

TEST REPORT

Reference No...... : WTF19S11080817W002 V1
FCC ID : 2AU8O-ICCWA1W
Applicant..... : HANGZHOU MULTI IR TECONOLOGY CO.,LTD.
Address..... : BULIDING 3, NO.503, XINGGUO ROAD, YUHANG, HANGZHOU, ZHEJIANG, CHINA
Manufacturer : The same as above
Address..... : The same as above
Product..... : Air Quality Monitor
Model(s) : IC-CWA1W
Brand Name..... : iClever
Standards..... : FCC Part 2.1091
Date of Receipt sample : 2019-11-21
Date of Test : 2019-11-22 to 2019-12-16
Date of Issue..... : 2019-12-19
Test Result..... : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTF19S11080 817W002	2019-11-21	2019-11-22 to 2019-12-16	2019-12-17	original	-	Replaced
WTF19S11080 817W002 V1	2019-11-21	2019-11-22 to 2019-12-16	2019-12-19	Version 1	Updated	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	Air Quality Monitor
Model(s):	IC-CWA1W
Model Description:	N/A
Wi-Fi Specification:	2.4G-802.11b/g/n HT20
Hardware Version:	MIR-PMT100-LED-A3P2 2018-04-23
Software Version:	ESP8266_RF_TEST_BIN_V130_26m_20190731

4.2 Details of E.U.T.

Operation Frequency:	802.11b/g/n HT20: 2412~2462MHz
Type of Modulation:	CCK, OFDM
Antenna installation:	internal permanent antenna
Antenna Gain:	2.0 dBi
Ratings:	DC 3.7V 1800mAh by battery

5 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	2.1091	PASS

6 RF Exposure

Test Requirement: FCC Part 2.1091

Test Mode: The EUT work in test mode(Tx).

6.1 Procedures and Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

FCC Part 1.1307:

(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)*	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)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ;

*Plane-wave equivalent power density

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, d=20cm, as well as the gain of the used antenna, the RF power density can be obtained

6.2 Test Result

FCC Part 2.1091:

A distance of 20cm normally can be maintained between the user and the device.

Mode	Antenna Gain (dBi)	Antenna Gain (numeric)	Max.Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)
WiFi	0.00	1.000	16.58	45.50	0.009051	1

=====End of Report=====