



# Test Report

**Applicant:** Damail Technologies SAS

**Address of Applicant:** Corso Della Repubblica 65, Fabriano Italy

**Equipment Under Test (EUT):**

EUT Name: IP Phone

Model No.: D-2304(DM-2604), D-3310(DM-2604), D-3300, D-3320, D-4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390

Serial No.: Not supplied by client

**Standards:** FCC PART15 SUBPART B: 2007

**Date of Receipt:** Mar. 31, 2011

**Date of Test:** Mar. 31, 2011 – Apr. 25, 2011

**Date of Issue:** Apr. 28, 2011

**Test Result :** **PASS\***

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Henly.xie / Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All test results in this report can be traceable to National or International Standards.

The test report prepare by:

Guangzhou Huesent Testing Service Co.,Ltd.

No.91, Dongguanzhuang Road,Guangzhou,China.

Tel: 86-20-28263298 Fax: 86-20-28263237 <http://www.hst.org.cn> E-mail:hst@hst.org.cn



## 2. Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4:2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4:2003	Class B	PASS
<p>Model: D-2304(DM-2604), D-3310(DM-2604), D-3300, D-3320, D-4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390</p> <p>The tests were actually carried out for the item <b>D-2304(DM-2604)</b> and the test of RE was carried out for the item <b>D-3310(DM-2604)</b>, since all the other models were electric/ structure and component/ function identical with the only difference being model number and appearance.</p> <p>The EUTs were modified by the applicant to pass the test of RE.</p>				



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## **4. General Information**

### **4.1 Client Information**

Applicant: Damail Technologies SAS  
Address of Applicant: Corso Della Repubblica 65, Fabriano Italy

### **4.2 General Description of E.U.T.**

EUT Name: IP Phone  
Item No.: Listed on the cover page  
Trade Name: Damail  
Serial No.: Not supplied by client

### **4.3 Details of E.U.T.**

Power Supply: DC5V, 1A by adapter  
Power Cord: /

### **4.4 Description of Support Units**

Model: GM-050100, GVE's AC/DC adapter, input: AC100-240V, 50/60Hz, 0.5A; Output: DC5V1.0A  
Dell's PC host ( model: OPTIPLEX380 ) / China Greatwall's LCD monitor ( model: M5WE1 )

### **4.5 Standards Applicable for Testing**

The standard used was FCC PART 15, SUBPART B, CLASS B 2007

### **4.6 Test Location**

All tests were subcontract to the laboratory following:

ITL lab. which is located at

Floors 1 & 2, A2 South Building, No. 3 Keyan Road, Science Town, Luogang District,  
Guangzhou City, Guangdong Province, China

Tel: 86-20-32209330 Fax: 86-20-62824387 Email: itl@i-testlab.com

FCC- Registration No: 935596 on Jun. 3, 2009

### **4.8 Deviation from Standards**

None.

### **4.9 Abnormalities from Standard Conditions**

None.

## 5. Equipments Used during Test

No.	Test item.	Name of Equipment's	Model/Type	Last Calibrated Date
1	CE/RE	EMI Test receiver	R&S ESCI	2010-4-21
2	CE	LISN	R & S ENV216	2010-5-4
3	CE/RE	Shielding room	ETS•Lindgren 8*4*3	2009-3-13
4	RE	Semi-Anechoic chamber	ETS•Lindgren FACT3 2.0	2009-4-11
5	RE	Biconilog Antenna	ETS•Lindgren 3142D	2009-1-29

Note:

/

## 6. Test Results

### 6.1 Conducted Emissions Mains Terminals, 150 kHz to 30MHz

Test Requirement: FCC Part 15 B  
Test Method: ANSI C63.4  
Class / Severity: Class B  
Detector: Peak for pre-scan (9kHz Resolution Bandwidth)  
Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit  
Test Date: Apr. 25, 2011

#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 20.0°C

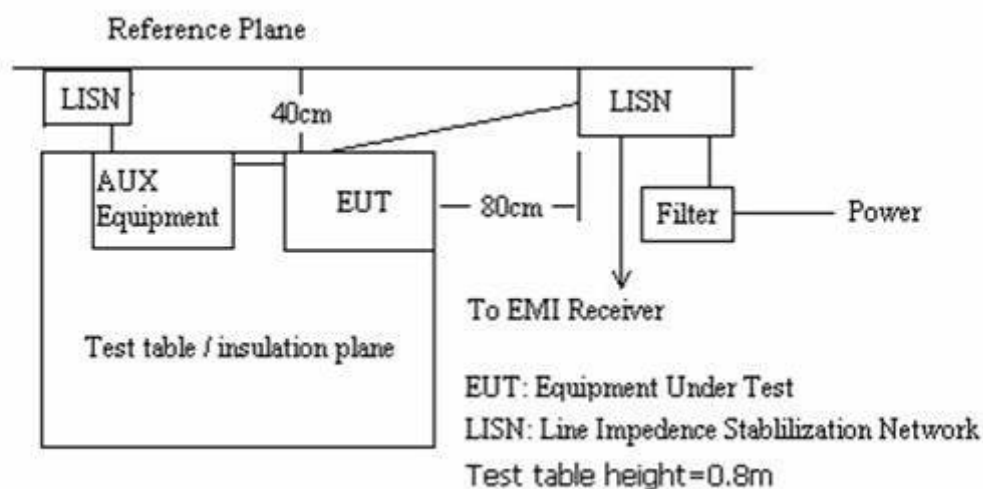
Humidity: 50% RH

Atmospheric Pressure: 1020mBar

EUT Operation:

1. Connect the EUT via a power cable to an AC/DC adapter in 120VAC/60Hz.
2. Pre-test the EUT work normally in hooking or phoning modes during the whole test.

#### 6.1.2 Plan View of Test Setup

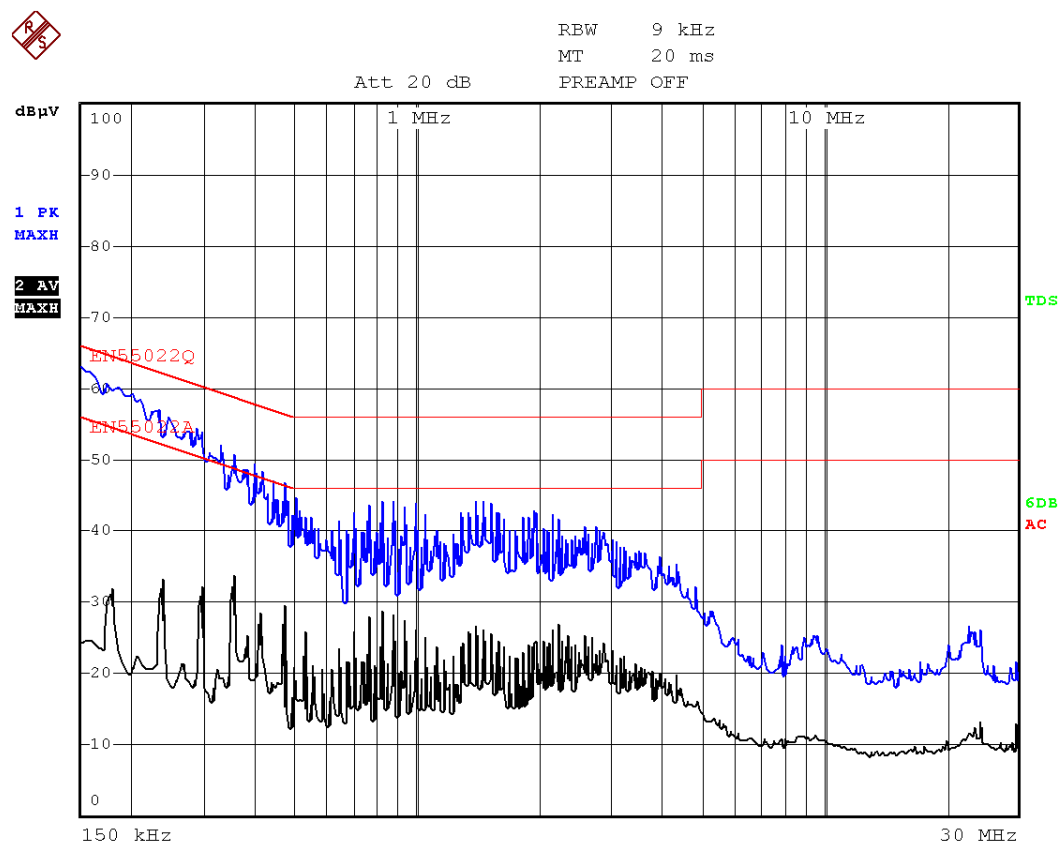


#### 6.1.3 Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized emission were detected when Peak measurement level is over Average Limit.

