Certificate #7130.01

FCC Radio Test Report

FCC ID: 2AYMH-NP-200

This report concerns: Original Grant

Project No.	:	2409C159
Equipment	:	electronic shelf label
Brand Name	:	Hanshow
Test Model	:	Nebular Pro-200Q-N
Series Model	:	Nebular-200Y-N, Nebular Pro-200H-N
Applicant	:	HANSHOW TECHNOLOGY CO.,LTD.
Address	:	Building 1(IF podium building and 4F) and Building 5 (7F) in Jiaxing Photovolta High-tech Park, No. 1288 Kanghe Rd., Xiuzhou District, Jiaxing, Zhejiang China
Manufacturer	:	HANSHOW TECHNOLOGY CO.,LTD.
Address	:	Building 1(IF podium building and 4F) and Building 5 (7F) in Jiaxing Photovolta High-tech Park, No. 1288 Kanghe Rd., Xiuzhou District, Jiaxing, Zhejiang China
Factory	:	HANSHOW TECHNOLOGY CO.,LTD.
Address	:	Building 1(IF podium building and 4F) and Building 5 (7F) in Jiaxing Photovolta High-tech Park, No. 1288 Kanghe Rd., Xiuzhou District, Jiaxing, Zhejiang China
Date of Receipt	:	Sep. 18, 2024
Date of Test	:	Sep. 19, 2024 ~ Oct. 11, 2024
Issued Date	:	Oct. 18, 2024
Report Version	:	R00
Test Sample	:	Engineering Sample No.: SSL20240918222 for conducted, SSL20240918220 for radiated.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart C

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Prepared by : Antony Liang

Approved by : Chay Cai

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025: 2017 requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective. Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

Table of Contents Page

Table of Contents Page

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-1-2409C159	R00	Original Report.	Oct. 18, 2024	Valid

1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:
ANSI C63.10-2013

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart C				
Standard(s) Section	**Test Item**	**Test Result**	**Judgment**	**Remark**
15.207(a)	AC Power Line Conducted Emissions	APPENDIX A	N/A	------
15.209 15.249(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	------
15.215(c)	Bandwidth	APPENDIX E	PASS	------
15.203	Antenna Requirement	------	PASS	Note(2)

Note:

(1) “N/A” denotes test is not applicable to this device.

(2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.
BTL's Registration Number for FCC: 747969
BTL's Designation Number for FCC: CN1377

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

Test Site	Method	Measurement Frequency Range	Ant. H / V	*U*,(dB)
DG-CB03 (3m)	CISPR	30MHz ~ 200MHz	V	4.40
		30MHz ~ 200MHz	H	3.62
		200MHz ~ 1,000MHz	V	4.58
		200MHz ~ 1,000MHz	H	3.98

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB03 (3m)	CISPR	1GHz ~ 6GHz	4.08
		6GHz ~ 18GHz	4.62

Test Site	Method	Measurement Frequency Range	*U*,(dB)
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.36

B. Other Measurement:

Test Item	Uncertainty
Bandwidth	0.90 %
Temperature	0.8 °C
Humidity	2.2 %

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
Radiated Emissions-9 kHz to 30 MHz	24°C	46%	DC 3V	Hayden Chen	Sep. 24, 2024
Radiated Emissions-30 MHz to 1000 MHz	24°C	57%	DC 3V	Allen Tong	Sep. 21, 2024
Radiated Emissions-Above 1000 MHz	26°C	58%	DC 3V	Allen Tong	Sep. 29, 2024
	26°C	59%	DC 3V	Allen Tong	Sep. 30, 2024
Bandwidth	23°C	60%	DC 3V	Arvin Tong	Sep. 25, 2024

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	electronic shelf label
Brand Name	Hanshow
Test Model	Nebular Pro-200Q-N
Series Model	Nebular-200Y-N, Nebular Pro-200H-N
Model Difference(s)	Only differ in model name.
Power Source	Power supply or battery
Power Rating	DC 3 V
Operation Frequency	2402MHz~2480MHz
Modulation Technology	GFSK
Bit Rate of Transmitter	0.05 Mbps (This value is provided by the applicant.)
Max. Field Strength	84.47 dBuV/m(AVG) 98.10 dBuV/m(Peak)
Max. Output Power	-10.83 dBm (0.00008W) (AVG) 2.8 dBm (0.001905W) (Peak)

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the user's manual.

2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2402.0	41	2422.0	81	2442.0	121	2462.0
2	2402.5	42	2422.5	82	2442.5	122	2462.5
3	2403.0	43	2423.0	83	2443.0	123	2463.0
4	2403.5	44	2423.5	84	2443.5	124	2463.5
5	2404.0	45	2424.0	85	2444.0	125	2464.0
6	2404.5	46	2424.5	86	2444.5	126	2464.5
7	2405.0	47	2425.0	87	2445.0	127	2465.0
8	2405.5	48	2425.5	88	2445.5	128	2465.5
9	2406.0	49	2426.0	89	2446.0	129	2466.0
10	2406.5	50	2426.5	90	2446.5	130	2466.5
11	2407.0	51	2427.0	91	2447.0	131	2467.0
12	2407.5	52	2427.5	92	2447.5	132	2467.5
13	2408.0	53	2428.0	93	2448.0	133	2468.0
14	2408.5	54	2428.5	94	2448.5	134	2468.5
15	2409.0	55	2429.0	95	2449.0	135	2469.0
16	2409.5	56	2429.5	96	2449.5	136	2469.5
17	2410.0	57	2430.0	97	2450.0	137	2470.0
18	2410.5	58	2430.5	98	2450.5	138	2470.5
19	2411.0	59	2431.0	99	2451.0	139	2471.0
20	2411.5	60	2431.5	100	2451.5	140	2471.5
21	2412.0	61	2432.0	101	2452.0	141	2472.0
22	2412.5	62	2432.5	102	2452.5	142	2472.5
23	2413.0	63	2433.0	103	2453.0	143	2473.0
24	2413.5	64	2433.5	104	2453.5	144	2473.5
25	2414.0	65	2434.0	105	2454.0	145	2474.0
26	2414.5	66	2434.5	106	2454.5	146	2474.5
27	2415.0	67	2435.0	107	2455.0	147	2475.0
28	2415.5	68	2435.5	108	2455.5	148	2475.5
29	2416.0	69	2436.0	109	2456.0	149	2476.0
30	2416.5	70	2436.5	110	2456.5	150	2476.5
31	2417.0	71	2437.0	111	2457.0	151	2477.0
32	2417.5	72	2437.5	112	2457.5	152	2477.5
33	2418.0	73	2438.0	113	2458.0	153	2478.0
34	2418.5	74	2438.5	114	2458.5	154	2478.5
35	2419.0	75	2439.0	115	2459.0	155	2479.0
36	2419.5	76	2439.5	116	2459.5	156	2479.5
37	2420.0	77	2440.0	117	2460.0	157	2480.0
38	2420.5	78	2440.5	118	2460.5		
39	2421.0	79	2441.0	119	2461.0		
40	2421.5	80	2441.5	120	2461.5		

3. Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	HSEL4Q_01_90M_30	PCB	N/A	-0.7

3.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX Mode_Channel 01/79/157
Mode 2	TX Mode Channel 79

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 2	TX Mode Channel 79

Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX Mode_Channel 01/79/157

Bandwidth test	
Final Test Mode	Description
Mode 1	TX Mode_Channel 01/79/157

Note:

