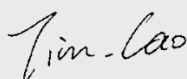


Test report No:
25A0445R.702B

FCC TEST REPORT

Product Name	electronic shelf label
Trademark	N/A
Model and /or type reference	Nebular Plus-266F-N, Nebular Plus-266QF-N
FCC ID	2BPF3-NP1-266F
Applicant's name / address	HANSHOW PTE.LTD. 138 ROBINSON ROAD #02-33 OXLEY TOWER SINGAPORE(068906).
Test method requested, standard	FCC 47CFR §2.1093
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	2025-11-24
Report Version	V1.0
Report template No	Template_FCC-MPE-RF-V1.0

INDEX

	page
Competences and Guarantees	3
General conditions	3
Document History	4
1 General Information	5
2. RF Exposure Evaluation	6
2.1. Limits: KDB 447498 D04 V01	6
2.2. RF Exposure Evaluation	8

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
Test Facility	A2LA (Certificate No. 3235.01) CNAS (Certificate No. L5313) FCC - Designation Number: CN1199 Test Firm Registration Number: 566524 ISED - CAB identifier: CN0040 IC#: 4075B
Date (receive sample)	Oct. 23, 2025
Date (start test)	Nov. 01, 2025
Date (finish test)	Nov. 20, 2025

1. The test results presented in this report relate only to the object tested.
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.
5. 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.



DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
25A0445R.702B	V1.0	Initial issue of report.	2025-11-24

1 GENERAL INFORMATION

Product Name:	electronic shelf label
Model Name:	Nebular Plus-266F-N, Nebular Plus-266QF-N
Trademark.:	N/A
FCC ID:	2BPF3-NP1-266F
Model difference:	Only model name differs.
Operating Temperature:	0~40°C
Power Supply:	3.0 Vdc, EUT is equipped with an adapter to power it via AC/DC.
Hardware Version:	MP
Software Version:	PM84PG15.00
Manufacturer:	HANSHOW PTE.LTD.
Manufacturer Address:	138 ROBINSON ROAD #02-33 OXLEY TOWER SINGAPORE(068906).
Wireless specification:	SRD 2.4G
Operating frequency range(s):	2402~2480MHz
Type of Modulation:	GFSK
Number of channels:	157
Channel separation:	0.5MHz
Antenna Type:	PCB
Antenna Gain:	-0.70 dBi
Remark: As above information is provided and confirmed by the applicant. DEKRA is not liable to the accuracy, suitability, reliability or/and integrity of the information.	

2. RF Exposure Evaluation

2.1. Limits: KDB 447498 D04 V01

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);

Mobile Device:

CFR Title 47 §2.1091(b)

(b) For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons.

Devices operating in standalone mobile exposure conditions may contain a single transmitter or multiple transmitters that do not transmit simultaneously. A minimum test separation distance ≥ 20 cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits. The distance must be fully supported by the operating and installation configurations of the transmitter and its antenna(s), according to the source-based time-averaged maximum power requirements of § 2.1091(d)(2). In cases where cable losses or other attenuations are applied to determine compliance, the most conservative operating configurations and exposure conditions must be evaluated. The minimum test separation distance required for a device to comply with mobile exposure conditions must be clearly identified in the installation and operating instructions, for all installation and exposure conditions, to enable users and installers to comply with RF exposure requirements. For mobile devices that have the potential to operate in portable device exposure conditions, similar to the configurations described in § 2.1091(d)(4), a KDB inquiry is required to determine the SAR test requirements for demonstrating compliance.

When the categorical exclusion provision of § 2.1091(c) applies, the minimum test separation distance may be estimated, when applicable, by simple calculations according to plane-wave equivalent conditions, to ensure the transmitter and its antenna(s) can operate in manners that meet or exceed the estimated distance. The source-based time-averaged maximum radiated power, according to the maximum antenna gain, must be applied to calculate the field strength and power density required to establish the minimum test separation distance. When the estimated test separation distance becomes overly conservative and does not support compliance, MPE measurement or computational modeling may be used to determine the required minimum separation distance.

According to § 1.1307(b)(3)(i)(B)

The available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
	5	10	15	20	25	30	35	40	45	50	
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

Finally, when 10-g extremity SAR applies, SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption threshold.

2.2. RF Exposure Evaluation

Mode	Maximum electric field strength (dBuV/m@3m)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Limit (mW)	RF Exposure Test
SRD	92.187	-3.013	0.50	1	Not required

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

Remark:

According to KDB 447498 D04, output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power and it will be used for calculating exemption Limits for Routine Evaluation.

Conclusion:

This EUT is exemption from RF exposure testing, therefore the basic restrictions are compliant with human exposure limits.

_____ The End _____