FCC CERTIFICATION TEST REPORT

Applicant	:	HANSHOW PTE. LTD.
Address	:	138 ROBINSON ROAD #02-33 OXLEY TOWER SINGAPORE(068906)
Equipment under Test	:	electronic shelf label
Model No.	:	Nebular Ultra-260WQ-N D3
Trade Mark	:	N/A
FCC ID	:	2BPF3-NU4-260W
Manufacturer	:	HANSHOW PTE. LTD.
Address	:	138 ROBINSON ROAD #02-33 OXLEY TOWER SINGAPORE(068906)
Report No.	:	LS-R26082501-16F01
Issue Date	:	Oct. 10, 2026

LabSure Testing Services (Tianjin) Co., Ltd.

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Test Report Declare

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Trade Mark	:	N/A
Manufacturer	:	HANSHOW PTE. LTD.
Address	:	138 ROBINSON ROAD #02-33 OXLEY TOWER SINGAPORE(068906)

Test Standard Used:
FCC Rules and Regulations Part 15 Subpart C.
Test Procedure Used:
ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024.

We Declare:
The equipment described above is tested and assessed by LabSure Testing Services (Tianjin) Co., Ltd. and in the configuration assessed the equipment complied with the standards specified above. The tested and assessed results are contained in this test report and LabSure Testing Services (Tianjin) Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these assessments.
After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above standards.

Report No.:	LS-R26082501-16F01		
Date of Receipt:	Sep. 07, 2026	**Date of Test:**	Sep. 07, 2026 - Sep. 30, 2026

Prepared By:	***Reviewed by:***	***Authorized by:***
Sunny Zhang	Ethan Bao	Aaron Zhang
Sunny Zhang/Engineer	***Ethan Bao/Engineer***	***Aaron Zhang/Manager***

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of LabSure Testing Services (Tianjin) Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Oct. 10, 2026	

1. Summary of Test Results

Description of Test Item	Standard	Verdict
20dB Bandwidth	FCC 15.215	Pass
Radiated Spurious Emissions	FCC 15.249 FCC 15.209 FCC 15.205	Pass
Radiated Band Edge Compliance	FCC 15.249 FCC 15.209 FCC 15.205	Pass
Power Line Conducted Emission	FCC 15.207	N/A
Antenna Requirement	FCC 15.203	Pass
N/A is an abbreviation for Not Applicable.		

2. General Test Information

2.1. Description of EUT

EUT* Name	:	electronic shelf label
Test Model Number	:	Nebular Ultra-260WQ-N D3
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	DC 3V by battery
Radio Specification	:	2.4G SRD
Operation Frequency	:	2402 MHz - 2480 MHz
Modulation	:	GFSK
Data Rate	:	500k bps
Antenna Type	:	PCB antenna, maximum PK gain: -0.7 dBi

Note1: EUT is the ab. of equipment under test.

Channel information							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
4	2402	44	2422	84	2442	124	2462
5	2402.5	45	2422.5	85	2442.5	125	2462.5
6	2403	46	2423	86	2443	126	2463
7	2403.5	47	2423.5	87	2443.5	127	2463.5
8	2404	48	2424	88	2444	128	2464
9	2404.5	49	2424.5	89	2444.5	129	2464.5
10	2405	50	2425	90	2445	130	2465
11	2405.5	51	2425.5	91	2445.5	131	2465.5
12	2406	52	2426	92	2446	132	2466
13	2406.5	53	2426.5	93	2446.5	133	2466.5
14	2407	54	2427	94	2447	134	2467
15	2407.5	55	2427.5	95	2447.5	135	2467.5
16	2408	56	2428	96	2448	136	2468
17	2408.5	57	2428.5	97	2448.5	137	2468.5
18	2409	58	2429	98	2449	138	2469
19	2409.5	59	2429.5	99	2449.5	139	2469.5
20	2410	60	2430	100	2450	140	2470
21	2410.5	61	2430.5	101	2450.5	141	2470.5
22	2411	62	2431	102	2451	142	2471
23	2411.5	63	2431.5	103	2451.5	143	2471.5
24	2412	64	2432	104	2452	144	2472
25	2412.5	65	2432.5	105	2452.5	145	2472.5
26	2413	66	2433	106	2453	146	2473
27	2413.5	67	2433.5	107	2453.5	147	2473.5
28	2414	68	2434	108	2454	148	2474
29	2414.5	69	2434.5	109	2454.5	149	2474.5

30	2415	70	2435	110	2455	150	2475
31	2415.5	71	2435.5	111	2455.5	151	2475.5
32	2416	72	2436	112	2456	152	2476
33	2416.5	73	2436.5	113	2456.5	153	2476.5
34	2417	74	2437	114	2457	154	2477
35	2417.5	75	2437.5	115	2457.5	155	2477.5
36	2418	76	2438	116	2458	156	2478
37	2418.5	77	2438.5	117	2458.5	157	2478.5
38	2419	78	2439	118	2459	158	2479
39	2419.5	79	2439.5	119	2459.5	159	2479.5
40	2420	80	2440	120	2460	160	2480
41	2420.5	81	2440.5	121	2460.5		
42	2421	82	2441	122	2461		
43	2421.5	83	2441.5	123	2461.5		

Remark: The information in this section is provided by the applicant or manufacturer, the laboratory is not liable to the accuracy, suitability, reliability or/and integrity of the information.

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Remark
N/A	N/A	N/A	N/A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	SN
Notebook	Lenovo Beijing Co. Ltd.	ThinkPad E450c	N/A	TP00067A

2.4. Block diagram of EUT configuration for test

EUT

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

Tested mode, channel, information			
Mode	Setting Tx Power	Channel	Frequency (MHz)
GFSK	Default	CH Low	2402
	Default	CH Middle	2441
	Default	CH High	2480

2.5. Deviations of test standard

No deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25 ℃
Humidity range:	25-75%
Pressure range:	86-106 kPa

2.7. Test laboratory

LabSure Testing Services (Tianjin) Co., Ltd.
Address: Building D-1, No. 19, Weisi Road, Microelectronics Industrial Park Development Area, Tianjin, China.
Tel: +86-22-58038033, www.lab-sure.com, E-mail: labsure@lab-sure.com
A2LA (American Association for Laboratory Accreditation) Number: 7735.01
CNAS (China National Accreditation Service for Conformity Assessment) CODE: L13402
FCC Designation Number: CN1464; FCC Test Firm Registration Number: 991964
ISED (Innovation, Science and Economic Development Canada) Company Number: 27768
Conformity Assessment Body Identifier: CN0125
VCCI Facility Registration Number: C-20089, T-20093, R-20125, G-20122

2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	0.14%
Peak Output Power (Conducted) (Spectrum Analyzer)	0.12 dB (10 MHz ≤ f < 3.6 GHz);
	0.32 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.51 dB
Power Spectral Density	0.12 dB (10 MHz ≤ f < 3.6 GHz);
	0.32 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	3.4×10^{-8} (Conducted method)
Conducted Spurious Emissions	0.12 dB (10 MHz ≤ f < 3.6 GHz);
	0.32 dB (3.6 GHz ≤ f < 8 GHz)
	0.52 dB (8 GHz ≤ f < 22 GHz)
Uncertainty for Radio Frequency (RBW < 20 kHz)	3×10^{-7}
Temperature	±2℃
Humidity	±1%
Uncertainty for Radiation Emission Test (30 MHz - 1 GHz)	2.72 dB (Antenna Polarize: V)
	2.72 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission Test (1 GHz - 40 GHz)	2.74 dB (1 - 6 GHz)
	2.72 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power Line Conduction Emission Test	3.40 dB (150 kHz - 30 MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

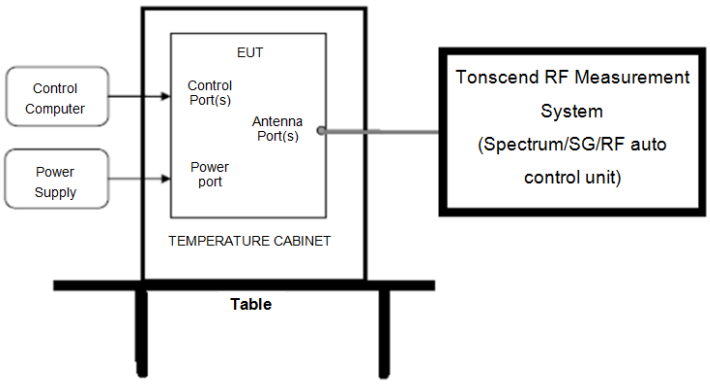
3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒**RF Connected Test**					
Spectrum Analyzer	R&S	FSV40-N	101642	2026/06/09	1 Year
Vector Signal Generator	R&S	SMCV100B	103781	2026/06/09	1 Year
Wideband Radio Communication Tester	R&S	CMW 500	167141	2026/06/09	1 Year
RF Control Unit	Tonscend	JS0806-2	24A80620795	2026/06/09	1 Year
MXG Vector Signal Generator	Keysight	N5182B	MY57301463	2026/02/11	1 Year
PXA Signal Analyzer	Keysight	N9010A	MY53281492	2026/02/11	1 Year
Power Sensor	Keysight	U2021XA	MY59150007	2026/02/11	1 Year
DC Power Supply	Chroma	62012P-80-60	62012PD00544	2026/01/13	1 Year
Test Software	Tonscend	JS1120-3	3.6.21	N/A	N/A
☒**Radiated Emission -10m EMI Chamber**					
Broadband Horn Antenna	TESEQ	BHA 9118	31754	2025/09/29	2 Year
BroadBand Horn Antenna	Com-Power	AHA-840	10100024	2025/09/29	2 Year
Active Loop Antenna	R&S	HFH2-Z2	100269	2026/08/24	2 Year
Amplifier	CMO-MW	DPA8 1000 1800	09211739	2026/02/17	1 Year
EMI Test Receiver	R&S	ESCI	101024	2026/02/11	1 Year
EMI Test Receiver	R&S	ESCI	101030	2026/02/11	1 Year
EMI Test Receiver	R&S	ESU26	100244	2026/02/17	1 Year
EXA Signal Analyzer	Keysight	N9010A	MY53281492	2026/02/11	1 Year
Bilog Antenna	TESEQ	CBL6112D	29068	2024/10/10	2 Year
Bilog Antenna	TESEQ	CBL6112D	29069	2024/10/10	2 Year
Amplifier	Sonoma	310N	300913	2026/02/11	1 Year
Amplifier	Sonoma	310N	334532	2026/02/11	1 Year
Ant Mast	Innco	MA4000	N/A	N/A	N/A
Ant Mast	Innco	MA4000	N/A	N/A	N/A
Mast Controller	Innco	CO2000	N/A	N/A	N/A
Mast Controller	Innco	CO2000	N/A	N/A	N/A
RF Selector 4CH	TOYO	NS4904N	Selector1	N/A	N/A
RF Selector 4CH	TOYO	NS4904N	Selector2	N/A	N/A
Test software	TOYO	EP5/RSE	Ver 1.9.1	N/A	N/A
Test software	Audix	E3	V 6.11111b	N/A	N/A
☐**Radiated Emission -3m EMI Chamber**					
Broadband Horn Antenna	TESEQ	BHA 9118	31754	2025/09/29	2 Year
BroadBand Horn Antenna	Com-Power	AHA-840	10100024	2025/09/29	2 Year
Active Loop Antenna	R&S	HFH2-Z2	100269	2026/08/24	2 Year
Amplifier	CMO-MW	DPA8 1000 1800	09211739	2026/02/17	1 Year
EMI Test Receiver	R&S	ESCI	101397	2026/02/11	1 Year
EMI Test Receiver	R&S	ESU26	100244	2026/02/17	1 Year
EXA Signal Analyzer	Keysight	N9010A	MY53281492	2026/02/11	1 Year

Bilog Antenna	TESEQ	CBL6112D	29067	2025/06/17	2 Year
Amplifier	Sonoma	310N	334533	2026/02/11	1 Year
Ant Mast	Innco	MA4000	N/A	N/A	N/A
Mast Controller	Innco	CO2000	N/A	N/A	N/A
RF Selector 4CH	TOYO	NS4904N	Selector1	N/A	N/A
Test software	TOYO	EP5/RE	Ver 5.7.10	N/A	N/A
Test software	Audix	E3	V 6.11111b	N/A	N/A
☐**Power Line Conducted Emissions Test**					
Test Receiver	R&S	ESCI	101375	2026/02/11	1 Year
LISN	R&S	ENV216	101123	2026/02/11	1 Year
Test software	TOYO	EP5/CE	V 5.4.40	N/A	N/A

4. 20 dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

4.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) 99% Bandwidth set the spectrum analyzer as follows:

RBW:	1% to 5% of the OBW
VBW:	at least three times RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, measure the 20 dB and 99% bandwidth of signal.