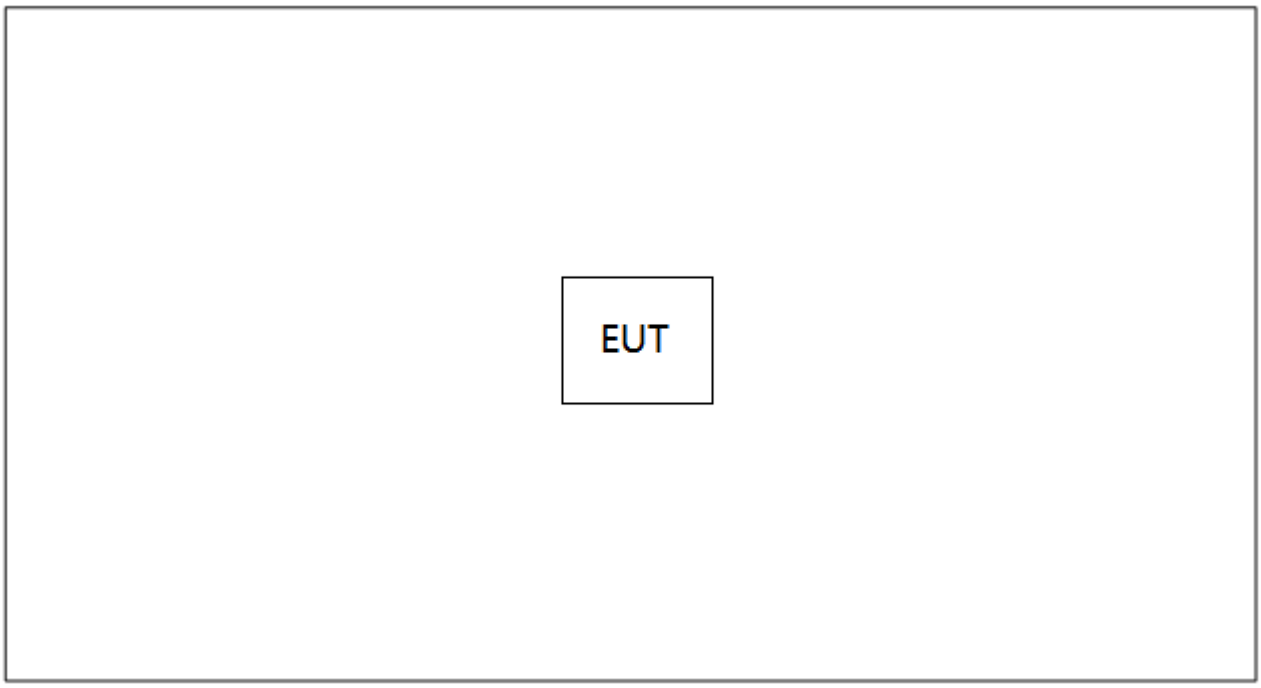
(1) For Radiated Emission Below 1GHz test, the channel 79 was found to be the worst case and recorded.

(2) For radiated emission above 1 GHz of Harmonic test: The polarization of Vertical and Horizontal are evaluated, the worst case is Vertical and recorded.

(3) For radiated emission above 1 GHz of Bandedge test: The polarization of Vertical and Horizontal are evaluated, the worst case is Horizontal and recorded.

(4) For radiated spurious emissions above 18 GHz test, only tested the worst case and recorded.

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.4 SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
-	-	-	-	-

3.5 CUSTOMER INFORMATION DESCRIPTION

1) The antenna gain is provided by the manufacturer.
2) Except for radiated emissions, the results of all test items include cable losses. All cable losses are provided by the testing laboratory.

4. AC POWER LINE CONDUCTED EMISSIONS

4.1 LIMIT

Frequency of Emission (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

Note:

(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

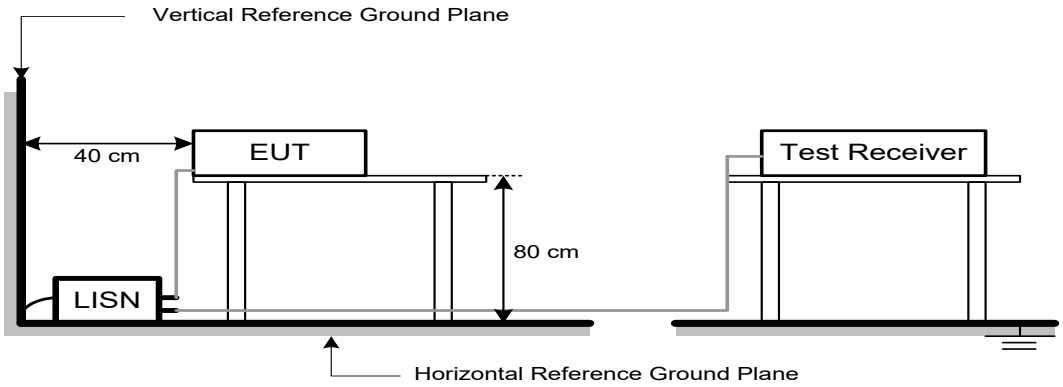
The following table is the setting of the receiver:

Receiver Parameters	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it), EUT was programmed to be in continuously transmitting data or hopping on mode.

4.6 TEST RESULTS

Please refer to the APPENDIX A.

Remark:

(1) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "*" marked in AVG Mode column of Interference Voltage Measured.

(2) Measuring frequency range from 150 kHz to 30 MHz.

5. RADIATED EMISSION TEST

5.1 LIMIT

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000 MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	Band edge/ Harmonic at 3m (dBµV/m)		Harmonic at 1m (dBµV/m)	
	Peak	Average	Peak	Average
Above 1000	74	54	83.5 (Note 4)	63.5 (Note 4)

LIMITS OF FIELD STRENGTH OF FUNDAMENTAL

Frequency (MHz)	(dBuV/m at 3 m)	
	Peak	Average
2400 to 2483.5	114	94

Note:

(1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.

(2) 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.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

(4)

$$FS_{\text{limit}} = FS_{\max} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

20log ($d_{limit}/d_{measure}$)=20log (3/1)=9.5 dB.
FS_{limit}: Harmonic at 3m Peak and Average limit.
FS_{max}: Harmonic at 1m Peak and Average Maximum value.
d_{limit}: Harmonic at 3m test distance.
$d_{measure}$: Harmonic Actual test distance.

