

FCC RF EXPOSURE EVALUATION REPORT

Product Name: Personal Emergency Response System
Trade Mark: IdentiFind
Model No.: IF-4G
Report Number: 180621015RFC-1
Test Standards: FCC 47 CFR Part 1 Subpart I
FCC ID: 2AMCHIF4G
Test Result: PASS
Date of Issue: August 7, 2018

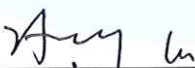
Prepared for:

Identifind LLC
1504 Penny Ln, Keller, Texas, United States

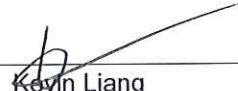
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Version

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V1.0	August 7, 2018	Original

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1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Identifind LLC
Address of Applicant:	1504 Penny Ln, Keller, Texas, United States
Manufacturer:	Identifind LLC
Address of Manufacturer:	1504 Penny Ln, Keller, Texas, United States

1.2 EUT INFORMATION

Product Name:	Personal Emergency Response System	
Model No.:	IF-4G	
Add. Model No.:	N/A	
Trade Mark:	IdentiFind	
DUT Stage:	Identical Prototype	
EUT Supports Function:	UTRA Bands:	Band II/ Band V
	E-UTRA Bands:	FDD Band 2/ Band 4/ Band 12
Sample Received Date:	June 22, 2018	
Sample Tested Date:	June 22, 2018 to July 28, 2018	

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Support Networks:	WCDMA, HSDPA, HSUPA, LTE	
Type of Modulation:	WCDMA Band II/ V	BPSK
	HSDPA Band II/ V:	QPSK
	HSUPA Band II/ V:	QPSK
	LTE Band 2/ 4/ 12:	QPSK, 16QAM
Frequency Range:	WCDMA Band II:	1852.4-1907.6 MHz
	WCDMA Band V:	826.4-846.6 MHz
	LTE Band 2 (Channel Bandwidth: 1.4 MHz):	1850.7-1909.3 MHz
	LTE Band 2 (Channel Bandwidth: 3 MHz):	1851.5-1908.5 MHz
	LTE Band 2 (Channel Bandwidth: 5 MHz):	1852.5-1907.5 MHz
	LTE Band 2 (Channel Bandwidth: 10 MHz):	1855.0-1905.0 MHz
	LTE Band 2 (Channel Bandwidth: 15 MHz):	1857.5-1902.5 MHz
	LTE Band 2 (Channel Bandwidth: 20 MHz):	1860.0-1900.0 MHz
	LTE Band 4 (Channel Bandwidth: 1.4 MHz):	1710.7-1754.3
	LTE Band 4 (Channel Bandwidth: 3 MHz):	1711.5-1753.5
	LTE Band 4 (Channel Bandwidth: 5 MHz):	1712.5-1752.5
	LTE Band 4 (Channel Bandwidth: 10 MHz):	1715-1750
	LTE Band 4 (Channel Bandwidth: 15 MHz):	1717.5-1747.5
	LTE Band 4 (Channel Bandwidth: 20 MHz):	1720-1745
	LTE Band 12 (Channel Bandwidth: 1.4 MHz):	699.7-715.3
	LTE Band 12 (Channel Bandwidth: 3 MHz):	700.5-714.5
	LTE Band 12 (Channel Bandwidth: 5 MHz):	701.5-713.5
	LTE Band 12 (Channel Bandwidth: 10 MHz):	704-711

Max RF Output Power:	WCDMA Band II:	22.02dBm
	WCDMA Band V:	23.46 dBm
	LTE Band 2 (Channel Bandwidth: 1.4 MHz):	21.70dBm
	LTE Band 2 (Channel Bandwidth: 3 MHz):	21.70dBm
	LTE Band 2 (Channel Bandwidth: 5 MHz):	21.70dBm
	LTE Band 2 (Channel Bandwidth: 10 MHz):	21.71dBm
	LTE Band 2 (Channel Bandwidth: 15 MHz):	21.66dBm
	LTE Band 2 (Channel Bandwidth: 20 MHz):	21.72dBm
	LTE Band 4 (Channel Bandwidth: 1.4 MHz):	20.70 dBm
	LTE Band 4 (Channel Bandwidth: 3 MHz):	19.98 dBm
	LTE Band 4 (Channel Bandwidth: 5 MHz):	20.70 dBm
	LTE Band 4 (Channel Bandwidth: 10 MHz):	20.71 dBm
	LTE Band 4 (Channel Bandwidth: 15 MHz):	20.66 dBm
	LTE Band 4 (Channel Bandwidth: 20 MHz):	20.72 dBm
	LTE Band 12 (Channel Bandwidth: 1.4 MHz):	22.93 dBm
	LTE Band 12 (Channel Bandwidth: 3 MHz):	22.93 dBm
	LTE Band 12 (Channel Bandwidth: 5 MHz):	22.93 dBm
	LTE Band 12 (Channel Bandwidth: 10 MHz):	22.95 dBm
Antenna Type:	PCB Antenna	
Antenna Gain:	WCDMA Band II/ LTE Band 2:	0.05 dBi
	LTE Band 12:	1.72 dBi
	LTE Band 4:	1.58 dBi
	WCDMA Band V:	0.86 dBi