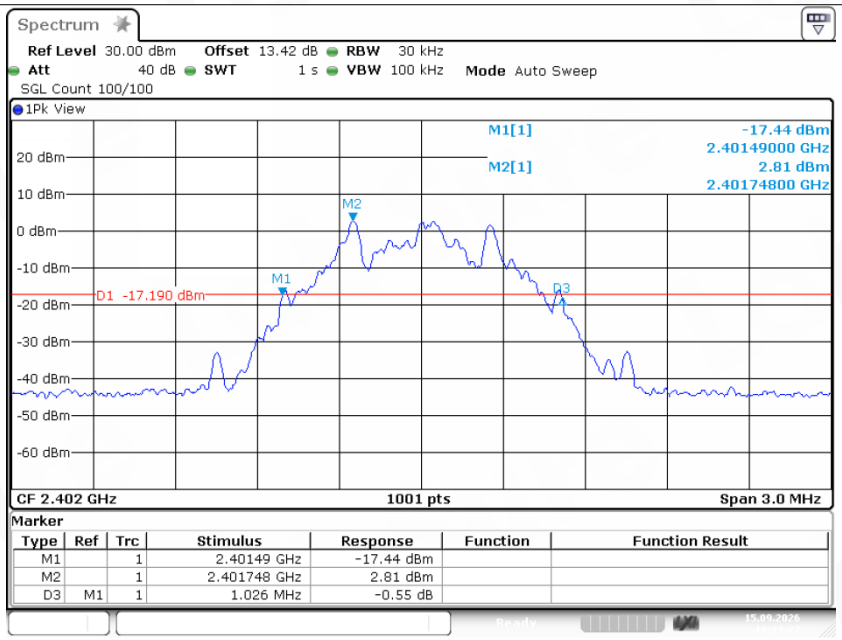
4.4. Test result

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
NVNT	GFSK	2402	Ant1	1.03	Pass
NVNT	GFSK	2441	Ant1	1.02	Pass
NVNT	GFSK	2480	Ant1	1.02	Pass

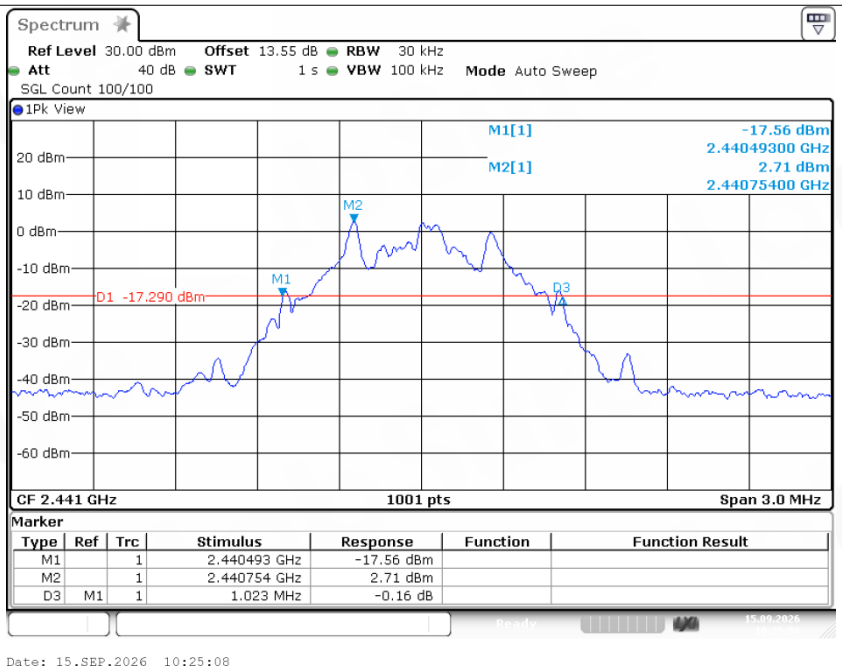
-20dB Bandwidth

Test Graphs

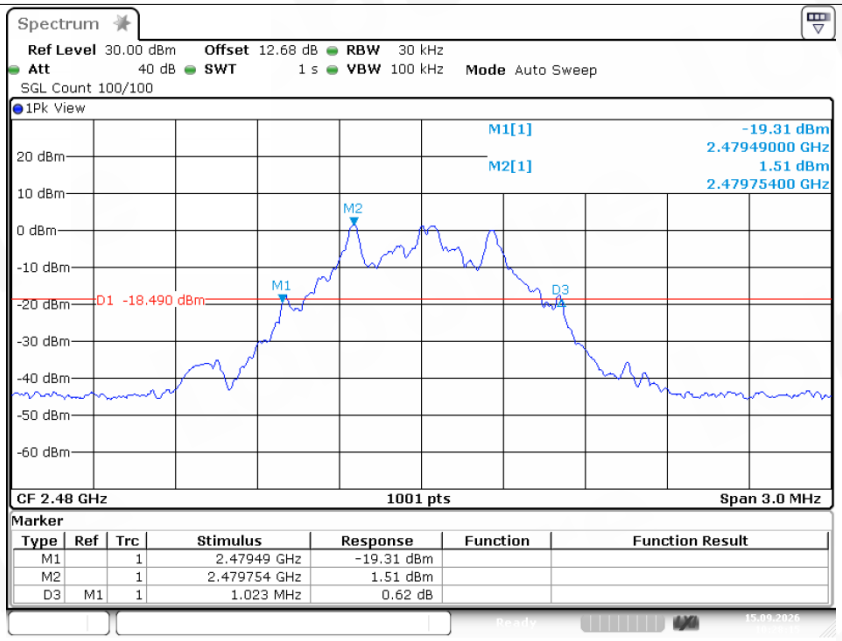
-20dB Bandwidth NVNT GFSK 2402MHz Ant1



-20dB Bandwidth NVNT GFSK 2441MHz Ant1



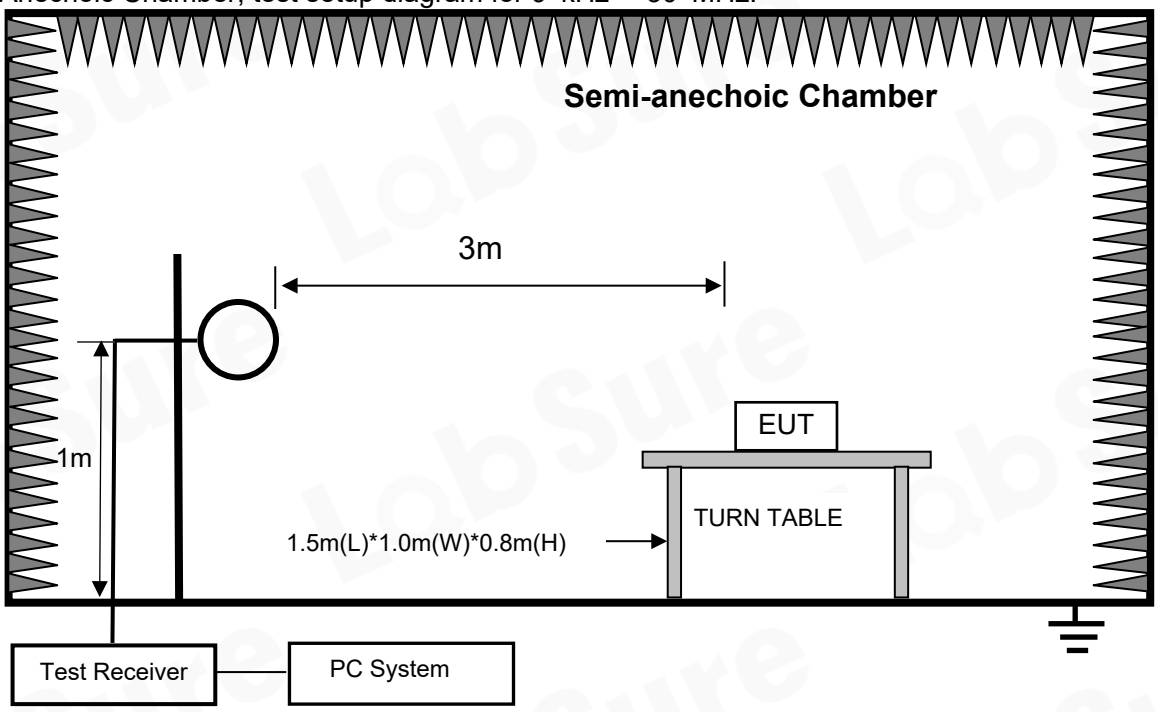
-20dB Bandwidth NVNT GFSK 2480MHz Ant1


Spectrum
Ref Level 30.00 dBm Offset 12.68 dB RBW 30 kHz
Att 40 dB SWT 1 s VBW 100 kHz Mode Auto Sweep
SGL Count 100/100
1Pk View
M1[1] -19.31 dBm
2.47949000 GHz
M2[1] 1.51 dBm
2.47975400 GHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
D1 -18.490 dBm
M1
M2
D3
CF 2.48 GHz
1001 pts
Span 3.0 MHz
Marker
Type Ref Trc Stimulus Response Function Function Result
M1 1 2.47949 GHz -19.31 dBm
M2 1 2.479754 GHz 1.51 dBm
D3 M1 1 1.023 MHz 0.62 dB
Date: 15.SEP.2026 10:28:15

