

TEST REPORT

of

FCC Part 15 Subpart C §15.209

FCC ID: NYOMBECWPC2606

Equipment Under Test : UNIT ASSY-WIRELESS CHARGING
Model Name : MBECWPC2606
Variant Model Name(s) : -
Applicant : MOBASE ELECTRONICS CO., LTD.
Manufacturer : MOBASE ELECTRONICS CO., LTD.
Date of Receipt : 2025.11.05
Date of Test(s) : 2025.12.05 ~ 2026.04.01
Date of Issue : 2026.04.09

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

- 1) The results of this test report are effective only to the items tested.
- 2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
- 3) This test report cannot be reproduced, except in full, without prior written permission of the Company.
- 4) The data marked ※ in this report was provided by the customer and may affect the validity of the test results.

We are responsible for all the information of this test report except for the data(※) provided by the customer.

Tested by:



Ethan Lim

Technical
Manager:



Jinhyoung Cho

SGS Korea Co., Ltd. Gunpo Laboratory

INDEX

Table of Contents

1. General Information -----	3
2. Field Strength of Fundamental and Spurious Emission -----	7
3. 20 dB Bandwidth -----	26

1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

Phone No. : +82 31 688 0901

Fax No. : +82 31 688 0921

1.2. Details of Applicant

Applicant : MOBASE ELECTRONICS CO., LTD.

Address : 100, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do,
Korea (Republic Of), 16648

Contact Person : Ryu, Hee-tack

Phone No. : +82 31 8090 2611

1.3. Details of Manufacturer

Company : Same as applicant

Address : Same as applicant

1.4. Description of EUT

Kind of Product	UNIT ASSY-WIRELESS CHARGING
Model Name	MBECWPC2606
Serial Number	001
Power Supply	DC 12 V
Operation Mode	5 W, 7.5 W, 15 W
Frequency Range	128 kHz
Antenna Type	Coil Antenna
Antenna Part Number	001
H/W Version	1.0
S/W Version	1.0

1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	R&S	SMBV100A	259067	06/24/2025	Annual	06/24/2026
DC Power Supply	R&S	HMP2020	102130	05/09/2025	Annual	05/09/2026
Spectrum Analyzer	R&S	FSV30	103211	02/20/2026	Annual	02/20/2027
Loop Antenna	Schwarzbeck Mess-Elektronik	HFRAE 5161	5161-028	11/14/2025	Annual	11/14/2026
Amplifier	H.P.	8447F	2944A03909	08/07/2025	Annual	08/07/2026
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	10/01/2025	Biennial	10/01/2027
Bilog Antenna	Schwarzbeck Mess-Elektronik	VULB 9163	01126	03/09/2026	Biennial	03/09/2028
EMI Test Receiver	R&S	ESU26	100109	01/21/2026	Annual	01/21/2027
Turn Table	Innco systems GmbH	DS 1200 S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/3 8330516/L	N.C.R.	N/A	N.C.R.
Antenna Mast	Innco systems GmbH	MA4640-XP-ET	MA4640/536/3 8330516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-5 m	TPC24021900 04	10/13/2025	Semi-annual	04/13/2026
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-10 m	TPC24021900 01	10/13/2025	Semi-annual	04/13/2026
Coaxial Cable	RADIAL	TESTPRO 3	182287	10/10/2025	Semi-annual	04/10/2026

► Support Equipment

Description	Manufacturer	Model	FCC ID
SAMSUNG Mobile Phone	Samsung Electronics Co., Ltd.	SM-N981U	A3LSMN981U
Apple Mobile Phone	Apple Inc.	A2101	BCG-E3234A

Note;

- For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15 Subpart C		
Section	Test Item(s)	Result
15.209	Radiated Emission, Spurious Emission and Field Strength of Fundamental	Pass
2.1049	20 dB Bandwidth	Pass
15.207	AC Power Line Conducted Emission	N/A ¹⁾

Note;

1) The AC power line test was not performed because the EUT use battery power for operation and which do not operate from the AC power lines.

1.7. Test Procedure(s)

The measurement procedures described in the American National Standard of Procedure for Compliance Testing of unlicensed Wireless Devices (ANSI C63.10-2020).

1.8. Sample Calculation

Where relevant, the following sample calculation is provided:

Field strength level (dB μ V/m) = Measured level (dB μ V) + Antenna factor (dB/m) + Cable loss (dB) + (AMP (dB))

1.9. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL006849	2026.04.09	Initial

1.10. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty	
20 dB Bandwidth	0.01 kHz	
Radiated Emission, 9 kHz to 30 MHz	H	3.60 dB
	V	3.60 dB
Radiated Emission, below 1 GHz	H	5.50 dB
	V	5.10 dB

All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicate a 95 % level of confidence.

1.11. Worst Case of Test Configurations

Charging mode With client device		Mode		Description
Model	FCC ID			
SM-N981U	A3LSMN981U	5 W, 15 W	128 kHz	1 % of battery 50 % of battery 99 % of battery
A2101	BCG-E3234A	7.5W	128 kHz	

Mode	Battery	Frequency (kHz)	Detect Mode	Reading (dBμV)
5 W	1 %	128	Average	69.30
	50 %			68.00
	99 %			67.60
7.5 W	1 %	128	Average	64.20
	50 %			62.80
	99 %			62.80
15 W	1 %	128	Average	69.80
	50 %			66.00
	99 %			66.60

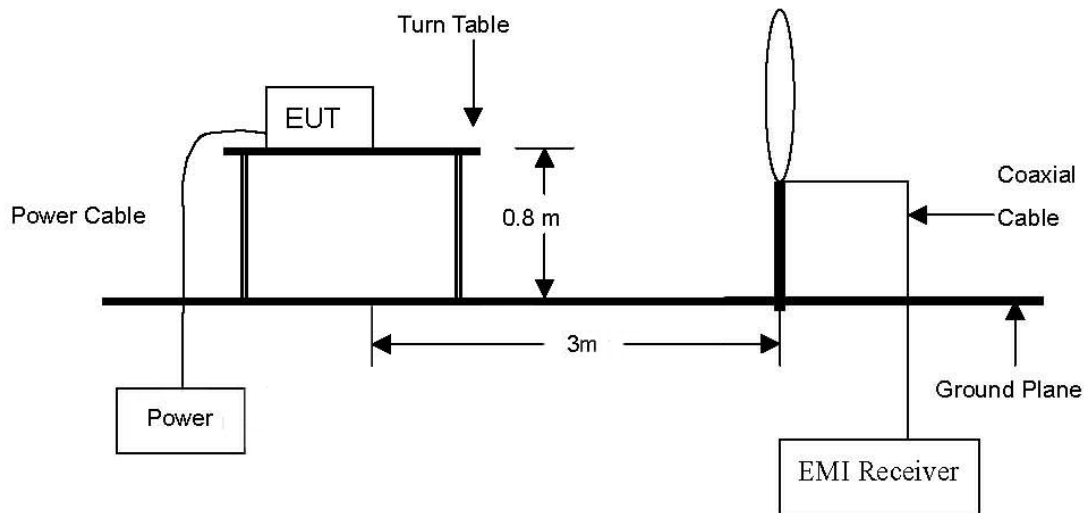
Note;

- EUT was investigated with client device under normal charging condition as above then worst value was only reported.