Live Line, Tested model: D-2304(DM-2604), hooking mode

### Peak Scan



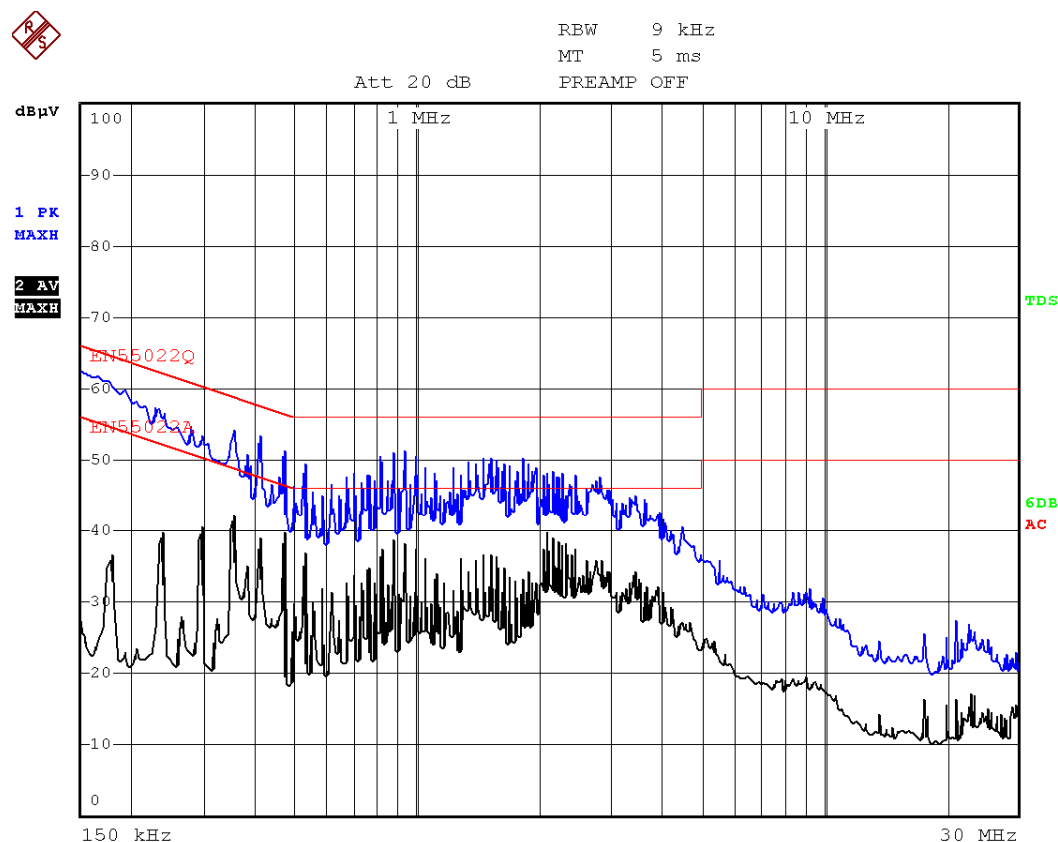
Date: 25.APR.2011 15:19:43

### Quasi-peak and Average measurement

Freq. (MHz)	Line	QP (dBμV)	Transducer (dB)	QP limit (dBμV)	Margin (dB)	AV (dBμV)	Transducer (dB)	AV limit (dBμV)	Margin (dB)
0.177	Live	56.2	0.1	64.6	8.4	31.5	0.1	54.6	23.1
0.358	Live	46.2	0.1	58.8	12.6	34.0	0.1	48.8	14.8
0.815	Live	42.6	0.2	56	13.4	28.1	0.2	46	17.9
2.245	Live	41.3	0.2	56	14.7	26.9	0.2	46	19.1
9.495	Live	23.2	0.3	60	36.8	10.8	0.3	50	39.2
23.15	Live	23.5	0.3	60	36.5	13.5	0.3	50	36.5

# Neutral Line, Tested model: D-2304(DM-2604), hooking mode

## Peak Scan



Date: 25.APR.2011 15:23:43

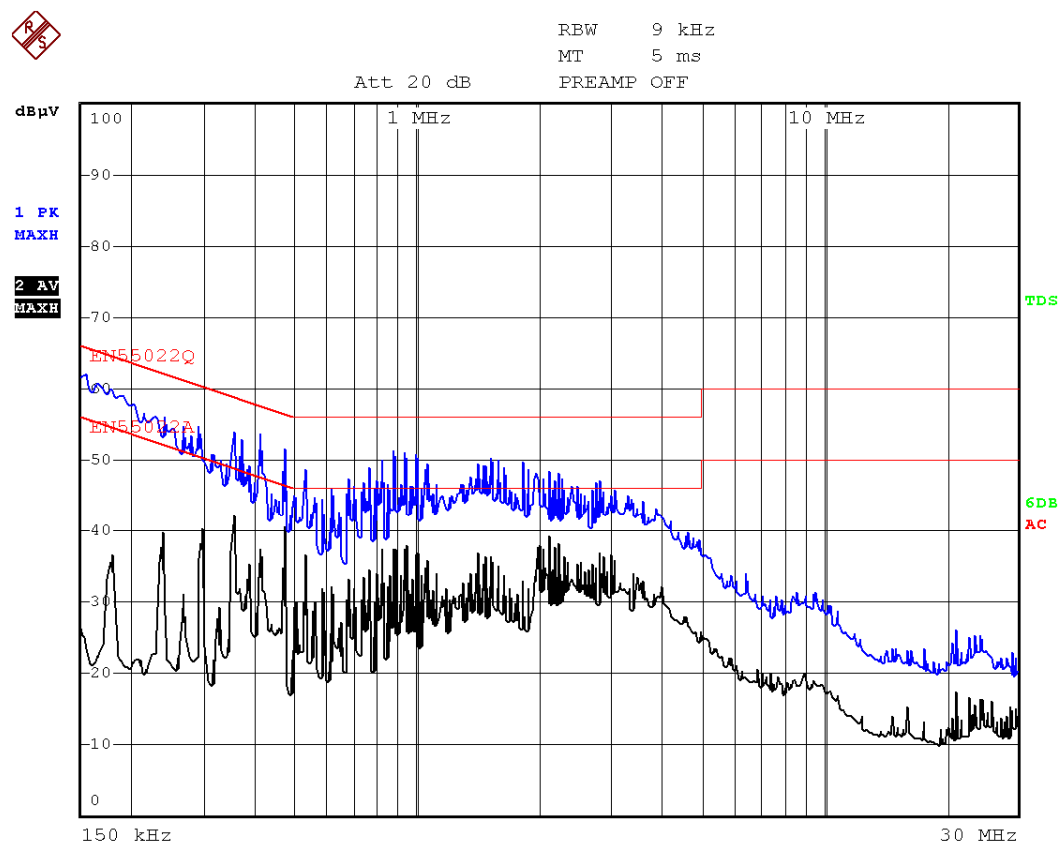
## Quasi-peak and Average measurement

Freq. (MHz)	Line	QP (dBμV)	Transducer (dB)	QP limit (dBμV)	Margin (dB)	AV (dBμV)	Transducer (dB)	AV limit (dBμV)	Margin (dB)
0.177	Neutral	57.3	0.1	64.6	7.3	36.5	0.1	54.6	18.1
0.358	Neutral	49.2	0.1	58.8	9.6	42.0	0.1	48.8	6.8
0.885	Neutral	47.5	0.2	56	8.5	38.1	0.2	46	7.9
2.143	Neutral	44.3	0.2	56	11.7	40.9	0.2	46	5.1
9.092	Neutral	27.2	0.3	60	32.8	18.8	0.3	50	31.2
21.35	Neutral	25.4	0.3	60	34.6	15.5	0.3	50	34.5



