

TEST REPORT

of

FCC Part 15 Subpart C §15.225

FCC ID: 2AFGCWC-MP03N

Equipment Under Test : WIRELESS CHARGER
Model Name : WC-MP03N
Variant Model Name(s) : -
Applicant : SL CORPORATION
Manufacturer : SL CORPORATION
Date of Receipt : 2025.08.26
Date of Test(s) : 2025.09.15 ~ 2025.10.29
Date of Issue : 2025.10.30

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:



Dave Kim

Technical
Manager:



Jinhyoung Cho

SGS Korea Co., Ltd. Gunpo Laboratory

INDEX

Table of contents

1. General Information -----	3
2. Radiated Emissions -----	7
3. Frequency Stability -----	17
4. 20 dB Bandwidth -----	22
5. Antenna Requirement -----	24

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 : SL CORPORATION

Address : 77, Gongdan 6-ro, Jillyang-eup, Gyeongsan-si, Gyeongsangbuk-do, Republic of Korea

Contact Person : Jang, Un-Yong

Phone No. : +82 53 850 8765

1.3. Details of manufacturer

Company : Same as applicant

Address : Same as applicant

1.4. Description of EUT

Kind of Product	WIRELESS CHARGER
Model Name	WC-MP03N
Variant Model Names	-
Serial Number	57LHTLQ2N1057DR000111
Power Supply	DC 12.0 V
Frequency Range	13.56 MHz (NFC)
Modulation Technique	ASK
Number of Channels	1 channel
Antenna Type	FPCB Antenna
H/W Version	1.0
S/W Version	25610
FVIN	N/A

1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Due	Cal. Interval
Signal Generator	R&S	SMA100B	106887	10/20/2026	Annual
DC Power Supply	R&S	U8002A	MY53150029	12/10/2025	Annual
Temperature Chamber	ESPEC CORP.	PL-2J	15004184	06/04/2026	Annual
Spectrum Analyzer	R&S	FSV30	103454	12/06/2025	Annual
Spectrum Analyzer	Agilent	N9020A	MY53421758	09/10/2026	Annual
Amplifier	H.P.	8447F	2944A03909	08/07/2026	Annual
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	10/01/2027	Biennial
Bilog Antenna	Schwarzbeck Mess-Elektronik	VULB 9163	01126	03/05/2027	Biennial
EMI Test Receiver	R&S	ESU26	100109	01/13/2026	Annual
Turn Table	Innco systems GmbH	DS 1200 S	N/A	N.C.R.	N/A
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/383 30516/L	N.C.R.	N/A
Antenna Mast	Innco systems GmbH	MA4640-XP-ET	MA4640/536/383 30516/L	N.C.R.	N/A
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N.C.R.	N/A
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-5 m	TPC2402190004	04/13/2026	Semi-Annual
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-10 m	TPC2402190001	04/13/2026	Semi-Annual

1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

Applied standard : FCC Part15 subpart C		
Section in FCC	Test item(s)	Result
15.225(a)(b)(c)(d) 15.209	Radiated Emission, Spurious Emission and Field Strength of Fundamental	Pass
15.225(e)	Frequency Stability	Pass
15.215(c)	20 dB Bandwidth & 99 % Bandwidth	Pass
15.207	AC Power Line Conducted Emissions	N/A ¹⁾
15.203	Antenna Requirement	Pass

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. Sample calculation

Where relevant, the following sample calculation is provided:

1.7.1. Radiation test

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

1.8. Information of software for test.

Using the software of Internal to testing of EUT.

