Lab Code: 200707-0

47CFR FCC PART 68

MEASUREMENT AND TEST REPORT

For

Yealink (Xiamen) Network Technology Co., Ltd.

4th-5th Floor, South Building, NO. 63 WangHai Road, 2nd Software Park, Xiamen, China

Model: W52P

Report Type:	**Product Type:**
Original Report	IP DECT Phone

Test Engineer:	Peter Pang
Report Number:	RSZ120919004-04
Report Date:	2012-11-23
Reviewed By:	Dick Zhang EMC Leader
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RSZ120919004-04	Original Report	2012-11-23

EQUIPMENT UNDER TEST DESCRIPTION

EUT Description

The *Yealink (Xiamen) Network Technology Co., Ltd.'s* product, model: *W52P* (or the "EUT") in this report is a IP DECT Phone, rated input voltage: DC 5V from adapter.

Adapter information:
Model: OH-1048A0500600U2
Input: 100-240V~ 50/60 Hz 250mA
Output: 5V DC, 1.2A

Note: The product IP DECT Phone, the model W52P, W52H and W52Duo are different in model number due to different combinations, the base unit of these three models is the same, the handset unit of these three models is the same, and W52P was selected to test, which was explained in the attached declaration letter.

** All measurement and test data in this report was gathered from production sample serial number: 1209090 (Assigned by BACL). The EUT supplied by applicant was received on 2011-10-09.*

Mechanical Description

The EUT described in this report measures approximately:
14.5 cm (L) x 5.0 m (W) x 2.0 cm (H) for Handset; 15.5 cm (L) x 11.0 cm (W) x 5.0 cm (H) for base.

EUT all view

TECHNICAL REQUIREMENTS SUMMARY

E1 **Schematic of Circuit Interface to Telephone Network**
The interface circuitry to the telephone network is shown in the technical information.

E2 **Components affecting 47CFR FCC Part 68 Compliance**
Reference to t technical information shows the values of the standard components.

E3 **Power Supply Description**
See EUT Description.

E4 **In-Band Signal Test**
See attached Laboratory Measurement Report

E5 **Connections to Non-Registered Equipment**
N/A

E6 **Photographs of the Devices**
Refer to EUT photos.

E7 **Re-dialing Information**
N/A

E8 **DID Ports**
N/A

TEST EQUIPMENT LIST

No.	Manufacturer	Description	Model	Serial Number	Calibration Due Date
1	Hewlett-Packard	Spectrum analyzer	3585A	1750A03382	03-15-2013
2	Agilent	Function/Arbitrary Wavefrom Generator	33220A	MY44018679	11-24-2013
3	Brüel & Kjær	Ear Simulator	4185	2190351	02-08-2013
4	Brüel & Kjær	Telephone Test Head	4602B	2174439	09-11-2013
5	LISTEN, Inc.	Microphone Power Supply	N/A	1199-PS165	N/A
6	Brüel & Kjær	Measure Ampllifier	2636	1118355	02-09-2013
7	CCLab	Hearing Aid Compatibility Probe-Axial	HAC A-100	0095	10-15-2013
8	CCLab	Hearing Aid Compatibility Probe-Radial	HAC A-100	0095	10-15-2013

***Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed using suitable standards traceable to National Institute of Metrology (NIM).

1 - HEARING AID COMPATIBILITY AND VOLUME CONTROL

FCC 68.316 Hearing Aid Compatibility

4.2 Axial Field Intensity

The axial component of the magnetic field directed along the measurement axis and located at the measurement plane, shall be greater than -22 dB relative to 1 A/m, for an input of -10dBV at 1000Hz.

Axial					
Volume Setting	**Freq. Hz**	**Response dBV**	**Probe Coil Correction Factor dBV/(A/m)**	**Axial Response dBA/m**	**Limit > -22 dBA/m**
Nominal	1000	-54.6	60.0	5.4	Pass
Maximum	1000	-66.1	60.0	-6.1	Pass

Nominal Volume adjusting in <V.3> position.
Maximum Volume adjusting in <V.5> position

Results: Pass

4.3 Radial Field Intensity

The radial component of the magnetic field as measured at four points 90° apart, and at a distance ≥ 16 mm from the measurement axis, shall be greater than –27 dB relative to 1 A/m, for an input of –10 dBV at 1000Hz.