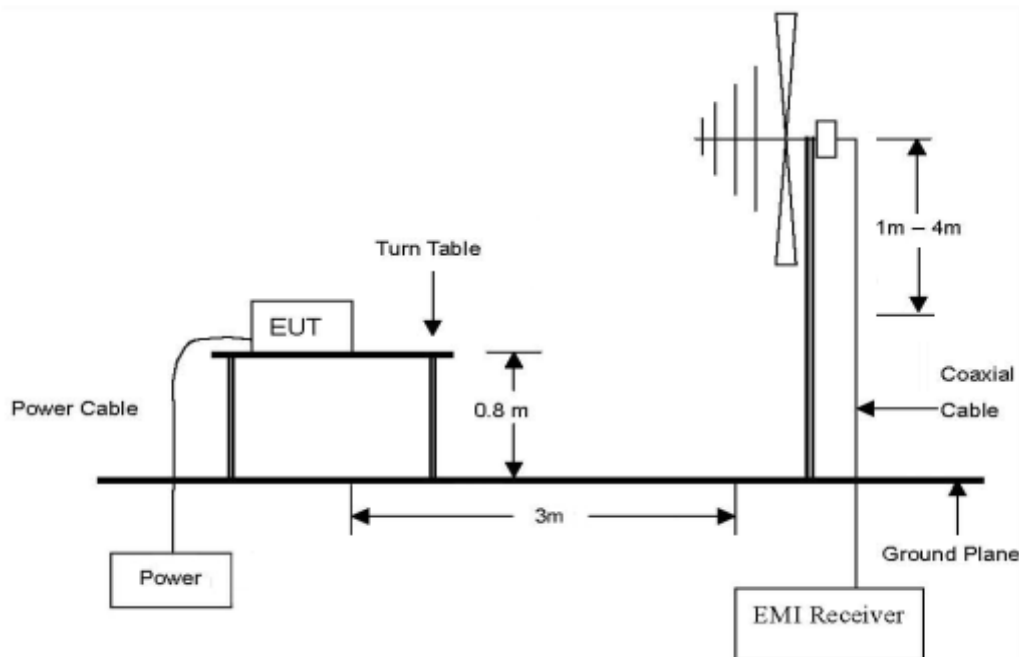
2. Field Strength of Fundamental and Spurious Emission

2.1. Test Setup

The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz.



2.2. Limit

2.2.1. Radiated emission limits, general requirements

According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meter)
0.009-0.490	2 400/F(kHz)	300
0.490-1.705	24 000/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

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. however, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241

According to §15.209(d), The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1 000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

2.3. Test Procedures

Radiated emissions from the EUT were measured according to the dictates of ANSI C63.10:2020.

2.3.1. Test Procedures for emission from 9 kHz to 30 MHz

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel and perpendicular of the antenna are set to make the measurement.
3. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading.
4. The test-receiver system was set to Quasi Peak and Average Detect Function and Specified Bandwidth with Maximum Hold Mode.
5. To get a maximum emission level from the EUT, the EUT is manipulated through three orthogonal planes (X, Y, Z). Worst orthogonal plan of EUT is **X – axis** during radiation test.

2.3.2. Test Procedures for emission from 30 MHz to 1 000 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. During performing radiated emission below 1 GHz, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 GHz, the EUT was set 3 meter away from the interference-receiving antenna.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. 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 from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.

2.4. Field Strength of Fundamental Test Result

Ambient temperature : (23 ± 1) °C
Relative humidity : 47 %

The following table shows the highest levels of radiated emissions on between polarizations of horizontal and vertical.

Test Condition: 5 W Operating mode with client device

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	Cable (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 300 m	Limit (dB μ V/m) at 300 m	Margin (dB)
Operating Frequency: 128 kHz									
0.128	69.30	Average	H	18.09	0.04	87.43	7.43	25.46	18.03

Test Condition: 7.5 W Operating mode with client device

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	Cable (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 300 m	Limit (dB μ V/m) at 300 m	Margin (dB)
Operating Frequency: 128 kHz									
0.128	64.20	Average	H	18.09	0.04	82.33	2.33	25.46	23.13

Test Condition: 15 W Operating mode with client device

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	Cable (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 300 m	Limit (dB μ V/m) at 300 m	Margin (dB)
Operating Frequency: 128 kHz									
0.128	69.80	Average	H	18.09	0.04	87.93	7.93	25.46	17.53

Test Condition: Idle mode

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	Cable (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 300 m	Limit (dB μ V/m) at 300 m	Margin (dB)
Operating Frequency: 128 kHz									
0.128	58.60	Average	H	18.09	0.04	76.73	-3.27	25.46	28.73

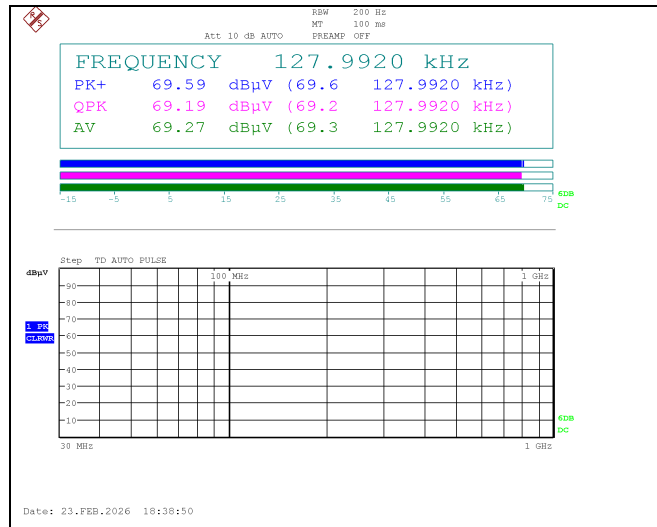
Remark;

1. According to §15.31(f)(2),
 - 300 m Result (dB μ V/m) = 3 m Result (dB μ V/m) - 40log (300/3) (dB μ V/m).
2. According to field strength table of general requirement in §15.209(a), field strength limits below 1.705 MHz were calculated as below.
 - 9 kHz to 490 kHz: 20log (2 400 / F (kHz)) at 300 m (dB μ V/m)
 - 490 kHz to 1.705 MHz: 20log (24 000/F (kHz)) at 30 m (dB μ V/m)
3. According to §15.209(d), the measurements were tested by using Quasi peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1 GHz in these three bands on measurements employing an average detector.
4. The limit above was calculated based on table of §15.209(a).
5. Actual (dB μ V/m) at 3 m = Reading (dB μ V) + AF (dB/m) + CL (dB).