1.9. Measurement Uncertainty

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

Parameter	Uncertainty	
99 % Bandwidth	0.04 kHz	
20 dB Bandwidth	0.04 kHz	
Frequency Stability	0.11 kHz	
Radiated Emission, 9 kHz to 30 MHz	H	3.40 dB
	V	3.40 dB
Radiated Emission, below 1 GHz	H	4.60 dB
	V	5.00 dB

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

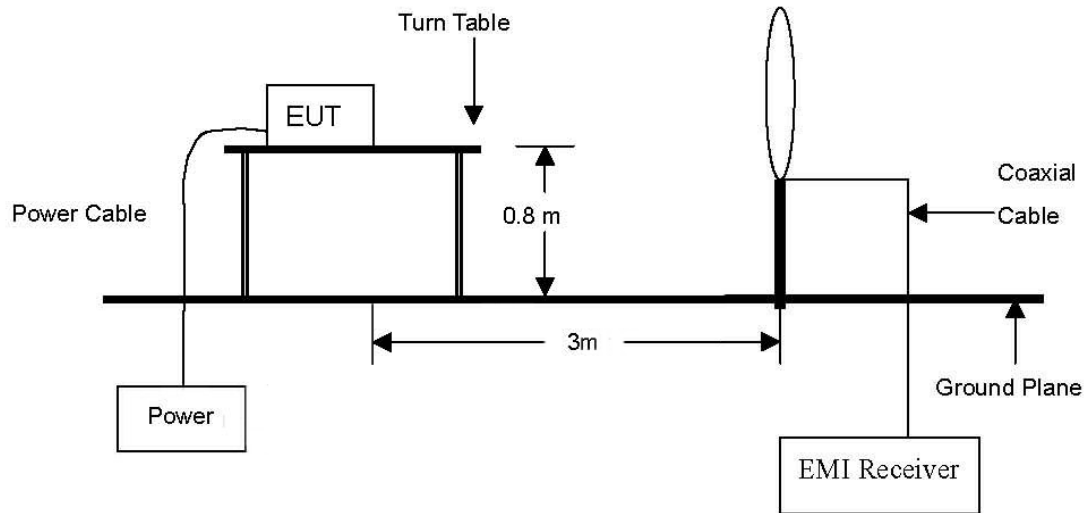
1.10. Test report revision

Revision	Report number	Date of Issue	Description
0	F690501-RF-RTL006446	2025.10.30	Initial

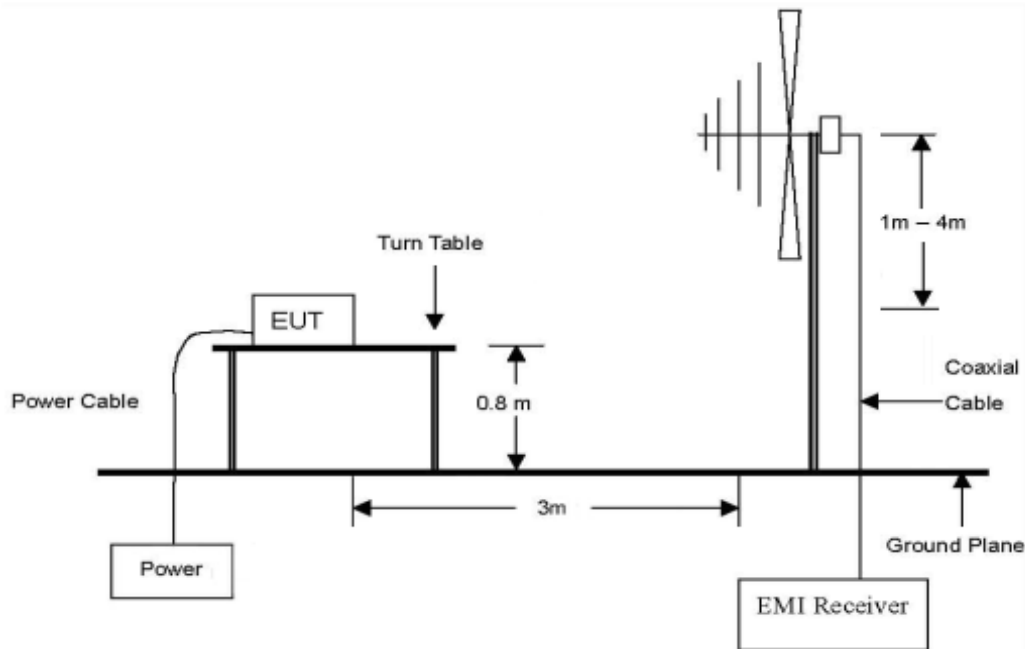
2. Radiated Emissions

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 Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 000 MHz Emissions.