5.2 TEST PROCEDURE

a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
b. The measuring distance of 3 m or 1m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1 GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1 GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

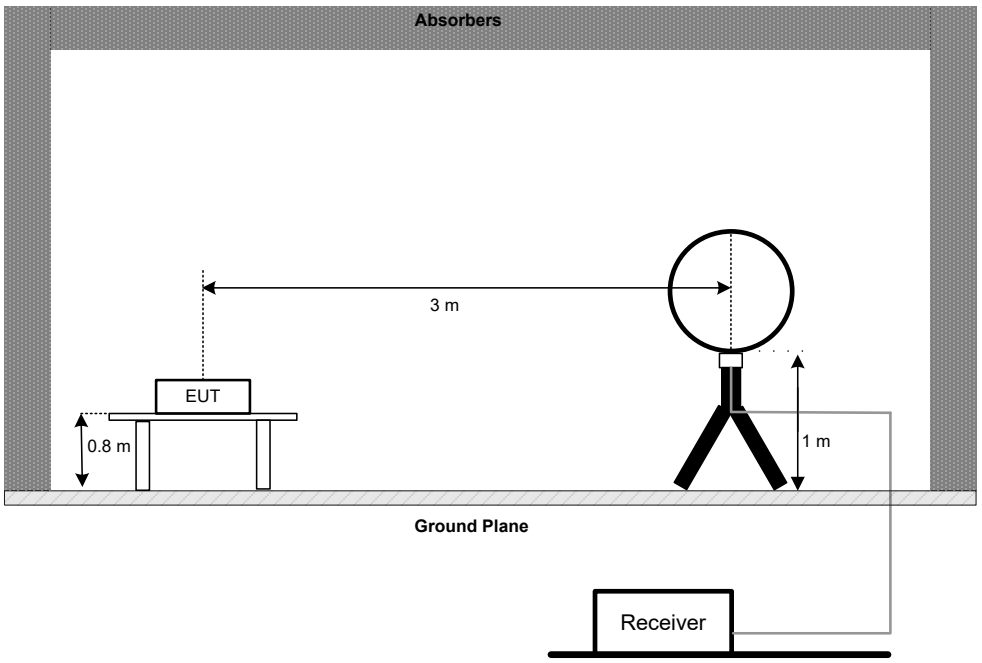
Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	Above 1GHz for PK/AVG detector