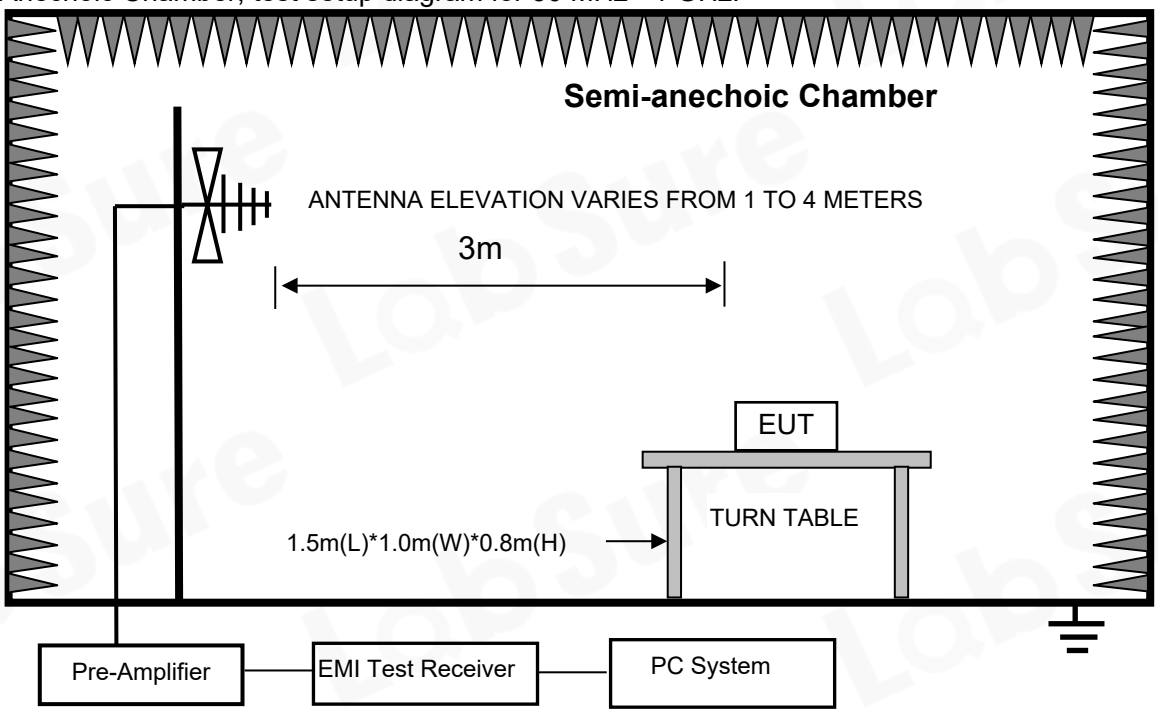
5. Radiated Emission

5.1. Block diagram of test setup

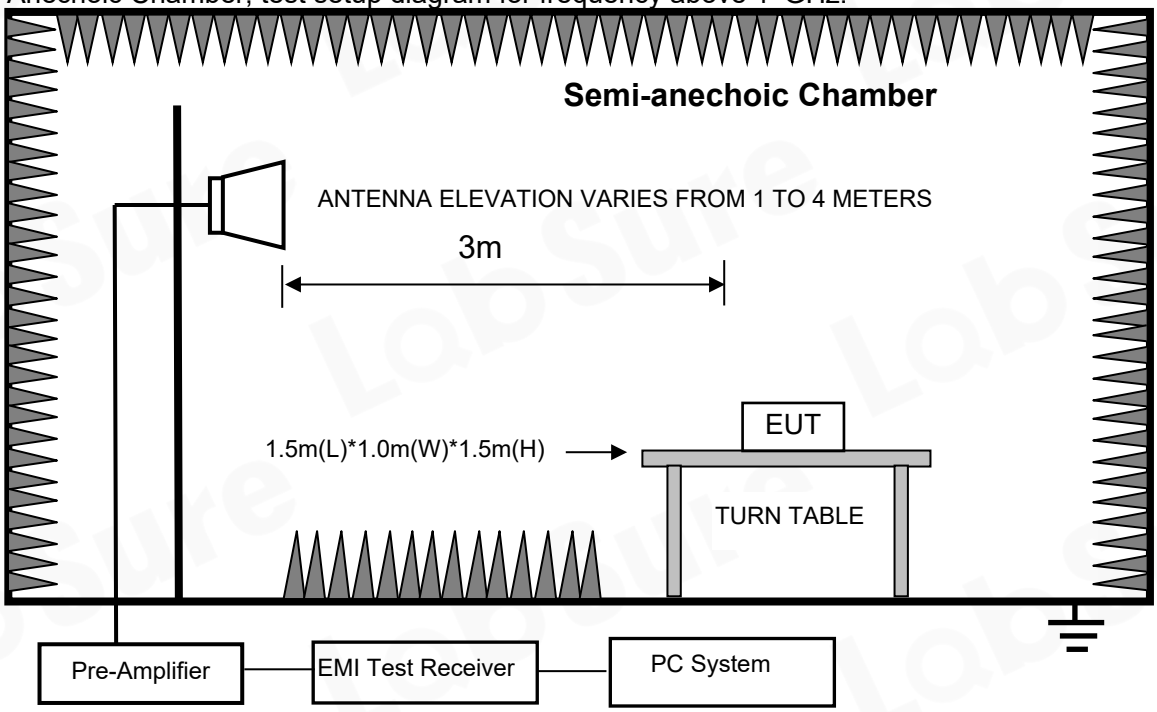
Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

5.2. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

(2) FCC 15.209 Limit.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	
Field Strength of Fundamental emission for 2.4 GHz - 2.4835 GHz	3	94.0 dB(μV)/m (Average) 114.0 dB(μV)/m (Peak)	
Field Strength of Harmonics	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz, radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m)= Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

(3) Limit for this EUT
All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions or comply with 15.209 limits.

5.3. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1G and 150 cm above the ground plane inside a fully-anechoic chamber for above 1G.

(2) Test antenna was located on an adjustable mast, the distance from test antenna to EUT and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m
1 GHz - 18 GHz	Double Ridged Horn Antenna (1 GHz - 18 GHz)	3 m
18 GHz - 40 GHz	Horn Antenna (18 GHz - 40 GHz)	3 m

According ANSI C63.10:2020 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also is positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18 GHz to 25 GHz, so below final test was performed with frequency range from 9 kHz to 18 GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10:2020 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz, for emissions from 9 kHz - 90 kHz,110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2020 clause 4.1.5.2.3 and 4.1.5.2.5 procedure for average measure.

(8) X axis, Y axis, Z axis are tested, and worse setup X axis is reported.

5.4. Test result

Pass. (See below detailed test result)

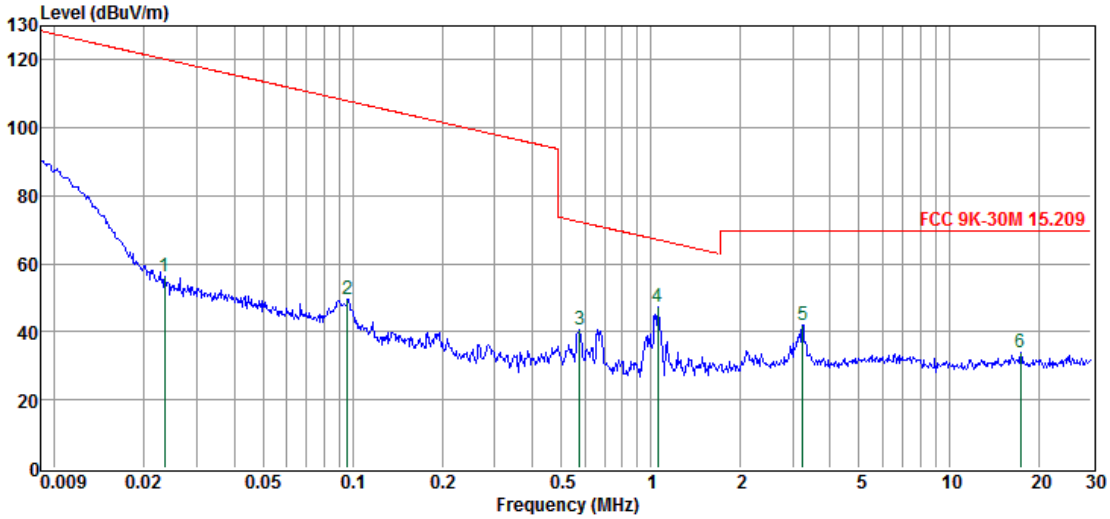
All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits.
Note1: For emissions below 1 GHz and above 18 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in 2480MHz transmission mode.
Note 2: Scan with all modes, the worst case was recorded in this report.
Note3: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

Radiated Emission test (9kHz-30MHz)

Radiated Emission Test Result

Test Site	: DDT 10m Chamber		
Test Date	: 09-15-2026	**Tested By**	: Sunny
EUT	: electronic shelf label	**Model Number**	: Nebular Ultra-260WQ-N D3
Power Supply	: Battery	**Test Mode**	: TX mode
Memo	: 2.4G 2480MHz		

Data: 47

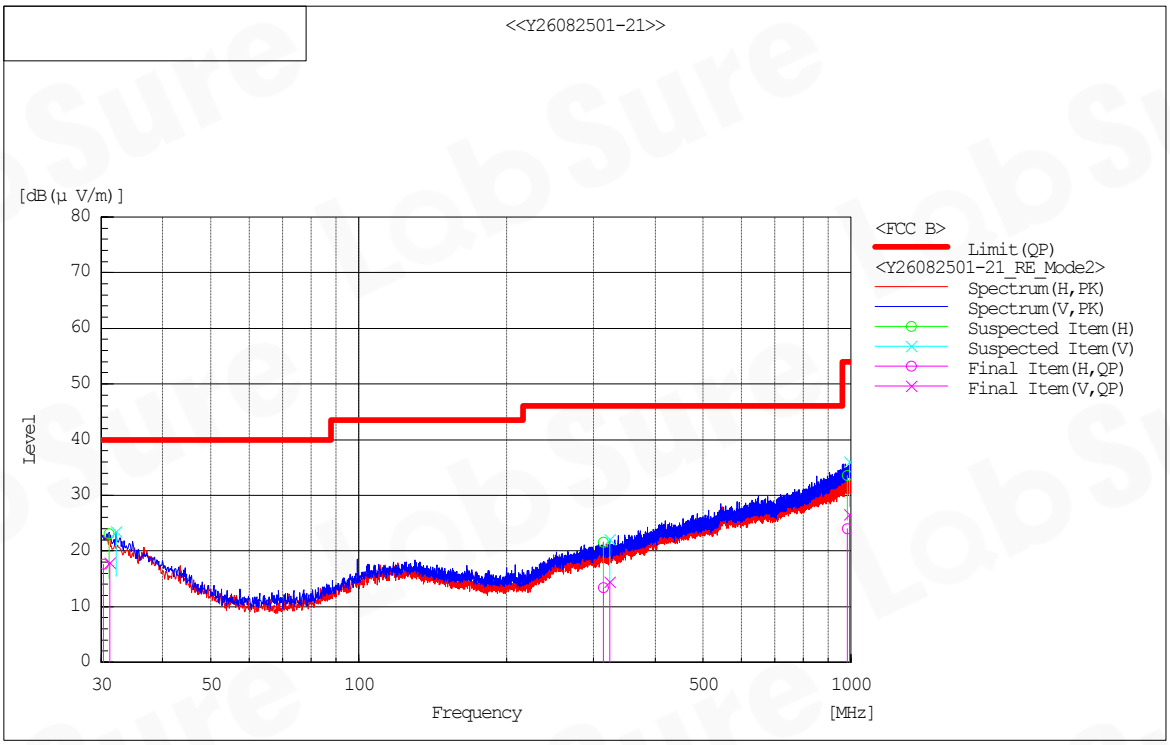


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	0.023	36.59	19.78	0.02	56.39	120.20	-63.81	Peak	HORIZONTAL
2	0.096	30.01	19.70	0.03	49.74	107.94	-58.20	Peak	HORIZONTAL
3	0.577	20.77	19.76	0.05	40.58	72.37	-31.79	Peak	HORIZONTAL
4	1.052	27.16	19.99	0.07	47.22	67.16	-19.94	Peak	HORIZONTAL
5	3.224	21.83	19.95	0.14	41.92	69.54	-27.62	Peak	HORIZONTAL
6	17.422	13.46	20.11	0.27	33.84	69.54	-35.70	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: 9k-150kHz, RBW: 300Hz; 150k-30Mhz, RBW: 10kHz, Sweep time: auto.