2.2. Limit

According to §15.225,

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15 848 microvolts/meter at 30 meters.

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

According to §15.209,

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	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

** 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.

2.3. Test Procedures

Radiated emissions from the EUT were measured according to the dictates of ANSI C63.10-2013.

2.3.1. Test Procedures for emission below 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 Detect Function with Maximum Hold Mode.

2.3.2. Test Procedures for emission above 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. 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.
3. The antenna is a bi-log 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.
4. 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.
5. For measurements below 1 GHz resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Note;

The radiation test of the EUT was investigated in three orthogonal orientations X, Y, and Z, and the worst case data is reported.

2.4. Test Result

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

The following table shows the highest levels of radiated emissions.

- Fundamental within the band 13.553 MHz - 13.567 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	Ant. Factor (dB/m)	Cable loss (dB)	Actual (dBμV/m) at 3 m	Actual (dBμV/m) at 30 m	Limit (dBμV/m) at 30 m	Margin (dB)
13.560	60.57	Peak	H	18.77	0.56	79.90	39.90	84.00	44.10

- Spurious emission within the bands 13.410 MHz - 13.553 MHz and 13.567 MHz - 13.710 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	Ant. Factor (dB/m)	Cable loss (dB)	Actual (dBμV/m) at 3 m	Actual (dBμV/m) at 30 m	Limit (dBμV/m) at 30 m	Margin (dB)
13.553	55.06	Peak	H	18.77	0.56	74.39	34.39	50.47	16.08
13.567	54.90	Peak	H	18.77	0.56	74.23	34.23	50.47	16.24

- Spurious emission within the bands 13.110 MHz - 13.410 MHz and 13.710 MHz - 14.010 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	Ant. Factor (dB/m)	Cable loss (dB)	Actual (dBμV/m) at 3 m	Actual (dBμV/m) at 30 m	Limit (dBμV/m) at 30 m	Margin (dB)
13.348	45.22	Peak	H	18.77	0.56	64.55	24.55	40.51	15.96
*13.408	40.82	Peak	H	18.77	0.56	60.15	20.15	29.54	9.39
13.771	41.02	Peak	H	18.78	0.57	60.37	20.37	40.51	20.14

- Spurious emission within the bands 9 MHz - 13.110 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	Ant. Factor (dB/m)	Cable loss (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 30 or 300 m	Limit (dB μ V/m) at 30 or 300 m	Margin (dB)
0.034	43.09	Peak	H	18.29	0.03	61.41	-18.59	36.97	55.56
0.150	26.61	Peak	H	18.08	0.07	44.76	-35.24	24.08	59.32
*12.292	12.99	Peak	H	18.75	0.55	32.29	-7.71	29.54	37.25

- Spurious emission within the bands 14.010 MHz - 30 MHz

Radiated Emissions			Ant.	Correction Factors		Total		Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	Ant. Factor (dB/m)	Cable loss (dB)	Actual (dB μ V/m) at 3 m	Actual (dB μ V/m) at 30 m	Limit (dB μ V/m) at 30 m	Margin (dB)
14.113	27.56	Peak	H	18.78	0.58	46.92	6.92	29.54	22.62
*16.422	11.65	Peak	H	18.86	0.65	31.16	-8.84	29.54	38.38
*25.640	12.90	Peak	H	19.23	0.78	32.91	-7.09	29.54	36.63
Above 26.000	Not detected	-	-	-	-	-	-	-	-

Remark;