Live Line, Tested model: D-2304(DM-2604), phoning mode

### Peak Scan



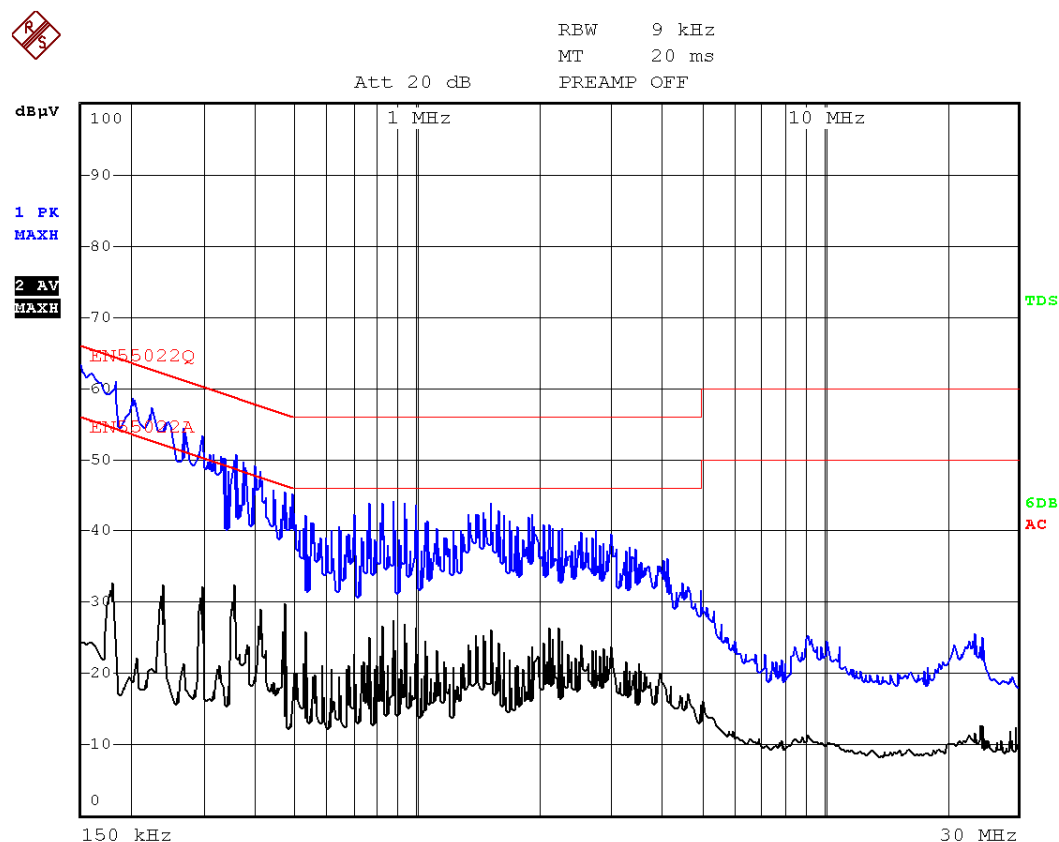
Date: 25.APR.2011 15:15:15

### Quasi-peak and Average measurement

Freq. (MHz)	Line	QP (dBμV)	Transducer (dB)	QP limit (dBμV)	Margin (dB)	AV (dBμV)	Transducer (dB)	AV limit (dBμV)	Margin (dB)
0.177	Live	54.3	0.1	64.6	10.3	36.4	0.1	54.6	18.2
0.358	Live	50.2	0.1	58.8	8.6	42.0	0.1	48.8	6.8
0.892	Live	48.3	0.2	56	7.7	37.1	0.2	46	8.9
2.245	Live	45.3	0.2	56	10.7	38.9	0.2	46	7.1
9.472	Live	27.3	0.3	60	32.7	18.6	0.3	50	31.4
21.35	Live	23.8	0.3	60	36.2	17.5	0.3	50	32.5

# Neutral Line, Tested model: D-2304(DM-2604), phoning mode

## Peak Scan



Date: 25.APR.2011 15:17:07

## Quasi-peak and Average measurement

Freq. (MHz)	Line	QP (dBμV)	Transducer (dB)	QP limit (dBμV)	Margin (dB)	AV (dBμV)	Transducer (dB)	AV limit (dBμV)	Margin (dB)
0.177	Neutral	57.0	0.1	64.6	7.6	32.5	0.1	54.6	22.1
0.358	Neutral	45.2	0.1	58.8	13.6	33.2	0.1	48.8	15.6
0.882	Neutral	43.5	0.2	56	12.5	28.1	0.2	46	17.9
2.140	Neutral	38.3	0.2	56	17.7	26.9	0.2	46	19.1
9.092	Neutral	22.2	0.3	60	37.8	11.8	0.3	50	38.2
24.34	Neutral	25.2	0.3	60	34.8	11.5	0.3	50	38.5

## 6.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement: FCC Part15 B  
Test Method: ANSI C63.4  
Class: Class B  
Detector: Peak for pre-scan (120kHz resolution bandwidth)  
Quasi-Peak if maximised peak within 6dB of limit  
Test Date: Apr. 25, 2011

### 6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 20°C

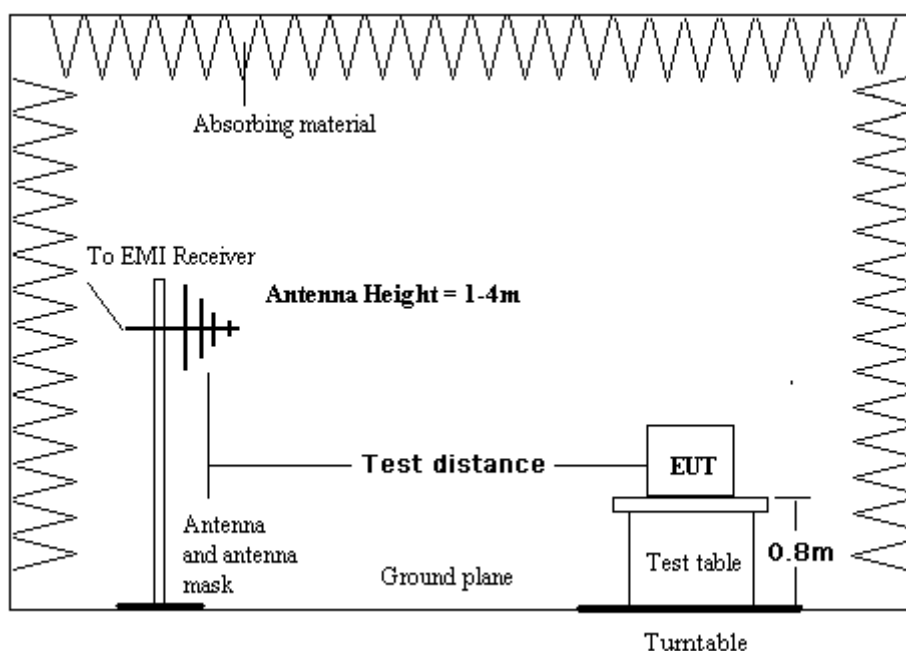
Humidity: 50% RH

Atmospheric Pressure: 1020mBar

EUT Operation:

1. Connect the EUT via an power cable to an AC/DC adapter in 120VAC/60Hz.
2. Pre-test the EUT work normally in hooking or phoning mode during the whole test.

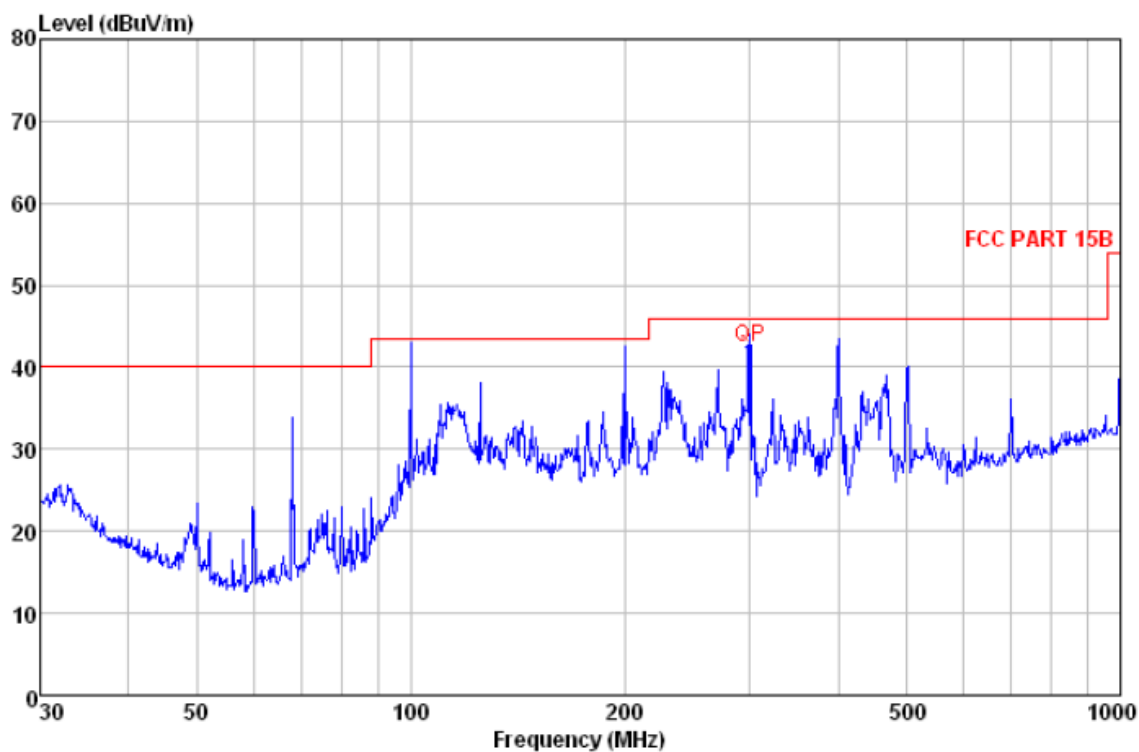
### 6.2.2 Test Setup



### 6.2.3 Measurement Data

An initial pre-scan was performed in the 3m chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bilog antenna with 2 orthogonal polarities

