

APPLICATION FOR CERTIFICATION

On Behalf of

GoodWe Technologies Co., Ltd.

Smart Meter

Model No. : (1)GMK121 (2)GMK141

Brand : GOODWE

FCC ID : 2AU7J-SMARTMETER

Prepared for

GoodWe Technologies Co., Ltd.

No.90 Zijin Rd., New District, Suzhou, 215011, China

Prepared by

Audix Technology (Wujiang) Co., Ltd. EMC Dept.

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Report No. : ACWE-F2204027

Date of Test : Apr.03, 2022

Date of Report : Apr.24, 2022

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TEST REPORT CERTIFICATION

Applicant : GoodWe Technologies Co., Ltd.
Manufacturer : GoodWe Technologies Co., Ltd.
EUT Description : Smart Meter
FCC ID : 2AU7J-SMARTMETER
(A) Model No. : (1)GMK121 (2)GMK141
(B) Brand : GOODWE
(C) Test Voltage : AC 120V/60Hz

The measurement results are contained in this test report and Audix Technology (Wujiang) Co., Ltd. EMC Dept. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this test report shows that the EUT to be technically compliant with the FCC limits.

This test report applies to above tested sample only. This test report shall not be reproduced in part without written approval of Audix Technology (Wujiang) Co., Ltd. EMC Dept.

Date of Test: Apr.03, 2022

Date of Report: Apr.24, 2022

Prepared by

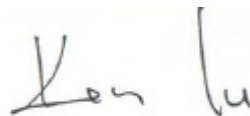
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(Emma Hu/Assistant Administrator)

Approved & Authorized Signer

:



(Ken Lu/Vice General Manager)



1. DESCRIPTION OF VERSION

Edition No.	Date of Rev.	Summary	Report No.
0	Apr.24, 2022	Original Report.	ACWE-F2204027

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description	:	Smart Meter
Model No.	:	(1)GMK121 (2)GMK141 Remark: The difference of the models is for sales market.
Test Model	:	GMK141
FCC ID	:	2AU7J-SMARTMETER
Brand	:	GOODWE
Applicant	:	GoodWe Technologies Co., Ltd. No.90 Zijin Rd., New District, Suzhou, 215011, China
Manufacturer	:	GoodWe Technologies Co., Ltd. No.90 Zijin Rd., New District, Suzhou, 215011, China
Date of Receipt of Sample	:	Apr.02, 2022
Date of Test	:	Apr.03, 2022

2.2. Antenna Information

Antenna Type	Frequency(MHz)	Gain(dBi)
Sucker Antenna	2400-2500	2.4

2.3. EUT Specification Assessed in Current Report

Mode	Fundamental Range (MHz)	Channel Number	Modulation
802.11b	2412-2462	11	DSSS
802.11g			OFDM
802.11n-HT20			
802.11n-HT40	2422-2452	9	

2.4. Description of Test Facility

Name of Firm : **Audix Technology (Wujiang) Co., Ltd. EMC Dept.**

Site Location : No. 1289 Jiangxing East Road, the Eastern Part of Wujiang Economic Development Zone
Jiangsu China 215200

Test Facilities : **RF Fully Chamber**

NVLAP Lab Code : 200786-0
Valid until on Sep.30, 2022
(NVLAP is a signatory member of ILAC MRA)
Remark: This report shall not be imply endorsement, certification or approval by NVLAP, NIST, or any agency of the U.S. Federal Government.

2.5. Measurement Uncertainty

Test Item	Uncertainty
Maximum Peak Output Power	$\pm 0.12\text{dB}$

Remark: Uncertainty = $k_{uc}(y)$

3. SUMMARY OF STADARDS AND RESULTS

3.1. Specification Limits

According to FCC CFR 47 §1.1310, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Limits for Maximum Permissible Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits For Occupational / Control Exposures (f = frequency)				
30-300	61.4	0.163	1.0	6
300-1500	...	...	f/300	6
1500-100,000	...	...	5.0	6
(B) Limits For General Population / Uncontrolled Exposure (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

NOTE: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

3.2. MPE Calculator Method

$$S = PG/(4 \pi R^2)$$

$$R = [PG/(4 \pi S)]^{0.5}$$

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

P = power input to the antenna (in appropriate units, e.g., mW) (the measured power value see Report: F12124 Section 6.6)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

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

3.3. Calculated Result

WIFI 2.4GHz MPE

Based on safety distance (r)=	20cm
Highest Power Output (P)=	19.27dBm = 84.53mW
Antenna Gain (G)=	2.40dBi = 1.74 Numerical
MPE (S) = (P*G) / (4* π *r ²) =	= (84.53*1.74)/(4*π*20²)=0.029mW/cm²