Radiated Emission test (30MHz - 1 GHz)

Radiated Emission Test Result



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(μ V)]	c.f [dB(1/m)]	Result QP [dB(μ V/m)]	Limit QP [dB(μ V/m)]	Margin QP [dB]	Height [cm]	Angle [°]	System
1	30.263	H	22.3	-4.7	17.6	40.0	22.4	102.0	131.1	1
2	313.680	H	20.0	-6.6	13.4	46.0	32.6	307.0	161.2	1
3	981.927	H	17.1	6.9	24.0	54.0	30.0	302.0	166.0	1
4	31.272	V	22.3	-4.5	17.8	40.0	22.2	196.0	170.7	2
5	324.017	V	19.2	-4.8	14.4	46.0	31.6	298.0	8.4	2
6	992.851	V	17.5	9.0	26.5	54.0	27.5	104.0	14.3	2

Radiated Emission test (1 GHz – 18GHz)

Radiated Emission Test Result

Test Site : DDT 10m Chamber

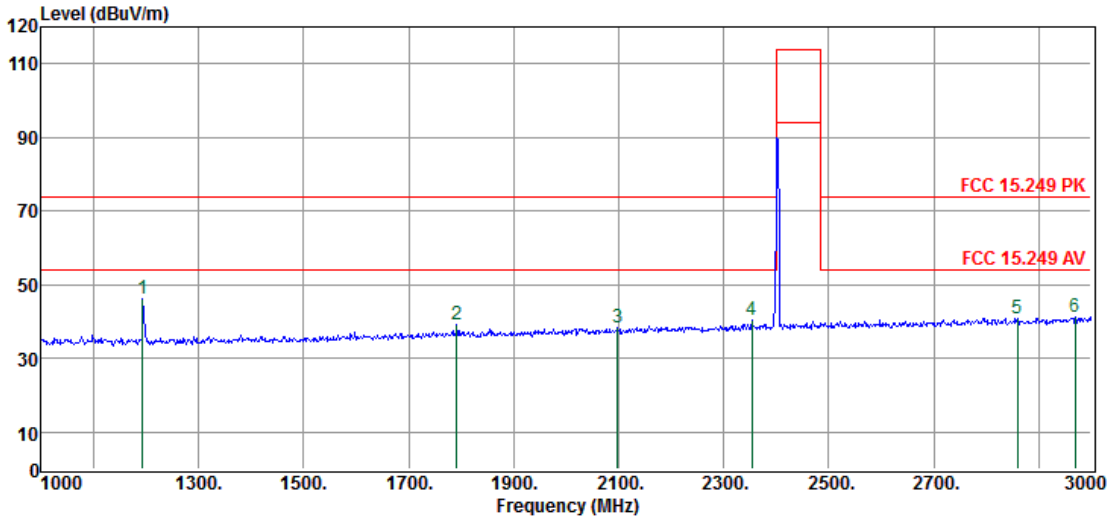
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2402MHz

Data: 94



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1194.000	72.99	27.39	55.05	0.89	46.22	74.00	-27.78	Peak	HORIZONTAL
2	1792.000	64.36	29.40	55.83	1.13	39.06	74.00	-34.94	Peak	HORIZONTAL
3	2098.000	62.62	30.69	56.10	1.18	38.39	74.00	-35.61	Peak	HORIZONTAL
4	2354.000	63.78	31.46	56.10	1.39	40.53	74.00	-33.47	Peak	HORIZONTAL
5	2860.000	62.54	32.84	56.10	1.53	40.81	74.00	-33.19	Peak	HORIZONTAL
6	2970.000	62.59	33.12	56.10	1.57	41.18	74.00	-32.82	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

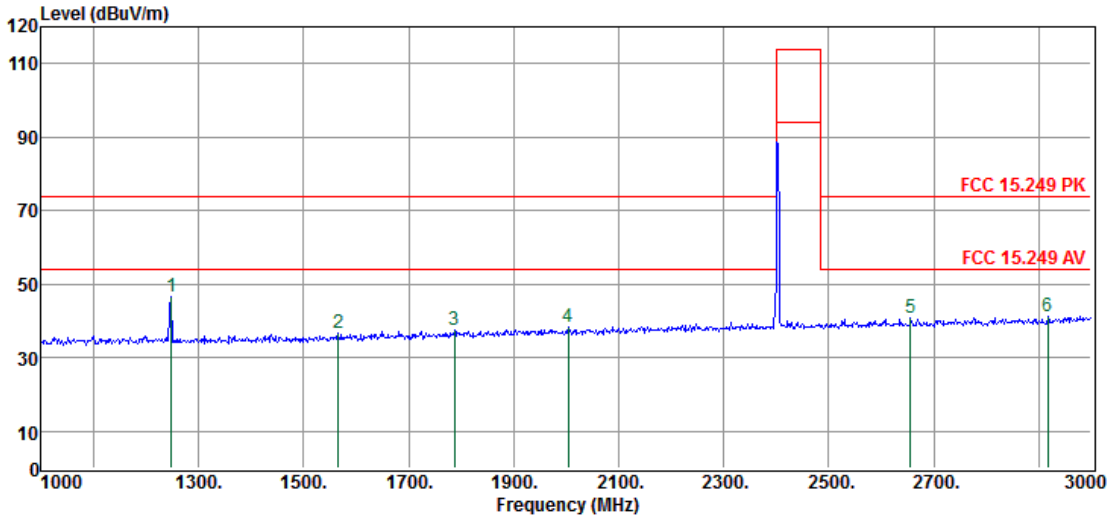
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2402MHz

Data: 95



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1248.000	73.45	27.50	55.12	0.90	46.73	74.00	-27.27	Peak	VERTICAL
2	1566.000	62.80	28.32	55.54	1.00	36.58	74.00	-37.42	Peak	VERTICAL
3	1788.000	62.73	29.38	55.82	1.12	37.41	74.00	-36.59	Peak	VERTICAL
4	2004.000	62.96	30.41	56.10	1.20	38.47	74.00	-35.53	Peak	VERTICAL
5	2656.000	63.02	32.31	56.10	1.45	40.68	74.00	-33.32	Peak	VERTICAL
6	2918.000	62.67	32.99	56.10	1.56	41.12	74.00	-32.88	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

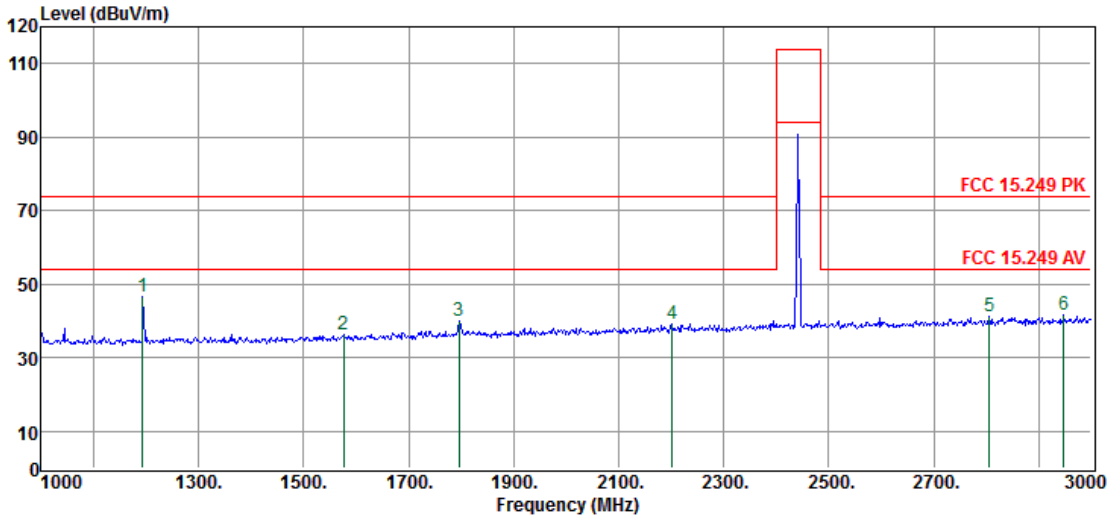
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2441MHz

Data: 96



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1194.000	73.34	27.39	55.05	0.89	46.57	74.00	-27.43	Peak	HORIZONTAL
2	1576.000	62.29	28.36	55.55	1.00	36.10	74.00	-37.90	Peak	HORIZONTAL
3	1796.000	65.48	29.42	55.83	1.13	40.20	74.00	-33.80	Peak	HORIZONTAL
4	2202.000	62.97	31.01	56.10	1.34	39.22	74.00	-34.78	Peak	HORIZONTAL
5	2806.000	62.89	32.70	56.10	1.54	41.03	74.00	-32.97	Peak	HORIZONTAL
6	2948.000	63.19	33.06	56.10	1.59	41.74	74.00	-32.26	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

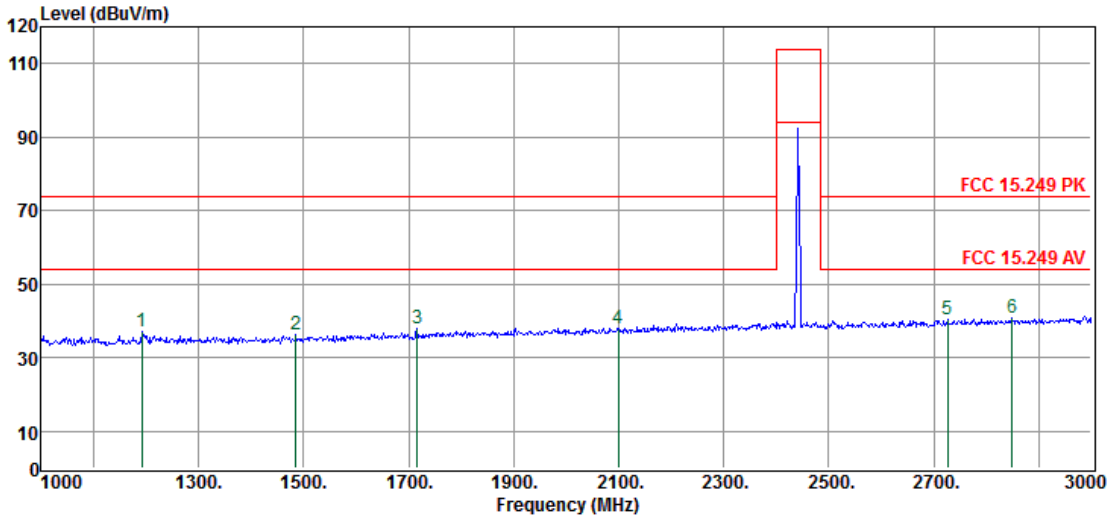
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2441MHz

Data: 97



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	1192.000	64.04	27.38	55.05	0.89	37.26	74.00	-36.74	Peak	VERTICAL
2	1486.000	62.61	27.97	55.43	0.96	36.11	74.00	-37.89	Peak	VERTICAL
3	1716.000	63.57	29.04	55.73	1.02	37.90	74.00	-36.10	Peak	VERTICAL
4	2100.000	62.24	30.70	56.10	1.18	38.02	74.00	-35.98	Peak	VERTICAL
5	2726.000	62.51	32.49	56.10	1.48	40.38	74.00	-33.62	Peak	VERTICAL
6	2850.000	62.70	32.81	56.10	1.53	40.94	74.00	-33.06	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