- Test plots

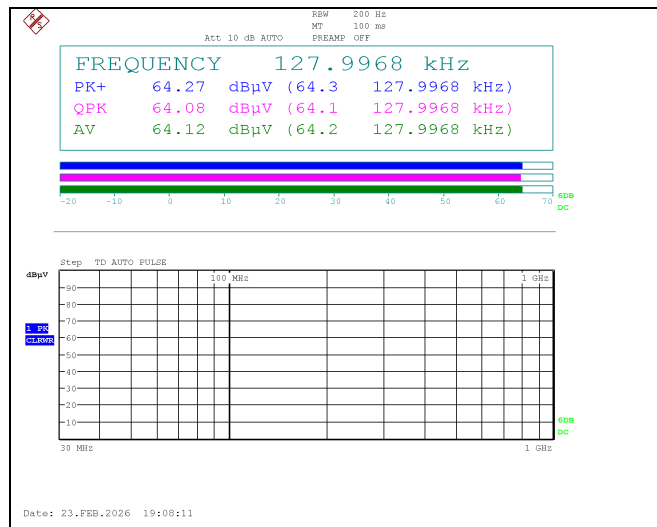
Test Condition: 5 W Operating mode with client device

Operating Frequency: 128 kHz



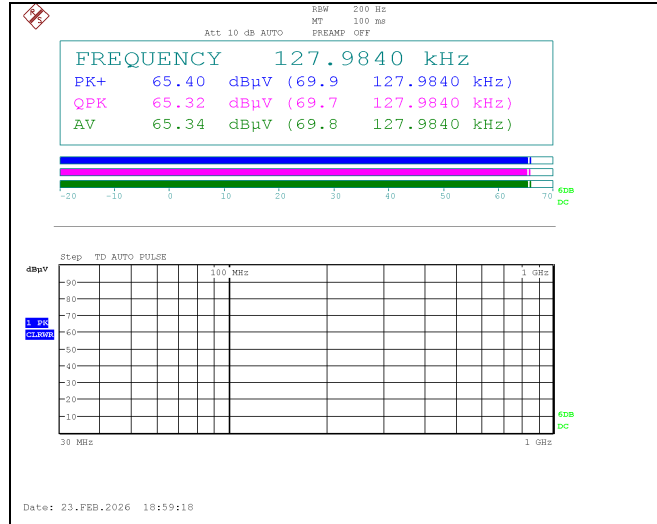
Test Condition: 7.5 W Operating mode with client device

Operating Frequency: 128 kHz



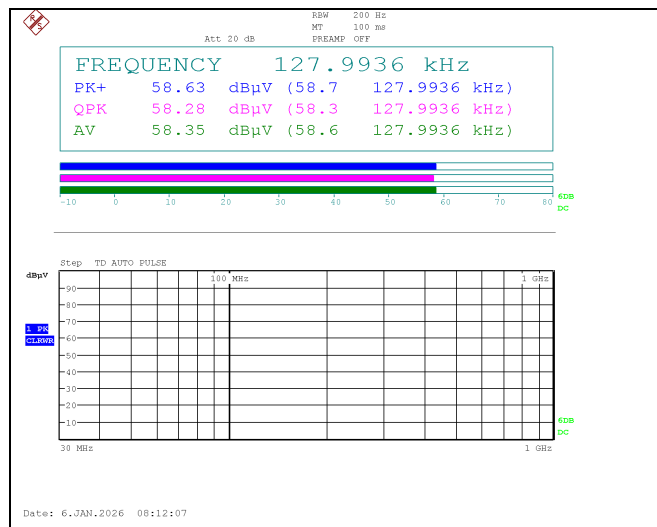
Test Condition: 15 W Operating mode with client device

Operating Frequency: 128 kHz



Test Condition: Idle mode

Operating Frequency: 128 kHz



2.5. Spurious Emission Test Result

Ambient temperature : (23 ± 1) °C
Relative humidity : 47 %

The following table shows the highest levels of radiated emissions on between polarizations of horizontal and vertical.

Test Condition: 5 W Operating mode with client device

Operating Frequency: 128 MHz

Below 30 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dBμV/m) at 3 m	Actual (dBμV/m) at 300 m or 30 m	Limit (dBμV/m) at 300 m or 30 m	Margin (dB)
0.019	31.90	Average	H	18.69	0.04	50.63	-29.37	42.03	71.40
0.034	46.90	Average	H	18.29	0.03	65.22	-14.78	36.97	51.75
0.184	30.00	Average	H	18.06	0.07	48.13	-31.87	22.31	54.18
0.386	17.20	Average	H	18.04	0.09	35.33	-44.67	15.87	60.54
Above 1.000	Not detected	-	-	-	-	-	-	-	-

Above 30 MHz

Radiated Emissions			Ant.	Correction (dB/m)	Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.		Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
38.30	38.44	Quasi Peak	V	-9.21	29.23	40.00	10.77
44.98	30.41	Quasi Peak	V	-7.61	22.80	40.00	17.20
150.98	37.32	Quasi Peak	V	-12.04	25.28	43.50	18.22
176.09	34.41	Quasi Peak	V	-10.68	23.73	43.50	19.77
Above 200.00	Not detected	-	-	-	-	-	-

Test Condition: 7.5 W Operating mode with client device

Operating Frequency: 128 MHz

Below 30 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 300 m or 30 m	Limit (dB μ V/m) at 300 m or 30 m	Margin (dB)
0.020	30.00	Average	H	18.65	0.04	48.69	-31.31	41.58	72.89
0.034	39.90	Average	H	18.29	0.03	58.22	-21.78	36.97	58.75
0.385	27.00	Average	H	18.04	0.09	45.13	-34.87	15.90	50.77
0.640	27.00	Quasi Peak	H	18.16	0.11	45.27	5.27	31.48	26.21
0.897	23.70	Quasi Peak	H	18.26	0.13	42.09	2.09	28.55	26.46
Above 1.000	Not detected	-	-	-	-	-	-	-	-

Above 30 MHz

Radiated Emissions			Ant.	Correction (dB/m)	Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.		Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
38.57	30.42	Quasi Peak	V	-9.13	21.29	40.00	18.71
47.68	27.69	Quasi Peak	V	-7.42	20.27	40.00	19.73
Above 50.00	Not detected	-	-	-	-	-	-

Test Condition: 15 W Operating mode with client device

Operating Frequency: 128 MHz

Below 30 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 300 m or 30 m	Limit (dB μ V/m) at 300 m or 30 m	Margin (dB)
0.019	32.00	Average	H	18.69	0.04	50.73	-29.27	42.03	71.30
0.034	44.00	Average	H	18.29	0.03	62.32	-17.68	36.97	54.65
0.090	22.50	Quasi Peak	H	18.13	0.01	40.64	-39.36	28.52	67.88
0.386	18.30	Average	H	18.04	0.09	36.43	-43.57	15.87	59.44
20.098	19.50	Quasi Peak	H	19.00	0.70	39.20	-0.80	29.54	30.34
Above 21.000	Not detected	-	-	-	-	-	-	-	-

Above 30 MHz

Radiated Emissions			Ant.	Correction (dB/m)	Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.		Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
30.65	34.04	Quasi Peak	V	-11.01	23.03	40.00	16.97
37.92	36.45	Quasi Peak	V	-9.34	27.11	40.00	12.89
47.14	31.03	Quasi Peak	V	-7.48	23.55	40.00	16.45
151.03	40.74	Quasi Peak	V	-12.03	28.71	43.50	14.79
176.15	37.08	Quasi Peak	V	-10.68	26.40	43.50	17.10
Above 200.00	Not detected	-	-	-	-	-	-

Test Condition: Idle mode

Operating Frequency: 128 MHz

Below 30 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dBμV/m) at 3 m	Actual (dBμV/m) at 300 m or 30 m	Limit (dBμV/m) at 300 m or 30 m	Margin (dB)
0.019	37.20	Average	H	18.69	0.04	55.93	-24.07	42.03	66.10
0.034	42.40	Average	H	18.29	0.03	60.72	-19.28	36.97	56.25
0.517	13.00	Quasi Peak	H	18.11	0.10	31.21	-8.79	33.33	42.12
3.113	5.80	Quasi Peak	H	18.61	0.28	24.69	-15.31	29.54	44.85
Above 4.000	Not detected	-	-	-	-	-	-	-	-