## Horizontal: Tested model: D-2304(DM-2604), hooking mode

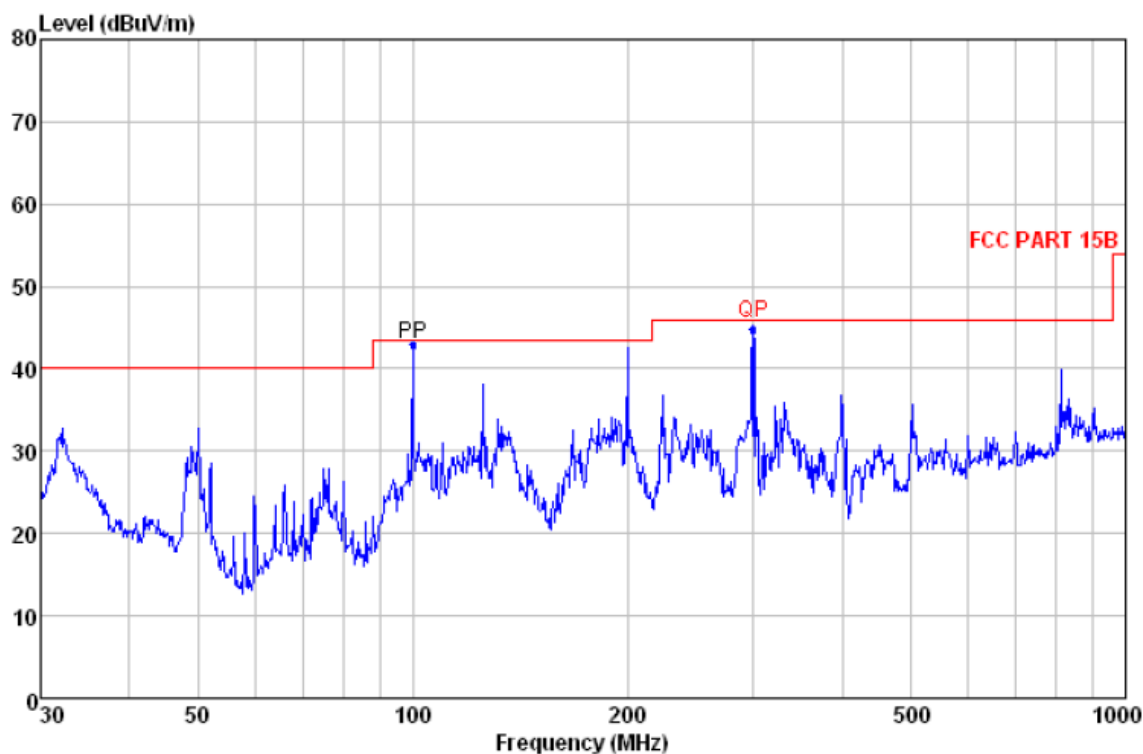


## Quasi-peak measurement

Frequency	Level	Transducer	Limit	Margin
MHz	dBuV/m	dB	dBuV/m	dB
68.8	33.7	9.1	40	6.3
100.0	41.3	9.4	43.5	2.2
200.0	40.8	13.2	43.5	2.7
300.0	41.8	15.9	46	4.2
400.0	41.9	18.2	46	4.1
500.0	38.1	20.4	46	7.9

## Note:

The transducer factor includes antenna factor and cable loss.

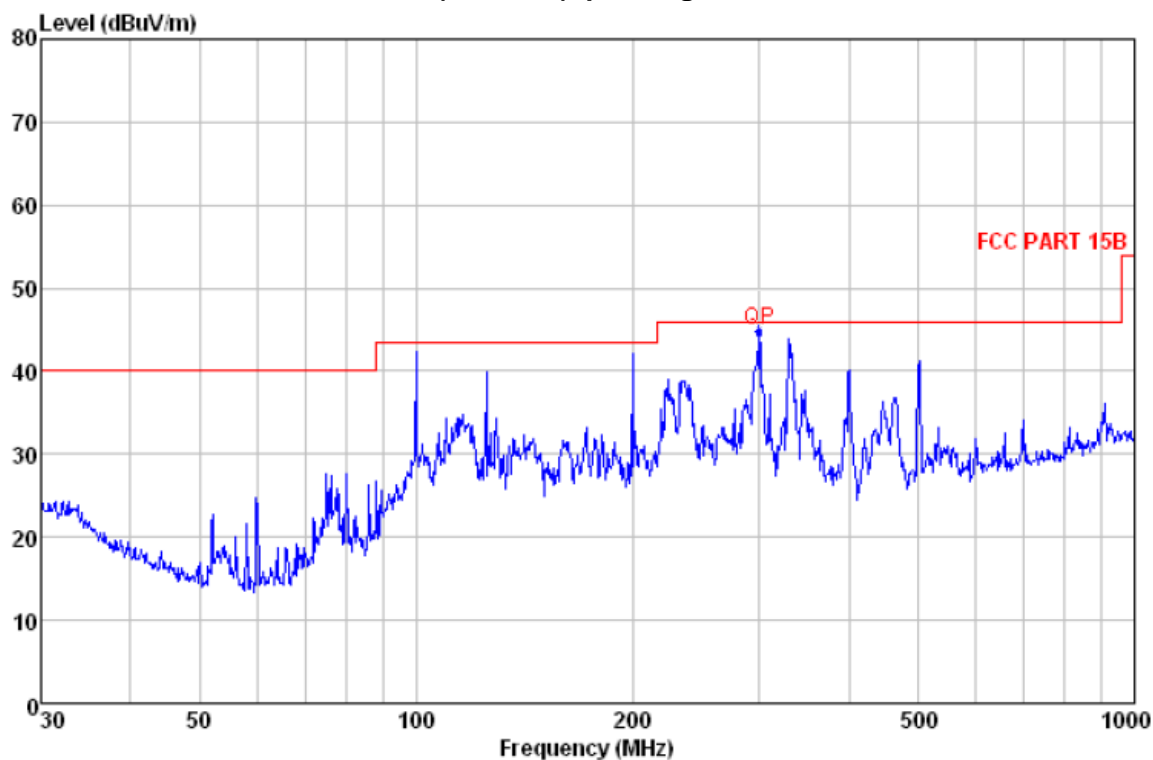
**Vertical: Tested model: D-2304(DM-2604), hooking mode**

**Quasi-peak measurement**

Frequency	Level	Transducer	Limit	Margin
MHz	dBuV/m	dB	dBuV/m	dB
32.9	31.3	8.1	40	8.7
50.0	32.2	8.6	40	7.8
100.0	42.3	9.4	43.5	1.2
200.0	41.8	13.2	43.5	1.7
300.0	44.8	15.9	46	1.2
400.0	35.9	18.2	46	10.1

Note:

The transducer factor includes antenna factor and cable loss.

