



TEST REPORT

REPORT NO.: ABPS-ESH-P21042727B-4

MODEL NO.: AD50S2SS1FA-1, AD71S2SS1FA-1,
AD35S2SM3FA-1, AD50S2SM3FA-1,
AD71S2SM3FA-1, AD105S2SM3FA-1,
AD50S2SS1FA(H), AD71S2SS1FA(H),
AD35S2SM3FA(H), AD50S2SM3FA(H),
AD71S2SM3FA(H), AD105S2SM3FA(H)

RECEIVED: May. 17, 2021

ISSUED: May. 26, 2021

APPLICANT: Qingdao Haier Air Conditioner Electric Co., Ltd.

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ISSUED BY: LCIE China Company Limited

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CONTENTS

1. Test program.....	3
2. General information.....	4
2.1 General description of EUT	4
3. EN 62311 Requirement	5
3.1 Human exposure to the electromagnetic fields	5
3.2 Assessment methods.....	6
3.3 Test Procedure	7
3.4 Test Result of RF Exposure Evaluation	8



1. Test program

PRODUCT: Indoor Unit of Air Conditioner

MODEL NO.: AD50S2SS1FA-1, AD71S2SS1FA-1, AD35S2SM3FA-1,
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AD50S2SS1FA(H), AD71S2SS1FA(H), AD35S2SM3FA(H),
AD50S2SM3FA(H), AD71S2SM3FA(H), AD105S2SM3FA(H)

APPLICANT: Qingdao Haier Air Conditioner Electric Co., Ltd.

TESTED: /

STANDARDS: EN 62311 :2008

We, LCIE China Company Limited, declare that the equipment above has been tested and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

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DATE: May. 26, 2021

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DATE: May. 26, 2021



2. General information

2.1 General description of EUT

Product	Indoor Unit of Air Conditioner
Brand	Haier
Model	AD50S2SS1FA-1, AD71S2SS1FA-1, AD35S2SM3FA-1, AD50S2SM3FA-1, AD71S2SM3FA-1, AD105S2SM3FA-1, AD50S2SS1FA(H), AD71S2SS1FA(H), AD35S2SM3FA(H), AD50S2SM3FA(H), AD71S2SM3FA(H), AD105S2SM3FA(H)
Model Difference	different power and appearance
Nominal Voltage	AC 220-240V, 50/60Hz
Temperature Operating Range	-20deg.c to +60deg.c
Modulation Type	802.11b:DSSS(CCK, DQPSK, DBPSK) 802.11g/n:OFDM(64QAM,16QAM,QPSK,BPSK)
Modulation Technology	802.11b:DSSS(CCK, DQPSK, DBPSK) 802.11g/n:OFDM(64QAM,16QAM,QPSK,BPSK)
Operating Frequency	802.11 b/g/n(HT20):2412MHz to 2472MHz
Number of Channel	802.11 b/g/n(HT20):13
Adaptive/Non-Adaptive	<input type="checkbox"/> non-adaptive Equipment <input checked="" type="checkbox"/> adaptive Equipment without the possibility to switch to a non-adaptive mode <input type="checkbox"/> adaptive Equipment which can also operate in a non-adaptive mode
EIRP Power (Measured Max. Average)	15.62dBm
Antenna Type	PCB antenna
Antenna Gain	3dBi
Data Cable Supplied	NA

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.
2. The EIRP Power is refer to test report number of SHEM200500402604.

3. EN 62311 Requirement

3.1 Human exposure to the electromagnetic fields

LIMIT

The electronic and electro-technical apparatus shall comply with the basic restriction as specified in Annex II of Council Recommendation 1999/519/EC.

The reference levels in the Council Recommendation 1999/519/EC on public exposure to electromagnetic fields are derived from the basic restrictions using worst-case assumptions about exposure.

According to EN62311, the reference level listed in the following table 2 shall be used to evaluate the environment impact of human exposure human exposure to electromagnetic fields (0 Hz - 300 GHz) as specified in 1999/519/EC. Council Recommendation 1999/519/EC of 12 July 1999

Table 2

Reference levels for electric, magnetic and electromagnetic fields(0 Hz to 300 GHz, unperturbed rms values)

Frequency Range	E-field Strength (V/m)	H-field Strength (A/m)	B-field (μ T)	Equivalent plane wave power density Seq (W/m ²)
0-1 Hz	–	3.2×10^4	4×10^4	–
1-8 Hz	10000	$3.2 \times 10^4/f^2$	$4 \times 10^4/f^2$	–
8-25 Hz	10000	$4000/f$	$5000/f$	–
0.025-0.8 kHz	$250/f$	$4/f$	$5/f$	–
0.8-3 kHz	$250/f$	5	6.25	–
3-150 kHz	87	5	6.25	–
0.15-1 MHz	87	$0.73/f$	$0.92/f$	–
1-10 MHz	$87/f^{1/2}$	$0.73/f$	$0.92/f$	–
10-400 MHz	28	0.73	0.092	2
400-2000 MHz	$1.375 f^{1/2}$	$0.0037 f^{1/2}$	$0.0046 f^{1/2}$	$f/200$
2-300G Hz	61	0.16	0.20	10

Notes:

1. f as indicated in the frequency range column.
2. For frequencies between 100 kHz and 10 GHz, Seq, E2, H2, and B2 are to be averaged over any six-minute period.
3. For frequencies exceeding 10 GHz, Seq, E2, H2, and B2 are to be averaged over any $68/f^{1.05}$ -minute period (f in GHz).



4. No E-field value is provided for frequencies < 1 Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 25 kV/m. Spark discharges causing stress or annoyance should be avoided.

3.2 Assessment methods

Under normal use of condition, this device has a separation distance of at least 20cm between the antenna and the body of the user. A radiation exposure statement "this equipment should be installed and operated with minimum distance between the antenna and your body" is shown on the user manual, so human exposure to the electromagnetic field of this product is at far-field region under normal use.

Far-field region Calculation Formula:

P watts are radiated, from a point, uniformly over the surface of sphere of radius r.

In free space

$$E = \eta_0 H = [30 \cdot P \cdot G(\theta, \phi)]^{0.5} / r$$

Where

G = antenna gain relative to an isotropic antenna

θ, ϕ = elevation and azimuth angles to point of investigation

r = distance from observation point to the antenna (m)

η = characteristic impedance of free space

Safety Distance Calculation Formula:

The power flux:

$$S = \frac{P \cdot G_{(\theta, \phi)}}{4 \cdot \pi \cdot r^2}$$

So safety distance as following:

$$r = \sqrt{\frac{P \cdot G}{4 \cdot \pi \cdot S}}$$

P = input power of the antenna

G = antenna gain relative to an isotropic antenna

θ, ϕ = elevation and azimuth angles.

r = distance from the antenna to the point of investigation



3.3 Test Procedure

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

The temperature and related humidity: 25°C and 60% RH.



3.4 Test Result of RF Exposure Evaluation

Max Power Operation Mode	Frequency Range (MHz)	Maximum EIRP (dBm)	Limit of Power Density S(W/m ²)	Power Density S(W/m ²)	Result
802.11b	2412MHz~2472MHz	15.62	10	0.07	Pass

--END--