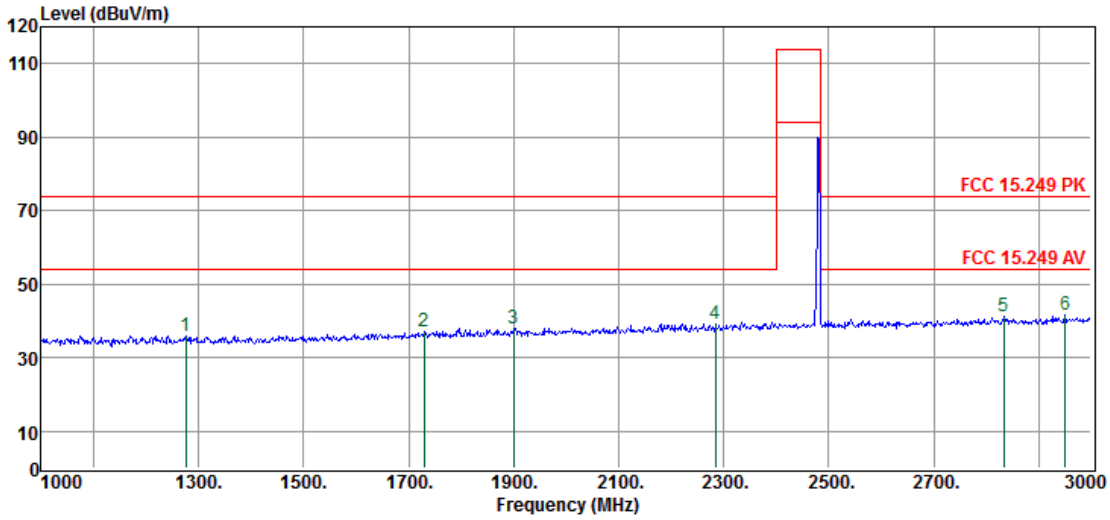
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 98



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1276.000	62.67	27.55	55.16	0.89	35.95	74.00	-38.05	Peak	HORIZONTAL
2	1730.000	62.57	29.10	55.75	1.03	36.95	74.00	-37.05	Peak	HORIZONTAL
3	1900.000	63.05	29.92	55.97	1.09	38.09	74.00	-35.91	Peak	HORIZONTAL
4	2284.000	62.76	31.25	56.10	1.32	39.23	74.00	-34.77	Peak	HORIZONTAL
5	2834.000	63.16	32.77	56.10	1.53	41.36	74.00	-32.64	Peak	HORIZONTAL
6	2950.000	62.90	33.07	56.10	1.59	41.46	74.00	-32.54	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

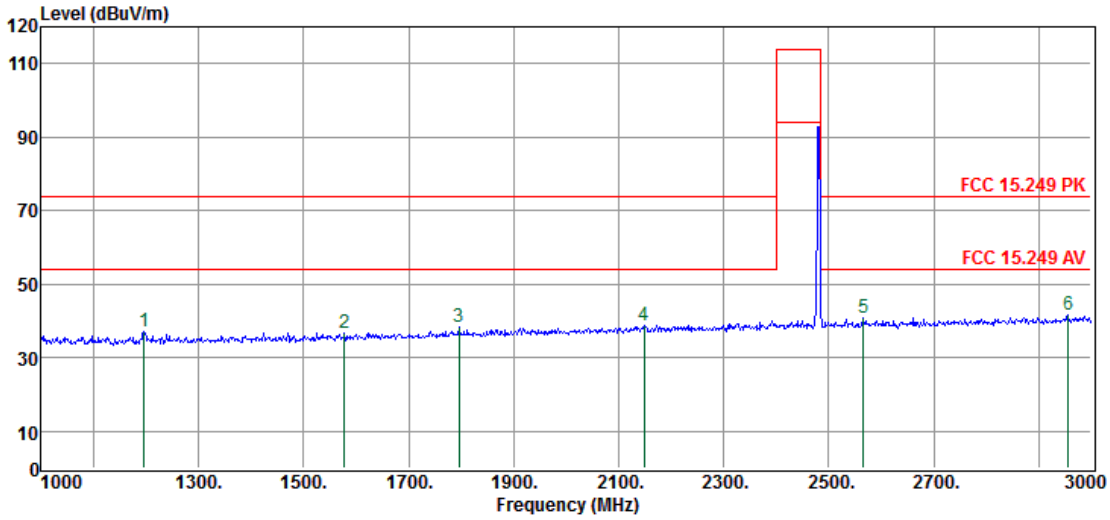
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 99



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1196.000	63.72	27.39	55.05	0.90	36.96	74.00	-37.04	Peak	VERTICAL
2	1578.000	62.96	28.37	55.55	1.00	36.78	74.00	-37.22	Peak	VERTICAL
3	1796.000	63.47	29.42	55.83	1.13	38.19	74.00	-35.81	Peak	VERTICAL
4	2148.000	62.76	30.84	56.10	1.34	38.84	74.00	-35.16	Peak	VERTICAL
5	2566.000	63.57	32.07	56.10	1.45	40.99	74.00	-33.01	Peak	VERTICAL
6	2956.000	63.00	33.09	56.10	1.59	41.58	74.00	-32.42	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

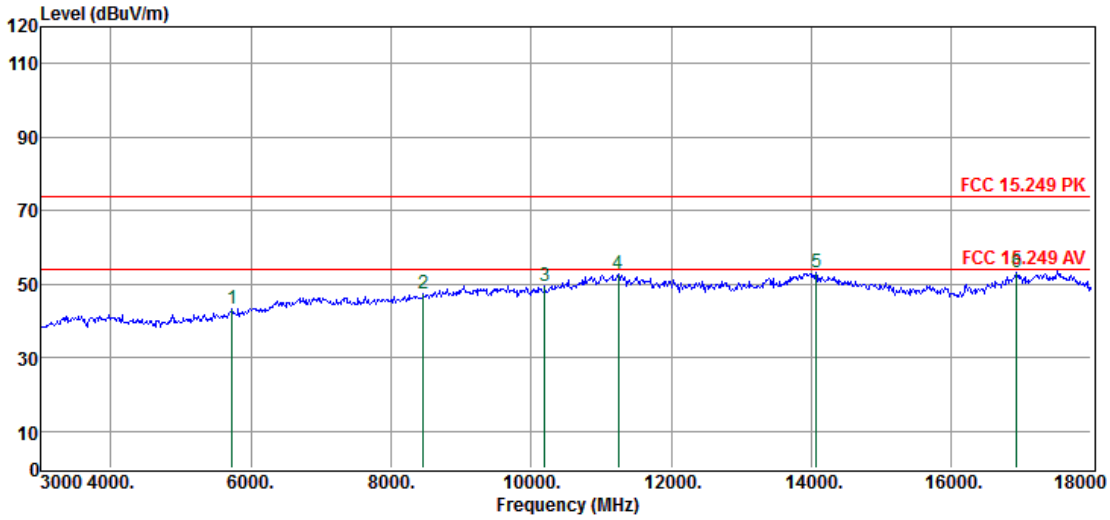
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2402MHz

Data: 100



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5730.000	58.23	37.15	54.32	2.33	43.39	74.00	-30.61	Peak	HORIZONTAL
2	8460.000	57.75	40.76	54.19	3.06	47.38	74.00	-26.62	Peak	HORIZONTAL
3	10200.000	58.46	41.60	54.10	3.47	49.43	74.00	-24.57	Peak	HORIZONTAL
4	11250.000	59.54	42.20	53.53	4.76	52.97	74.00	-21.03	Peak	HORIZONTAL
5	14070.000	57.66	45.25	54.20	4.32	53.03	74.00	-20.97	Peak	HORIZONTAL
6	16935.000	57.26	44.71	53.29	4.45	53.13	74.00	-20.87	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

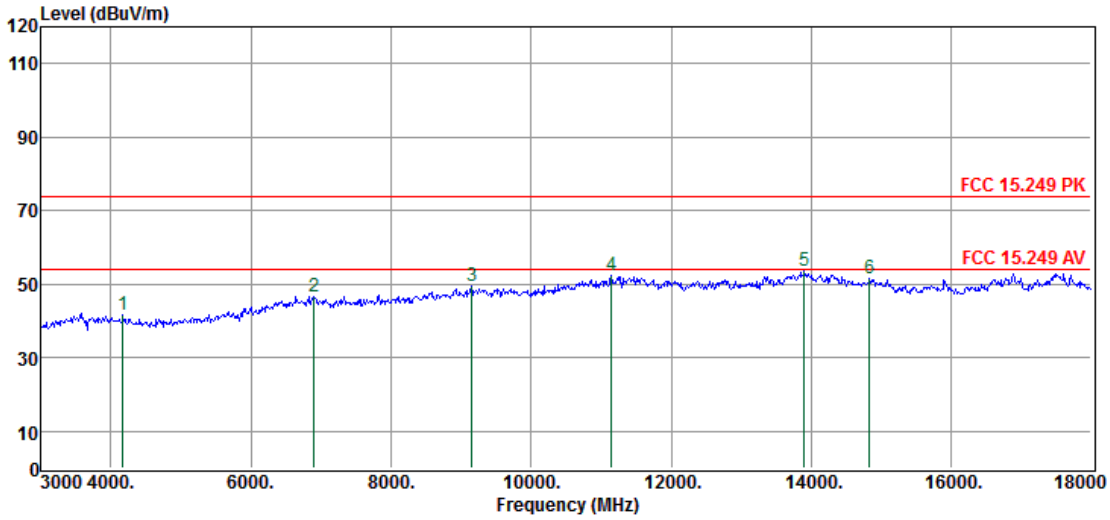
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2402MHz

Data: 101



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	4170.000	60.29	35.30	55.65	1.79	41.73	74.00	-32.27	Peak	VERTICAL
2	6900.000	59.66	38.26	53.83	2.55	46.64	74.00	-27.36	Peak	VERTICAL
3	9150.000	59.36	41.25	54.30	2.99	49.30	74.00	-24.70	Peak	VERTICAL
4	11145.000	59.07	42.07	53.43	4.61	52.32	74.00	-21.68	Peak	VERTICAL
5	13905.000	58.20	45.27	54.27	4.32	53.52	74.00	-20.48	Peak	VERTICAL
6	14835.000	58.54	43.03	54.20	4.23	51.60	74.00	-22.40	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

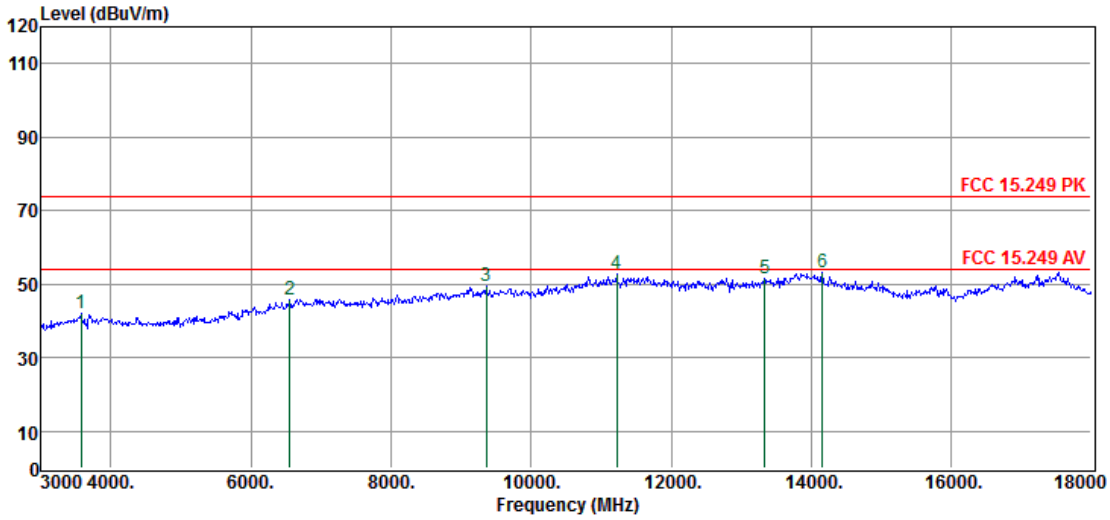
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2441MHz

