Conducted Disturbance

EUT:	D8111W
Op Cond:	Connect to PC
Test Spec:	N
Comment:	AC120V/60Hz



6. RADIATED DISTURBANCE TEST

6.1. Test Standard and Limit

6.1.1.Test Standard

FCC Part 15 15.209

6.1.2.Test Limit

Table 8 Radiated Disturbance Test Limit

FREQUENCY MHz	FIELD STRENGTHS LIMITS （μV/m)	FIELD STRENGTHS LIMITS dB (μV/m)
Fundamental	50000	94.0
Harmonics	500	54.0
30 ~ 88	100	40.0
88 ~ 216	150	43.5
216 ~ 960	200	46.0
960 ~	500	54.0

* The lower limit shall apply at the transition frequency.
* The test distance is 3m.

6.2. Test Procedure

The EUT is placed on a turntable, which is 0.8 meter above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz，VBW≥RBW. All readings above 1 GHz are AV and PK values。RBW=1MHz and VBW=10Hz for AV value，RBW=1MHz and VBW≥RBW for peak value.
Measurements were made at 3 meters

6.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

6.4. Test Data

The emissions don't show in below are too low against the limits.

Table 9 General Radiated Emission Data

Model：D8111W

mode: 1

Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
35.832	36.7	19.0	17.7	Horizontal	40.0	QP Value
228.276	41.8	28.2	13.6	Horizontal	46.0	QP Value
257.435	43.5	27.0	16.5	Horizontal	46.0	QP Value
803.667	41.2	16.2	25.0	Horizontal	46.0	QP Value
57.214	38.2	31.0	7.2	Vertical	40.0	QP Value
237.996	44.0	29.3	14.7	Vertical	46.0	QP Value
918.357	43.2	17.2	26.0	Vertical	46.0	QP Value
4824.642	28.7	26.4	2.3	Horizontal	54.0	AV Value
4824.521	25.8	23.5	2.3	Vertical	54.0	AV Value
4824.642	34.8	32.5	2.3	Horizontal	74.0	PK Value
4824.521	31.6	29.3	2.3	Vertical	74.0	PK Value
2389.208	19.8	23.5	-3.7	Horizontal	54.0	AV Value
2389.208	25.4	29.1	-3.7	Horizontal	74.0	PK Value
2389.208	18.1	21.8	-3.7	Vertical	54.0	AV Value
2389.208	22.6	26.3	-3.7	Vertical	74.0	PK Value
2483.597	16.3	20.0	-3.7	Horizontal	54.0	AV Value
2483.597	20.1	23.8	-3.7	Horizontal	74.0	PK Value
2483.597	11.5	15.2	-3.7	Vertical	54.0	AV Value
2483.597	18.9	22.6	-3.7	Vertical	74.0	PK Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.

Table 10 General Radiated Emission Data

Model：D8111W

mode: 2

Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
35.831	36.9	19.2	16.5	Horizontal	40.0	QP Value
142.745	41.1	27.3	11.7	Horizontal	43.5	QP Value
237.996	43.6	29.0	12.0	Horizontal	46.0	QP Value
257.434	44.0	27.5	13.8	Horizontal	46.0	QP Value
57.214	37.9	30.7	6.0	Vertical	40.0	QP Value
142.745	38.7	24.9	11.7	Vertical	43.5	QP Value
237.996	43.3	28.7	12.0	Vertical	46.0	QP Value
918.357	42.7	16.8	20.9	Vertical	46.0	QP Value
4885.018	34.0	31.7	2.3	Horizontal	54.0	AV Value
4885.215	29.6	27.3	2.3	Vertical	54.0	AV Value
4885.018	41.1	38.8	2.3	Horizontal	54.0	PK Value
4885.215	36.1	33.8	2.3	Vertical	54.0	PK Value
2390.010	18.6	22.3	-3.7	Horizontal	54.0	AV Value
2390.010	24.3	28.0	-3.7	Horizontal	74.0	PK Value
2390.010	15.7	19.4	-3.7	Vertical	54.0	AV Value
2390.010	21.9	25.6	-3.7	Vertical	74.0	PK Value
2483.567	18.1	21.8	-3.7	Horizontal	54.0	AV Value
2483.567	22.8	26.5	-3.7	Horizontal	74.0	PK Value
2483.567	16.8	20.5	-3.7	Vertical	54.0	AV Value
2483.567	20.6	24.3	-3.7	Vertical	74.0	PK Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.

Table 11 General Radiated Emission Data

Model：D8111W

mode: 3

Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
35.832	37.5	19.8	17.7	Horizontal	40.0	QP Value
142.745	40.9	27.1	13.8	Horizontal	43.5	QP Value
237.995	42.7	28.1	14.7	Horizontal	46.0	QP Value
257.434	43.2	26.7	16.5	Horizontal	46.0	QP Value
803.667	40.3	15.3	25.0	Horizontal	46.0	QP Value
57.214	38.6	31.4	7.2	Vertical	40.0	QP Value
171.904	41.2	28.7	12.5	Vertical	43.5	QP Value
237.993	43.5	28.9	14.7	Vertical	46.0	QP Value
918.357	43.1	17.1	26.0	Vertical	46.0	QP Value
4923.918	32.3	30.0	2.3	Horizontal	54.0	AV Value
4924.001	28.5	26.2	2.3	Vertical	54.0	AV Value
4923.918	38.7	36.4	2.3	Horizontal	54.0	PK Value
4924.001	35.9	33.6	2.3	Vertical	54.0	PK Value
2390.010	22.5	26.2	-3.7	Horizontal	54.0	AV Value
2390.010	30.0	33.7	-3.7	Horizontal	74.0	PK Value
2390.010	20.9	24.6	-3.7	Vertical	54.0	AV Value
2390.010	27.4	31.1	-3.7	Vertical	74.0	PK Value
2483.567	20.8	24.5	-3.7	Horizontal	54.0	AV Value
2483.567	27.1	30.8	-3.7	Horizontal	74.0	PK Value
2483.567	19.1	22.8	-3.7	Vertical	54.0	AV Value
2483.567	24.5	28.2	-3.7	Vertical	74.0	PK Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.

Table 12 General Radiated Emission Data

Model：D8111W

mode: 4

Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
33.578	38.3	19.8	18.5	Vertical	40.0	QP Value
143.371	38.1	24.3	13.8	Vertical	43.5	QP Value
228.218	39.0	25.4	13.6	Horizontal	46.0	QP Value
271.653	45.9	29.8	16.1	Horizontal	46.0	QP Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.

Table 13 General Radiated Emission Data

Model：D8111W

mode: 5

Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
37.328	37.9	21.4	16.5	Horizontal	40.0	QP Value
157.198	38.7	25.6	13.1	Horizontal	43.5	QP Value
232.786	45.5	31.5	14.0	Horizontal	46.0	QP Value
279.176	45.7	29.7	16.0	Horizontal	46.0	QP Value
37.327	37.1	20.6	16.5	Vertical	40.0	QP Value
58.732	39.2	32.7	6.5	Vertical	40.0	QP Value
239.997	45.9	31.3	14.6	Vertical	46.0	QP Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.

Table 14 General Radiated Emission Data

Model：D8111W

Mode: 6

Frequency MHz	Emission (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
37.117	38.2	21.7	16.5	Vertical	40.0	QP Value
201.007	39.0	26.3	12.7	Horizontal	43.5	QP Value
226.328	37.2	23.6	13.6	Horizontal	46.0	QP Value

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.

Table 15 Restricted Band Radiated Emission Data

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	
6.31175 - 6.31225	123 - 138	2200 - 2300	
8.291 - 8.294	149.9 - 150.05	2310 - 2390	
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	
12.29 - 12.293	167.72 - 173.2	3332 - 3339	
12.51975 - 12.52025	240 - 285	3345.8 - 3358	
12.57675 - 12.57725	322 - 335.4	3600 - 4400	
13.36 - 13.41			

All the emission of the above band were less than the limit 20dB.

7. 6DB BANDWIDTH MEASUREMENT

7.1. LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

7.2. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and VBW≥RBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.3. TEST SETUP

7.4. EUT OPERATING CONDITIONS

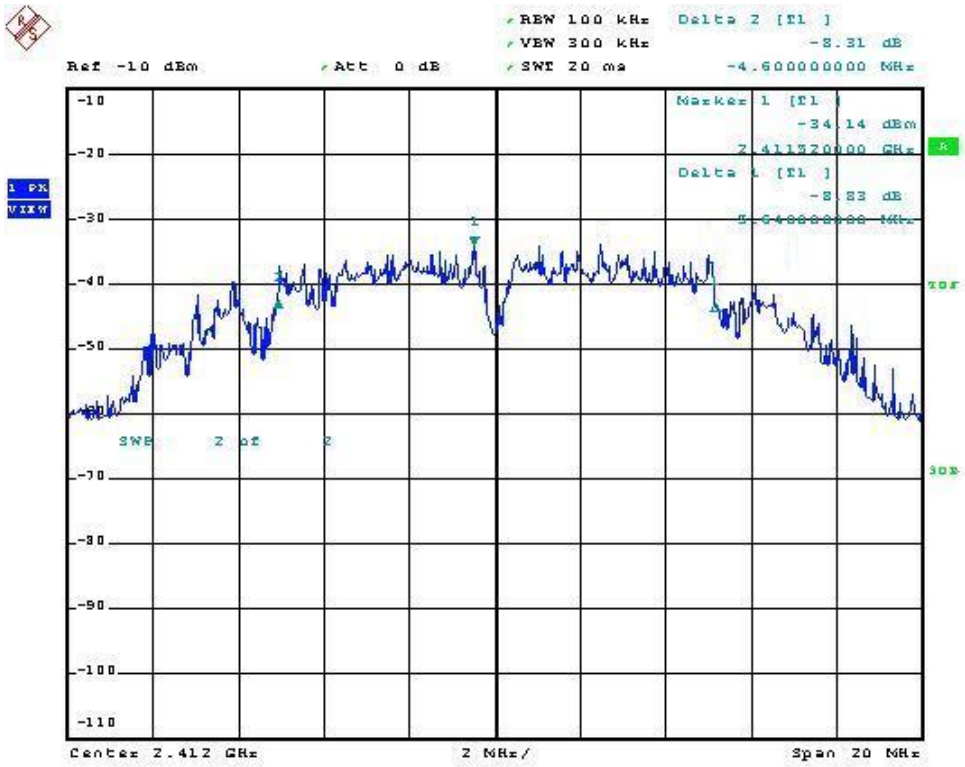
mode 1
mode 2
mode 3

7.5. Test Data

Table 16 6dB Bandwidth Test Data

CHANNEL	**6dB BANDWIDTH (MHz)**	**MINIMUM LIMIT (MHz)**	**results**
Ch1	10.2	0.5	Pass
Ch7	9.6	0.5	Pass
Ch11	9.9	0.5	Pass