Above 30 MHz

Radiated Emissions			Ant.	Correction (dB/m)	Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.		Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
150.98	36.18	Quasi Peak	H	-12.04	24.14	43.50	19.36
176.04	34.40	Quasi Peak	V	-10.69	23.71	43.50	19.79
Above 200.00	Not detected	-	-	-	-	-	-

Remark;

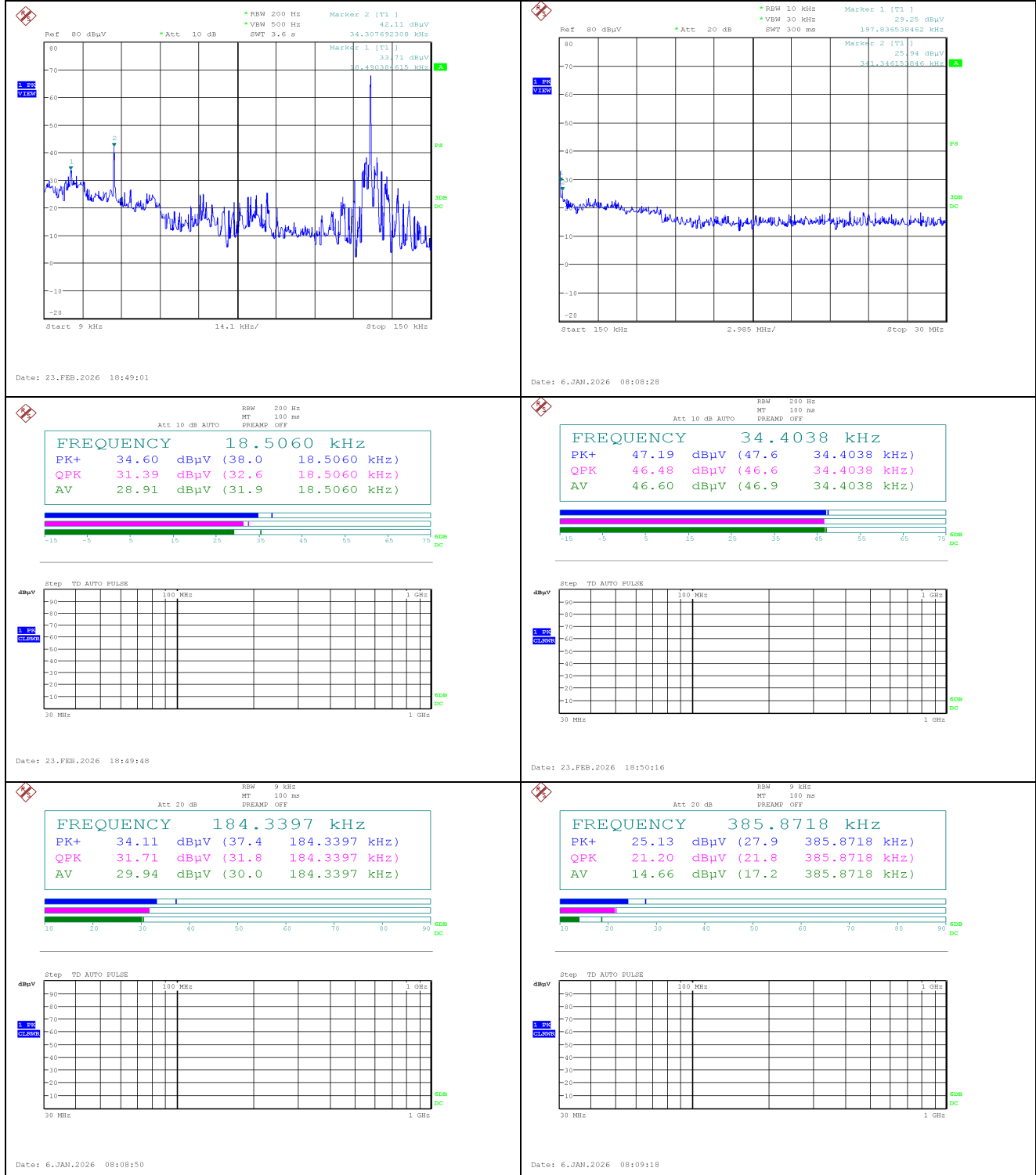
- According to §15.31 (f)(2),
 - 300 m Result (dBμV/m) = 3 m Result (dBμV/m) - 40log (300/3) (dBμV/m)
 - 30 m Result (dBμV/m) = 3 m Result (dBμV/m) - 40log (30/3) (dBμV/m)
- According to field strength table of general requirement in §15.209 (a), field strength limits below 1.705 MHz were calculated as below.
 - 9 kHz to 490 kHz: 20log (2 400 / F (kHz)) at 300 m (dBμV/m)
 - 490 kHz to 1.705 MHz: 20log (24 000 / F (kHz)) at 30 m (dBμV/m)
- According to §15.209 (d), the measurements were tested by using Quasi peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1 GHz in these three bands on measurements employing an average detector.
- The limit above was calculated based on table of §15.209 (a).
- Actual (dBμV/m) at 3 m were calculated as below.
 - Below 30 MHz : Reading (dBμV) + AF (dB/m) + CL (dB)
 - Above 30 MHz : Actual = Reading + Correction (Correction = Antenna Factor + AMP Factor + Cable Loss)
- According to §15.31(o), emission levels are not report much lower than the limits by over 20 dB.
- Test from 30 MHz to 1 000 MHz was performed using the software of ELEKTRA(V5.02) from Rohde & Schwarz GmbH & Co. KG.

- Test plots

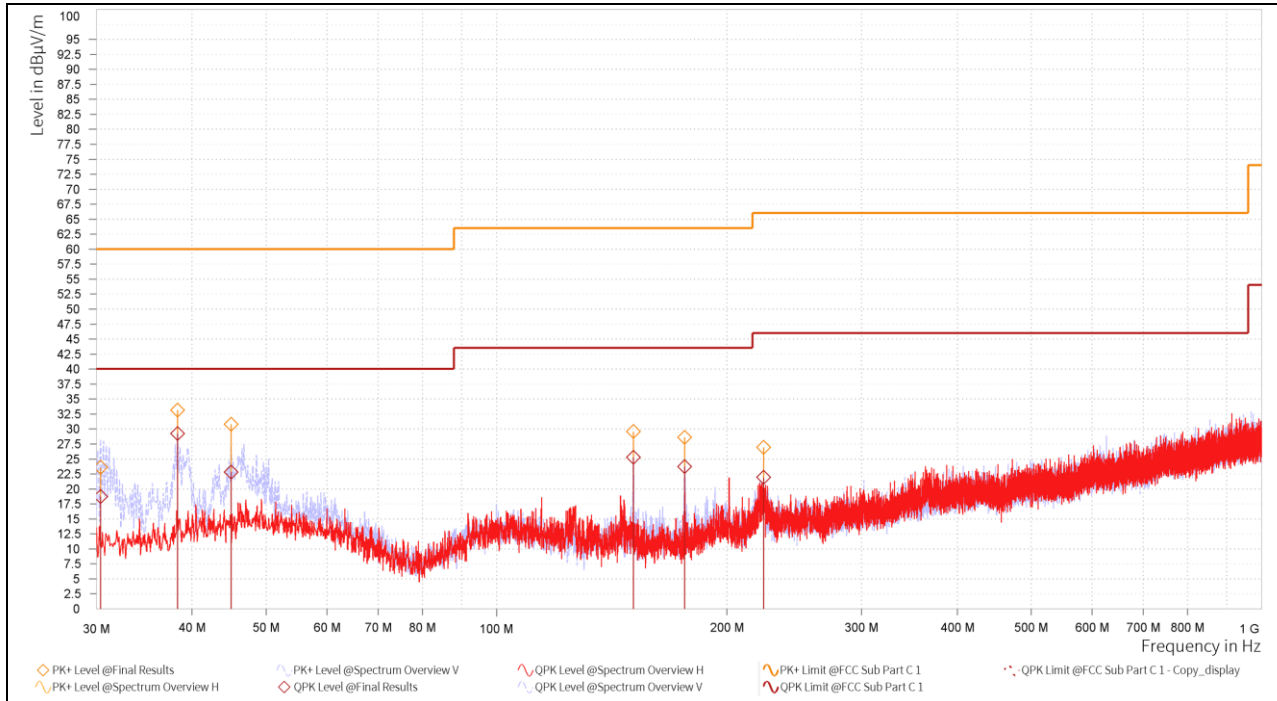
Test Condition: 5 W Operating mode with client device

