



Test report No:
2510546R-RF-US-P20V01

RF Exposure Evaluation Exemption Report

Product Name	electronic shelf label
Trademark	HanShow
Model and /or type reference	Nebular Pro-154Q-N, Nebular-154R-N, Nebular Pro-154H-N, Nebular Pro-154QP-N, Nebular Pro-154QO-N
FCC ID	2AYMH-NQ154
Applicant's name / address	Hanshow Technology Co., Ltd. The 1st Floor Podium and Floor 4 of Building 1, Floor 7 of Building 5, Jiaxing Photovoltaic Technology Innovation Park, No.1288, Kanghe Road, Xiuzhou District, Jiaxing City, Zhejiang Prov.
Test method requested, standard	FCC 47CFR §1.1307, §1.1310
Verdict Summary	IN COMPLIANCE
Documented By (name / position & signature)	Tim Cao/Project Manager 
Approved by (name / position & signature)	Frank He/ Technical Manager 
Date of issue	2025-03-06
Report Version	V1.0
Report template No	Template_FCC MPE-RF-V1.0

INDEX

	page
Competences and Guarantees	3
General conditions.....	3
Environmental conditions	3
Possible test case verdicts	4
Abbreviations.....	4
Document History	5
Remarks and Comments.....	5
1. RF Exposure Evaluation.....	6
1.1. Limits	6
1.2. Test Procedure	7
1.3. Test Result of RF Exposure Evaluation	7

COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date (receive sample)	Jan. 17, 2025
Date (start test)	Feb. 10, 2025
Date (finish test)	Feb. 21, 2025

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15°C - 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
UN	: Nominal voltage
Tx	: Transmitter
Rx	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2510546R-RF-US-P20V01	V1.0	Initial issue of report.	2025-03-06

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with FCC 47CFR §1.1307 and §1.1310.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, it is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.3 Antenna information.

1. RF Exposure Evaluation

1.1. Limits

1- mW Test Exemption

According to § 1.1307(b)(3)(i)(A)

The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

1.2. 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: 18°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product Name	electronic shelf label
Model No(for FCC).	Nebular Pro-154Q-N, Nebular-154R-N, Nebular Pro-154H-N, Nebular Pro-154QP-N, Nebular Pro-154QO-N
Trademark	HanShow
FCC ID	2AYMH-NQ154
Hardware version	HSEL4Q_01_54M_39
Software version	ROM74
Manufacturer	Hanshow Technology Co., Ltd.
Manufacturer address.....	The 1st Floor Podium and Floor 4 of Building 1, Floor 7 of Building 5, Jiaying Photovoltaic Technology Innovation Park, No.1288, Kanghe Road, Xiuzhou District, Jiaying City, Zhejiang Prov.
Model Difference(s)	The only difference between models is the region where they are sold.

Wireless specification	SRD 2.4G
Operating frequency range(s)	2402~2480MHz
Type of Modulation	GFSK
Number of channel	157
Channel separation	0.5MHz

Rated power supply	Voltage and Frequency	
	<input type="checkbox"/>	AC: 220 – 240 Vac, 50/60 Hz
	<input type="checkbox"/>	AC: 110 – 130 Vac, 50/60 Hz
	<input type="checkbox"/>	DC:
	<input checked="" type="checkbox"/>	Battery: 3Vdc
	<input type="checkbox"/>	PoE:
Mounting position	<input checked="" type="checkbox"/>	Table top equipment
	<input type="checkbox"/>	Wall/Ceiling mounted equipment
	<input type="checkbox"/>	Floor standing equipment
	<input type="checkbox"/>	Hand-held equipment
	<input type="checkbox"/>	Other:

Antenna information:

Antenna model / type number	HSEL4Q_01_54M_39		
Antenna serial number	N/A		
Antenna Delivery	<input checked="" type="checkbox"/>	1TX + 1RX	
	<input type="checkbox"/>	2TX + 2RX	
	<input type="checkbox"/>	Others:.....	
Antenna technology	<input checked="" type="checkbox"/>	SISO	
	<input type="checkbox"/>	MIMO	<input type="checkbox"/> CDD
			<input type="checkbox"/> Beam-forming
Antenna Type	<input type="checkbox"/>	External	<input type="checkbox"/> Dipole
			<input type="checkbox"/> Sectorized
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/> Ceramic Chip
			<input type="checkbox"/> PIFA
			<input checked="" type="checkbox"/> PCB
			<input type="checkbox"/> Others:.....
Antenna Gain.....	-0.7 dBi		

Note: The antenna information for the EUT in clause 1.3 are provided and confirmed by the client.

Standalone modes:

Mode	Exposure Condition	Maximum electric field strength (dBuV/m@3m)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Limit (mW)	RF exposure evaluation verdict
SRD 2.4G	Body	90.666	-4.534	0.35	1	Not required

Note: Maximum EIRP(dBm) = Maximum electric field strength (dBuV/m@3m) -95.2dB

Conclusion: SAR test is not required..

_____ The End _____