Data: 102



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	3570.000	61.78	34.35	55.93	1.88	42.08	74.00	-31.92	Peak	HORIZONTAL
2	6555.000	59.69	37.43	53.93	2.50	45.69	74.00	-28.31	Peak	HORIZONTAL
3	9360.000	59.13	41.46	54.30	3.26	49.55	74.00	-24.45	Peak	HORIZONTAL
4	11220.000	59.27	42.16	53.50	4.72	52.65	74.00	-21.35	Peak	HORIZONTAL
5	13335.000	57.40	44.40	54.67	4.31	51.44	74.00	-22.56	Peak	HORIZONTAL
6	14160.000	58.12	45.05	54.20	4.22	53.19	74.00	-20.81	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

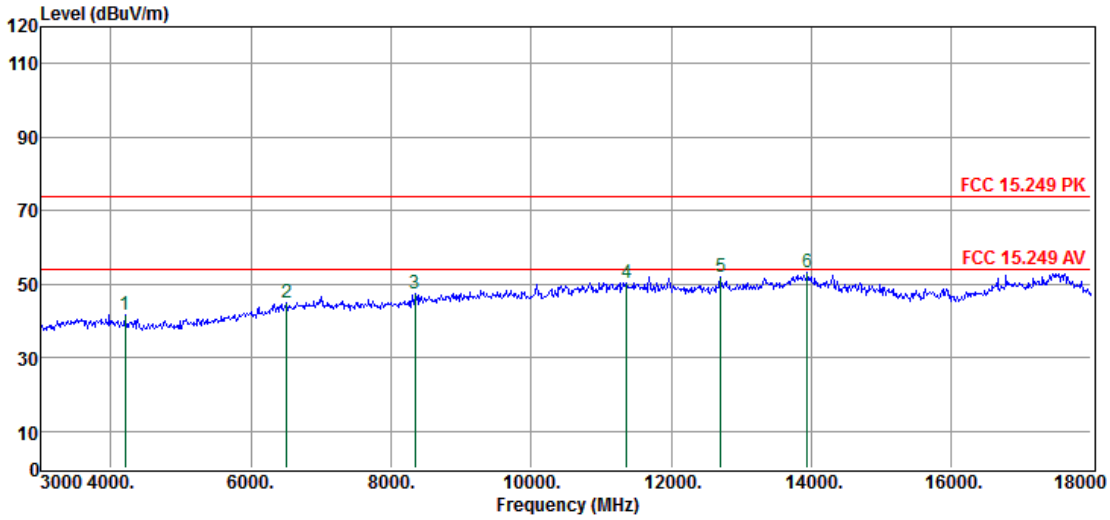
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2441MHz

Data: 103



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	4200.000	60.20	35.30	55.62	1.78	41.66	74.00	-32.34	Peak	VERTICAL
2	6510.000	59.30	37.32	53.95	2.47	45.14	74.00	-28.86	Peak	VERTICAL
3	8340.000	58.13	40.64	54.17	2.94	47.54	74.00	-26.46	Peak	VERTICAL
4	11370.000	56.89	42.34	53.63	4.90	50.50	74.00	-23.50	Peak	VERTICAL
5	12705.000	58.92	43.27	54.69	4.66	52.16	74.00	-21.84	Peak	VERTICAL
6	13950.000	57.90	45.33	54.24	4.36	53.35	74.00	-20.65	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

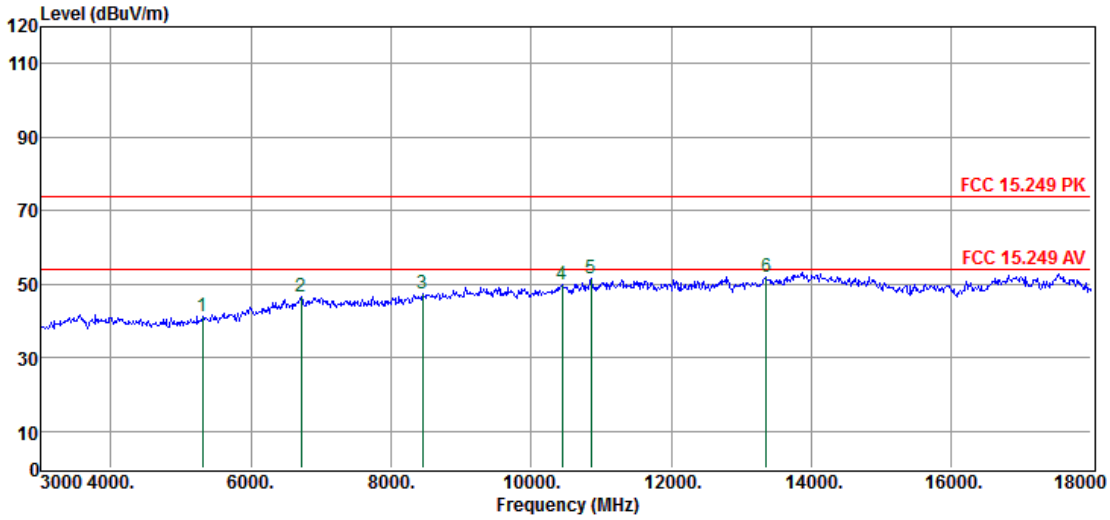
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 104



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5310.000	56.98	36.76	54.65	2.15	41.24	74.00	-32.76	Peak	HORIZONTAL
2	6720.000	60.01	37.83	53.88	2.60	46.56	74.00	-27.44	Peak	HORIZONTAL
3	8445.000	57.96	40.74	54.19	3.05	47.56	74.00	-26.44	Peak	HORIZONTAL
4	10440.000	58.19	41.60	53.86	4.16	50.09	74.00	-23.91	Peak	HORIZONTAL
5	10860.000	58.70	41.82	53.44	4.49	51.57	74.00	-22.43	Peak	HORIZONTAL
6	13365.000	57.87	44.46	54.64	4.34	52.03	74.00	-21.97	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

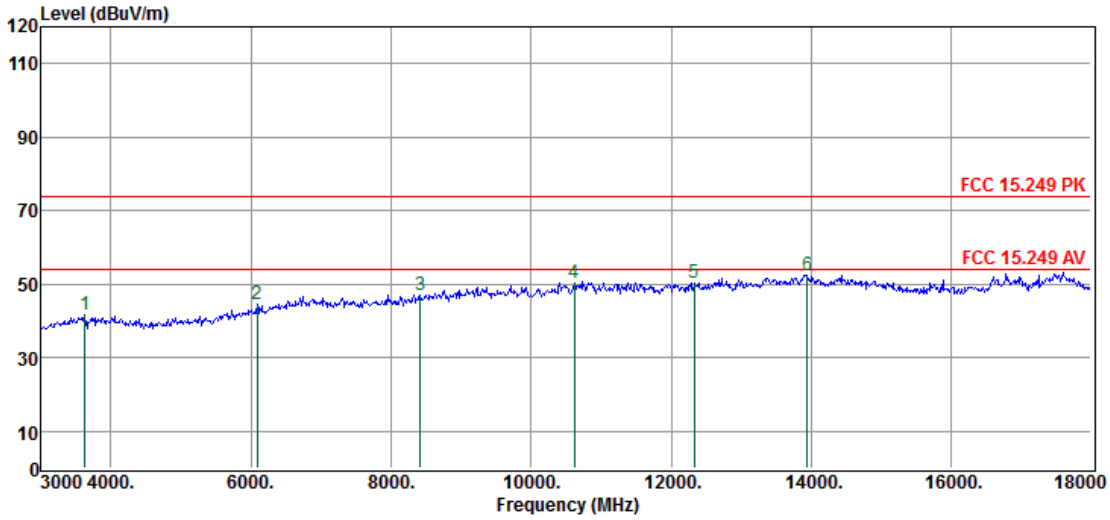
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 105



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	3630.000	61.28	34.49	55.91	1.84	41.70	74.00	-32.30	Peak	VERTICAL
2	6090.000	59.11	37.22	54.07	2.47	44.73	74.00	-29.27	Peak	VERTICAL
3	8415.000	57.56	40.72	54.18	3.02	47.12	74.00	-26.88	Peak	VERTICAL
4	10620.000	58.13	41.67	53.68	4.12	50.24	74.00	-23.76	Peak	VERTICAL
5	12330.000	57.48	42.83	54.43	4.60	50.48	74.00	-23.52	Peak	VERTICAL
6	13950.000	56.96	45.33	54.24	4.36	52.41	74.00	-21.59	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission test (18 GHz – 26.5GHz)

Radiated Emission Test Result

Test Site : DDT 10m Chamber

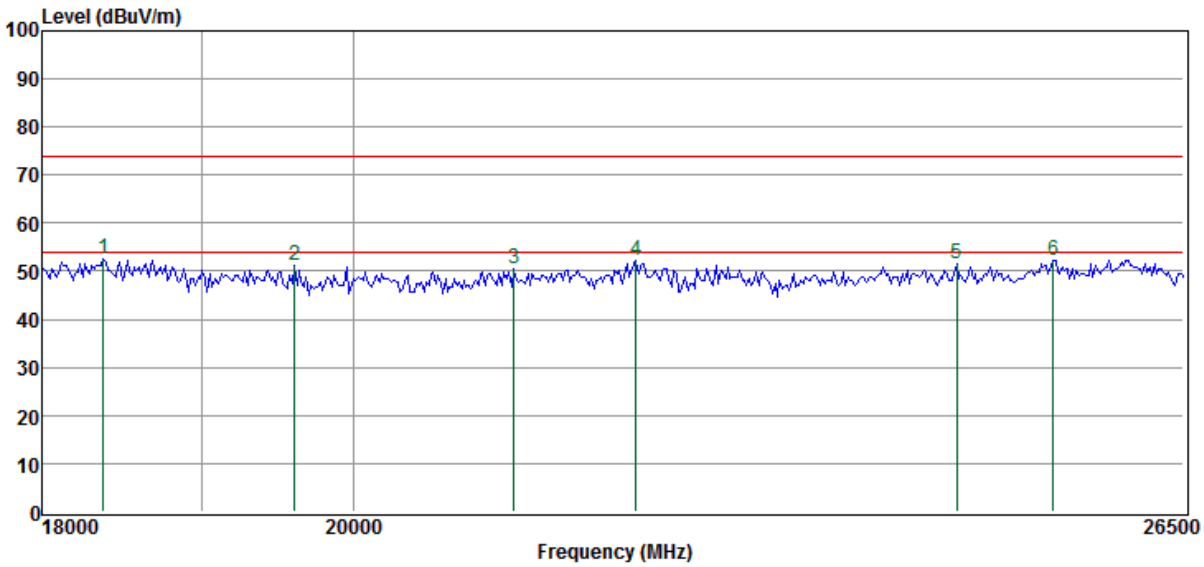
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 29