1. Fundamental limit (μ V/m) = $20 \log(15\ 848) = 84.00$ dB μ V/m.
2. 30 m distance compensation = $40 \log(3/30) = -40$ dB μ V/m.
3. 300 m distance compensation = $40 \log(3/300) = -80$ dB μ V/m.
4. "*" means the restricted band.
5. If the spurious emissions are in the restricted band, the limit complied with §15.209.
6. All data were recorded using a spectrum analyzer employing a peak detector.
If PK results were meet Quasi-peak limit, Quasi-peak measurements were omitted.
7. Radiated spurious emission measurement as below 30 MHz.
(Actual (dB μ A/m) at 3m = Reading (dB μ V) + AF (dB/m) + CL (dB))

- Spurious emission above 30 MHz

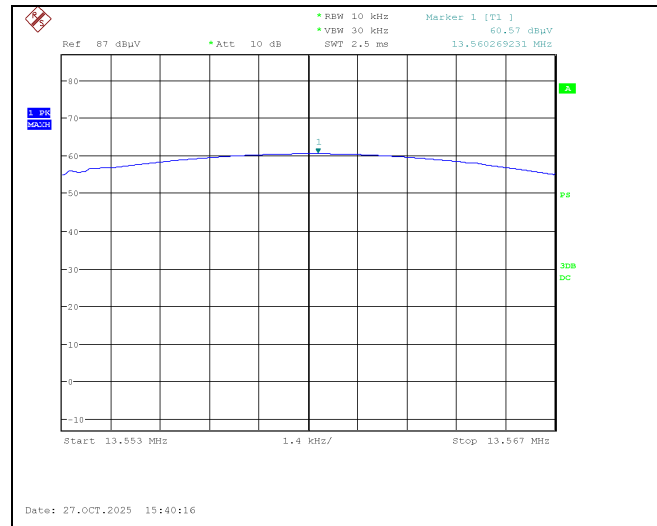
Radiated Emissions			Ant.	Correction (dB/m)	Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.		Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
45.79	34.65	Quasi Peak	V	-7.52	27.13	40.00	12.87
230.47	48.54	Quasi Peak	H	-7.50	41.04	46.00	4.96
235.53	40.23	Quasi Peak	H	-7.13	33.10	46.00	12.90
Above 300.00	Not detected	-	-	-	-	-	-

Remark;

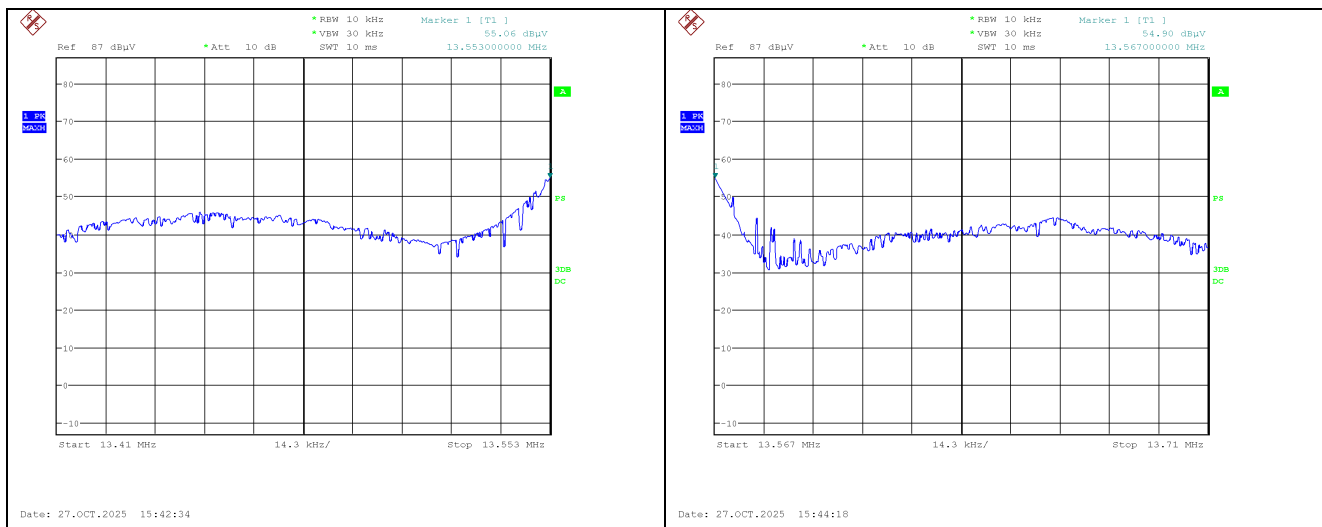
1. Radiated spurious emission measurement as below.
 (Actual (dBμA/m) = Reading (dBμV) + Correction)
 (Correction = Antenna Factor (dB/m) + AMP Factor (dB) + Cable Loss (dB))
2. According to §15.31(o), emission levels are not report much lower than the limits by over 20 dB.
3. Test from 30 MHz to 1 000 MHz was performed using the software of ELEKTRA(V5.02.1) from Rohde & Schwarz GmbH & Co. KG.