mode 1



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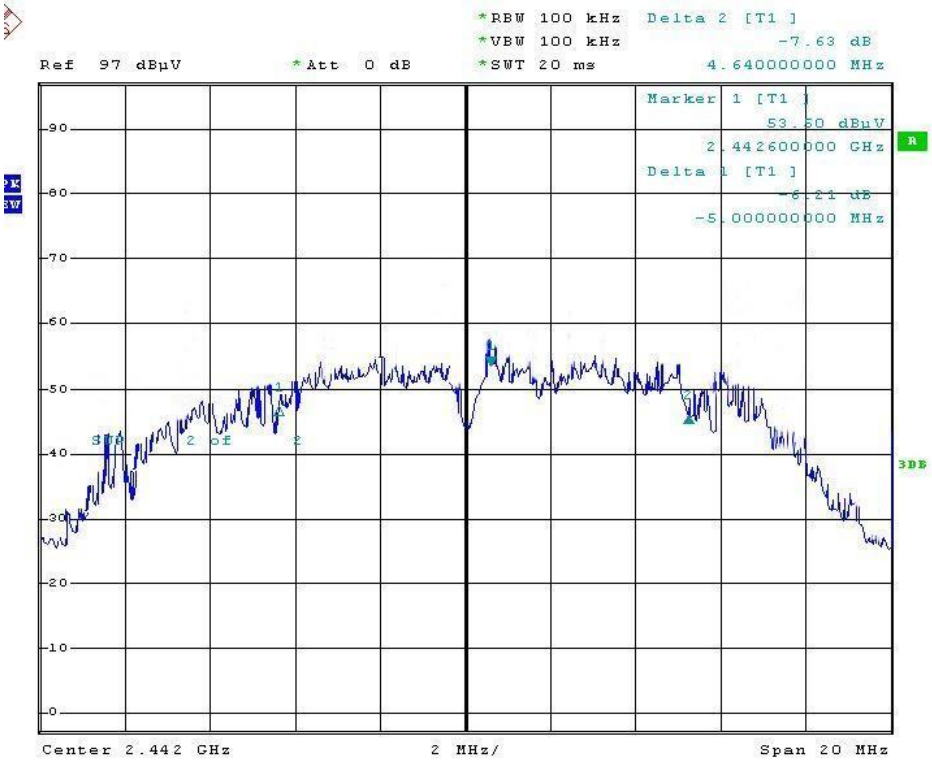
Date: 20.JUL.2007 17:51:44

mode 2



-8H

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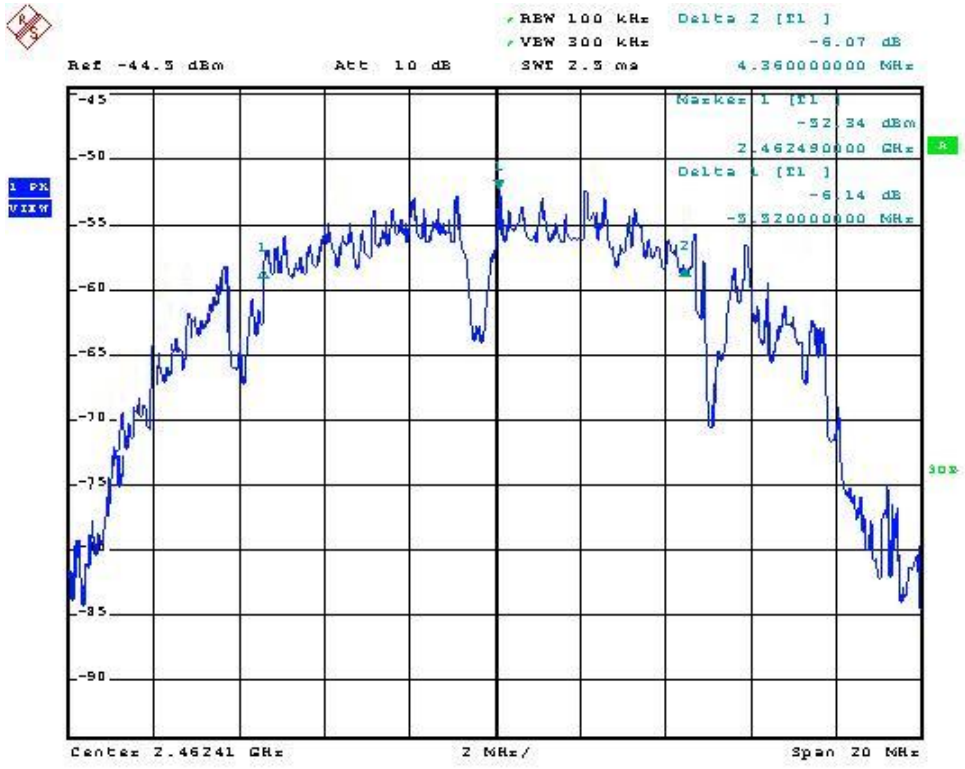
mode 3



UB-8H

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8. MAXIMUM PEAK OUTPUT POWER

8.1. LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

8.2. TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

8.3. TEST SETUP

8.4. EUT OPERATING CONDITIONS

mode 1
mode 2
mode 3

8.5. Test Data

Table 17 Maximum Peak Output Power Test Data

Supply voltage	Peak Power Output (dBm)			LIMIT (dBm)	results
	Ch1	Ch7	Ch11	30dBm	Pass
AC 230V	10.8	13.9	13.7	30dBm	Pass
AC 195V	9.3	11.8	11.2	30dBm	Pass
AC 265V	10.2	12.8	13.0	30dBm	Pass

9. POWER SPECTRAL DENSITY MEASUREMENT

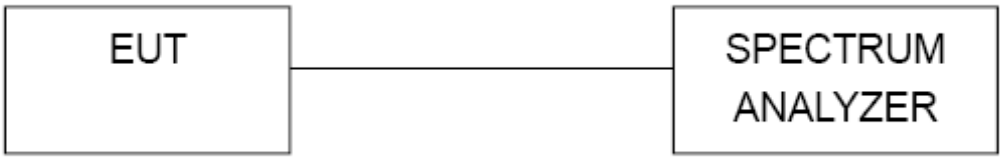
9.1. LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

9.2. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator(10.0dB), the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and VBW≥RBW, set sweep time = span/3kHz. The power spectral density was measured and recorded. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

9.3. 4.5.5 TEST SETUP



9.4. 4.5.6 EUT OPERATING CONDITION

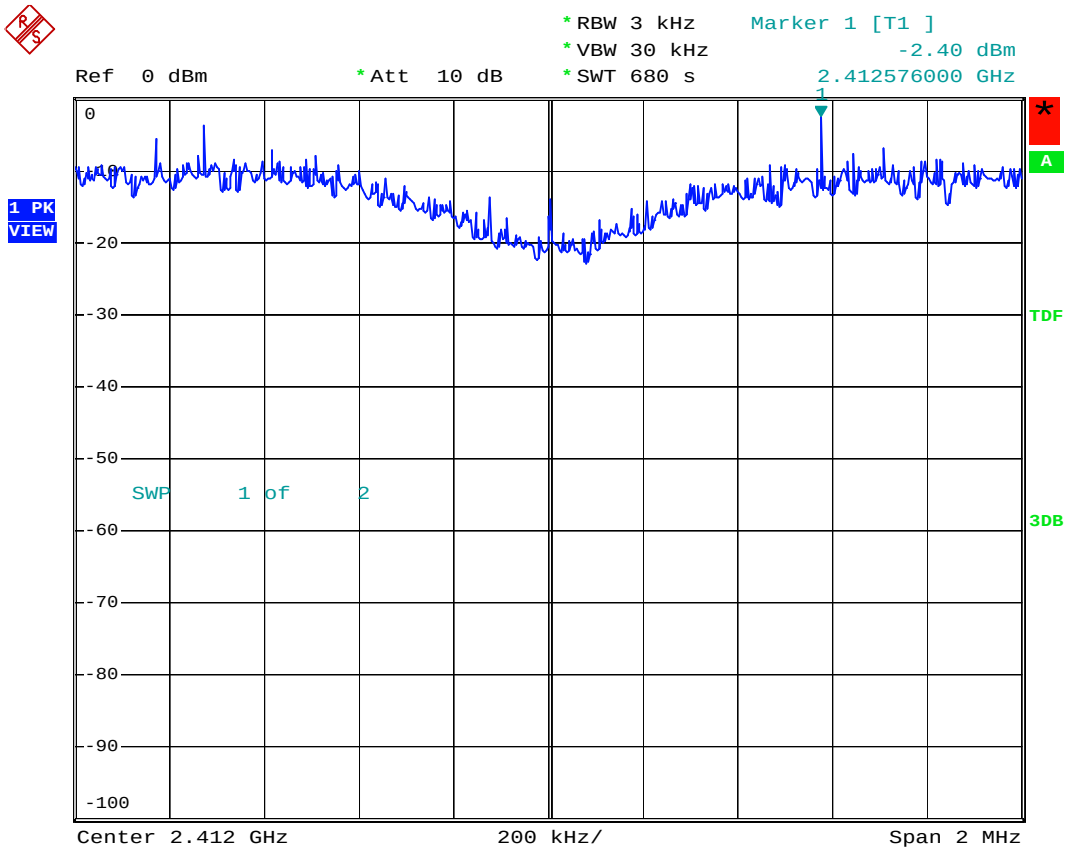
mode 1
mode 2
mode 3

9.5. Test Data

Table 18 Test Data

CHANNEL	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	results
Ch1	-2.4	8	Pass
Ch7	-4.1	8	Pass
Ch11	-0.5	8	Pass