Radial					
Degree	**Freq. Hz**	**Response dBV**	**Probe Coil Correction Factor dBV/(A/m)**	**Radial Response dBA/m**	**Limit > -27 dBA/m**
0	1000	-78.3	60.0	-18.3	Pass
90	1000	-78.7	60.0	-18.7	Pass
180	1000	-78.7	60.0	-18.7	Pass
270	1000	-78.5	60.0	-18.5	Pass

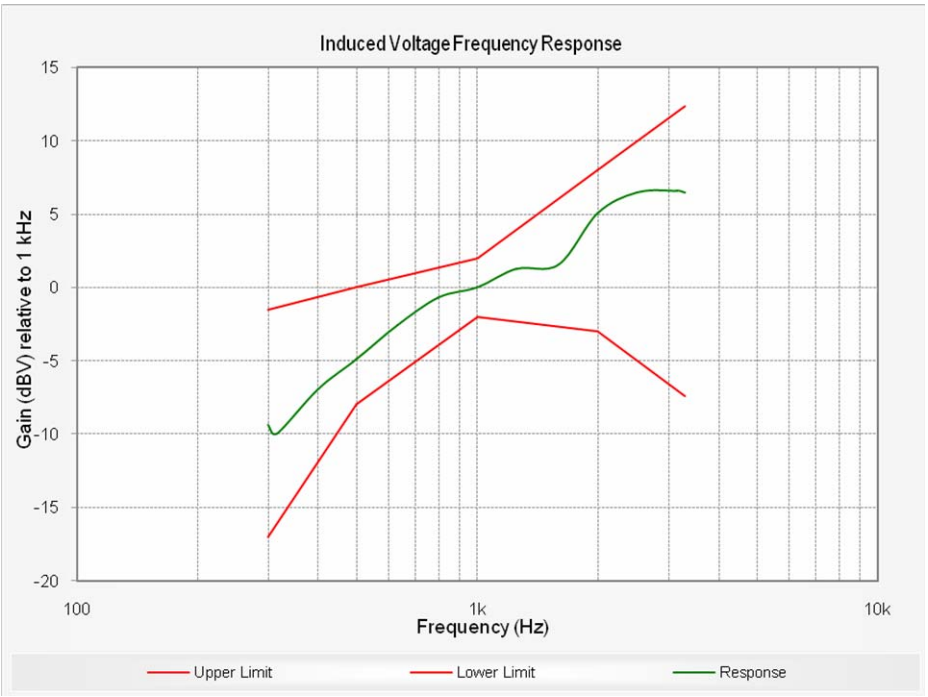
Nominal Volume adjusting in <V.3> position.

Results: Pass

4.4 Induced Voltage Frequency Response

The frequency response of the voltage induced in the probe coil by the axial component of the magnetic field as measured in 4.2 shall fall with in the acceptable region over the frequency range 300-to-3300 Hz.

Axial				
Freq. Hz	**Response dBV**	**Probe Coil Correction Factor dBV/(A/m)**	**Axial Response dBA/m**	**Response relative to 1kHz dB**
300	-75.5	60.0	-15.5	-9.4
315	-76.1	60.0	-16.1	-10.0
400	-73.0	60.0	-13.0	-6.9
500	-71.0	60.0	-11.0	-4.9
630	-68.7	60.0	-8.7	-2.6
800	-66.8	60.0	-6.8	-0.7
1000	-66.1	60.0	-6.1	0.0
1250	-64.8	60.0	-4.8	1.3
1600	-64.5	60.0	-4.5	1.6
2000	-61.0	60.0	-1.0	5.1
2500	-59.6	60.0	0.4	6.5
3150	-59.5	60.0	0.5	6.6
3300	-59.6	60.0	0.4	6.5



Nominal Volume adjusting in <V.3> position.
Maximum Volume adjusting in <V.5> position

Results: Pass

FCC 68.317 Hearing Aid Compatibility Volume Control

A digital telephone complies with the Commission's volume control requirements if the telephone is equipped with a receive volume control that provides, through the receiver of the handset or headset of the telephone, 12 dB of gain minimum and up to 18 dB of gain maximum, when measured in terms of Receive Objective Loudness Rating (ROLR). The 12 dB of gain minimum must be achieved without significant clipping of the test signal. The telephone also shall comply with the limits on the range for ROLR given in below when the receive volume control is set to its normal unamplified level.