Test plots

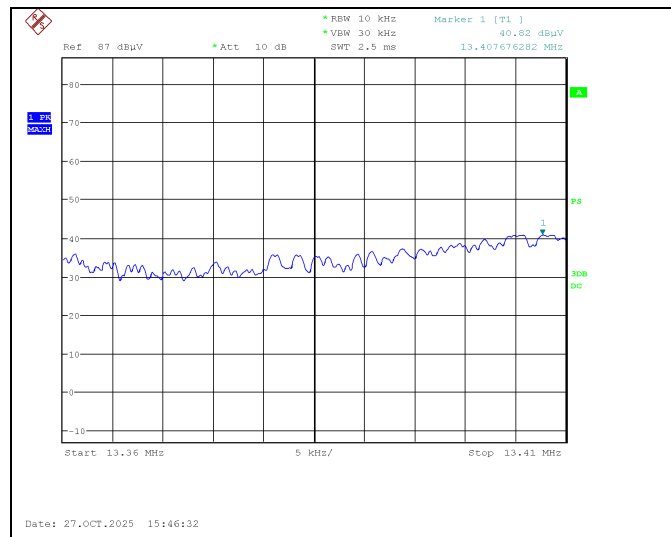
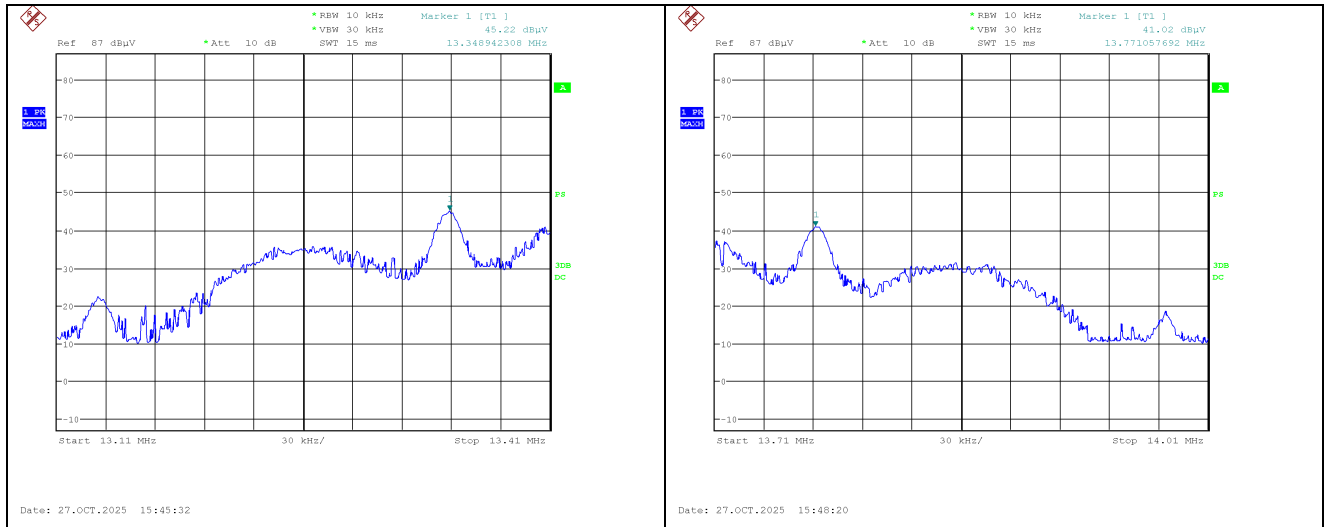
- Fundamental within the band 13.553 MHz - 13.567 MHz