mode 1



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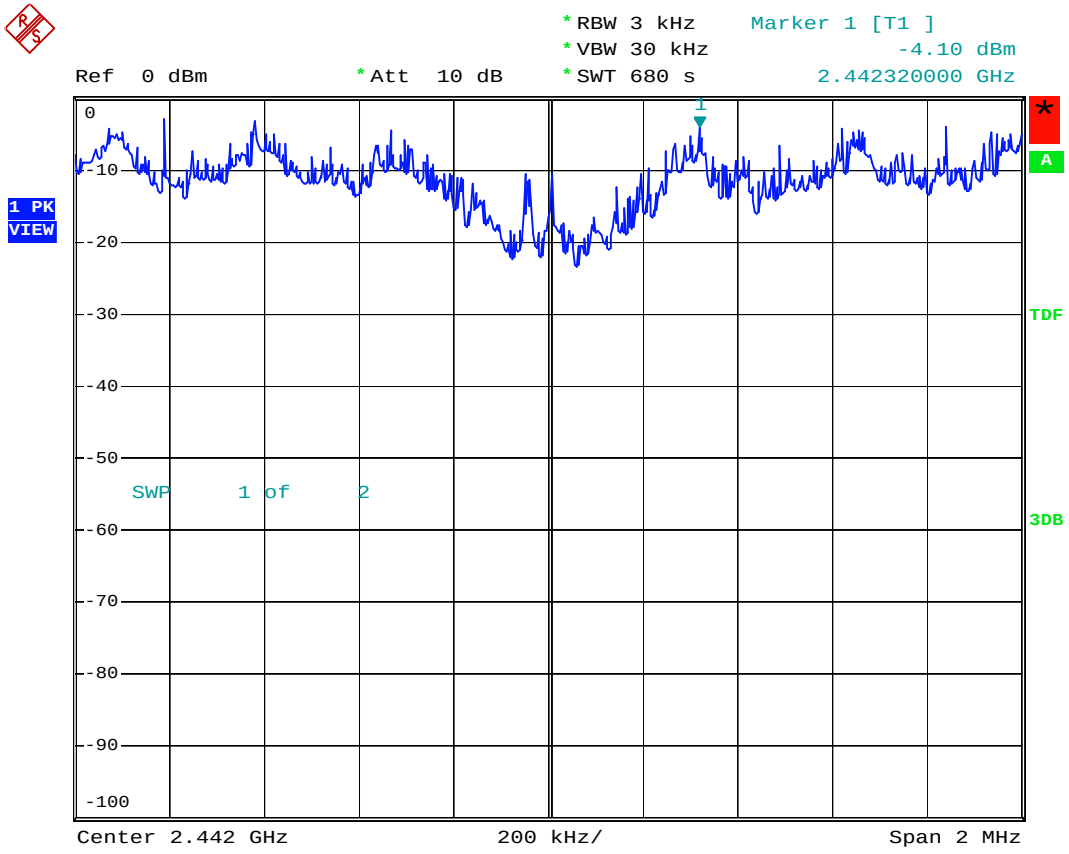
Date: 20.JUL.2007 18:09:38

mode 2



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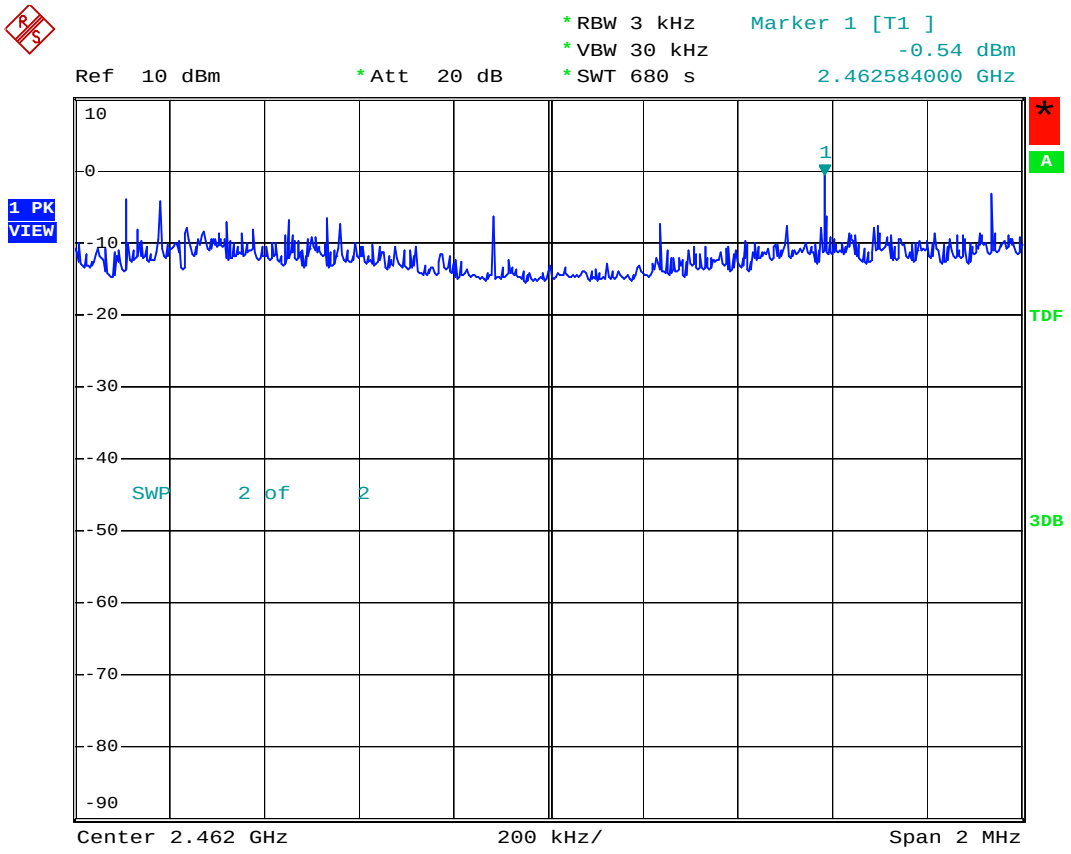
mode 3