Operating Frequency: 128 MHz

Below 30 MHz

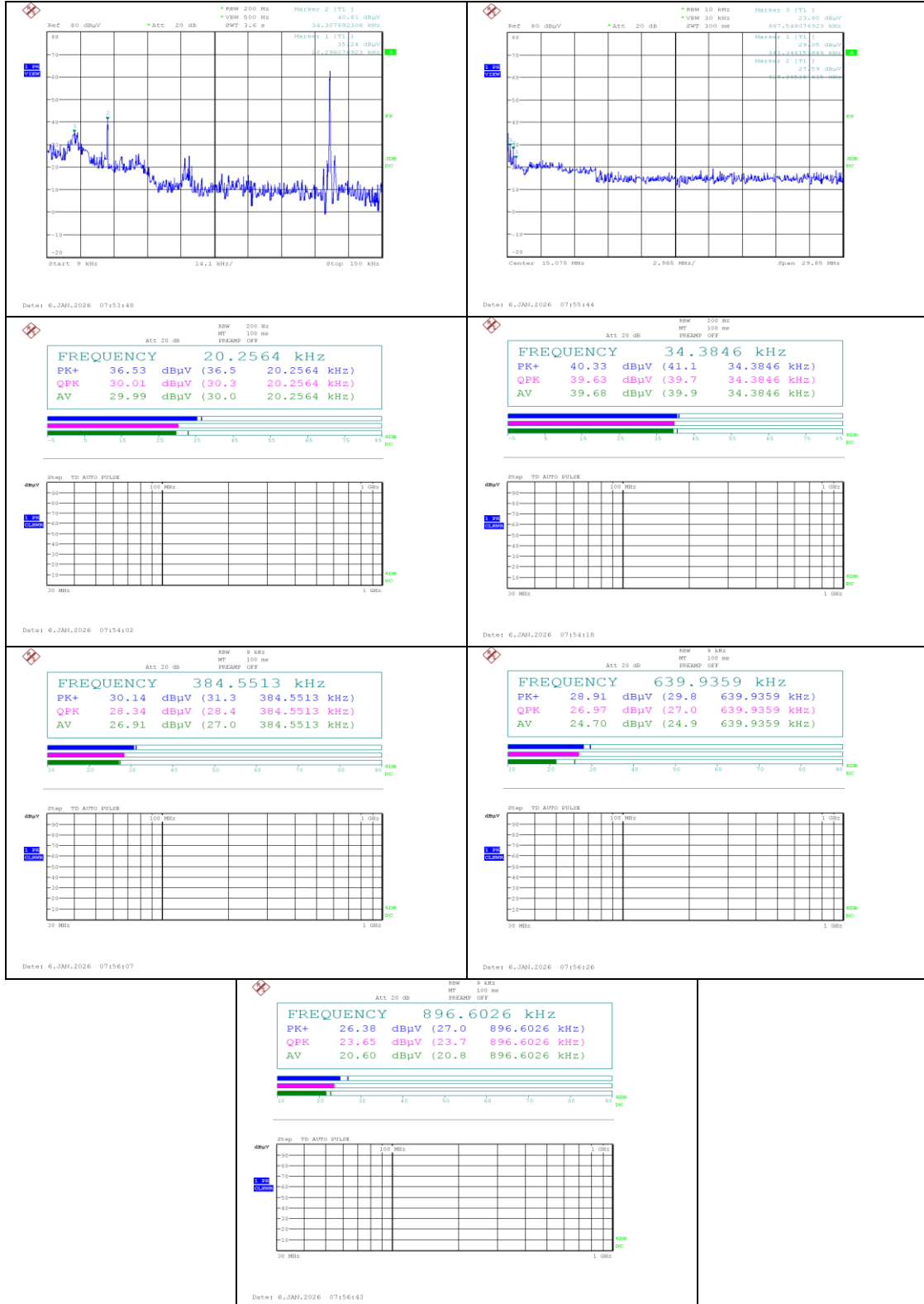


Above 30 MHz

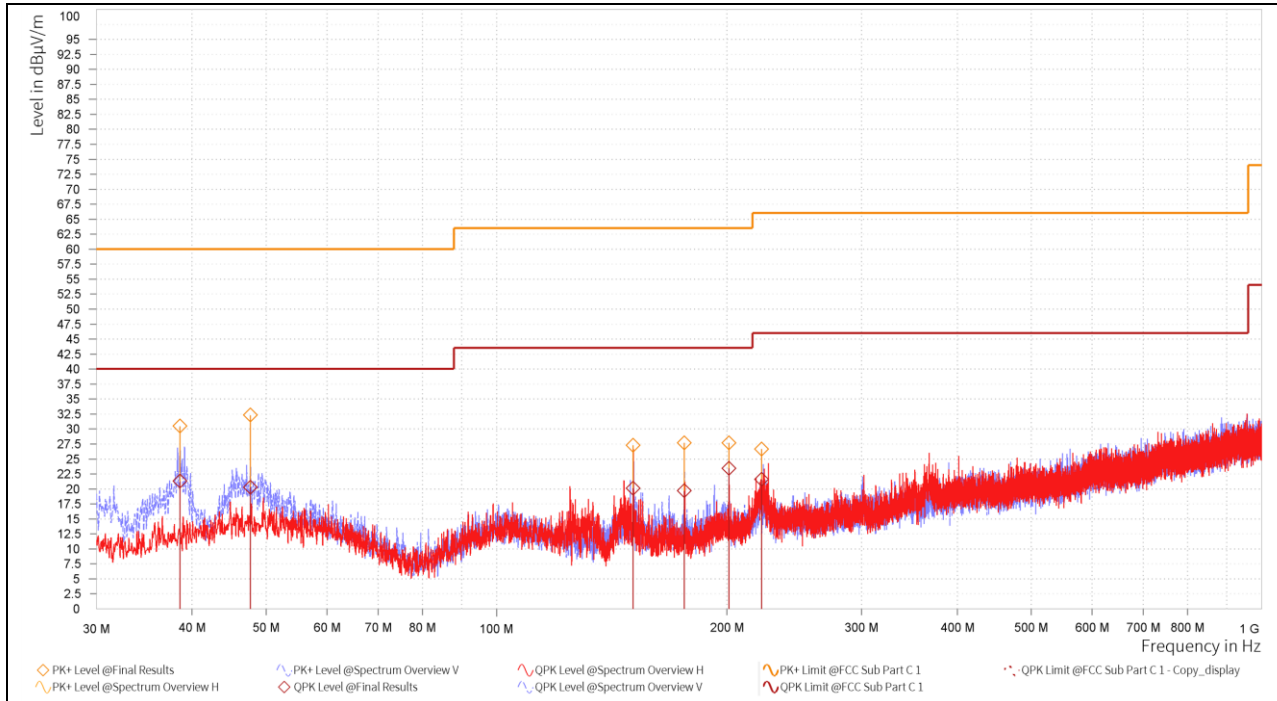


Test Condition: 7.5 W Operating mode with client device
Operating Frequency: 128 MHz

