



## RF Exposure Evaluation Declaration

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**FCC ID:** T2C-W53H  
**IC:** 10741A- W53H  
**APPLICANT:** YEALINK(XIAMEN) NETWORK TECHNOLOGY  
CO.,LTD

**Application Type:** Certification  
**Product:** DECT IP Phone  
**Model No.:** W53H  
**Brand Name:** YEALINK  
**FCC Classification:** Unlicensed PCS Portable Tx Held to Ear (PUE)  
**Test Procedure(s):** KDB 447498 D01v06

Reviewed By : Sunny Sun  
( Sunny Sun )  
Approved By : Robin Wu  
( Robin Wu )



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

## Revision History

Report No.	Version	Description	Issue Date	Note
1807RSU016-U3	Rev. 01	Draft Report	08-09-2018	

## 1. PRODUCT INFORMATION

### 1.1. Equipment Description

Product Name	DECT IP Phone
Model No.	W53H
Brand Name:	YEALINK

### 1.2. Product Specification Subjective to this Report

Frequency Range	1921.536 ~ 1928.448MHz
Number of Channels	5
Maximum Output Power	17.76dBm
Type of Modulation	Digital (Gaussian Frequency Shift Keying)
Antenna Gain	0dBi
Max Time Slots	24
Active Time Slots	1

## 2. RF Exposure Evaluation

### 2.1. Limits

#### SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and $\leq 50$ mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in Note 1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test Exclusion Threshold (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	
MHz	30	35	40	45	50	mm
150	232	271	310	349	387	SAR Test Exclusion Threshold (mW)
300	164	192	219	246	274	
450	134	157	179	201	224	
835	98	115	131	148	164	
900	95	111	126	142	158	
1500	73	86	98	110	122	
1900	65	76	87	98	109	
2450	57	67	77	86	96	
3600	47	55	63	71	79	
5200	39	46	53	59	66	
5400	39	45	52	58	65	
5800	37	44	50	56	62	

Note: The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] * \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

## 2.2. Test Result of RF Exposure Evaluation

Product	DECT IP Phone
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP(dBm)	Duty Cycle Factor (dB)	Frame Power (dBm)	SAR Test Exclusion Threshold (mW)
DECT	1921.536 ~ 1928.448	17.76	-13.80	3.96	11

Note 1: Both burst-averaged and calculated frame-averaged powers are included.

Frame-averaged powers were calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 24 timeslots

Note 2: Per FCC KDB 447498 D01v06, the SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{\text{Max Power of Channel (mW)}}{\text{Test Separation Dist (mm)}} * \sqrt{\text{Frequency(GHz)}} \leq 3.0$$

Based on the maximum conducted power of Bluetooth and the antenna to use separation distance, Bluetooth SAR was not required;

$$[(2.49\text{mW}/5) * \sqrt{1.924}] = 0.69 < 3.0$$

Note: When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

The End