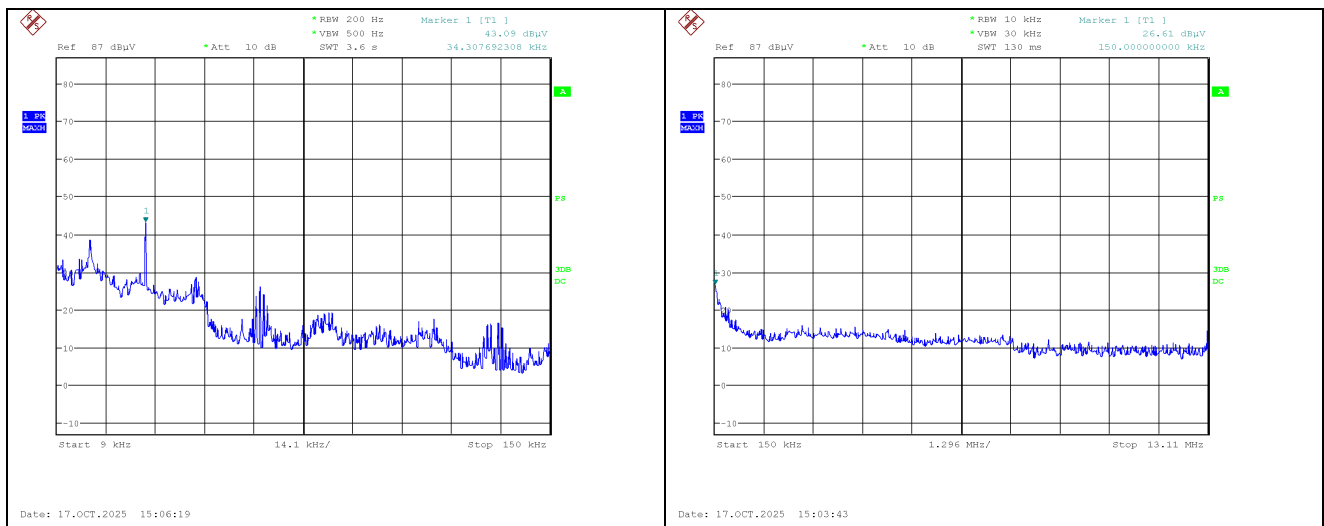
- Spurious emission within the bands 13.410 MHz - 13.553 MHz and 13.567 MHz - 13.710 MHz



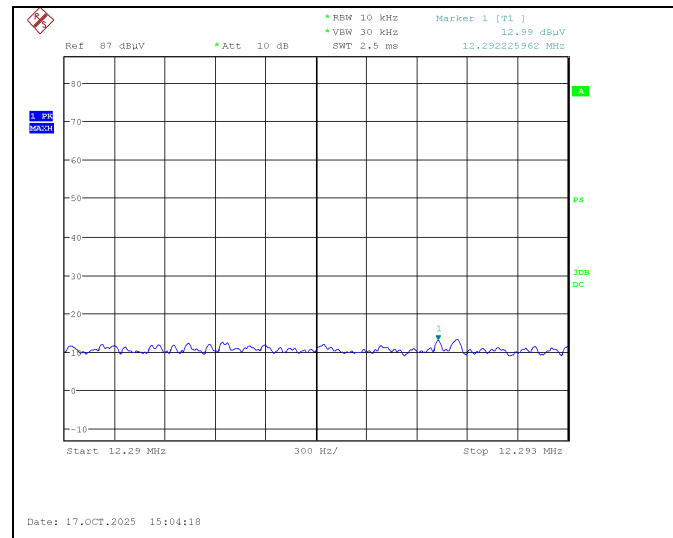
- Spurious emission within the bands 13.110 MHz - 13.410 MHz and 13.710 MHz - 14.010 MHz