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	18377.61	7.51	36.70	8.44	52.65	74.00	-21.35	Peak	HORIZONTAL
2	19605.54	6.12	36.06	8.86	51.04	74.00	-22.96	Peak	HORIZONTAL
3	21116.89	5.44	36.53	8.68	50.65	74.00	-23.35	Peak	HORIZONTAL
4	22012.17	6.40	36.81	8.95	52.16	74.00	-21.84	Peak	HORIZONTAL
5	24537.26	6.04	36.03	9.61	51.68	74.00	-22.32	Peak	HORIZONTAL
6	25353.88	6.58	36.33	9.43	52.34	74.00	-21.66	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

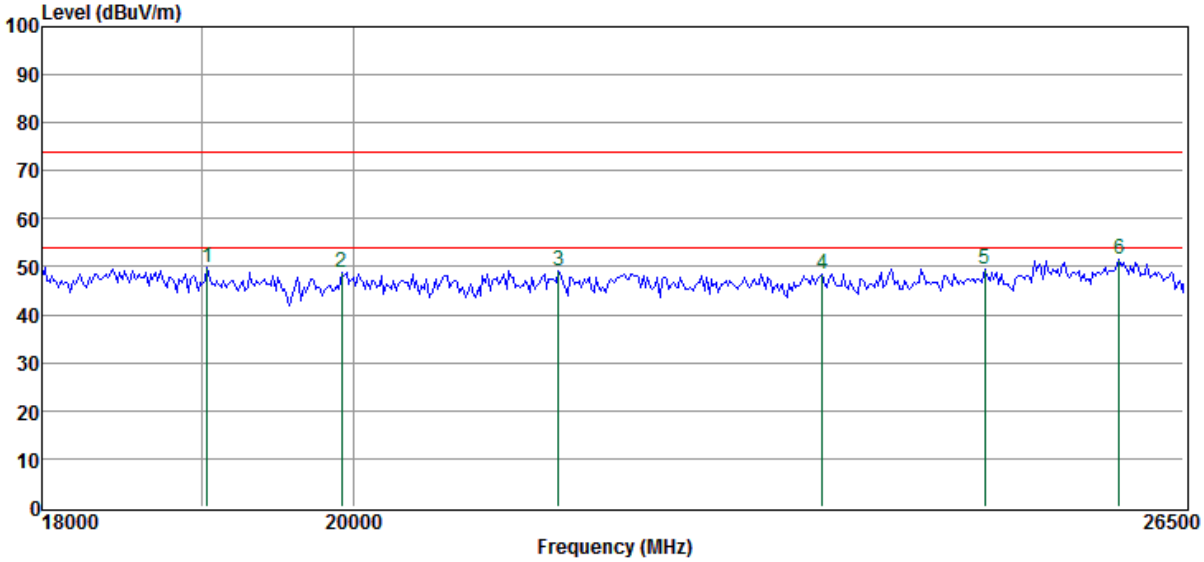
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 30

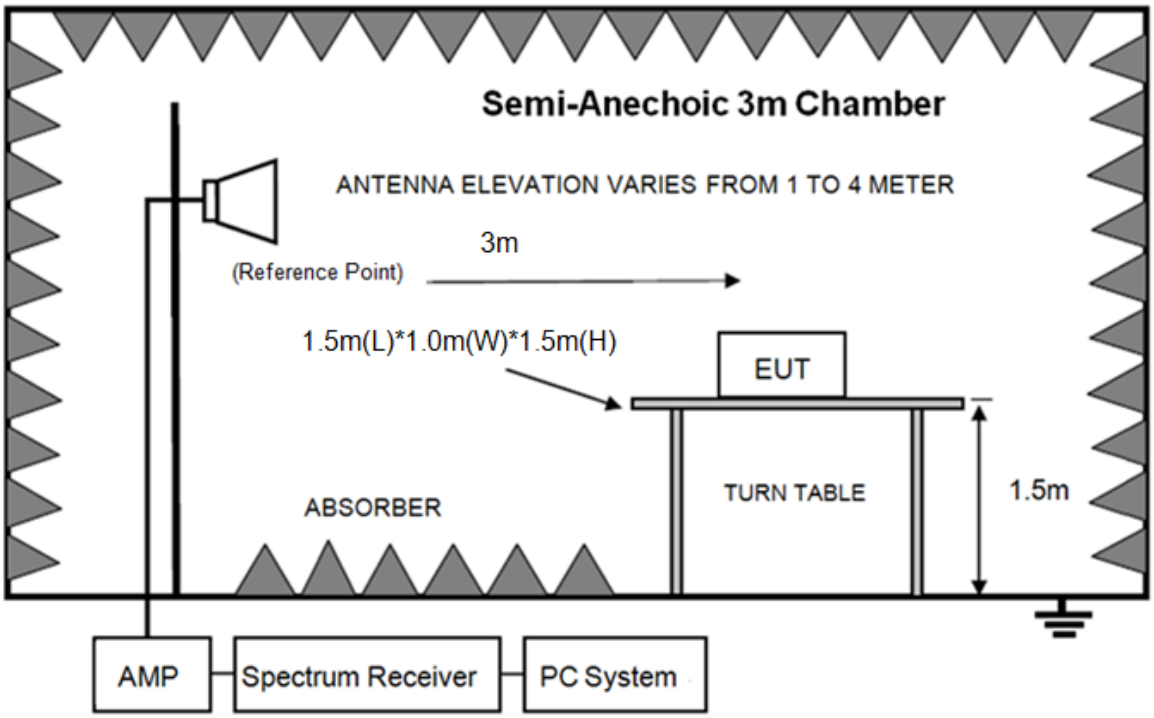


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	19034.77	5.42	36.19	8.05	49.66	74.00	-24.34	Peak	VERTICAL
2	19921.15	3.69	36.25	8.95	48.89	74.00	-25.11	Peak	VERTICAL
3	21439.71	4.15	36.34	8.72	49.21	74.00	-24.79	Peak	VERTICAL
4	23445.48	3.23	36.52	8.78	48.53	74.00	-25.47	Peak	VERTICAL
5	24773.51	3.76	36.22	9.48	49.46	74.00	-24.54	Peak	VERTICAL
6	25927.13	5.63	36.21	9.84	51.68	74.00	-22.32	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

6. Band Edge Compliance

6.1. Block diagram of test setup



6.2. Limit

All the lower and upper band-edges emissions appearing within 2310 MHz to 2390 MHz and 2483.5 MHz to 2500 MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

6.3. Test Procedure

Same with clause 5.3 except change investigated frequency range.

Remark: All restriction band have been tested, and only the worst case is shown in report.

6.4. Test result

Pass. (See below detailed test result)

Radiated Emission Test Result

Test Site : DDT 10m Chamber

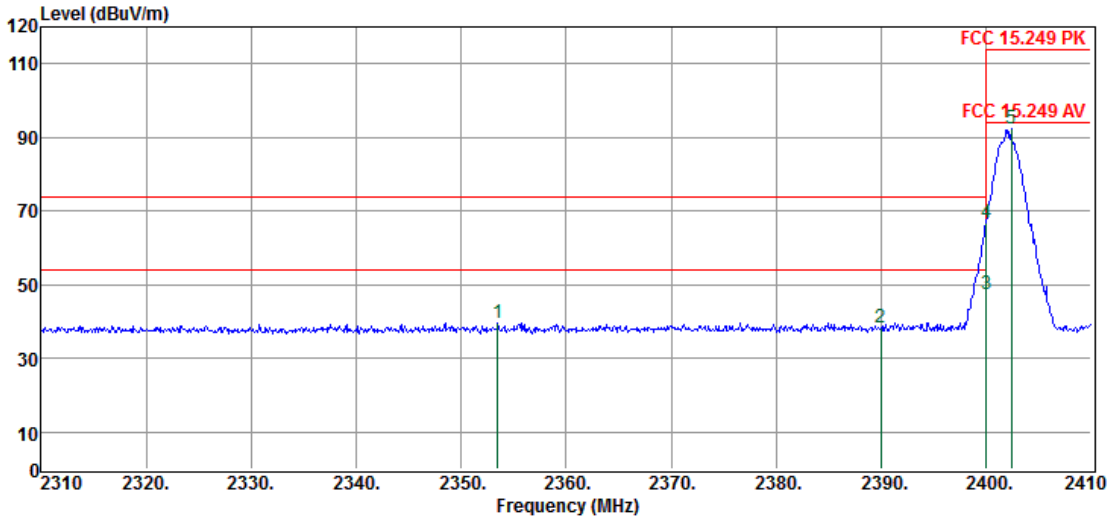
Test Date : 09-18-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2402MHz

Data: 87



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2353.500	62.70	31.46	56.10	1.39	39.45	74.00	-34.55	Peak	HORIZONTAL
2	2390.000	61.56	31.57	56.10	1.41	38.44	74.00	-35.56	Peak	HORIZONTAL
3	2400.000	70.40	31.60	56.10	1.41	47.31	54.00	-6.69	Average	HORIZONTAL
4	2400.000	89.96	31.60	56.10	1.41	66.87	74.00	-7.13	Peak	HORIZONTAL
5	2402.400	115.66	31.61	56.10	1.41	92.58	114.00	-21.42	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

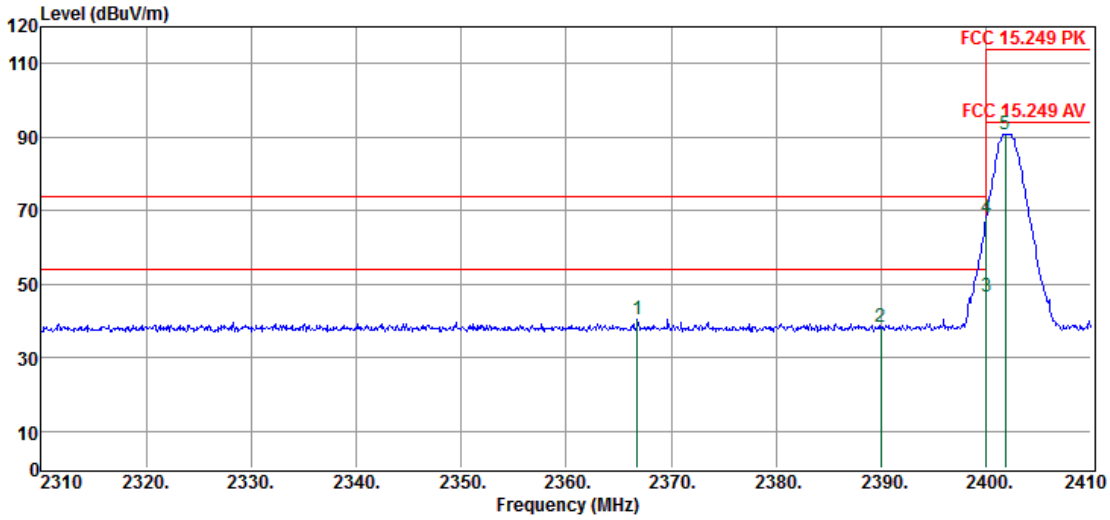
Test Date : 09-18-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2402MHz