Horizontal: Tested model: D-2304(DM-2604), phoning mode

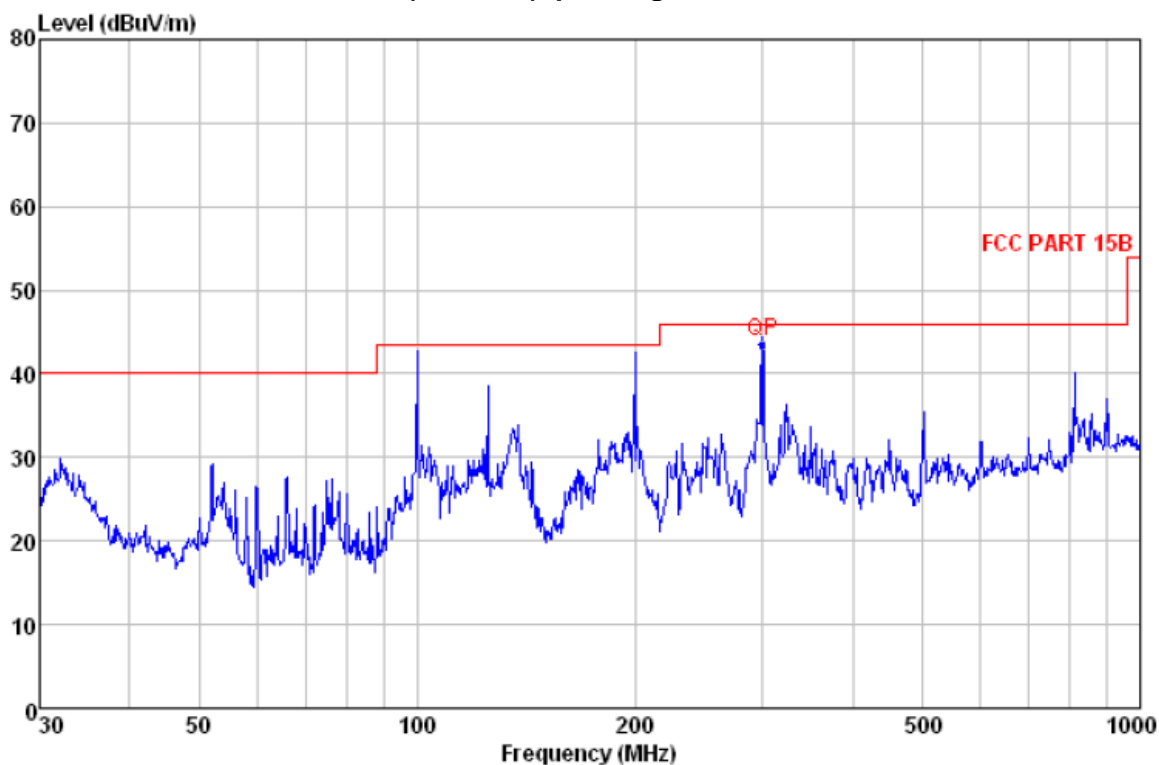


Quasi-peak measurement

Frequency	Level	Transducer	Limit	Margin
MHz	dBuV/m	dB	dBuV/m	dB
80.0	27.2	9.1	40	12.8
100.0	41.2	9.4	43.5	2.3
200.0	40.3	13.2	43.5	3.2
300.0	44.8	15.9	46	1.2
330.2	42.9	16.4	46	3.1
500.0	38.1	20.4	46	7.9

Note:

The transducer factor includes antenna factor and cable loss.

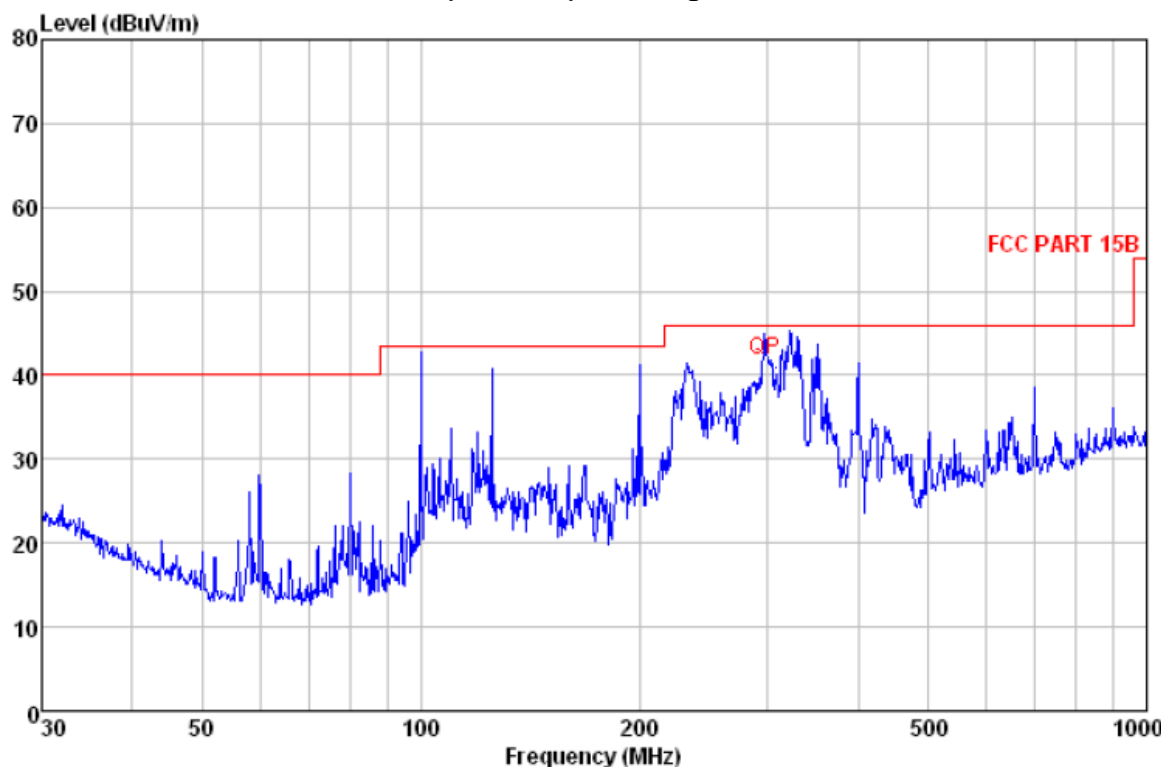
**Vertical: Tested model: D-2304(DM-2604), phoning mode**

**Quasi-peak measurement**

Frequency MHz	Level dBuV/m	Transducer dB	Limit dBuV/m	Margin dB
52.0	27.7	8.6	40	12.3
100.0	41.5	9.4	43.5	2.0
132.4	36.8	10.2	43.5	6.7
200.0	40.9	13.2	43.5	2.6
300.0	43.8	15.9	46	2.2
500.0	35.1	20.4	46	10.9

**Note:**

The transducer factor includes antenna factor and cable loss.

## Horizontal: Tested model: D-3310(DM-2604), hooking mode



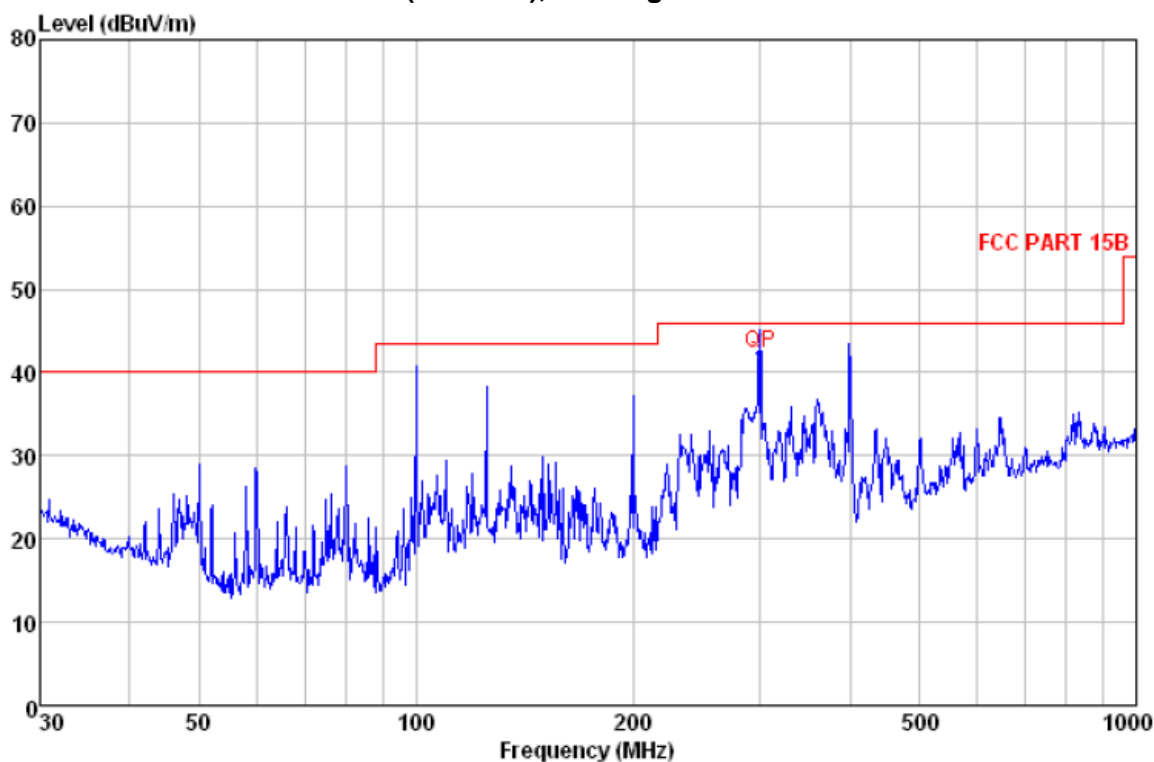
## Quasi-peak measurement

Frequency MHz	Level dBuV/m	Transducer dB	Limit dBuV/m	Margin dB
60.0	27.7	8.8	40	12.3
100.0	41.4	9.4	43.5	2.1
132.4	39.9	10.2	43.5	3.6
200.0	40.2	13.2	43.5	3.2
300.0	43.8	15.9	46	2.2
334.0	43.9	16.4	46	2.1

## Note:

The transducer factor includes antenna factor and cable loss.



