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RF Exposure Evaluation Report

Report No. : CQASZ20190700559E-02
Applicant: ShenZhen YueKe Technology Co.,LTD
Address of Applicant: 12C, block C, NEO Enterprise Building No. 6009 Shennan Avenue, Futian District
Equipment Under Test (EUT):
Product: Smart Remote
Model No.: YSG02
Brand Name: YOCTOP
FCC ID: 2ANSG-YSG02
Standards: 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2019-07-04
Date of Test: 2019-07-08 to 2019-07-22
Date of Issue: 2019-07-23
Test Result : PASS*

Tested By:

Tom Chen

(Tom Chen)

Reviewed By:

Aaron Ma

(Aaron Ma)

Approved By:

Jack Ai

(Jack Ai)



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

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190700559E-02	Rev.01	Initial report	2019-07-23.

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3 General Information

3.1 Client Information

Applicant:	ShenZhen YueKe Technology Co.,LTD
Address of Applicant:	12C, block C, NEO Enterprise Building No. 6009 Shennan Avenue, Futian District
Manufacturer:	ShenZhen YueKe Technology Co.,LTD
Address of Manufacturer:	12C, block C, NEO Enterprise Building No. 6009 Shennan Avenue, Futian District

3.2 General Description of EUT

Product Name:	Smart Remote
Model No.:	YSG02
Trade Mark:	YOCTOP
Hardware version:	V1.0
Software version:	V1.0
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Transfer Rate:	IEEE for 802.11b: 1Mbps/2Mbps/5.5Mbps/11Mbps IEEE for 802.11g : 6Mbps/9Mbps/12Mbps/18Mbps/24Mbps/36Mbps/48Mbps/54Mbps IEEE for 802.11n(HT20) : 6.5Mbps/13Mbps/19.5Mbps/26Mbps/39Mbps/52Mbps/58.5Mbps/65Mbps
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	SecureCRT (manufacturer declare)
Antenna Type:	internal antenna with ipex connector
Antenna Gain:	0dBi
Power Supply:	DC3.8V; Charge by DC5V

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 Limits

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

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

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 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 is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

1)For WIFI:

Measurement Data

802.11b mode				
Test channel	Average Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	8.47	8±1	9	7.943
Middle(2437MHz)	8.86	8±1	9	7.943
Highest(2462MHz)	8.89	8±1	9	7.943
802.11g mode				
Test channel	Average Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	8.06	7.5±1	8.5	7.079
Middle(2437MHz)	8.09	7.5±1	8.5	7.079
Highest(2462MHz)	7.85	7.5±1	8.5	7.079
802.11n(HT20)mode				
Test channel	Average Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	7.24	7±1	8	6.310
Middle(2437MHz)	7.38	7±1	8	6.310
Highest(2462MHz)	7.48	7±1	8	6.310

Worst case: 802.11b mode						
Channel	Average Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	8.47	8±1	9	7.943	2.47	3.0
Middle (2440MHz)	8.86	8±1	9	7.943	2.48	
Highest (2480MHz)	8.89	8±1	9	7.943	2.49	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190700559E-01