1.4 OTHER INFORMATION

None.

1.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

FCC 47 CFR Part 1 Subpart I

All test items have been performed and recorded as per the above standards

1.6 TEST LOCATION

All tests were performed at:

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China 518109
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1.7 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L9069

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC/EN 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

IC-Registration No.: 21600-1

The 3m Semi-anechoic chamber of Shenzhen UnionTrust Quality and Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 21600-1.

A2LA-Lab Certificate No.: 4312.01

Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC Accredited Lab.

Designation Number: CN1194

Test Firm Registration Number: 259480

1.8 DEVIATION FROM STANDARDS

None.

1.9 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.10 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

2. EQUIPMENT LIST

Please refer to the RF test report.

3. MPE EVALUATION

3.1 REFERENCE DOCUMENTS FOR EVALUATION

No.	Identity	Document Title
1	FCC 47 CFR Part 1 Subpart I	PROCEDURES IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969
2	KDB 447498 D01 General RF Exposure Guidance v06	RF EXPOSURE PROCEDURES AND EQUIPMENT AUTHORIZATION POLICIES FOR MOBILE AND PORTABLE DEVICES

3.2 MPE COMPLIANCE REQUIREMENT

3.2.1 Limits

According to §1.1307(b)(1), system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

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 Times 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
1500-100000	/	/	5	6

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 Times 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
1500-100000	/	/	1	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density.

3.2.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3.3 MPE CALCULATION METHOD

$$S = PG/4\pi R^2 = EIRP/4\pi R^2$$

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 (in appropriate units, e.g., cm)

3.4 MPE CALCULATION RESULTS

Note: For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3.4.1 For WWAN

For 3G function, operating at 1852.4-1907.6 MHz for WCDMA Band II and operating at 826.4-846.6 MHz for WCDMA Band V and
For 4G function, operating at 1850.7-1909.3 for LTE band 2 and operating at 1710.7-1754.3 MHz for LTE band 4 and operating at 699.7-715.3 for LTE band 12.

3.4.1.1 Antenna Type:

Chain 0: PCB Antenna

3.4.1.2 Antenna Gain:

Chain 0: WCDMA Band II/ LTE band 2: 0.05 dBi
WCDMA Band V: 0.86 dBi
LTE Band 4: 1.58 dBi
LTE Band 12: 1.72 dBi

3.4.1.3 Results

Operating Mode	Declared maximum conducted output power	Max. positive tolerance according manufacturer	Antenna Gain	Calculated maximum EIRP	Duty cycle	Equivalent EIRP	MPE Limit	MPE Value
	(dBm)	(dB)	(dBi)	(dBm)	(%)	(mW)	(mw/cm ²)	
WCDMA Band II	22	-1.5,+0.5	0.05	22.55	100	179.8871	1	0.0358
WCDMA Band V	23.5	-1.5,+0.5	0.86	24.86	100	306.1963	0.5493	0.0609
LTE Band 2	22.0	-1.5,+0.5	0.05	22.55	100	179.8871	1	0.0358
LTE Band 4	21.0	-1.5,+0.5	1.58	23.08	100	203.2357	1	0.0404
LTE Band 12	23.0	-1.5,+0.5	1.72	25.22	100	332.6596	0.466	0.0662

Note 1: Calculated maximum EIRP = Declared maximum conducted output power + Max. positive tolerance according manufacturer + Antenna Gain.
Note 2: Declared maximum EIRP = $10^{\frac{\text{Calculated maximum EIRP}}{10}}$.
Note 3: Equivalent EIRP = Declared maximum EIRP * Duty cycle.
Note 4: Margin = MPE Limit - MPE Value.

APPENDIX 1 PHOTOS OF TEST SETUP

N/A

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

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