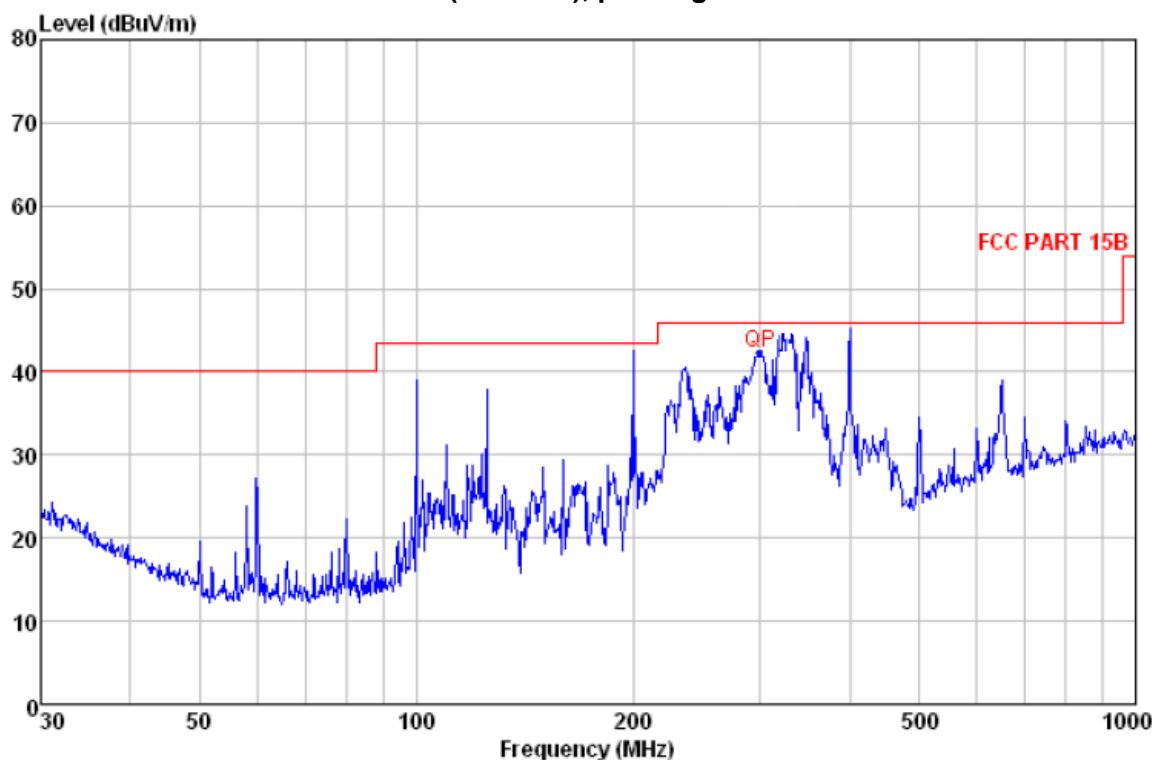
**Vertical: Tested model: D-3310(DM-2604), hooking mode**

**Quasi-peak measurement**

Frequency MHz	Level dBuV/m	Transducer dB	Limit dBuV/m	Margin dB
50.0	28.7	8.6	40	11.3
100.0	39.3	9.4	43.5	4.2
134.6	37.8	10.2	43.5	5.7
200.0	36.8	13.2	43.5	6.7
300.0	43.5	15.9	46	2.5
400.0	42.9	18.2	46	3.1

**Note:**

The transducer factor includes antenna factor and cable loss.

## Horizontal: Tested model: D-3310(DM-2604), phoning mode

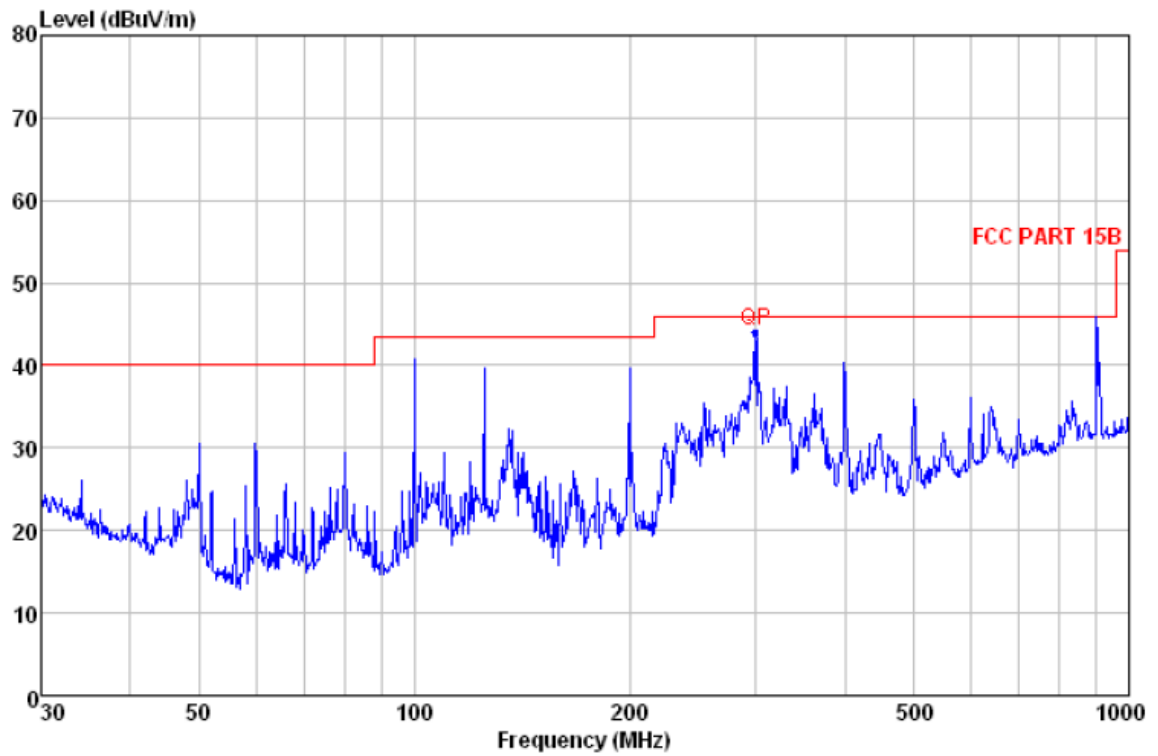


## Quasi-peak measurement

Frequency	Level	Transducer	Limit	Margin
MHz	dBuV/m	dB	dBuV/m	dB
60.0	26.8	8.8	40	13.2
100.0	37.6	9.4	43.5	5.9
134.3	36.2	10.2	43.5	7.3
200.0	41.9	13.2	43.5	1.6
300.0	41.7	15.9	46	4.3
324.2	43.2	16.3	46	2.8
400.0	44.3	18.2	46	1.7

Note:

The transducer factor includes antenna factor and cable loss.

**Vertical: Tested model: D-3310(DM-2604), phoning mode**

**Quasi-peak measurement**

Frequency	Level	Transducer	Limit	Margin
MHz	dBuV/m	dB	dBuV/m	dB
60.0	29.7	8.8	40	10.3
100.0	40.3	9.4	43.5	3.2
134.1	39.0	10.2	43.5	4.5
200.0	38.8	13.2	43.5	4.7
300.0	44.0	15.9	46	2.0
900.0	43.9	26.3	46	2.1

**Note:**

The transducer factor includes antenna factor and cable loss.