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Date: 20.JUL.2007 17:19:28

10. BAND EDGES MEASUREMENT

10.1.LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

10.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

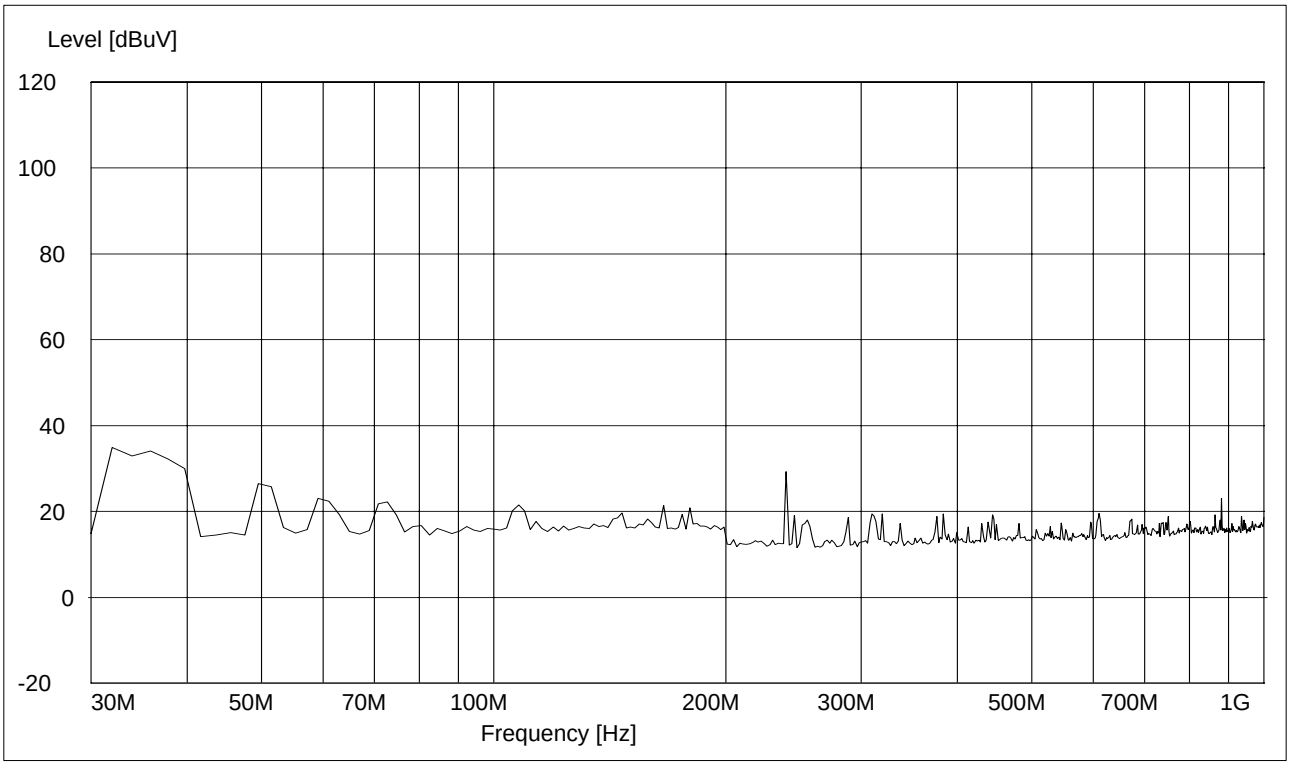
10.3.EUT OPERATING CONDITION

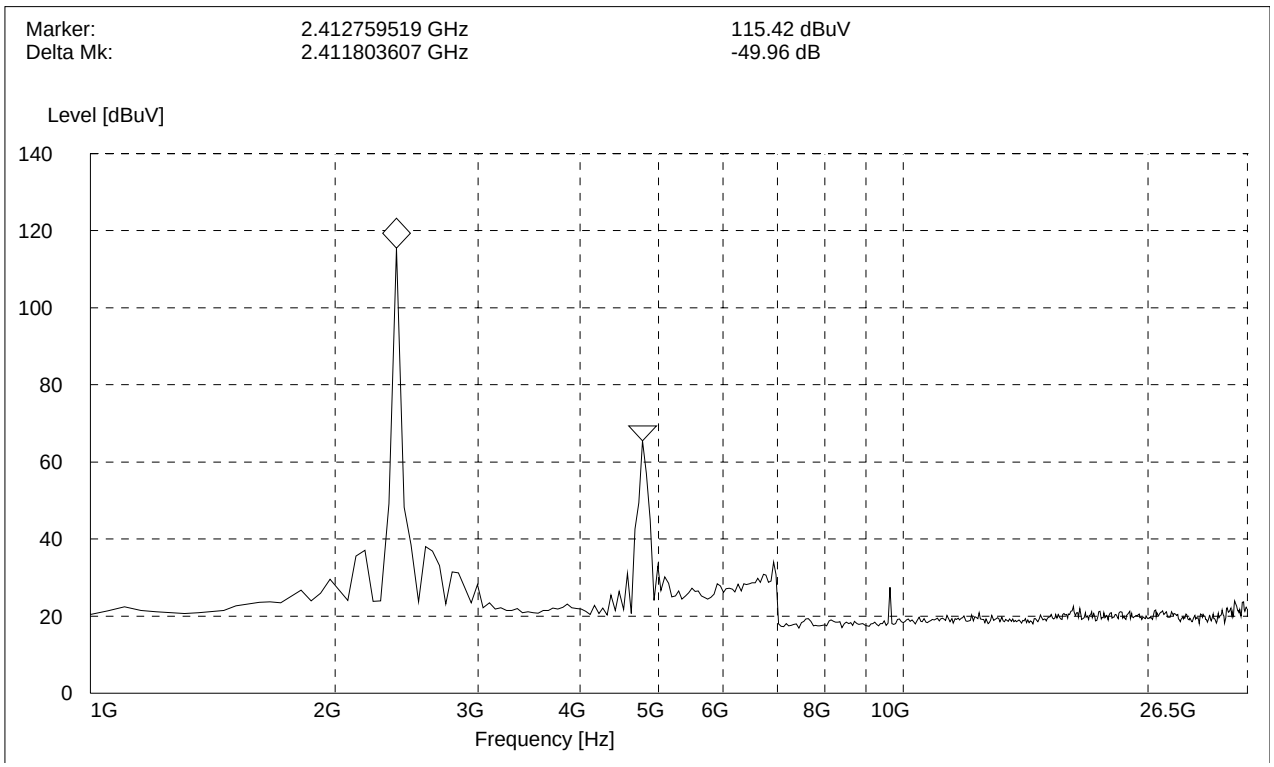
mode 1
mode 2
mode 3

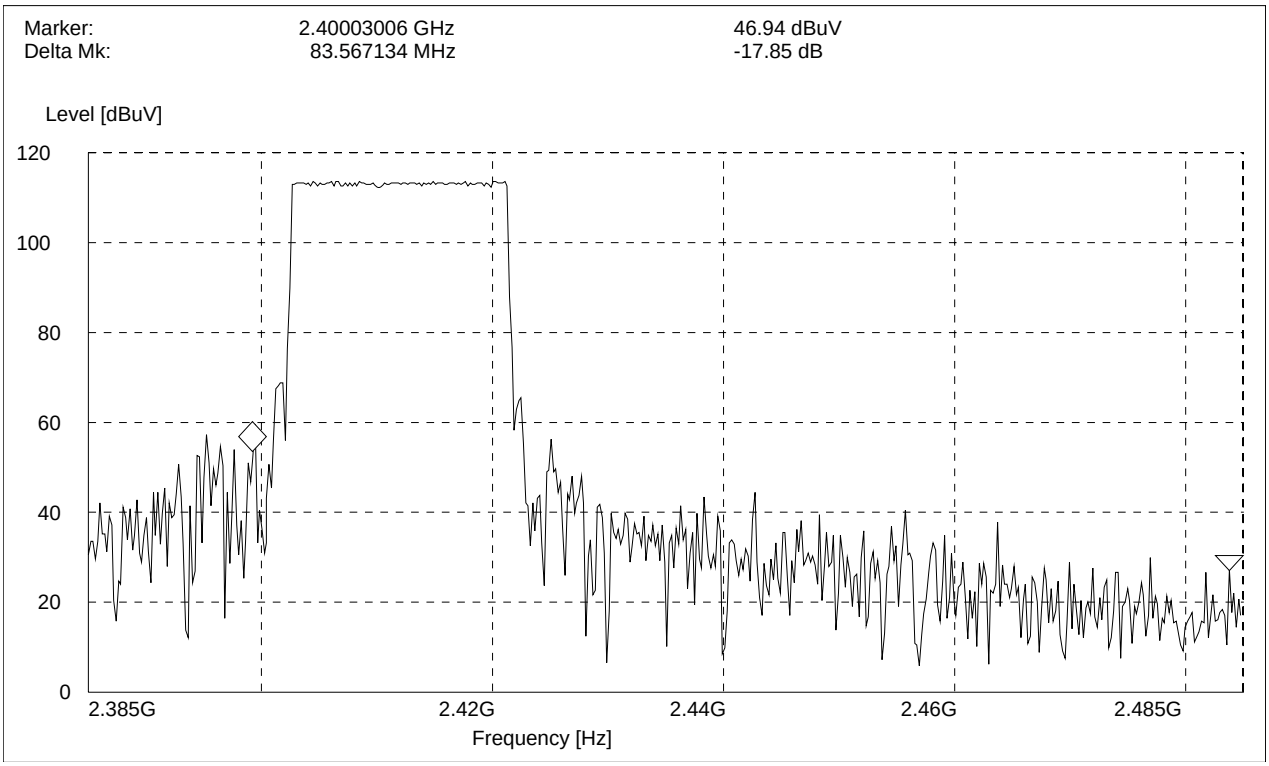
10.4.TEST RESULTS

The spectrum plots are attached on the following. Test data shows compliance with the band edge requirement in part 15.247(d) .

