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RF Exposure Evaluation Report

Under:
47 CFR Part 2.1091
KDB447498 D01 General RF Exposure Guidance v06

Prepared For:

YEALINK (XIAMEN) NETWORK TECHNOLOGY CO., LTD.

309, 3rd Floor, No.16, Yun Ding North Road, Huli District, Xiamen City, Fujian, China

FCC ID: T2C-CPW90-BT
EUT: Bluetooth Wireless Microphone
Model: CPW90-BT

June 24, 2019 **Issue Date:**
Original Report **Report Type:**
 **Test Engineer:** Jacky Huang
 **Review By:** Apollo Liu / Manager

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Report Revision History

Report #	Version	Description	Issued Date
KSZ2019050601J02	Rev.01	Initial issue of report	June 24, 2019

1. General Information

1. 1 Notes

The test results of this report relate exclusively to the test item specified in 1.6. The KMO Lab does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the KMO Lab.

1. 2 Testing Laboratory

Test Firm Name:	**Ke Mei Ou Lab Co., Ltd.**
Test Firm Address:	2013-2016, 20th Floor, Business Center, Jiahui Xin Cheng, No 3027, Shen Nan Road, Fu Tian, Shen Zhen, Guang Dong, P. R. China
FCC Designation Number:	CN1532
Test Firm Registration Number:	344480
Internet:	www.kmolab.com
Email:	kmo@kmolab.com
ANSI-ASQ National Accreditation Board/ACLASS ISO/IEC 17025 Accredited Lab for telecommunication standards. The Registration Number is AT-1532. The testing quality system meets with ISO/IEC-17025 requirements, This approval results is accepted by MRA of ILAC.	

1. 3 Detai1. 3 Details of Applicant

Name: **YEALINK (XIAMEN) NETWORK TECHNOLOGY CO., LTD.**
Address: **309, 3rd Floor, No.16, Yun Ding North Road, Huli District, Xiamen City, Fujian, China**

1. 4 Application Details

Date of Receipt of Application: May 6, 2019
Date of Receipt of Test Item: June 10, 2019
Date of Test : June 10~June 21, 2019

1. 5 Details of Manufacturer

Name: **Same as applicant**
Address: **Same as applicant**

1. 6 Test Item

EUT Feature	
EUT Description:	Bluetooth Wireless Microphone
Brand Name:	Yealink
Model Name:	CPW90-BT
EUT RF Technology:	☒Bluetooth BT ☐ Bluetooth v4.0 LE ☐Bluetooth v4.2 LE ☐Bluetooth v5.0 LE
HW Version:	CPW90-BTMV
SW Version:	1.0.0.4
EUT Stage:	☒Identical Prototype ☐Production
Note: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

Additional Information

Standard Product Specification				
Tx/Rx Frequency Range	2402~2480 MHz			
Number of Channels	79			
Carrier Frequency of Each Channel	f=2402+k MHz (k=0,1,2…,78)			
Antenna Type / Gain	Internal PCB Antenna / gain 3 dBi			
Type of Modulation	Bluetooth BR 1Mbps: GFSK Bluetooth EDR 2Mbps: π/4-DQPSK Bluetooth EDR 3Mbps: 8DPSK			
EUT Operational Condition	☐ AC			
	☒ DC → ☒ From Battery ☒ External AC adapter ☐ POE			
	☒ Li-ion battery			
Specification of Accessory				
☒**AC/DC Adapter (US)**	**Brand Name**	Yealink	**Model Name**	YLPS050600UC1-US
	Power Rating	I/P: AC 100-240V~50/60Hz, 0.2A; O/P:DC 5V /0.6A		
☒**Li-ion Battery**	**Brand Name**	Tianjin Lishen	**Model Name**	APK463446LA
	Power Rating	3.7V/800mAh(2.96Wh)		

1. 7 Applicable Standards

Applicable Standards
According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards: 47 CFR Part 2.1091 KDB447498 D01 General RF Exposure Guidance v06
Note: All test items were verified and recorded according to the standards and without any deviation during the test.

2. Technical Test

2. 1 Summary of Test Results

The EUT has been tested according to the following specifications:

FCC Rules	Test Type	Limit	Result	Notes
47 CFR Part 2.1091	Exposure Evaluation	< 1.0m W/cm^2	PASS	Complies.

3. EUT Modifications

No modification by test lab.

4. FCC Maximum Permissible Exposure (MPE)

4. 1 Limit of MPE

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

4. 2 RF Exposure Requirements

RF Exposure Requirements
$S=PG/4\prod R^2$ Where: S=Power density P=Power input to antenna G=Power gain of the antenna relative to an isotropic radiator R=Distance to the center of radiation of the antenna

4. 3 Conclusion

Compliance with FCC Rules					
Mode/Band	Maximum Antenna gain (dBi)	Maximum tune-up Conducted Power (dBm)	Evaluation Distance(cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
2402~2480MHz CH00_ 2402MHz	3.0	1.53	20	0.00056	1.0

----------End of Report ----------