## 7. Photographs

### 7.1 Conducted Emission Test Setup

Tested model: D-2304(DM-2604), hooking mode



Tested model: D-2304 (DM-2604), phoning mode





## 7.2 Radiated Emission Test Setup

Tested model: D-2304(DM-2604), hooking mode



Tested model: D-2304(DM-2604), phoning mode



Tested model: D-3310(DM-2604), hooking mode



Tested model: D-3310(DM-2604), phoning mode

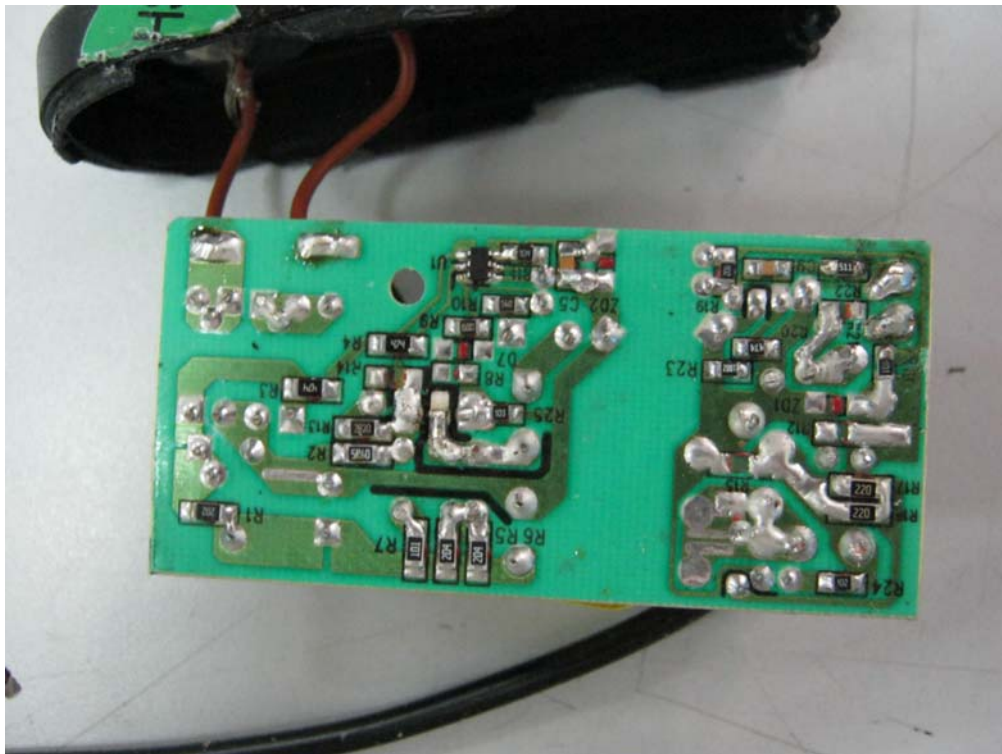




### 7.3 EUT Constructional Details

Photos of D-2304:



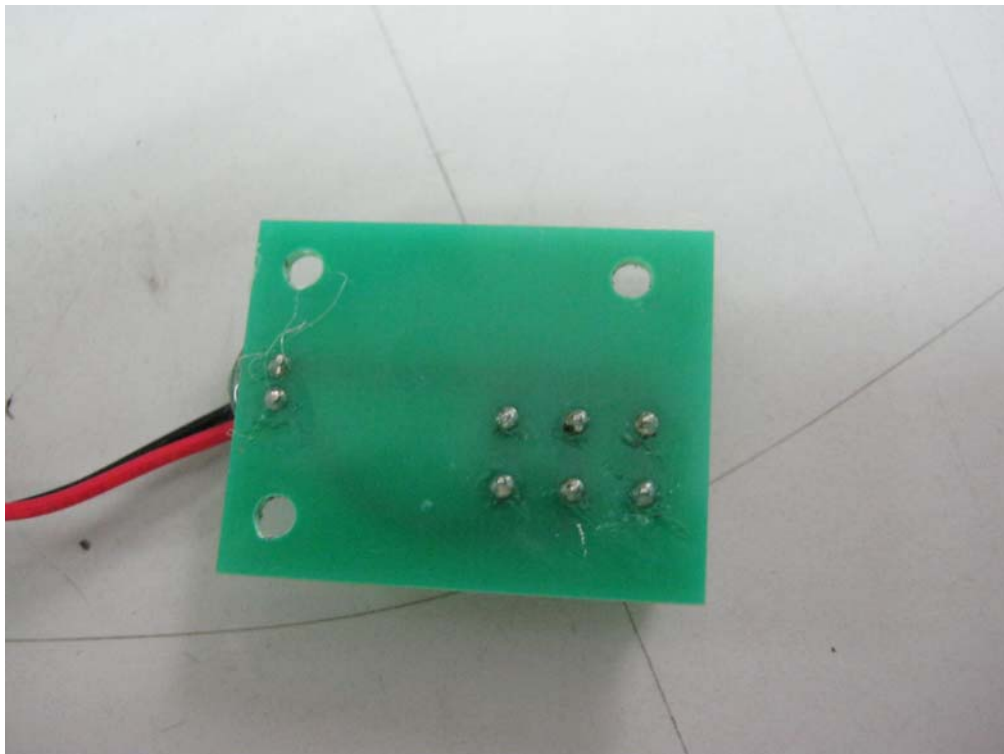






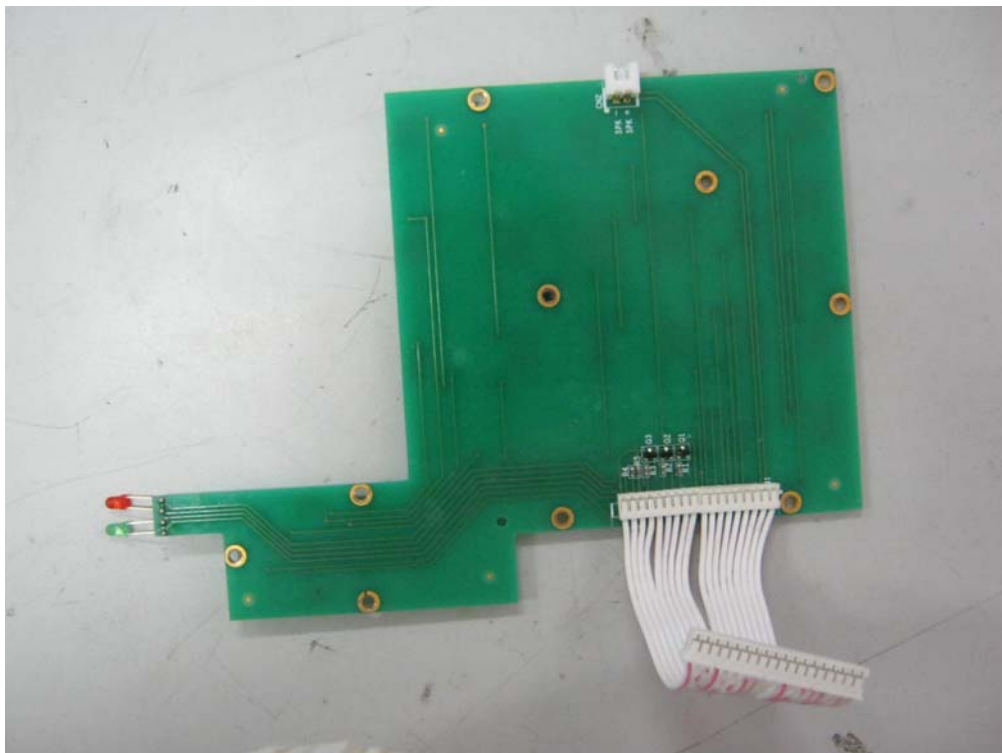
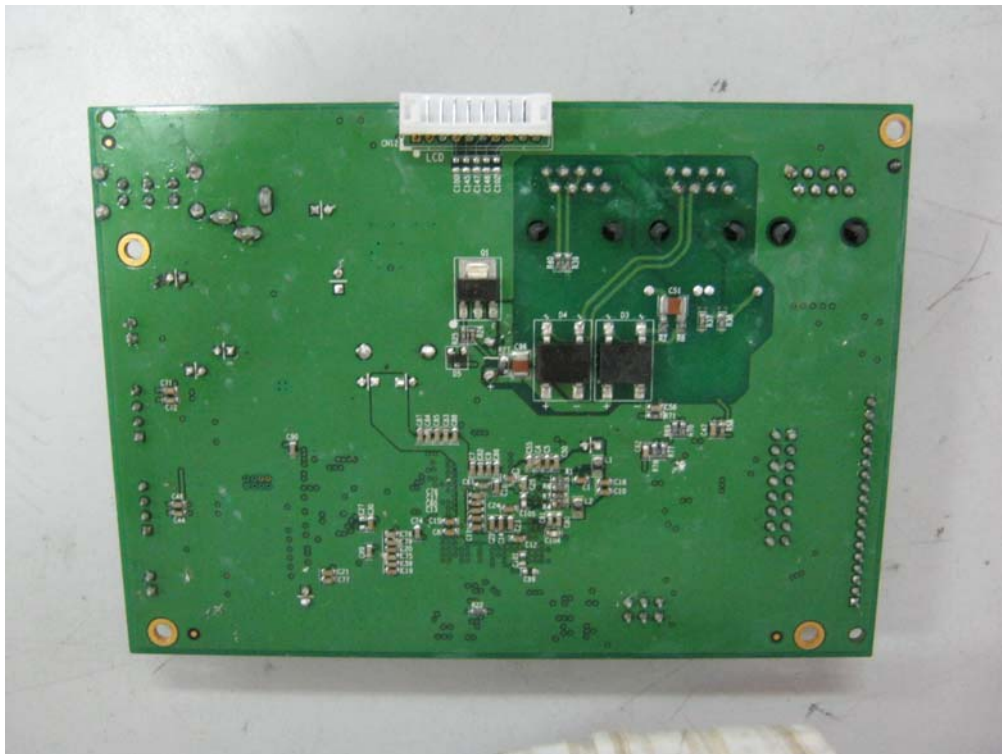