Below 30 MHz



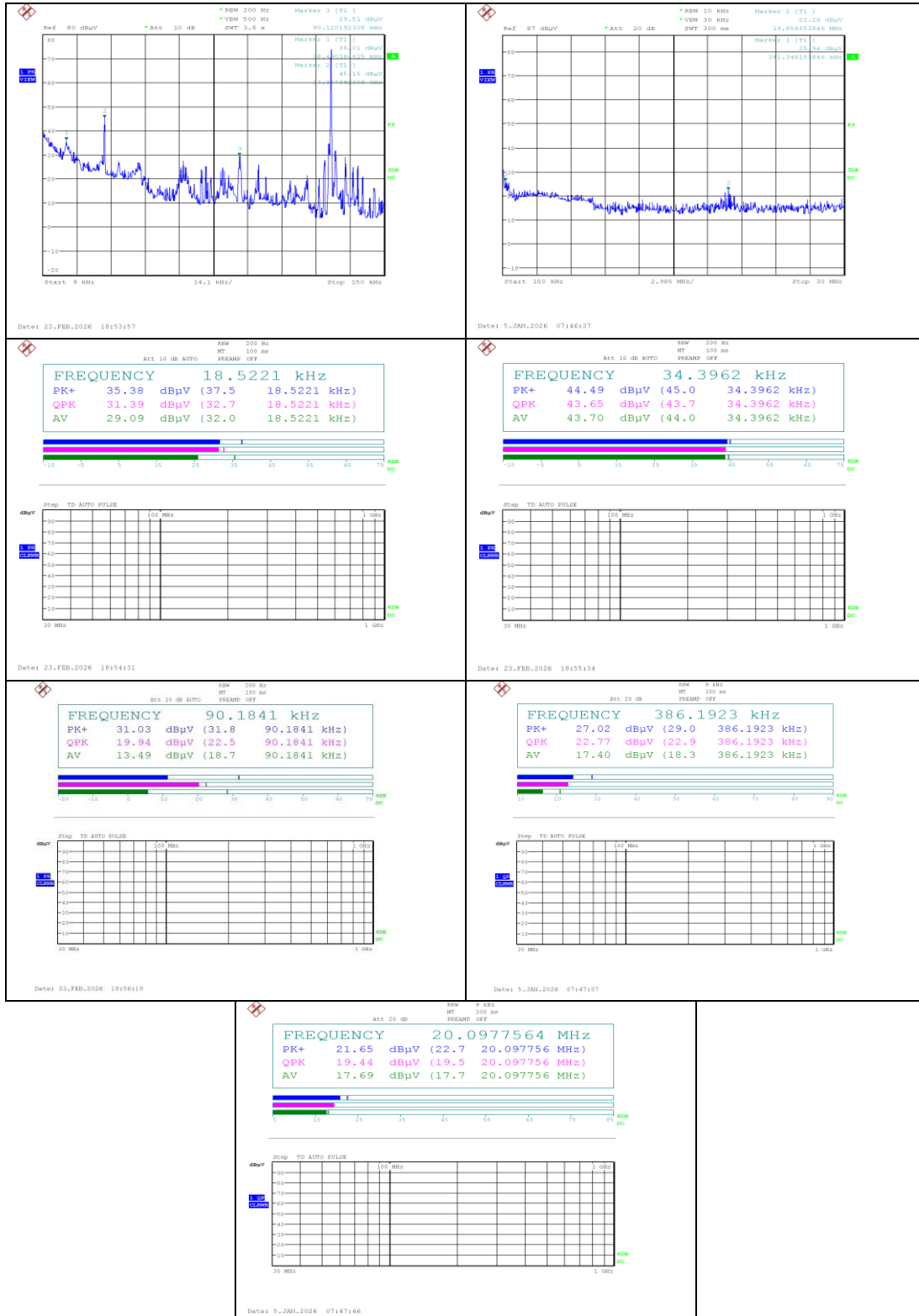
Above 30 MHz



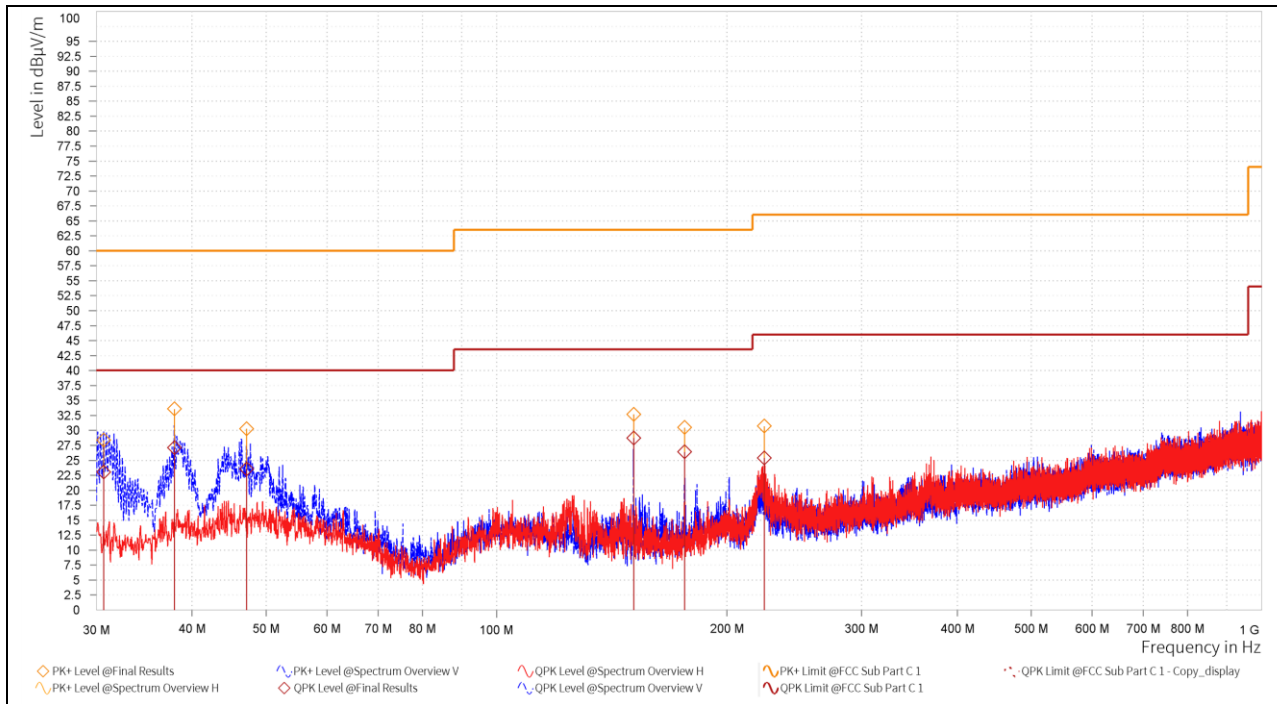
Test Condition: 15 W Operating mode with client device