5.3 DEVIATION FROM TEST STANDARD

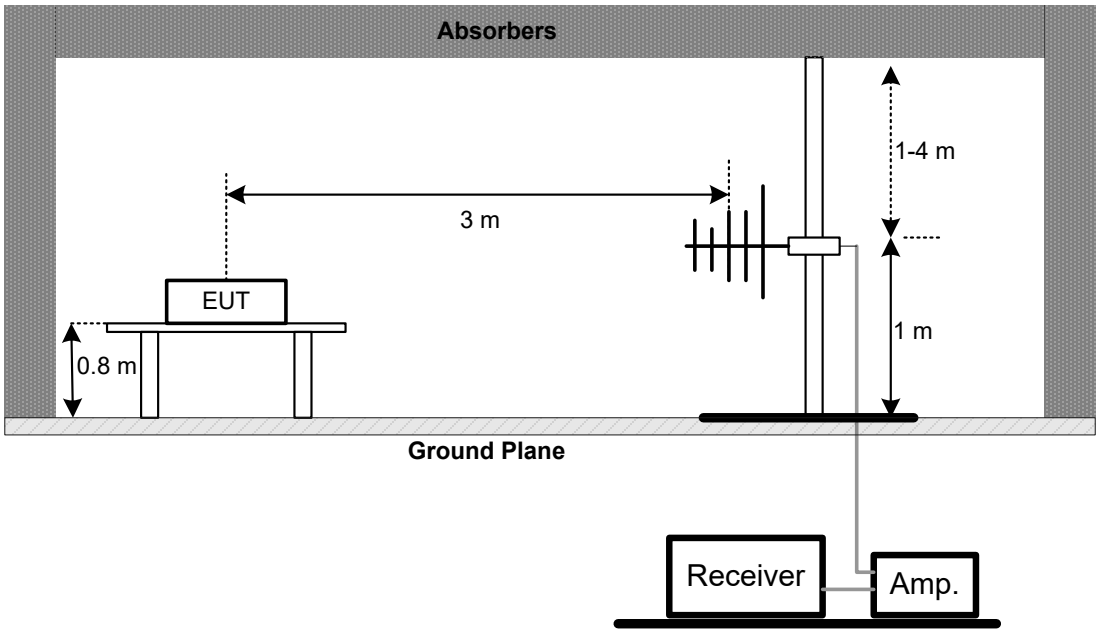
No deviation

5.4 TEST SETUP

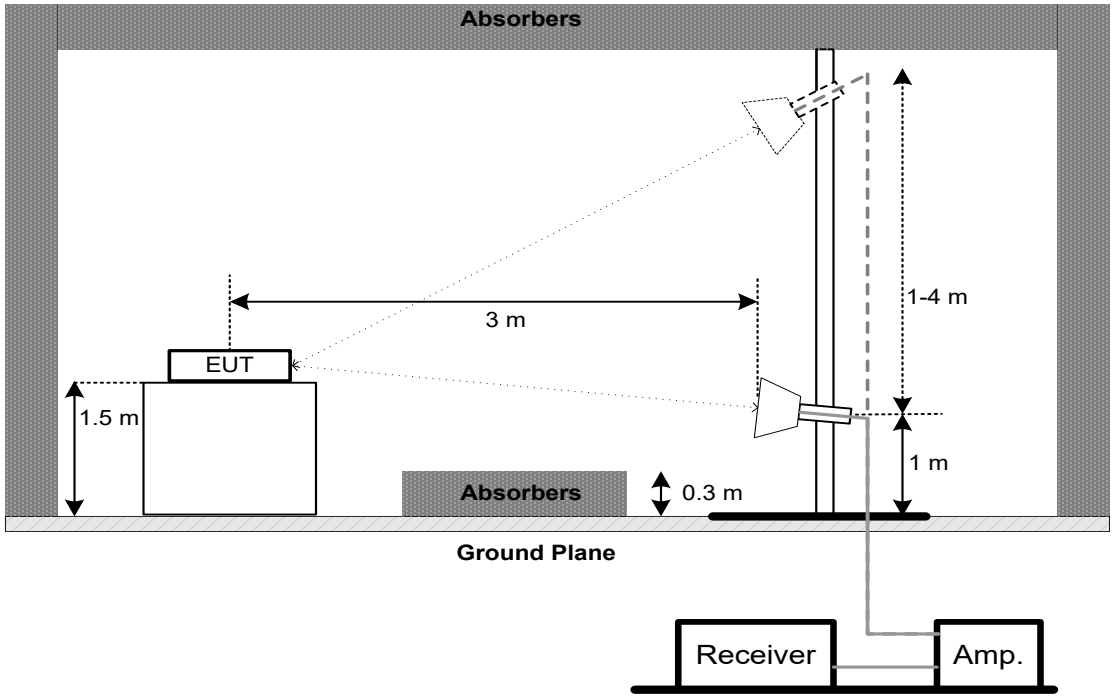
9 kHz-30 MHz



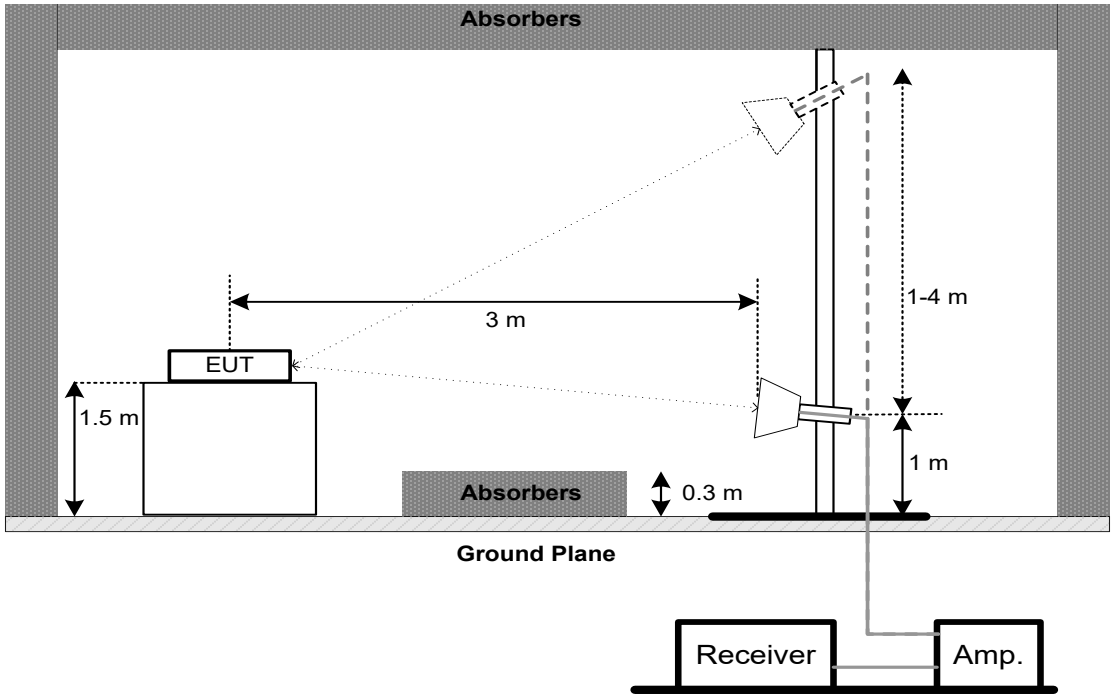
30 MHz to 1 GHz



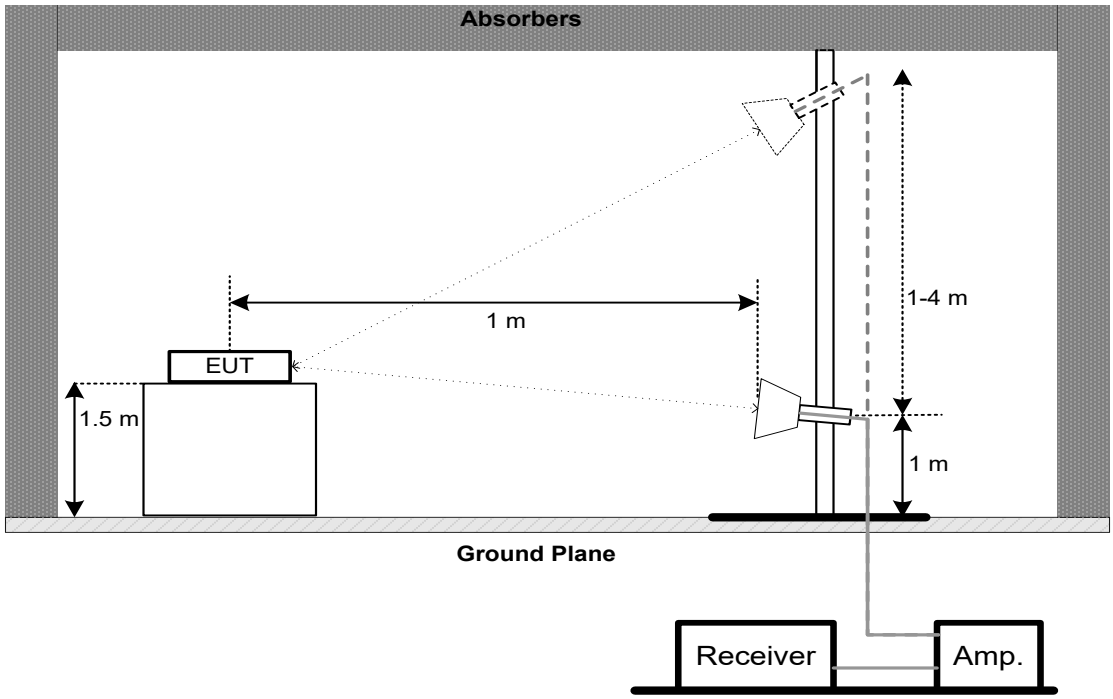
Above 1 GHz
Band edge



Harmonic(1 GHz to 18 GHz)



Harmonic(18 GHz to 26.5 GHz)



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT - 9 kHz TO 30 MHz

Please refer to the APPENDIX B.

Remark:

(1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(2) Limit line = specific limits (dBuV) + distance extrapolation factor.

5.7 TEST RESULT - 30 MHz TO 1000 MHz

Please refer to the APPENDIX C.

5.8 TEST RESULT - ABOVE 1000 MHz

Please refer to the APPENDIX D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

6. BANDWIDTH TEST

6.1 LIMIT

Section	Test Item	Limit
15.215(c)	20 dB Bandwidth	-

6.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

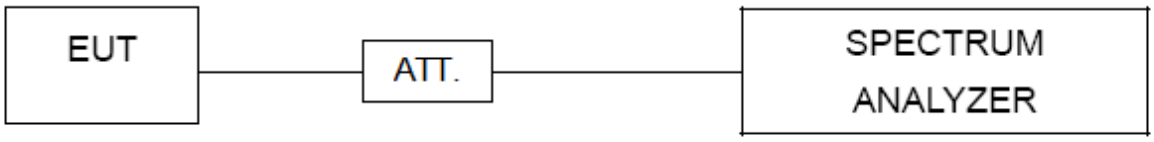
b. The following table is the setting of the spectrum analyzer.

Spectrum Parameters	Setting
Span Frequency	Between 2 times and 5 times the BW
RBW	Range of 1% to 5% of the BW
VBW	Approximately 3 times RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX E.

7. MEASUREMENT INSTRUMENTS LIST

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024
3	Cable	N/A	RW2350-3.8A-NMB M-1.5M	N/A	Jun. 09, 2025
4	Cable	N/A	LMR400-NMNM-8 M	N/A	Sep. 09, 2025
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	966 Chamber room	ETS	9*6*6	N/A	May 16, 2025
7	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	1462	Dec. 13, 2024
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06009	Dec. 13, 2024
3	Preamplifier	EMC INSTRUMENT	EMC001330	980998	Nov. 17, 2024
4	Cable	RegalWay	LMR400-NMNM-12 .5m	N/A	Jun. 06, 2025
5	Cable	RegalWay	LMR400-NMNM-3 m	N/A	Jun. 06, 2025
6	Cable	RegalWay	LMR400-NMNM-0. 5m	N/A	Jun. 06, 2025
7	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
8	Positioning Controller	MF	MF-7802	N/A	N/A
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chamber room	CM	9*6*6	N/A	May 16, 2025

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
2	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024
3	Double Ridged Guide Antenna	ETS	3115	75789	Jun. 15, 2025
4	Cable	RegalWay	RWLP50-4.0A-NMR ASM-2.5M	N/A	Jul. 03, 2025
5	Cable	RegalWay	RWLP50-4.0A-NMR ASMRA-0.8M	N/A	Jul. 03, 2025
6	966 Chamber room	CM	9*6*6	N/A	May 19, 2025
7	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
8	Filter	STI	STI15-9912	N/A	May 31, 2025
9	Positioning Controller	MF	MF-7802	N/A	N/A
10	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	May 31, 2025
2	Measurement Software	BTL	BTL Conducted Test	N/A	N/A
3	Isolation attenuator	Z-Link	ASMA-16-18-2W	N/A	N/A