Data: 88



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2366.800	63.64	31.50	56.10	1.40	40.44	74.00	-33.56	Peak	VERTICAL
2	2390.000	61.36	31.57	56.10	1.41	38.24	74.00	-35.76	Peak	VERTICAL
3	2400.000	69.74	31.60	56.10	1.41	46.65	54.00	-7.35	Average	VERTICAL
4	2400.000	91.01	31.60	56.10	1.41	67.92	74.00	-6.08	Peak	VERTICAL
5	2401.800	113.90	31.61	56.10	1.41	90.82	114.00	-23.18	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

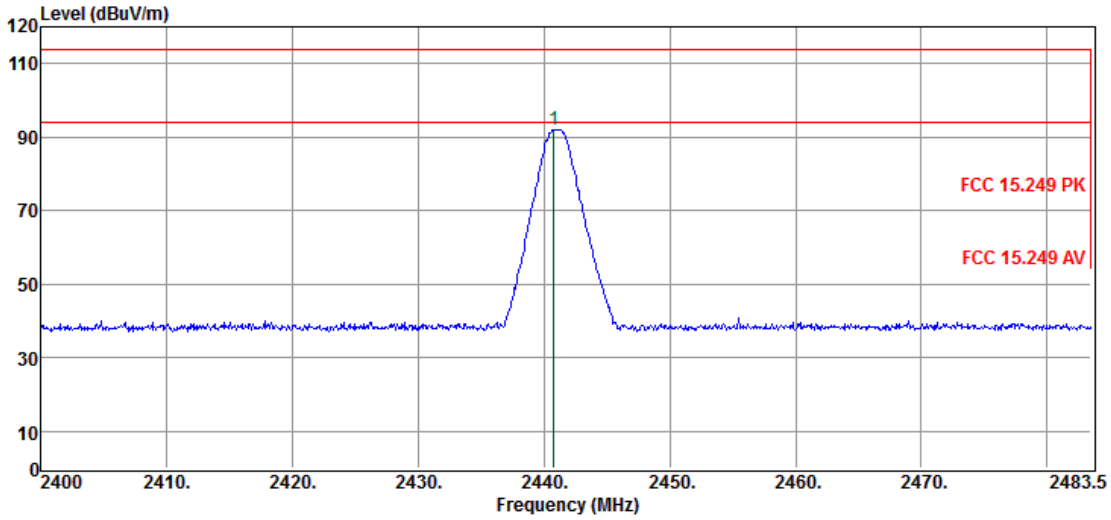
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2441MHz

Data: 90



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2440.748	115.03	31.72	56.10	1.43	92.08	114.00	-21.92	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

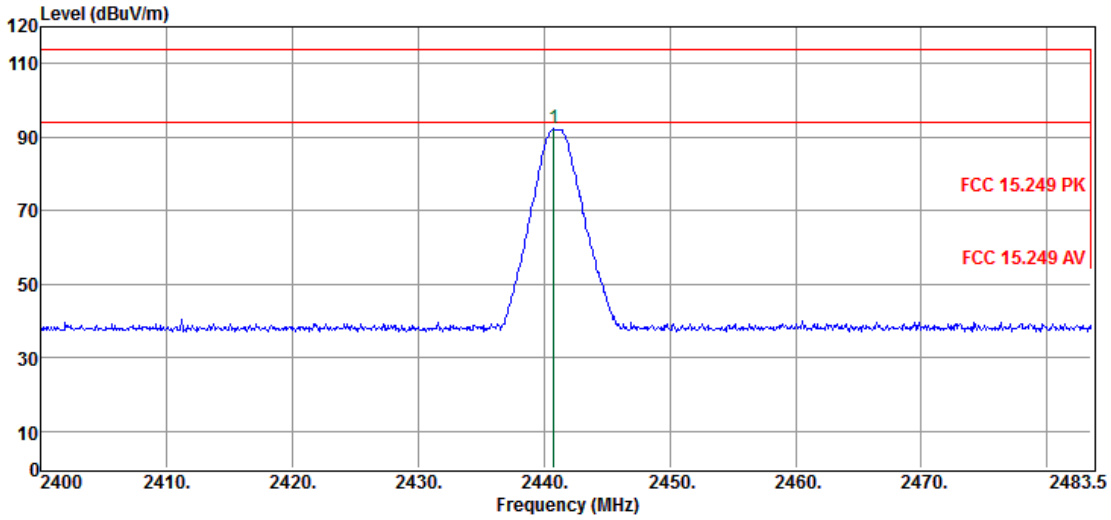
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2441MHz

Data: 91



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2440.748	115.14	31.72	56.10	1.43	92.19	114.00	-21.81	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

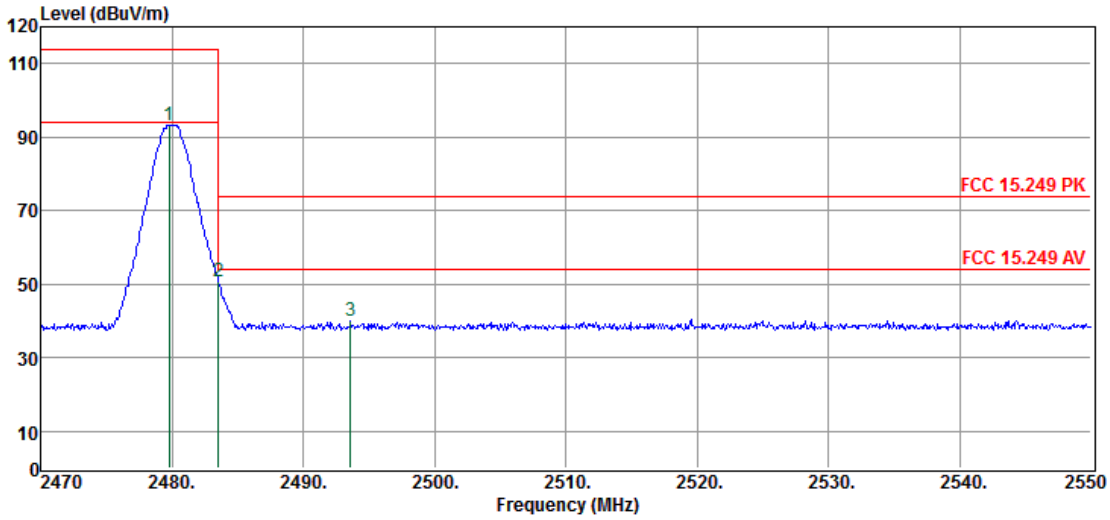
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 92



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2479.760	116.19	31.84	56.10	1.44	93.37	114.00	-20.63	Peak	HORIZONTAL
2	2483.500	73.35	31.85	56.10	1.44	50.54	74.00	-23.46	Peak	HORIZONTAL
3	2493.600	62.59	31.88	56.10	1.45	39.82	74.00	-34.18	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Radiated Emission Test Result

Test Site : DDT 10m Chamber

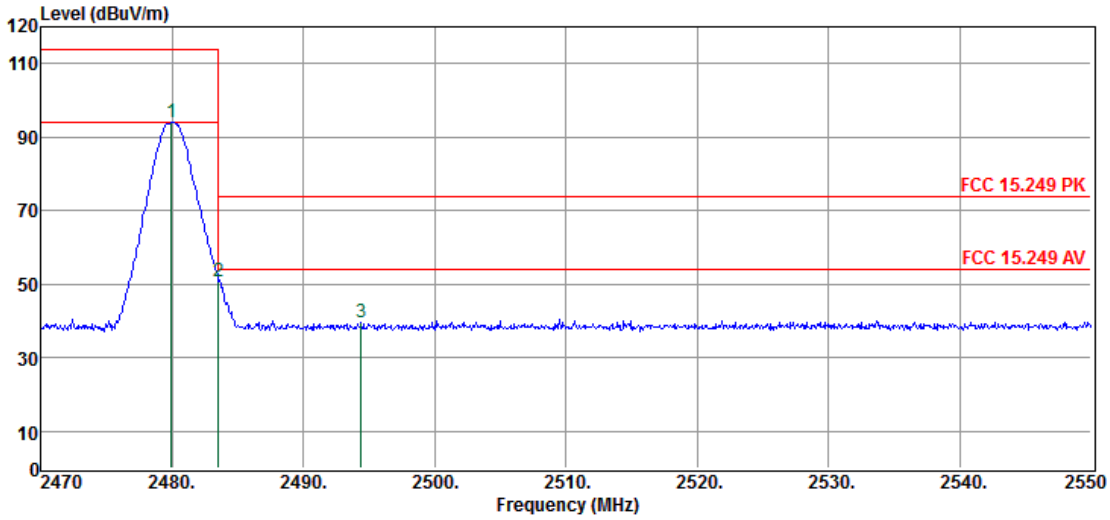
Test Date : 09-15-2026 **Tested By** : Sunny

EUT : electronic shelf label **Model Number** : Nebular Ultra-260WQ-N D3

Power Supply : Battery **Test Mode** : TX mode

Memo : 2.4G 2480MHz

Data: 93

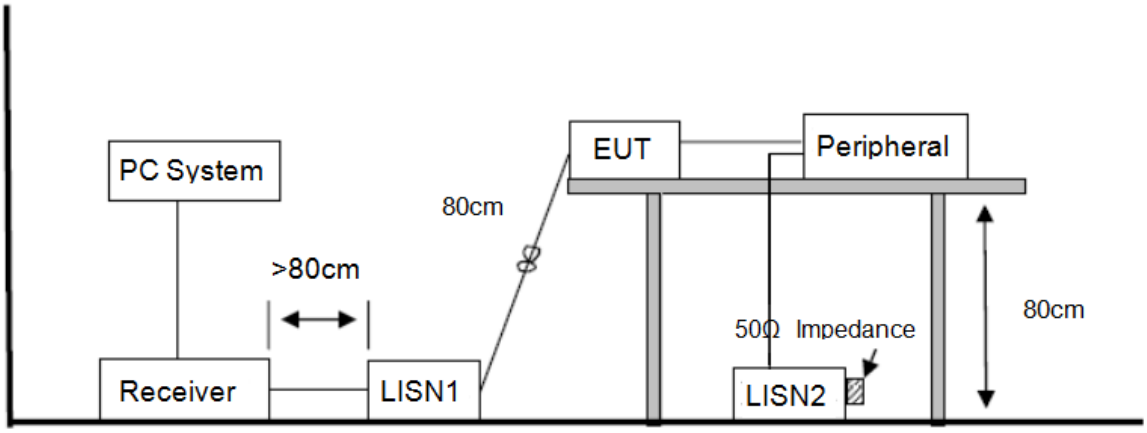


Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2479.920	116.73	31.84	56.10	1.44	93.91	114.00	-20.09	Peak	VERTICAL
2	2483.500	73.69	31.85	56.10	1.44	50.88	74.00	-23.12	Peak	VERTICAL
3	2494.400	62.50	31.88	56.10	1.45	39.73	74.00	-34.27	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

7. Power Line Conducted Emission

7.1. Block diagram of test setup



7.2. Power line conducted emission limits

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

7.3. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80 cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 3.0 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest

emission level in the preliminary test.
A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.
Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.
The test data of the worst-case condition(s) was recorded.
The bandwidth of test receiver is set at 9 kHz.

7.4. Test result

No Applicable.

8. Antenna Requirements

8.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

8.2. Result

The antenna used for this product is PCB antenna and no antenna other than that furnished by the responsible party shall be used with the device.

9. Test Setup Photograph

Please find the detailed in APPENDIXES-Test Setup.

10. Photos of the EUT

Please find the photos of EUT in APPENDIXES-Photos.

END OF REPORT