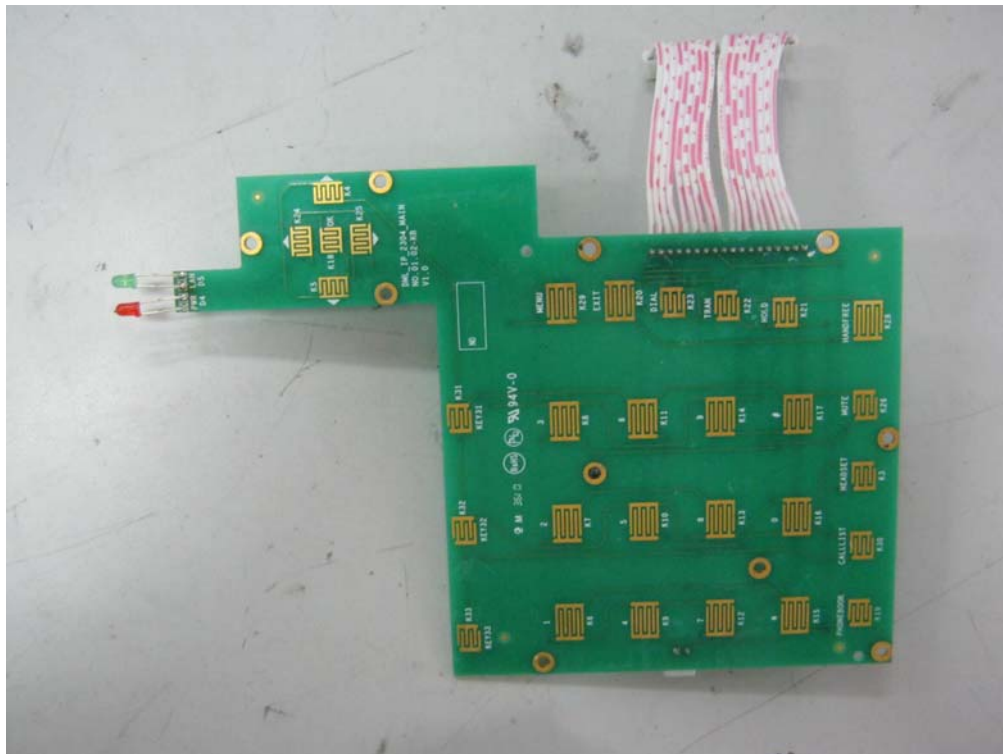














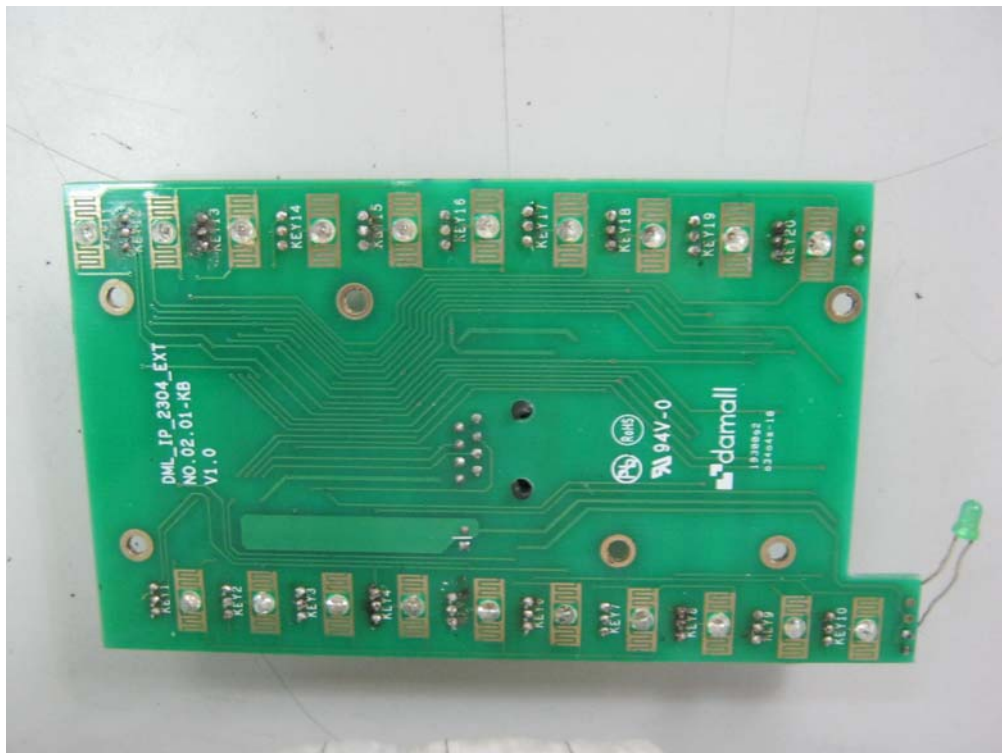
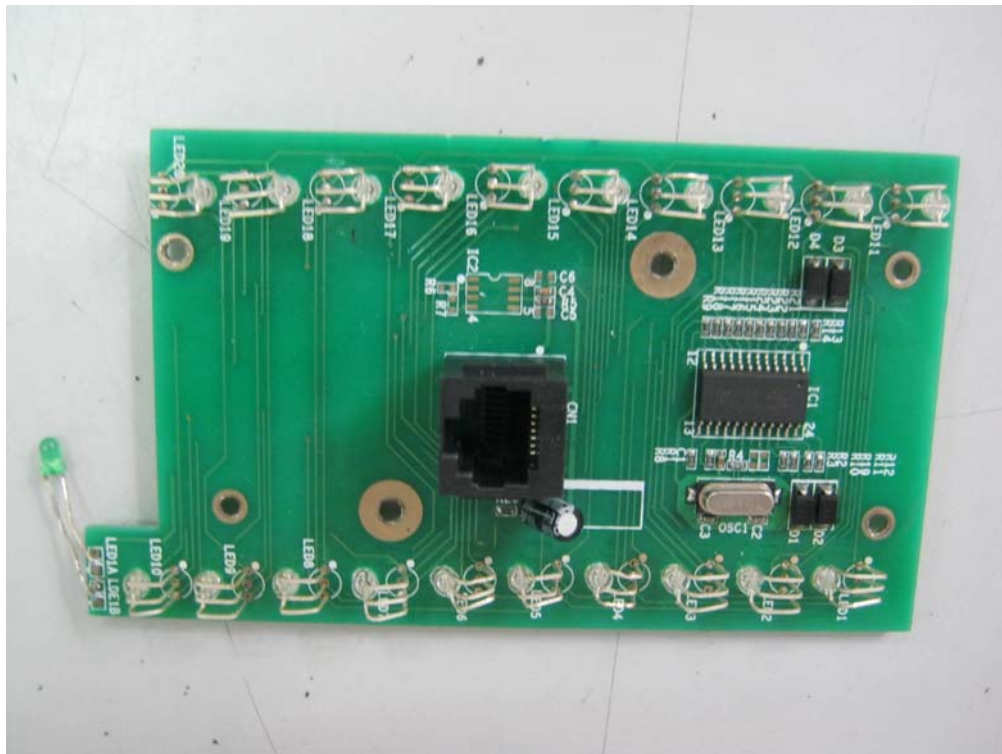




**Photos of DM-2604:**







**Photos of D-3310:**



\*\*\*End of Report\*\*\*