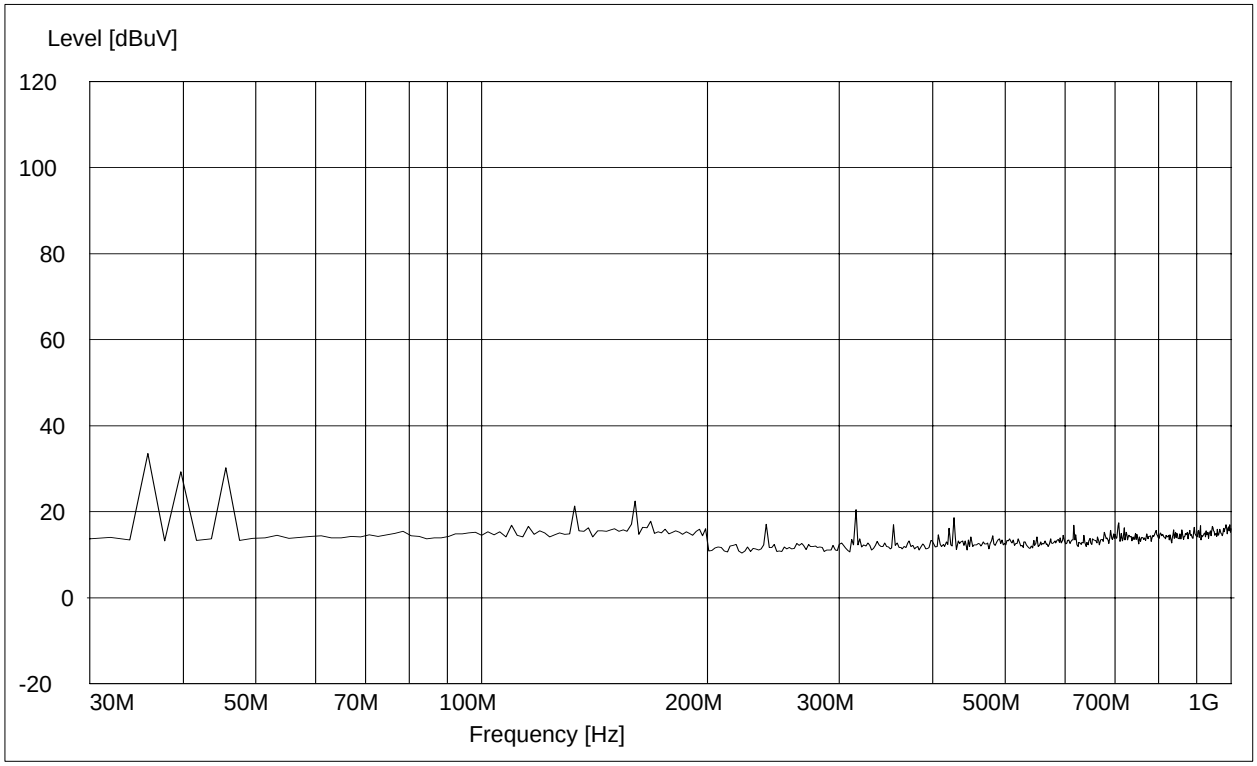
mode 1

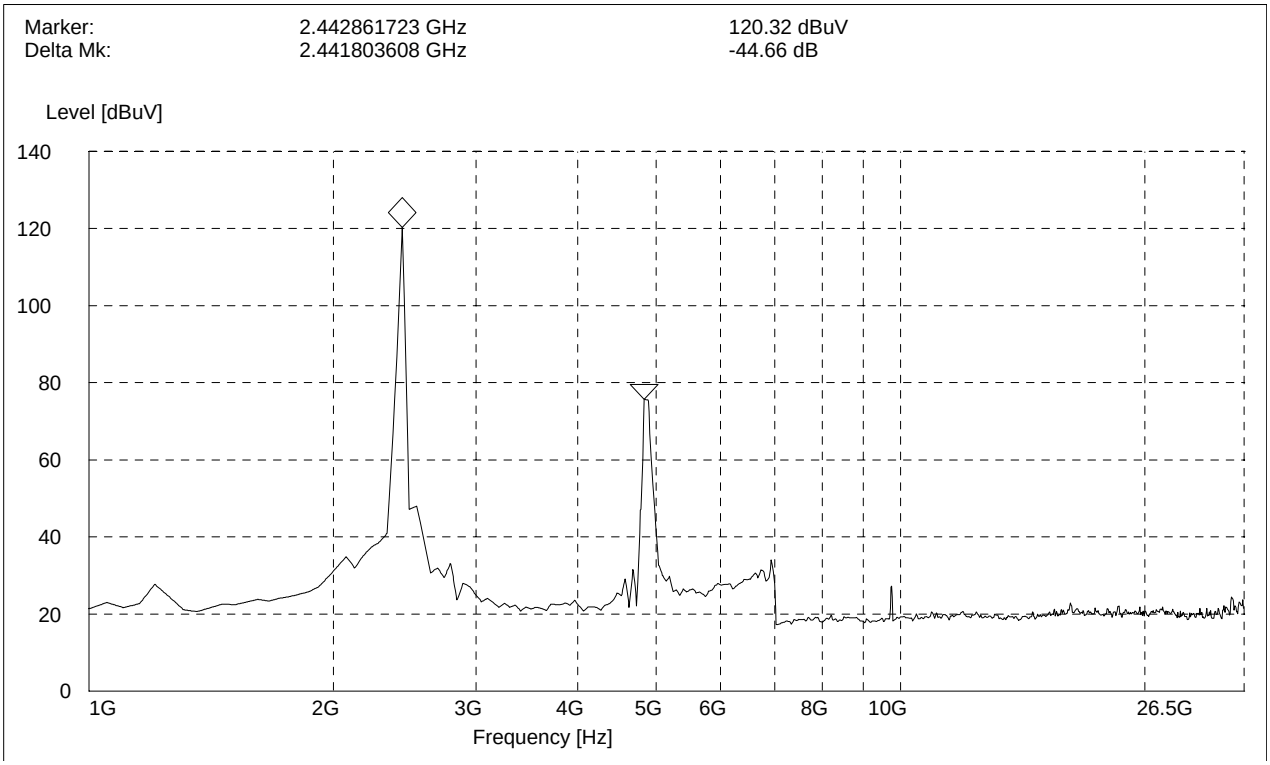


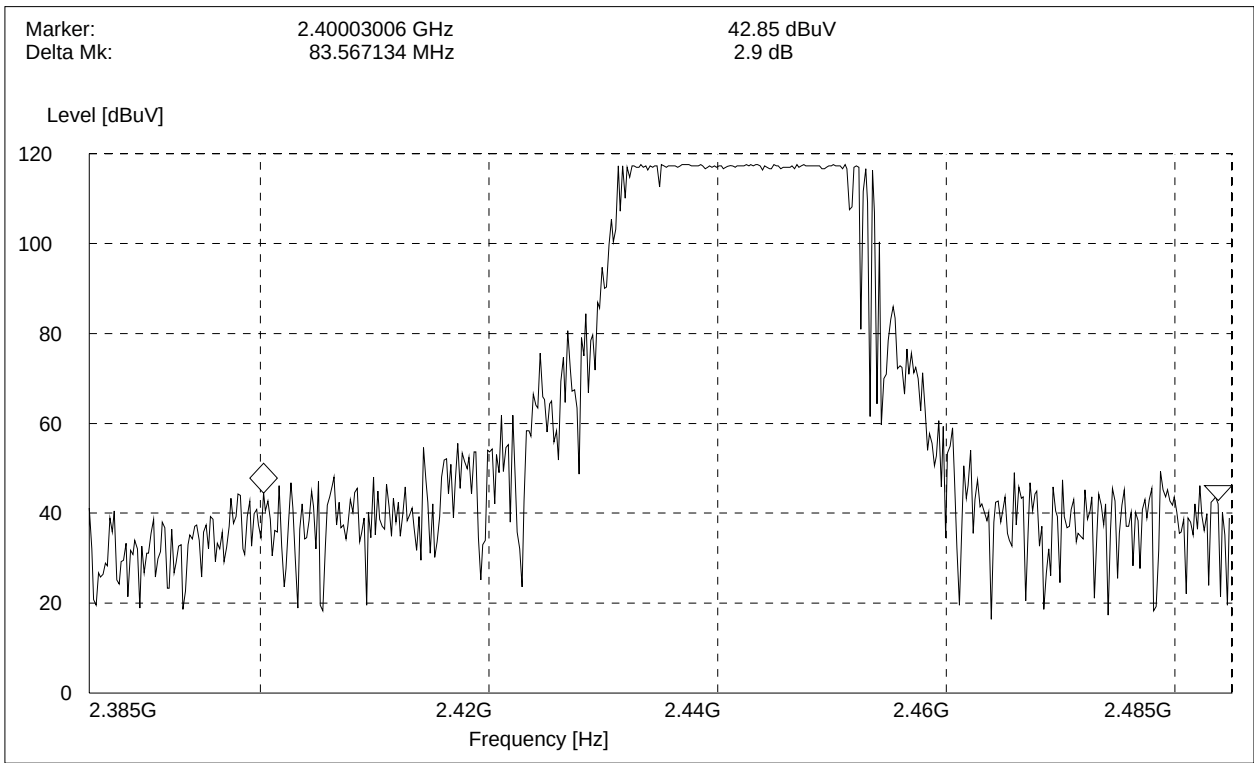

Marker: 2.412759519 GHz 115.42 dBuV
Delta Mk: 2.411803607 GHz -49.96 dB
Level [dBuV]
140
120
100
80
60
40
20
0
1G
2G
3G
4G
5G
6G
8G
10G
26.5G
Frequency [Hz]


Marker: 2.40003006 GHz 46.94 dBuV
Delta Mk: 83.567134 MHz -17.85 dB
Level [dBuV]
120
100
80
60
40
20
0
2.385G
2.42G
2.44G
2.46G
2.485G
Frequency [Hz]

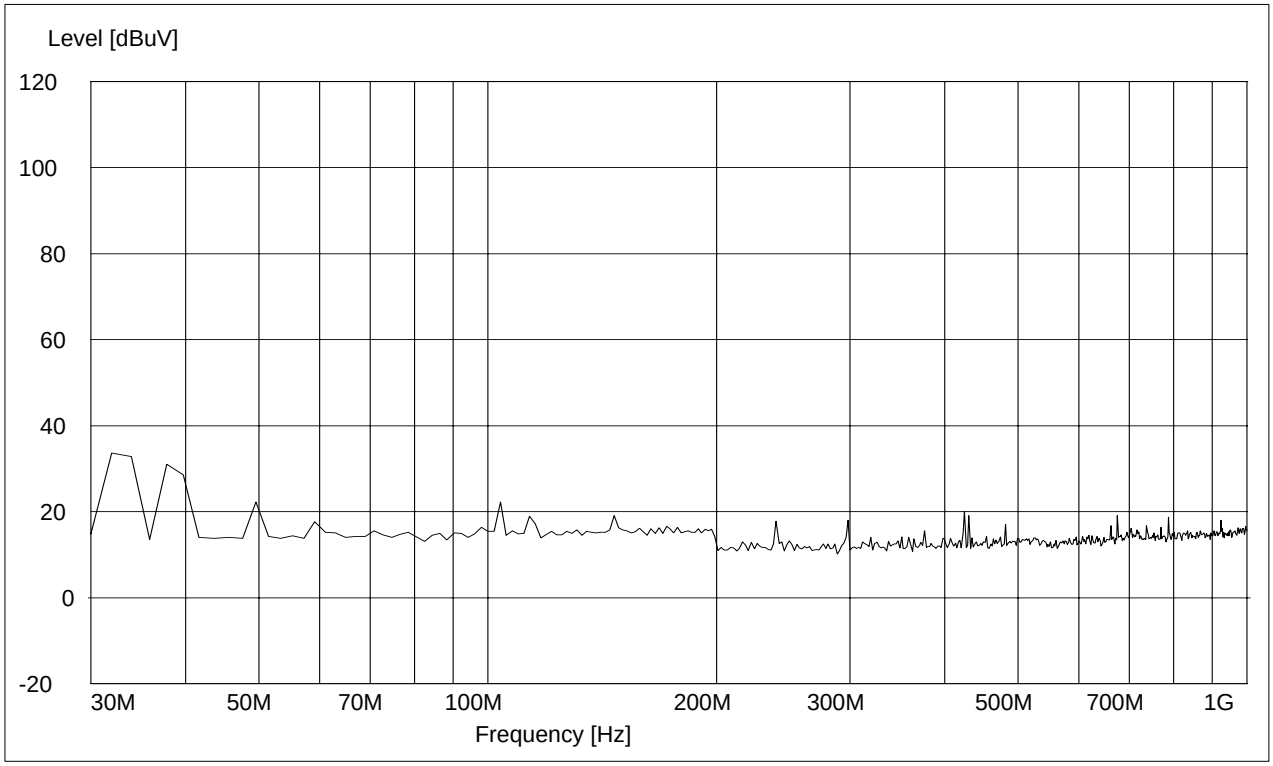
mode 2

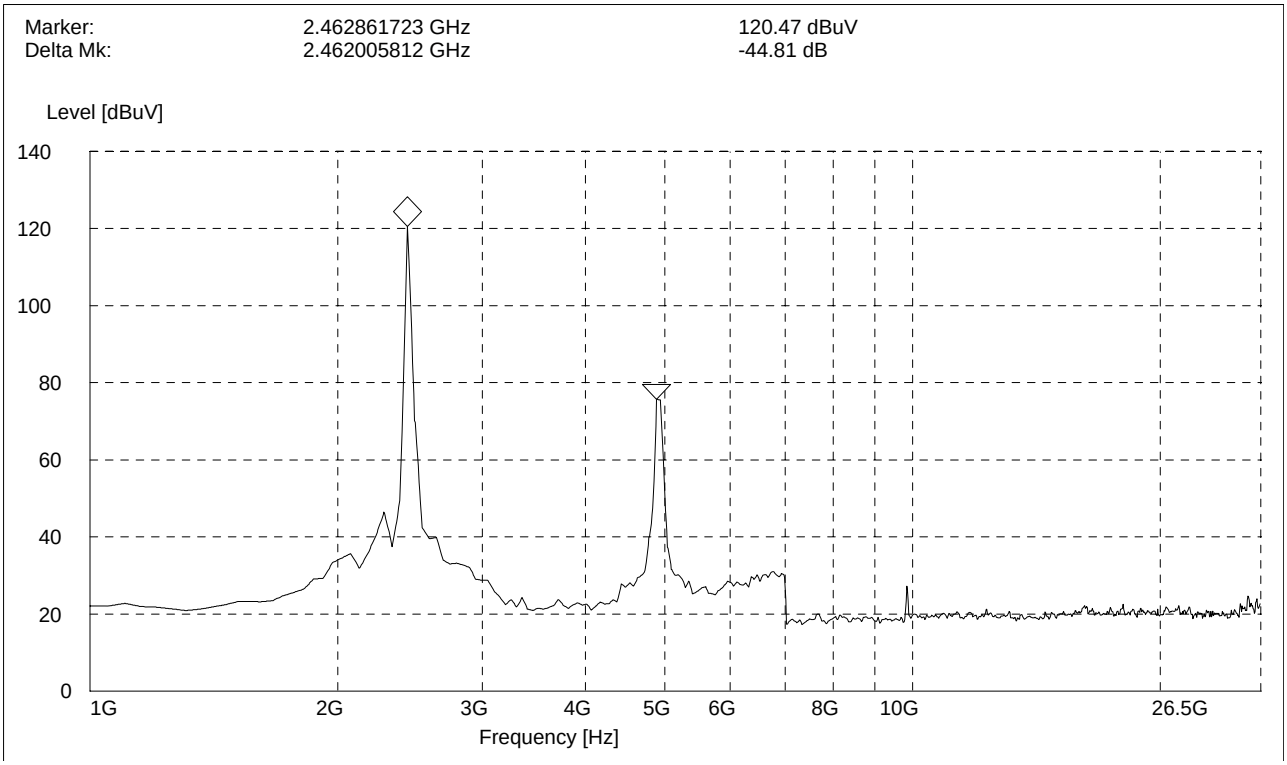

Level [dBuV]
120
100
80
60
40
20
0
-20
30M
50M
70M
100M
200M
300M
500M
700M
1G
Frequency [Hz]