Remark "N/A" denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

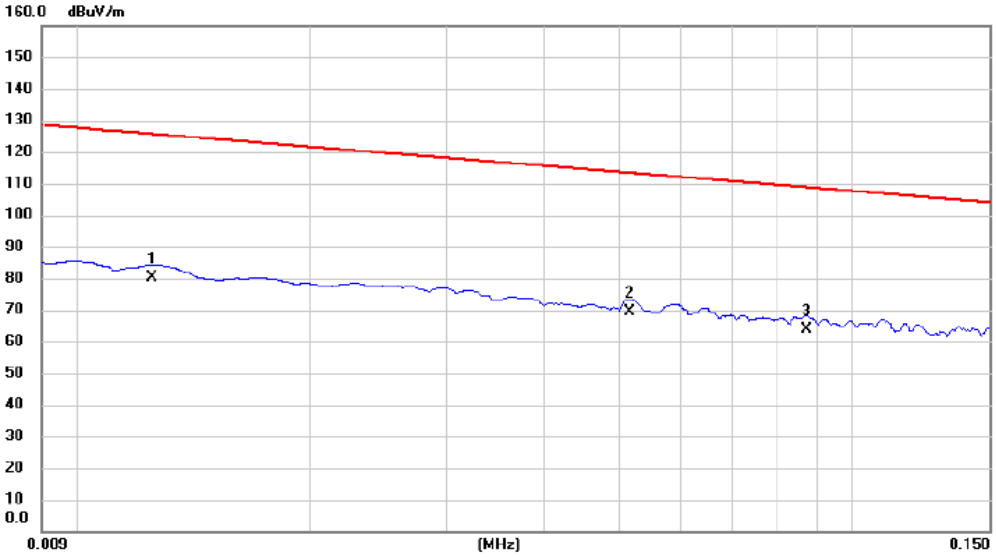
APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode: N/A

Note: “N/A” denotes test is not applicable to this device.

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

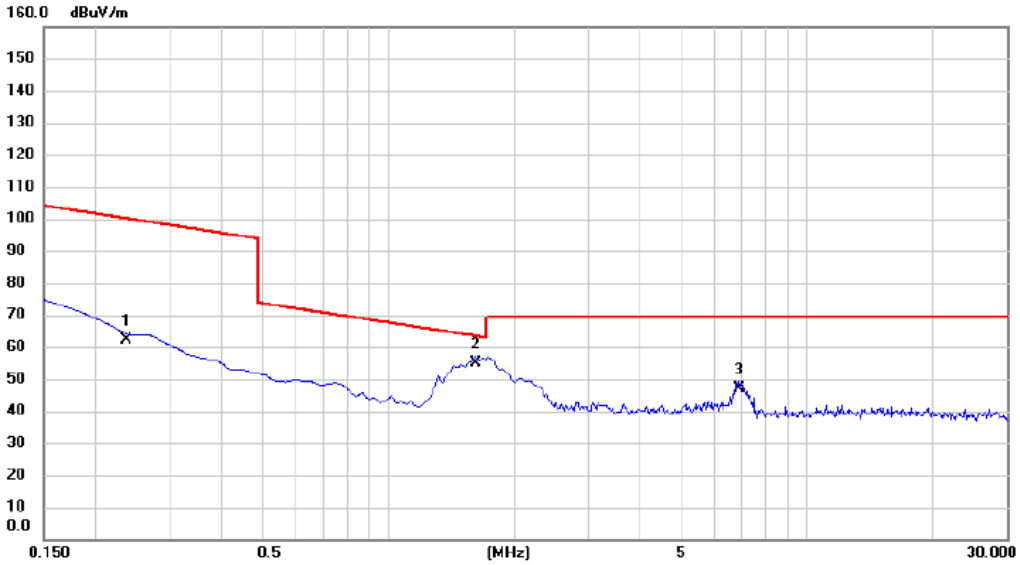
Test Mode	TX Mode Channel 79	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0125	59.46	20.60	80.06	125.67	-45.61	AVG	
2	*	0.0516	48.13	21.24	69.37	113.35	-43.98	AVG	
3		0.0871	42.56	21.33	63.89	108.80	-44.91	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

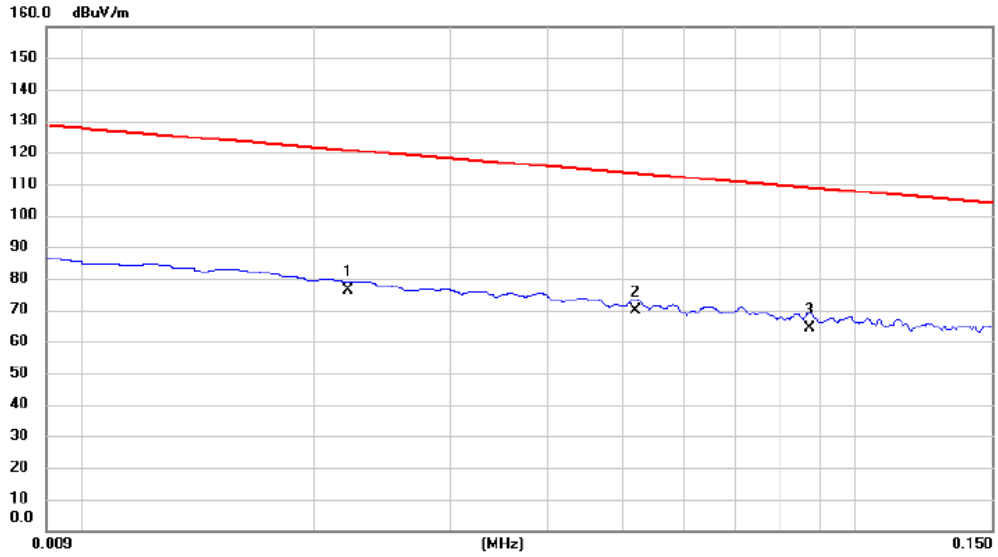
Test Mode	TX Mode Channel 79	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2366	41.03	21.14	62.17	100.13	-37.96	AVG	
2	*	1.6126	33.89	21.14	55.03	63.45	-8.42	QP	
3		6.8961	25.84	21.17	47.01	69.54	-22.53	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

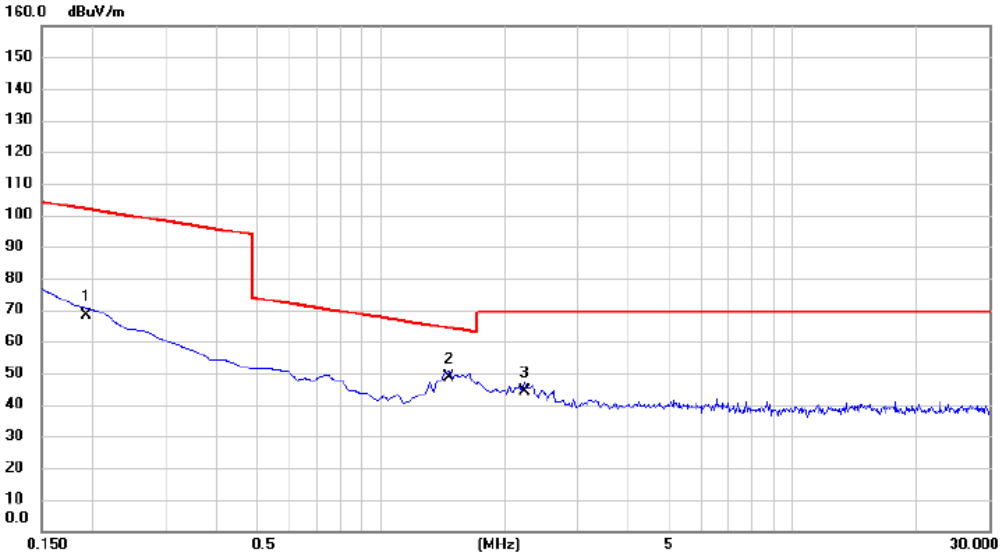
Test Mode	TX Mode Channel 79	Polarization	Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0221	55.31	20.89	76.20	120.72	-44.52	AVG	
2	*	0.0520	48.69	21.24	69.93	113.28	-43.35	AVG	
3		0.0873	43.03	21.33	64.36	108.78	-44.42	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX Mode Channel 79	Polarization	Ant 90°