Operating Frequency: 128 MHz

Below 30 MHz



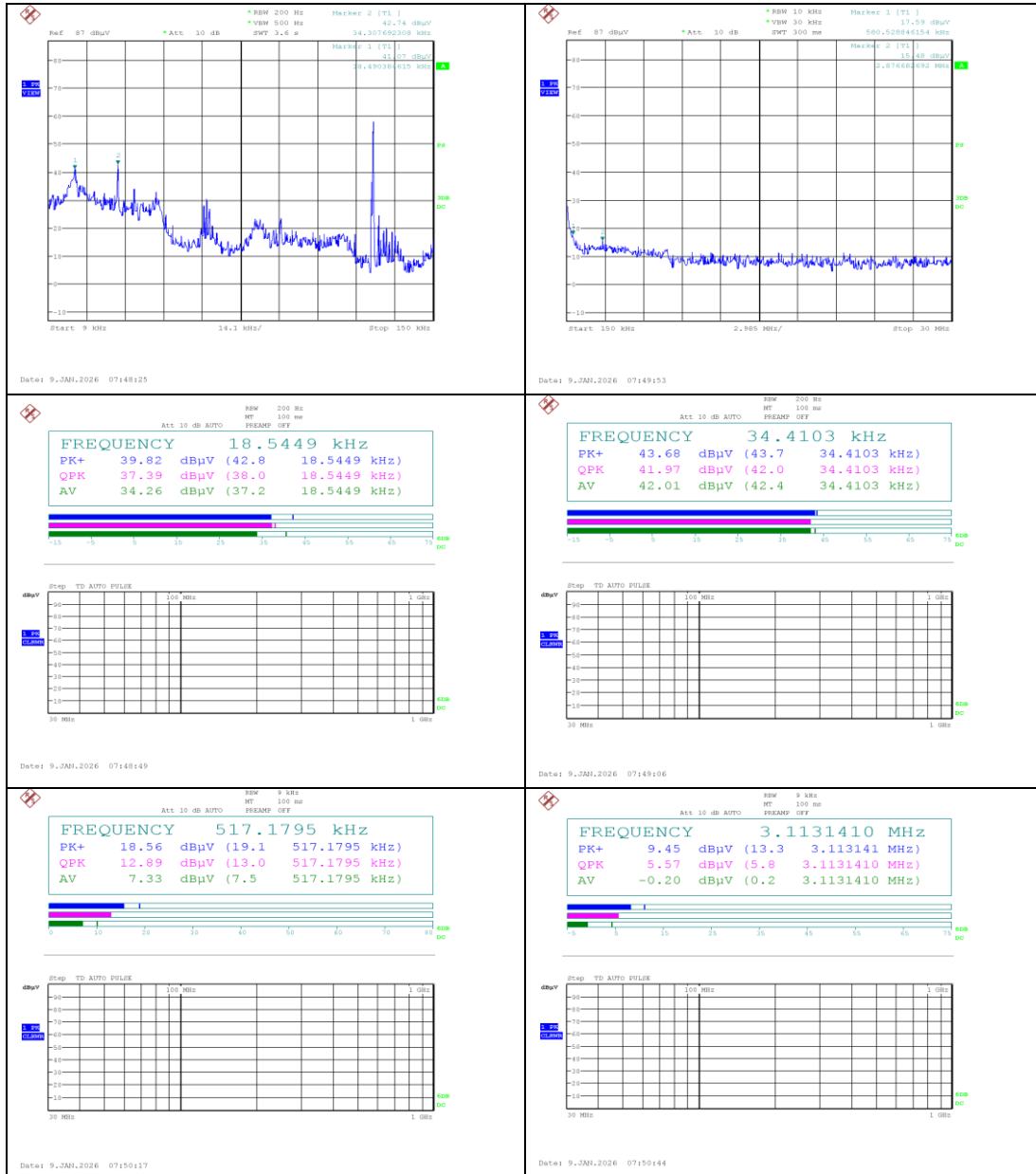
Above 30 MHz



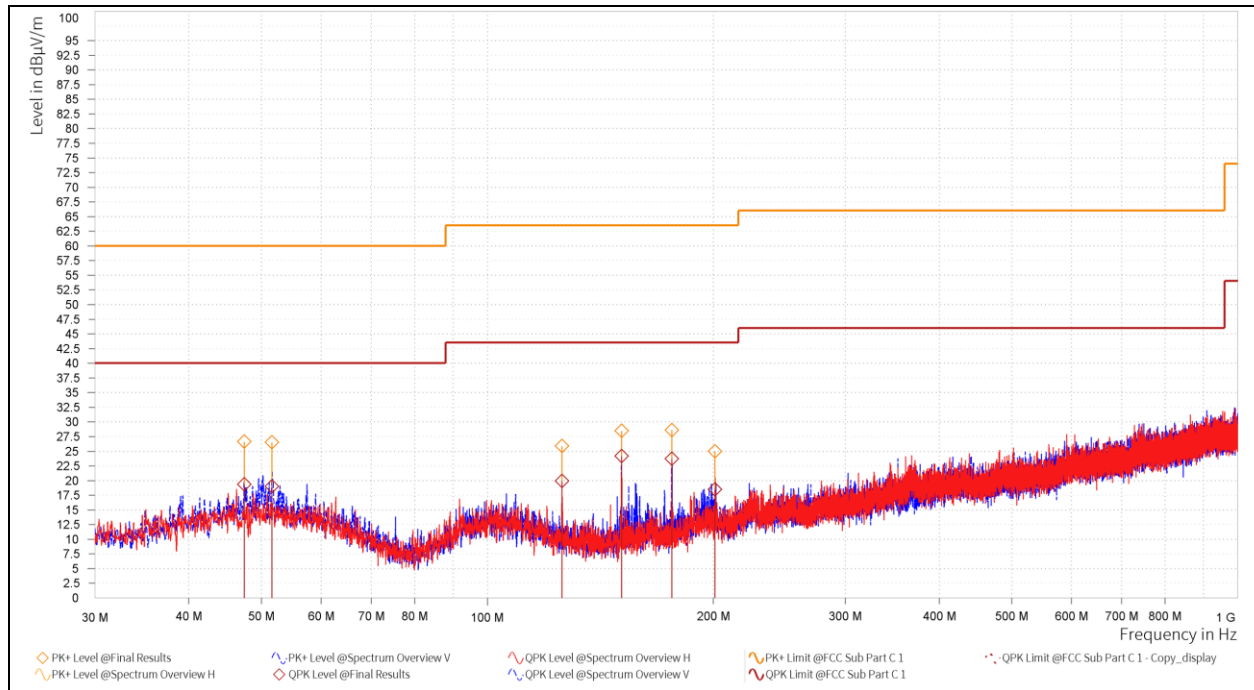
Test Condition: Idle mode

Operating Frequency: 128 MHz

Below 30 MHz

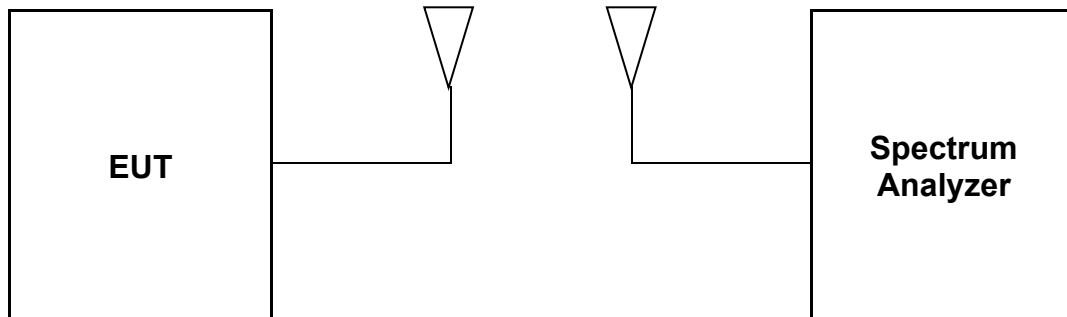


Above 30 MHz



3. 20 dB Bandwidth

3.1. Test Setup



3.2. Limit

None; for reporting purposed only

3.3. Test Procedure

- a. Span = set to capture all products of the modulation process, including the emission skirts.
RBW = 200 Hz, VBW = 200 Hz, Sweep = auto, Detector = peak, Trace = max hold.
- b. The marker-to-peak function to set the mark to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is 20 dB bandwidth of the emission.

3.4. Test Result

Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 %

Test Condition: 5 W Operating mode with client device

Frequency (kHz)	EUT Status	20 dB Bandwidth (kHz)	Limit
128 kHz	With client device (1 % battery status of client device)	0.539	Reporting proposed only

Test Condition: 7.5 W Operating mode with client device