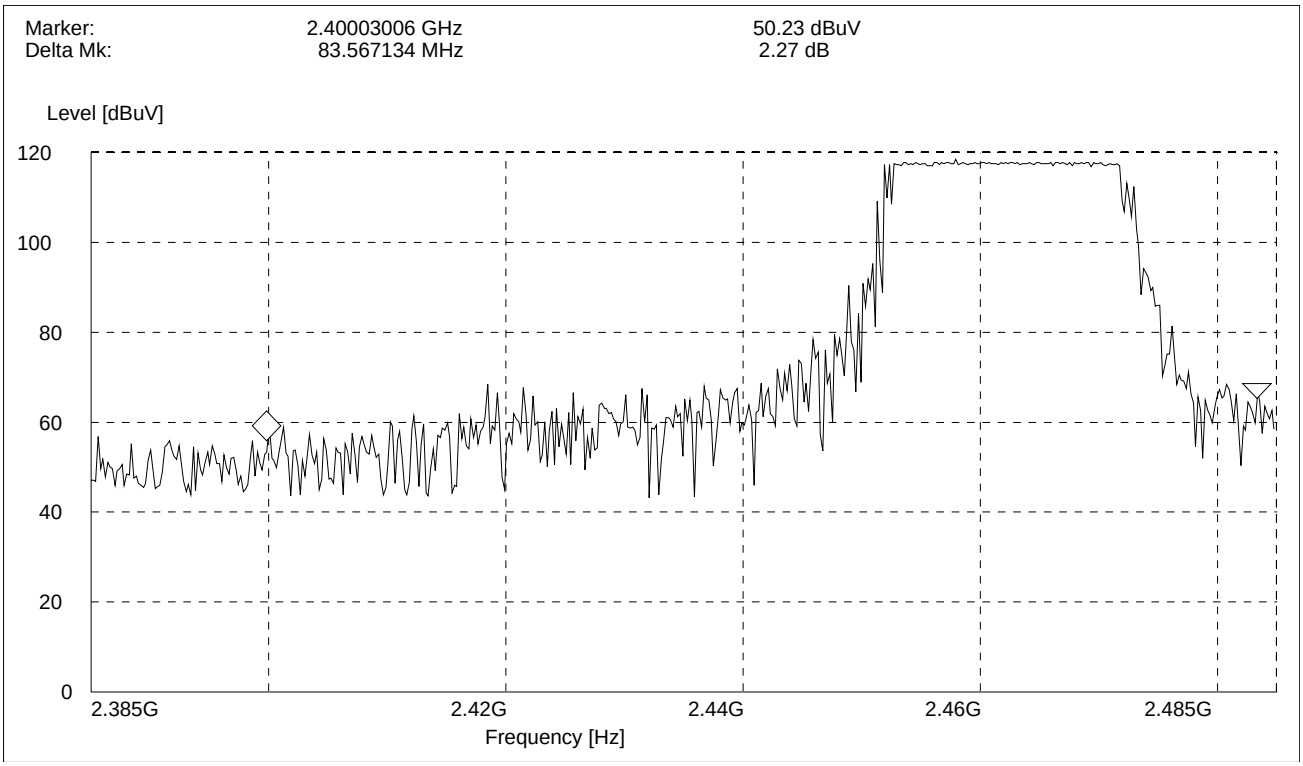

Marker: 2.442861723 GHz 120.32 dBuV
Delta Mk: 2.441803608 GHz -44.66 dB
Level [dBuV]
140
120
100
80
60
40
20
0
1G
2G
3G
4G
5G
6G
8G
10G
26.5G
Frequency [Hz]


Marker: 2.40003006 GHz 42.85 dBuV
Delta Mk: 83.567134 MHz 2.9 dB
Level [dBuV]
120
100
80
60
40
20
0
2.385G
2.42G
2.44G
2.46G
2.485G
Frequency [Hz]

mode 3


Level [dBuV]
120
100
80
60
40
20
0
-20
30M
50M
70M
100M
200M
300M
500M
700M
1G
Frequency [Hz]


Marker: 2.462861723 GHz 120.47 dBuV
Delta Mk: 2.462005812 GHz -44.81 dB
Level [dBuV]
140
120
100
80
60
40
20
0
1G
2G
3G
4G
5G
6G
8G
10G
26.5G
Frequency [Hz]


Marker: 2.40003006 GHz 50.23 dBuV
Delta Mk: 83.567134 MHz 2.27 dB
Level [dBuV]
120
100
80
60
40
20
0
2.385G
2.42G
2.44G
2.46G
2.485G
Frequency [Hz]

11. ANTENNA REQUIREMENT

11.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. ANTENNA CONNECTED CONSTRUCTION

The EUT has a built in antenna which is integrated on the PCB, this is permanently attached antenna and meets the requirements of this section.

APPENDIX I TEST PHOTO

Photo 1 Conducted Emission Test

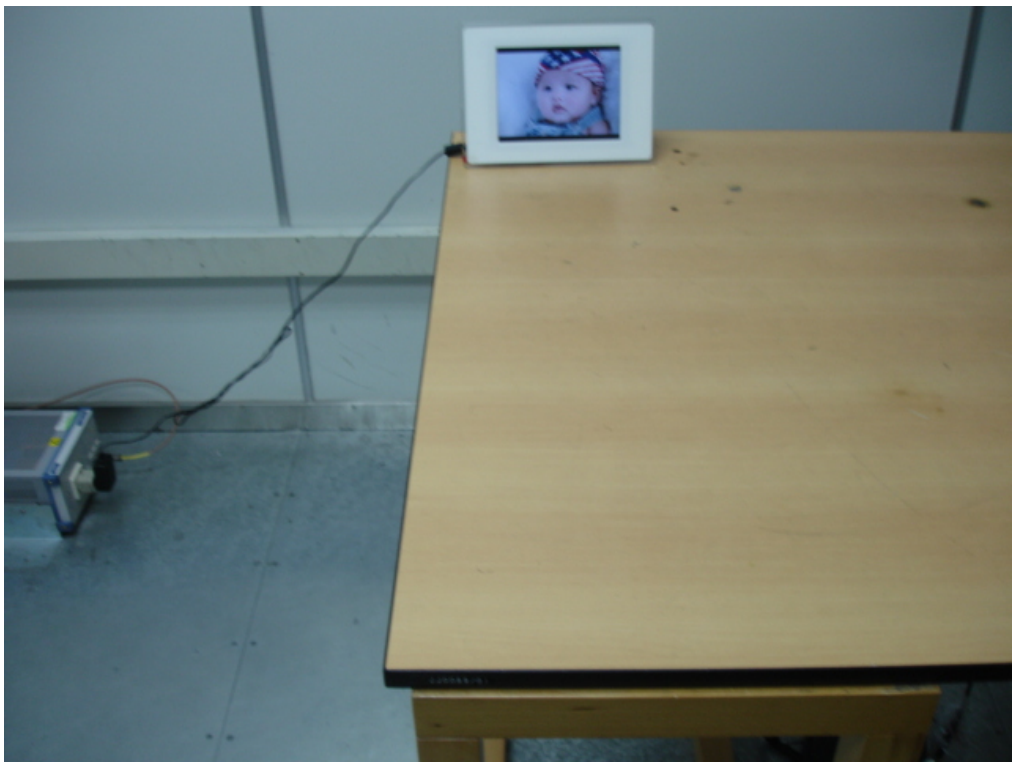
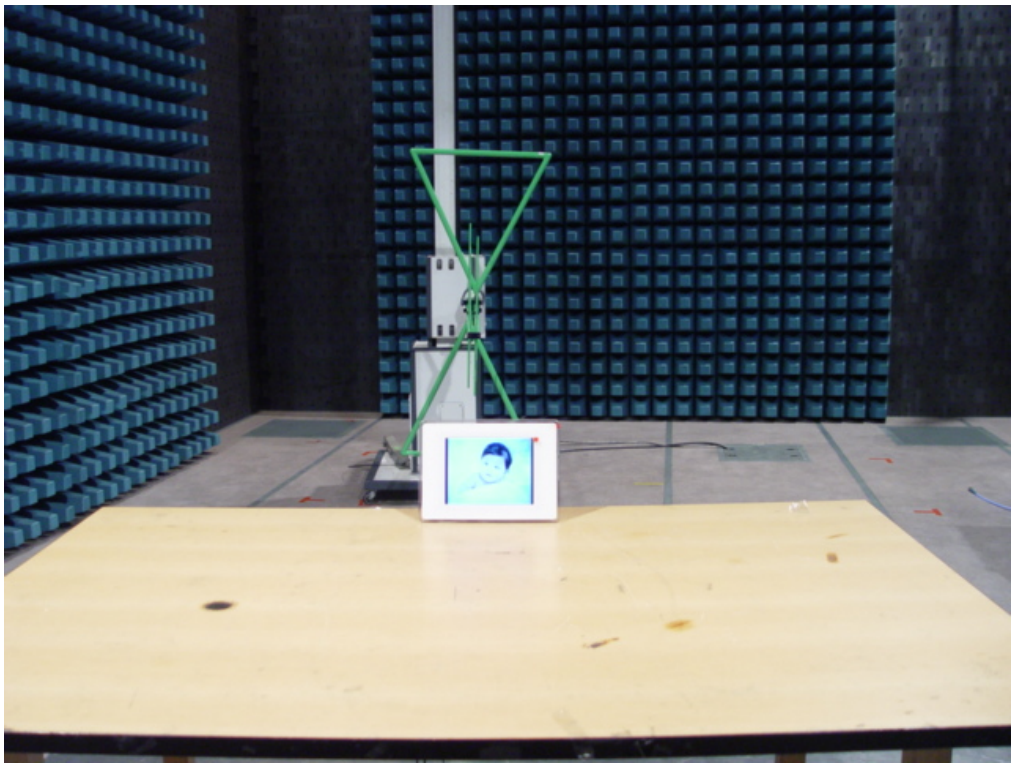