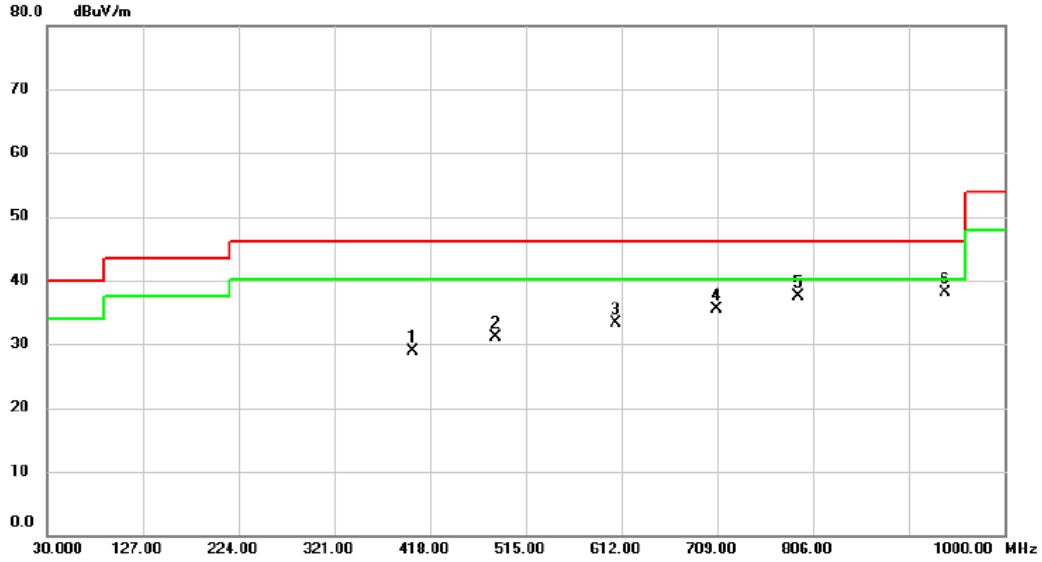


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.1934	47.03	21.20	68.23	101.88	-33.65	AVG	
2	*	1.4633	27.31	21.14	48.45	64.30	-15.85	QP	
3		2.2395	23.18	21.10	44.28	69.54	-25.26	QP	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

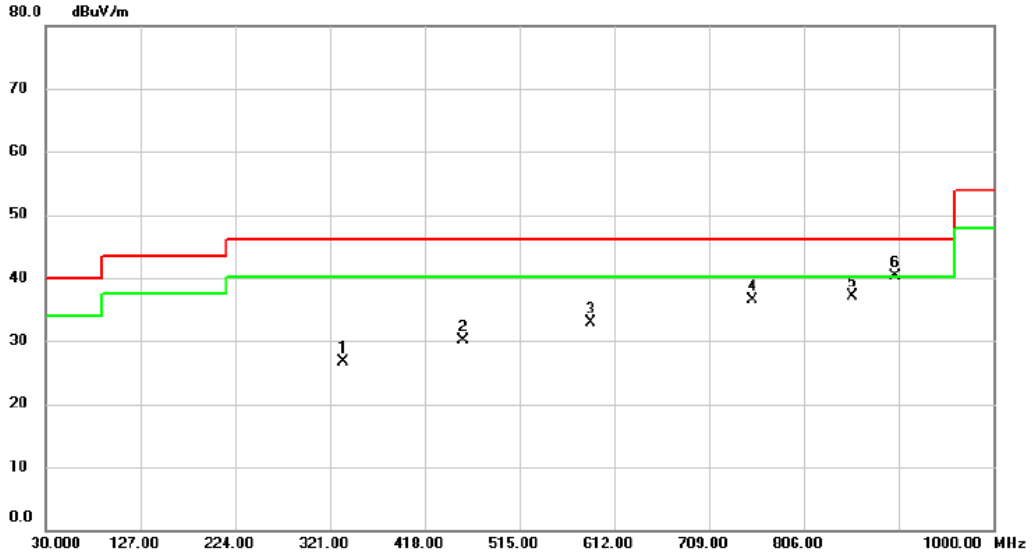
Test Mode	TX Mode Channel 79	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		401.025	36.89	-8.02	28.87	46.02	-17.15	peak	
2		484.930	37.35	-6.24	31.11	46.02	-14.91	peak	
3		606.180	36.71	-3.50	33.21	46.02	-12.81	peak	
4		708.515	37.68	-2.09	35.59	46.02	-10.43	peak	
5		790.480	38.63	-1.22	37.41	46.02	-8.61	peak	
6	*	939.375	37.60	0.50	38.10	46.02	-7.92	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX Mode Channel 79	Polarization	Horizontal

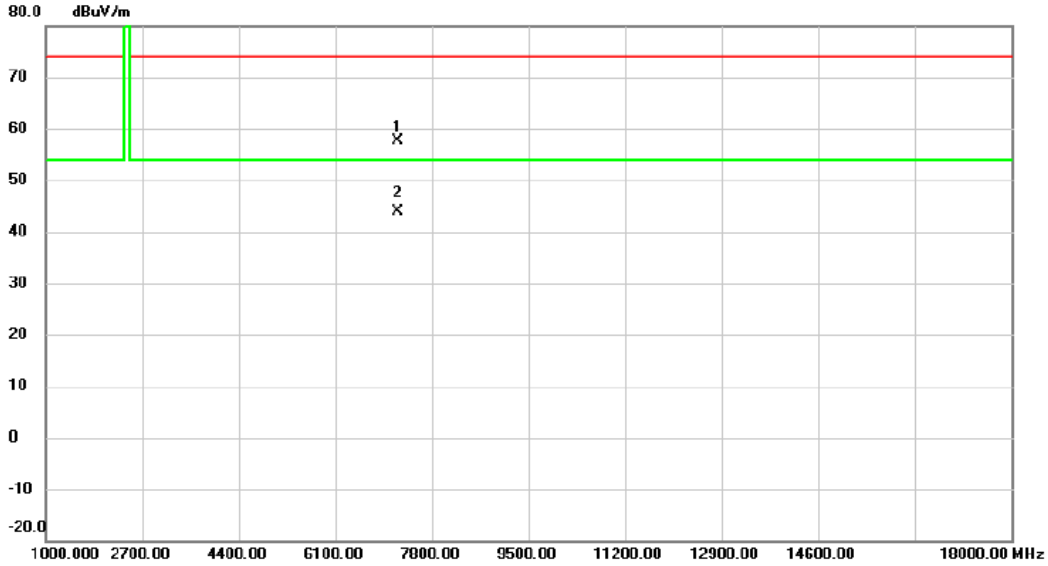


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		334.580	36.31	-9.61	26.70	46.02	-19.32	peak	
2		457.770	36.70	-6.65	30.05	46.02	-15.97	peak	
3		588.235	36.78	-3.93	32.85	46.02	-13.17	peak	
4		753.135	37.48	-1.07	36.41	46.02	-9.61	peak	
5		855.470	37.50	-0.30	37.20	46.02	-8.82	peak	
6	*	899.605	40.06	0.30	40.36	46.02	-5.66	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