Frequency (kHz)	EUT Status	20 dB Bandwidth (kHz)	Limit
128 kHz	With client device (1 % battery status of client device)	1.059	Reporting proposed only

Test Condition: 15 W Operating mode with client device

Frequency (kHz)	EUT Status	20 dB Bandwidth (kHz)	Limit
128 kHz	With client device (1 % battery status of client device)	0.539	Reporting proposed only

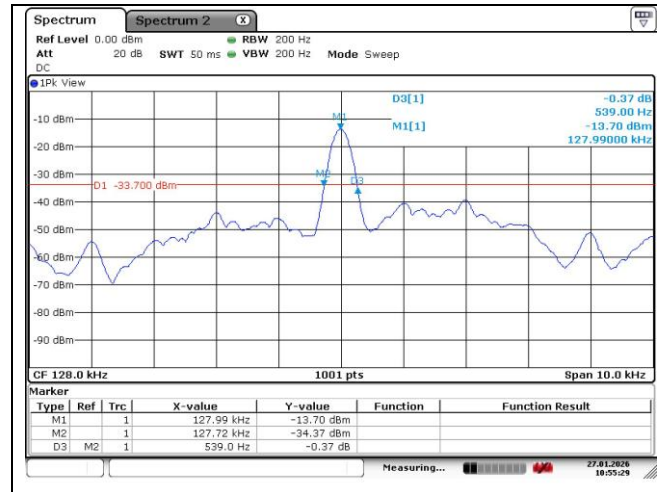
Test Condition: Idle mode

Frequency (kHz)	EUT Status	20 dB Bandwidth (kHz)	Limit
128 kHz	Without client device	0.518	Reporting proposed only

- Test plots

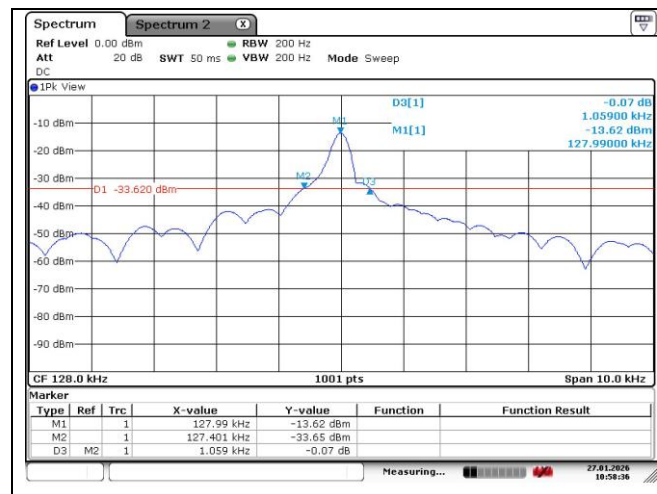
Test Condition: 5 W Operating mode with client device

Operating Frequency: 128 kHz



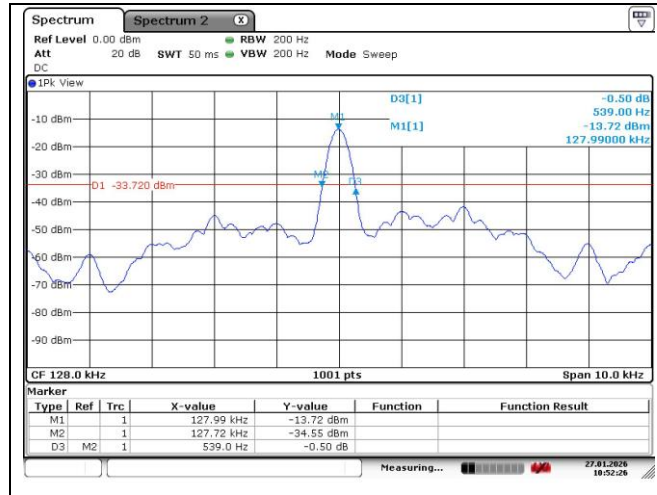
Test Condition: 7.5 W Operating mode with client device

Operating Frequency: 128 kHz



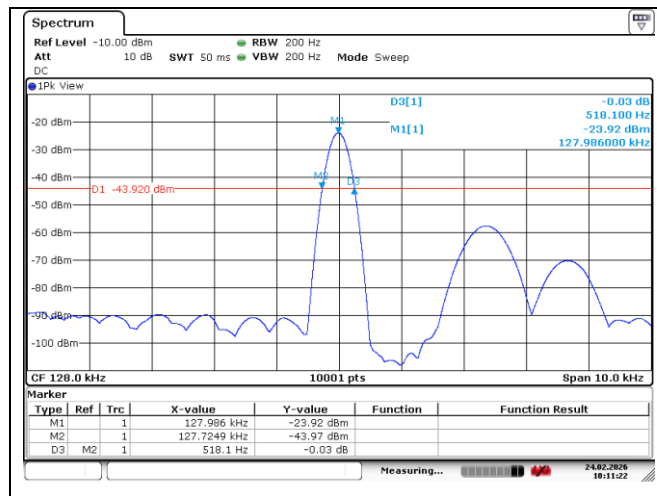
Test Condition: 15 W Operating mode with client device

Operating Frequency: 128 kHz



Test Condition: Idle mode

Operating Frequency: 128 kHz



- End of the Test Report -