Photo 2 Radiated Emission Test



APPENDIX II EUT PHOTO

Photo 1 Label of EUT

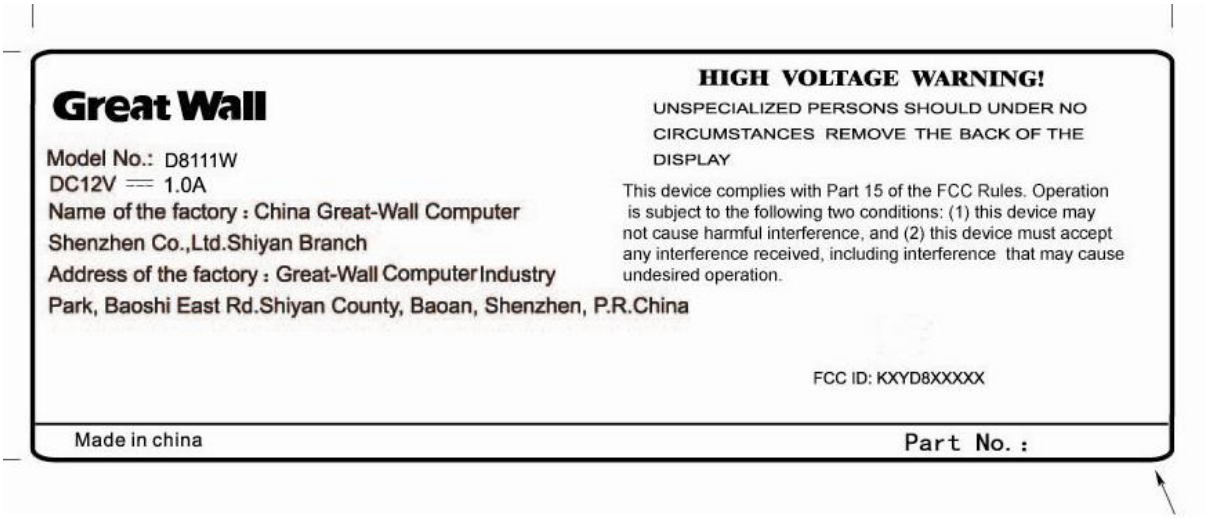


Photo 2 Appearance of EUT

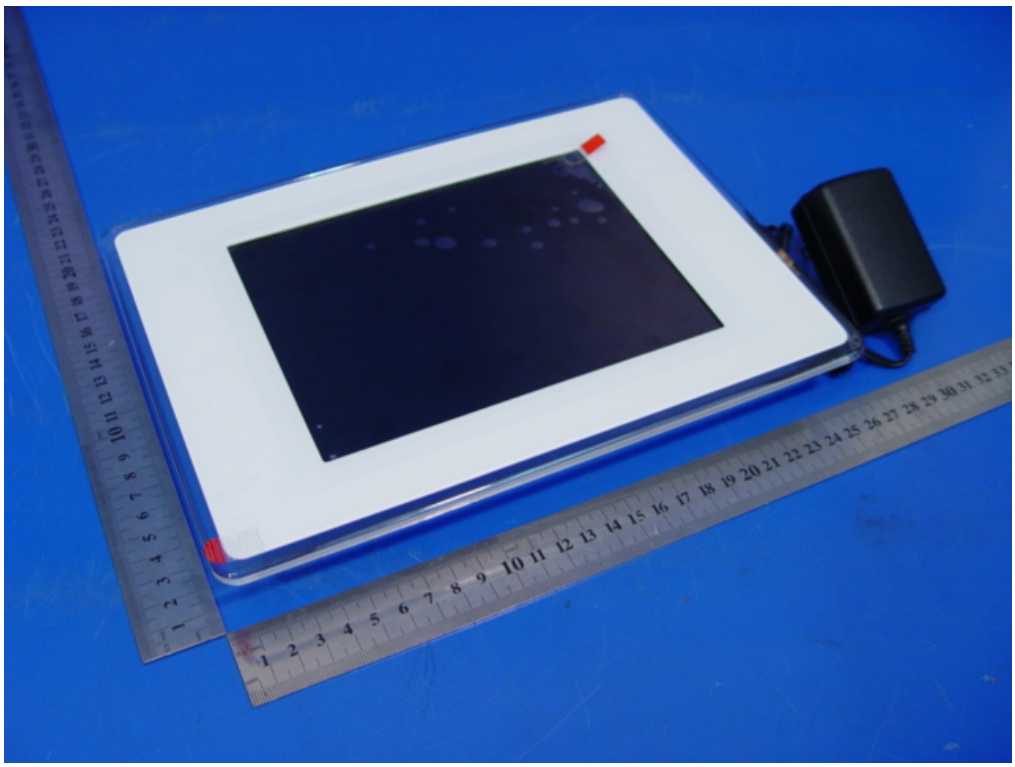


Photo 3 Appearance of EUT

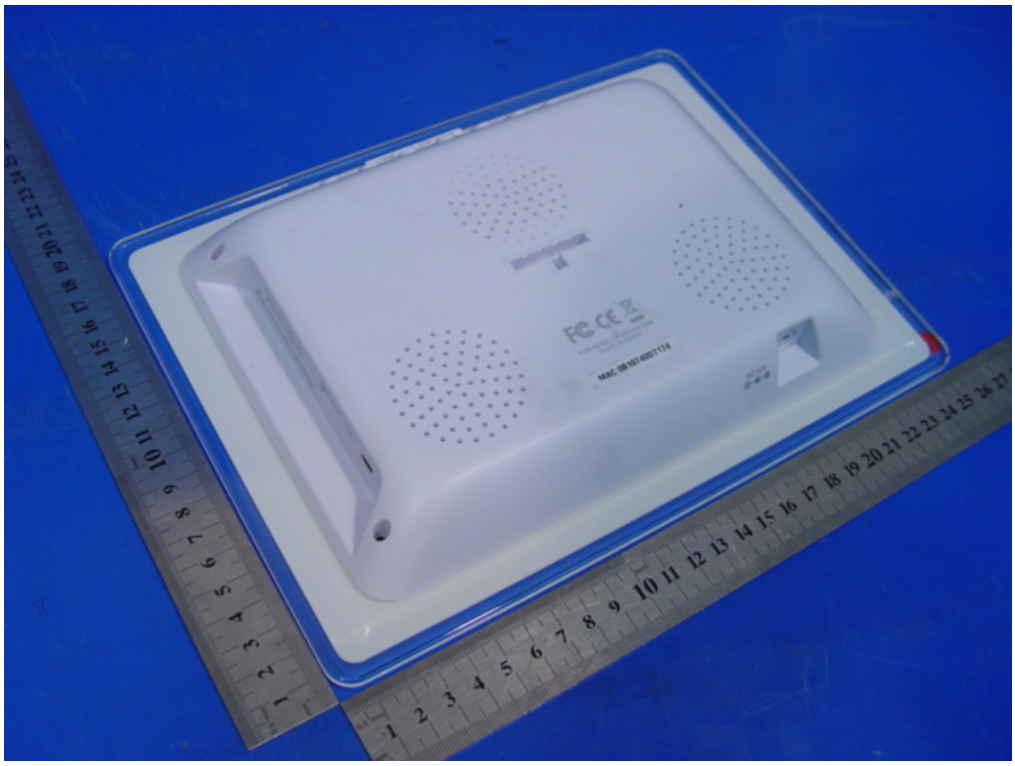


Photo 4 Adaptor of EUT

Photo 5 Inside of EUT