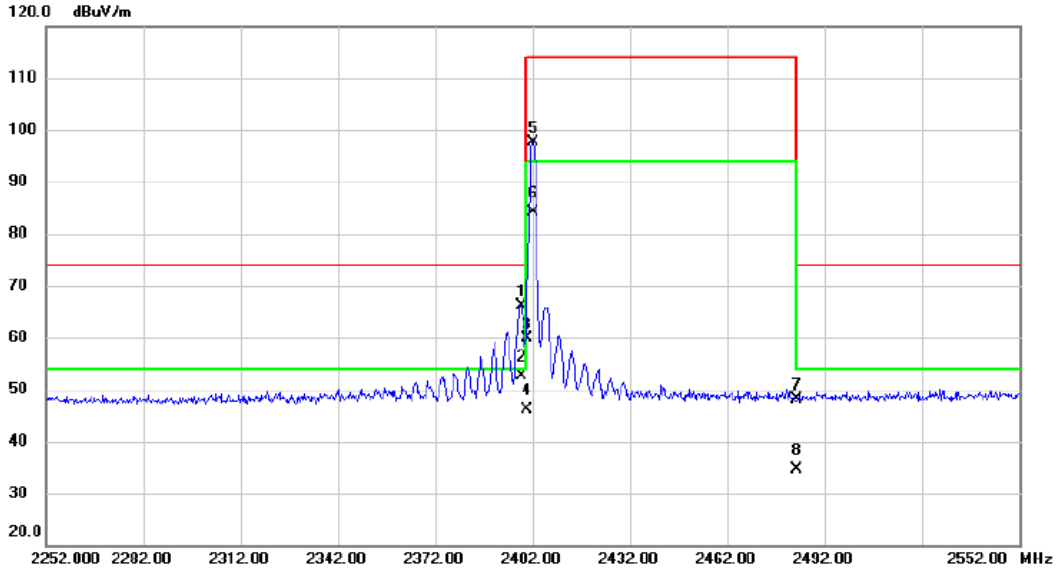
Test Mode	TX 2402 MHz _CH01	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7206.780	49.29	8.29	57.58	74.00	-16.42	peak	
2	*	7206.780	35.51	8.29	43.80	54.00	-10.20	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

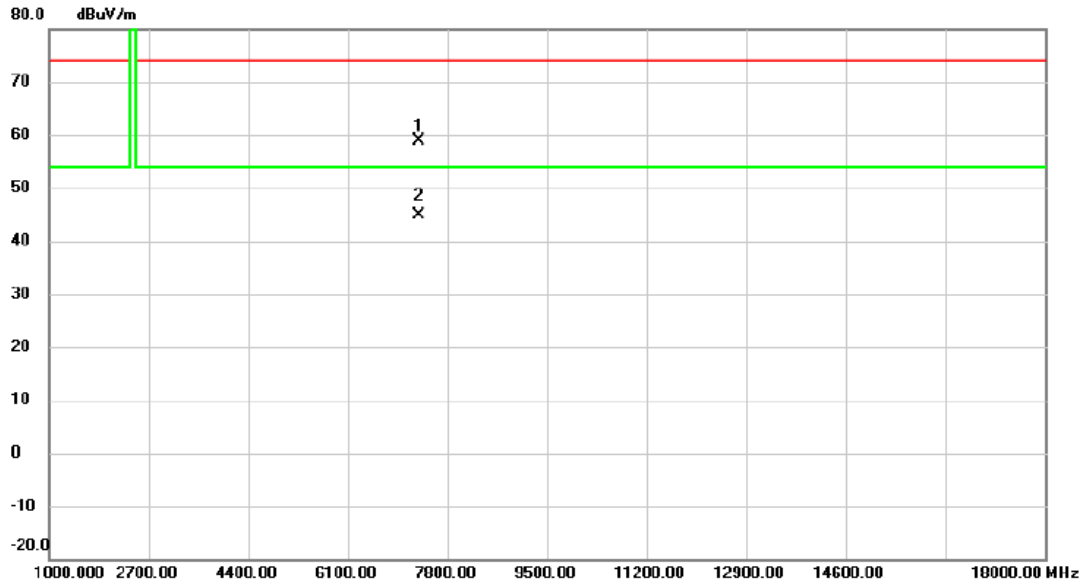
Test Mode	TX 2402 MHz _CH01	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2398.400	58.53	7.71	66.24	74.00	-7.76	peak	
2	*	2398.400	44.90	7.71	52.61	54.00	-1.39	AVG	
3		2400.000	52.06	7.71	59.77	74.00	-14.23	peak	
4		2400.000	38.43	7.71	46.14	54.00	-7.86	AVG	
5		2402.150	89.98	7.71	97.69	114.00	-16.31	peak	
6		2402.150	76.35	7.71	84.06	94.00	-9.94	AVG	
7		2483.500	40.40	7.81	48.21	74.00	-25.79	peak	
8		2483.500	26.77	7.81	34.58	54.00	-19.42	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

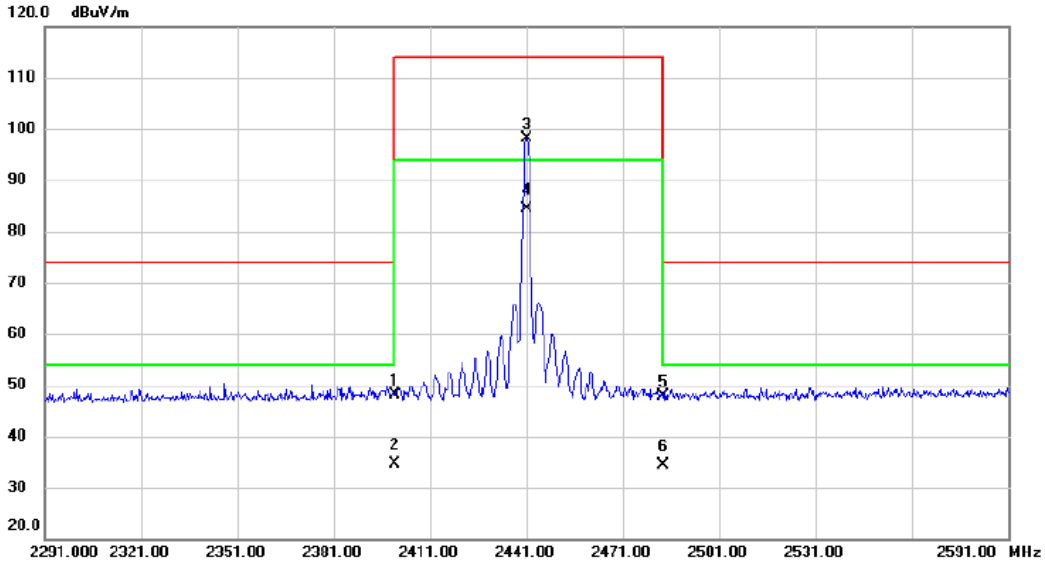
Test Mode	TX 2441 MHz _CH79	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7322.310	50.68	8.31	58.99	74.00	-15.01	peak	
2	*	7322.310	36.60	8.31	44.91	54.00	-9.09	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