Frequency Response Characteristics and Loudness Ratings										
Input Level		Freq.	Nominal Volume		Maximum Volume		Nominal Volume rel to 1kHz (dB)	Maximum Volume rel to 1kHz (dB)	**S_E**	**S_E**
(mV)	(dBV)	(Hz)	dB(SPL)	dBPa	dB(SPL)	dBPa			***nom***	***max***
316	-10.0	**300**	94.0	0.0	108.0	14.0	0.0	-1.0	-	-
316	-10.0	**400**	92.5	-1.5	106.0	12.0	-1.5	-3.0	0.120	0.247
316	-10.0	**500**	92.0	-2.0	105.5	11.5	-2.0	-3.5	0.089	0.179
316	-10.0	**600**	93.5	-0.5	106.5	12.5	-0.5	-2.5	0.074	0.149
316	-10.0	**700**	93.5	-0.5	107.0	13.0	-0.5	-2.0	0.065	0.131
316	-10.0	**1000**	94.0	0.0	109.0	15.0	0.0	0.0	0.153	0.323
316	-10.0	**1500**	91.0	-3.0	104.0	10.0	-3.0	-5.0	0.163	0.342
316	-10.0	**2000**	90.5	-3.5	103.0	9.0	-3.5	-6.0	0.106	0.206
316	-10.0	**2300**	91.3	-2.7	104.5	10.5	-2.7	-4.5	0.052	0.101
316	-10.0	**2700**	91.7	-2.3	105.1	11.1	-2.3	-3.9	0.061	0.123
316	-10.0	**3000**	90.2	-3.8	103.7	9.7	-3.8	-5.3	0.039	0.079
316	-10.0	**3300**	87.6	-6.4	101.0	7.0	-6.4	-8.0	0.032	0.064
Volume Gain Limit (dB)			**Volume Gain (dB)**				**ROLR *nom* Limit (dB)**		**ROLR (dB)**	
			ROLR *nom* – ROLR *max*						*nom*	*max*
12 to 18			**13.6**				**46 to 56**		**47.4**	**33.8**
Note:			The 18 dB of receive gain may be exceeded provided that the amplified receive capability automatically resets to nominal gain when the telephone is caused to pass through a proper on-hook transition in order to minimize the likelihood of damage to individuals with normal hearing.							

Nominal Volume adjusting in <V.3> position
Maximum Volume adjusting in <V.5> position

Results: Pass

IEEE standard method for determining objective loudness rating (ROLR) of telephone connections:

$$S_E, S_M, V_W \text{ or } V_T = \left(\frac{\sum_{j=2}^{N} \left(\log_{10} \frac{f_j}{f_{j-1}} \right) \left[\frac{\left(10^{\frac{x_j}{20}} \right)^{\frac{1}{2.2}} + \left(10^{\frac{x_{j-1}}{20}} \right)^{\frac{1}{2.2}}}{2} \right]}{\log_{10} f_N / f_1} \right)^{2.2}$$

$$\text{ROLR} = -20 \log_{10} \frac{S_E}{1/2 V_W \cdot \sqrt{\frac{900}{Z}}}$$

PRODUCT SIMILARITY DECLARATION LETTER

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2012-11-20

Product Similarity Declaration Letter

To Whom It May Concern,

We, Yealink （Xiamen）Network Technology Co.,Ltd. hereby declare that our product IP DECT Phone, the model W52P, W52H, W52Duo, the difference is W52P has one base and one handset, W52H has only one handset, and W52Duo has one base and two handsets. Model W52P was tested by BACL.

Please contact me if you have any question.

Signature:

Stone Lu：
Vice General Manager

******END OF REPORT******