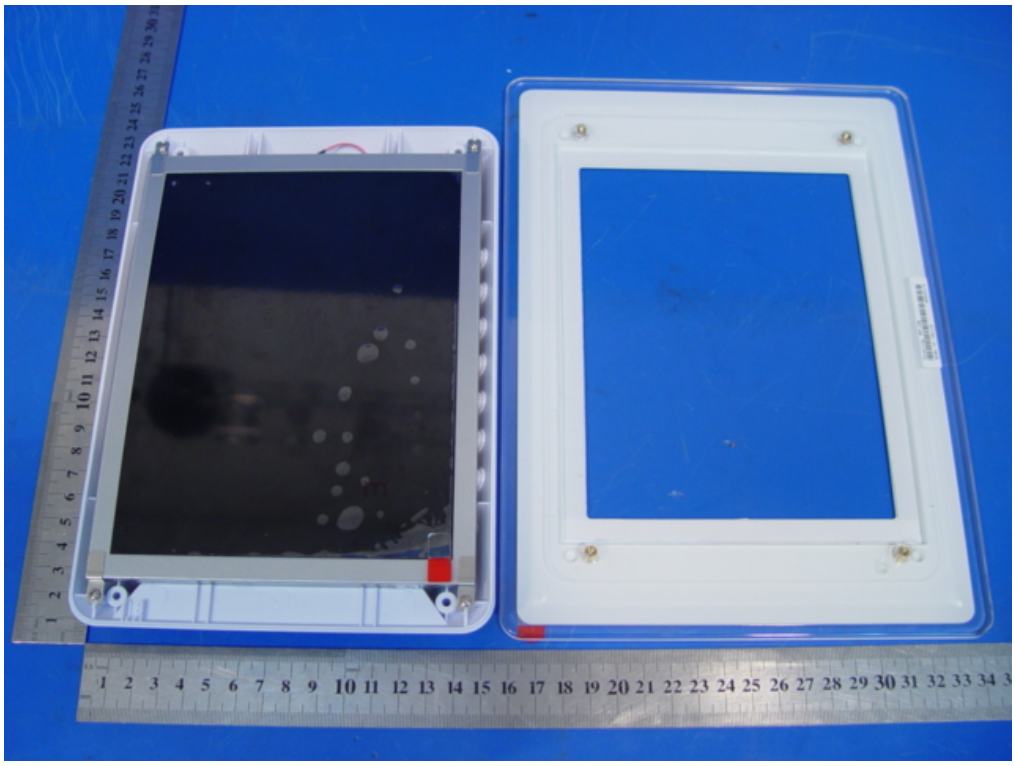


Photo 6 Inside of EUT

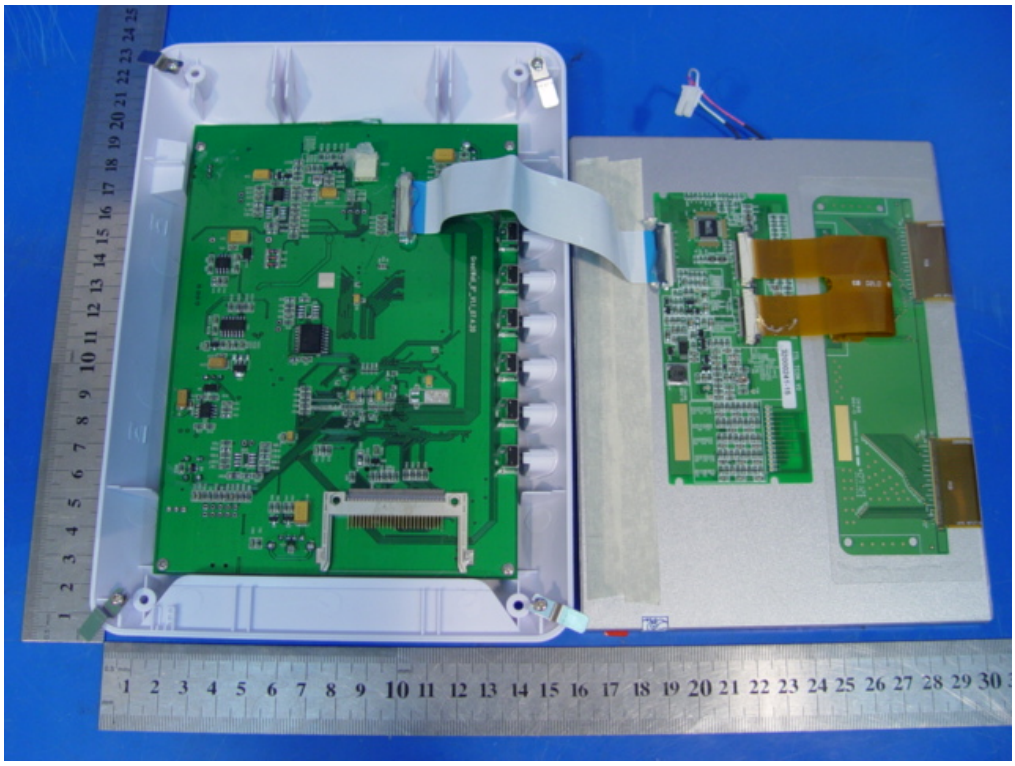


Photo 7 Inside of EUT

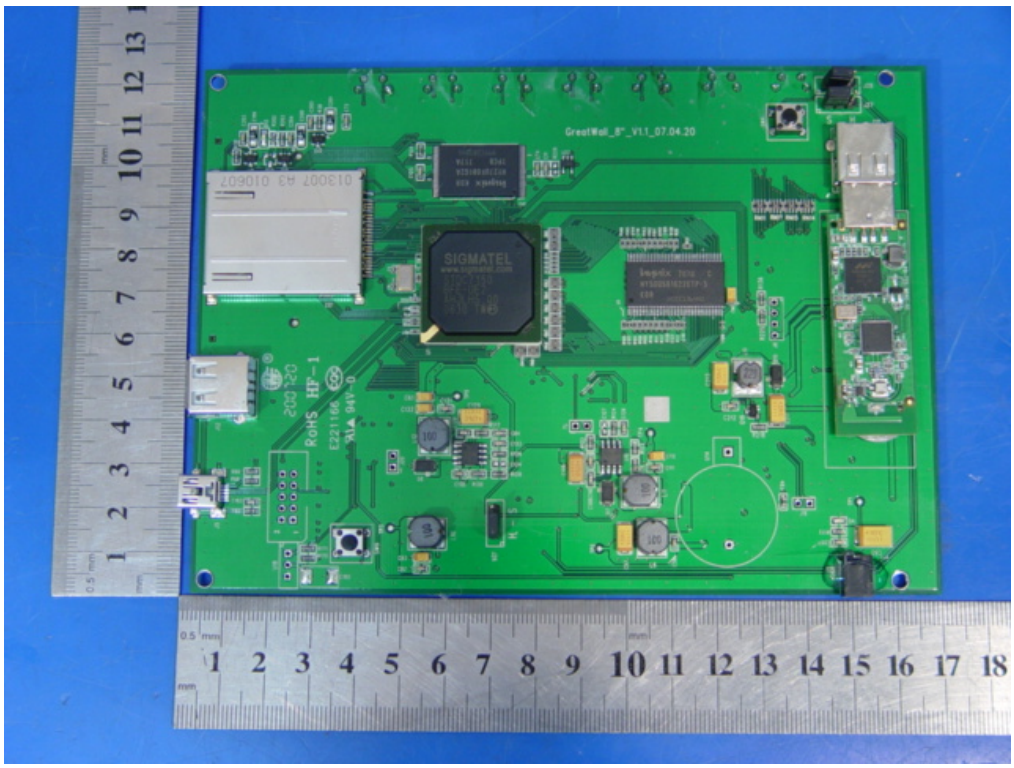


Photo 8 Inside of EUT

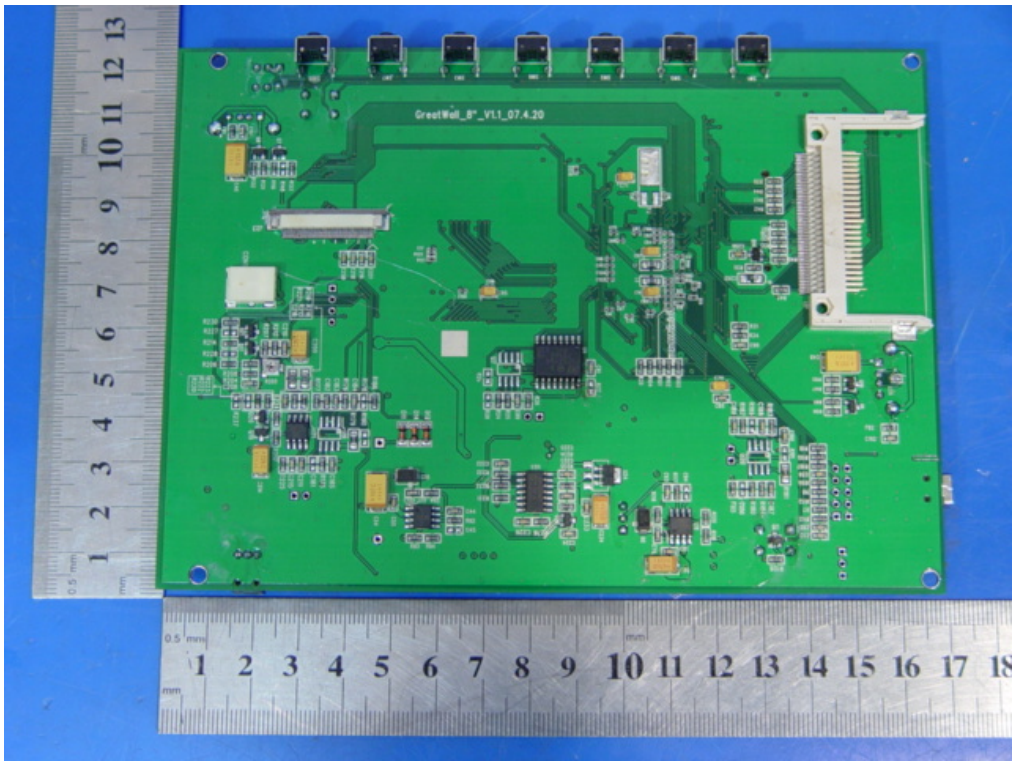


Photo 9 Inside of EUT

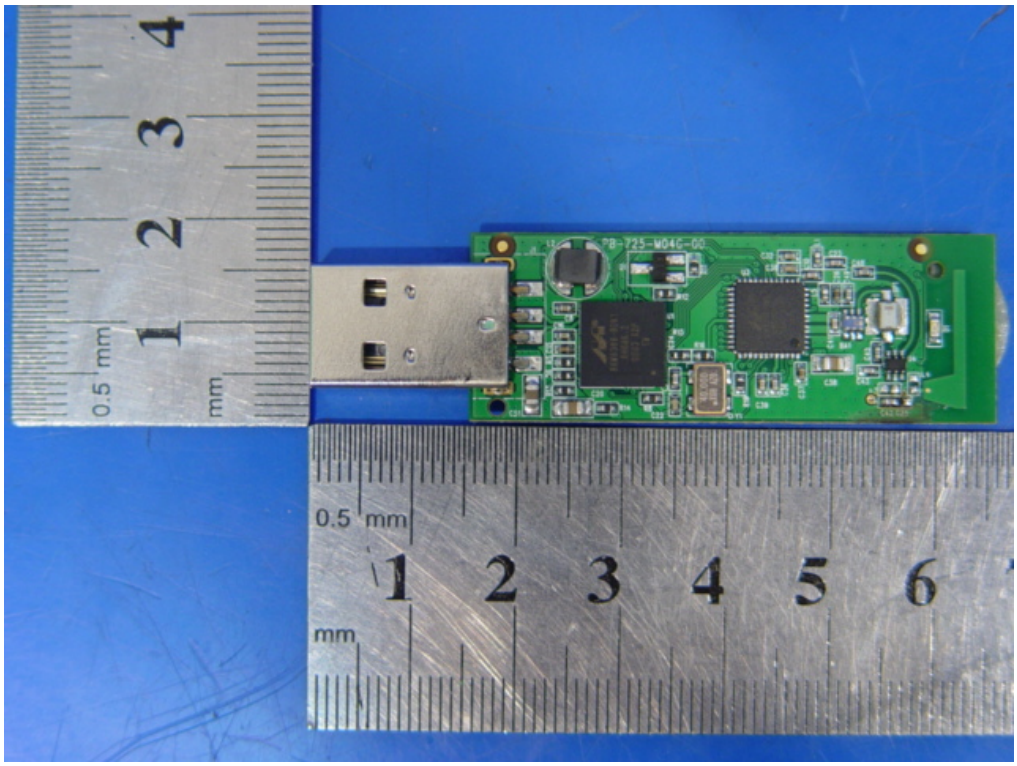


Photo 10 Inside of EUT