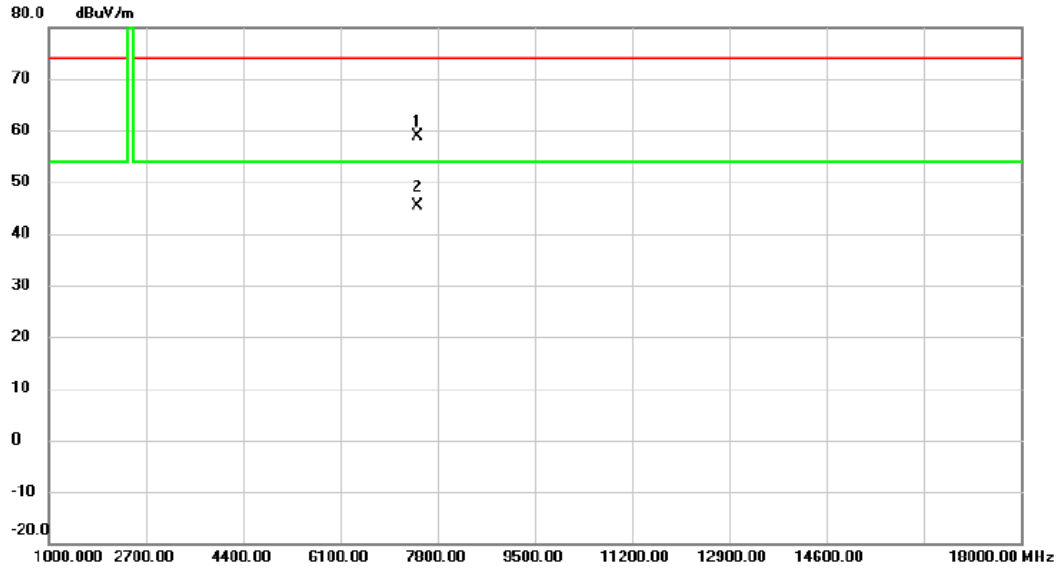
Test Mode	TX 2441 MHz _CH79	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2400.000	40.48	7.71	48.19	74.00	-25.81	peak	
2		2400.000	26.85	7.71	34.56	54.00	-19.44	AVG	
3		2441.300	90.34	7.76	98.10	114.00	-15.90	peak	
4	*	2441.300	76.71	7.76	84.47	94.00	-9.53	AVG	
5		2483.500	40.09	7.81	47.90	74.00	-26.10	peak	
6		2483.500	26.46	7.81	34.27	54.00	-19.73	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

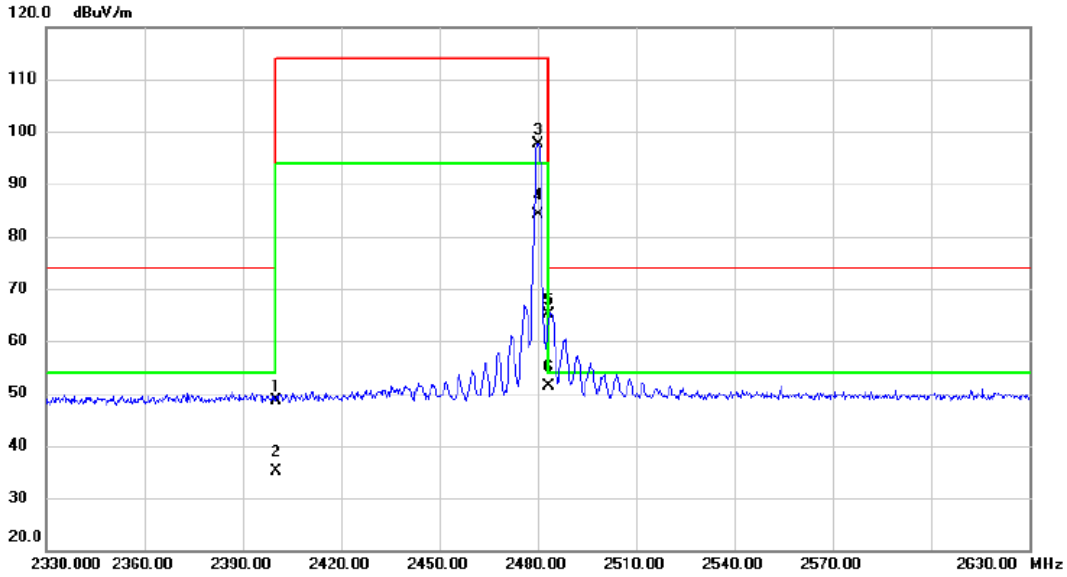
Test Mode	TX 2480 MHz _CH157	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7440.870	50.60	8.31	58.91	74.00	-15.09	peak	
2	*	7440.870	36.97	8.31	45.28	54.00	-8.72	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH157	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2400.000	40.96	7.71	48.67	74.00	-25.33	peak	
2		2400.000	27.33	7.71	35.04	54.00	-18.96	AVG	
3		2480.000	89.94	7.81	97.75	114.00	-16.25	peak	
4		2480.000	76.31	7.81	84.12	94.00	-9.88	AVG	
5		2483.500	57.29	7.81	65.10	74.00	-8.90	peak	
6	*	2483.500	43.66	7.81	51.47	54.00	-2.53	AVG	

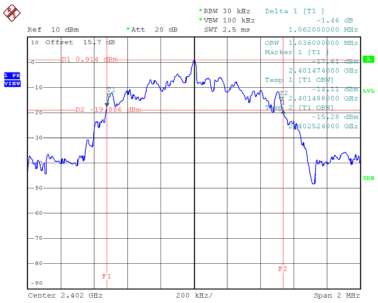
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

Test Mode	TX Mode

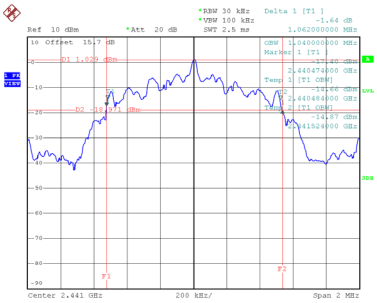
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	Result
01	2402	1.062	Complies
79	2441	1.062	Complies
157	2480	1.054	Complies

CH01



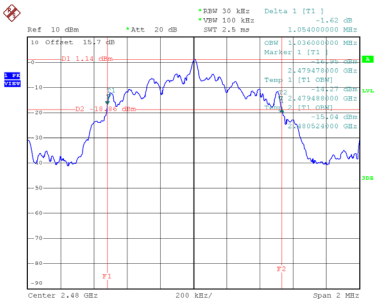
Date: 25.SEP.2024 18:43:19

CH56



Date: 25.SEP.2024 18:45:36

CH111



Date: 25.SEP.2024 18:50:29

End of Test Report