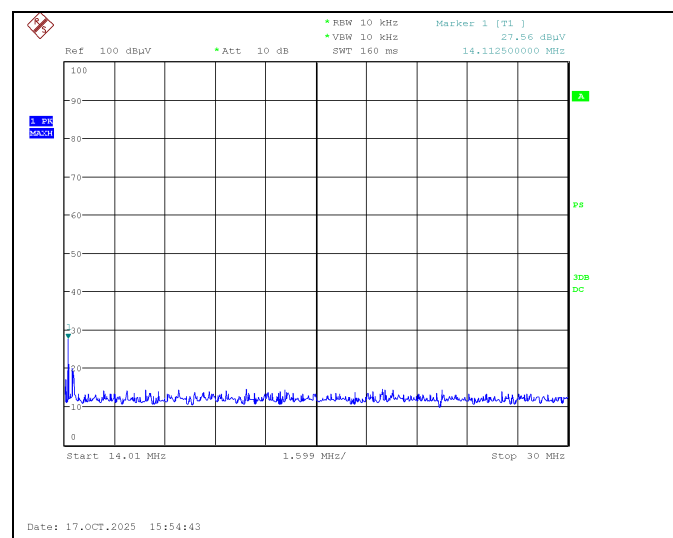
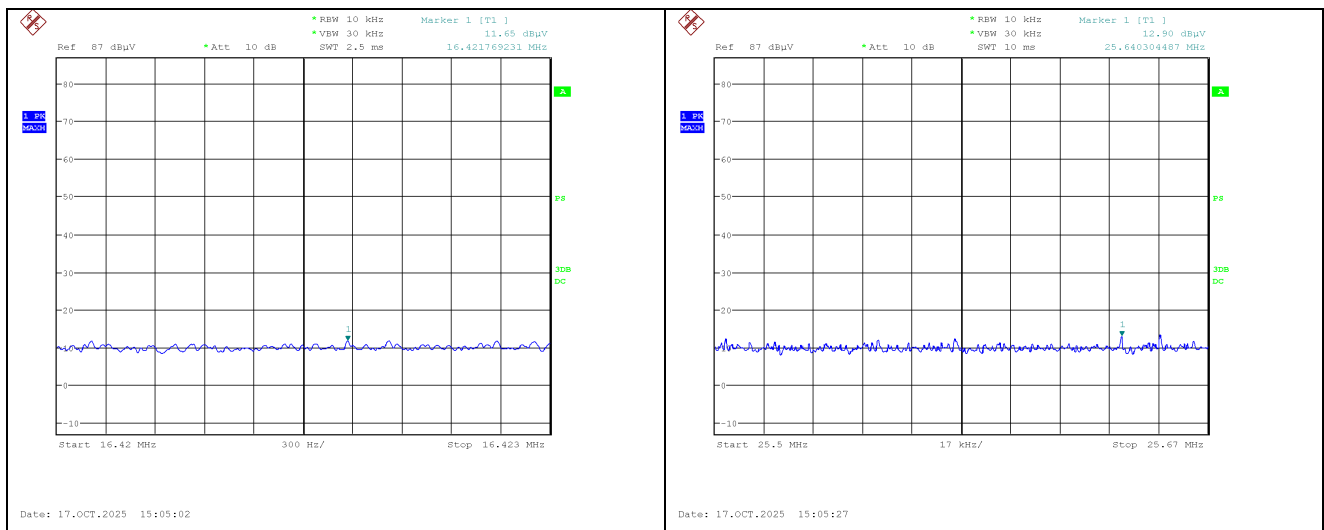
- Spurious emission within the bands 9 kHz - 13.110 MHz



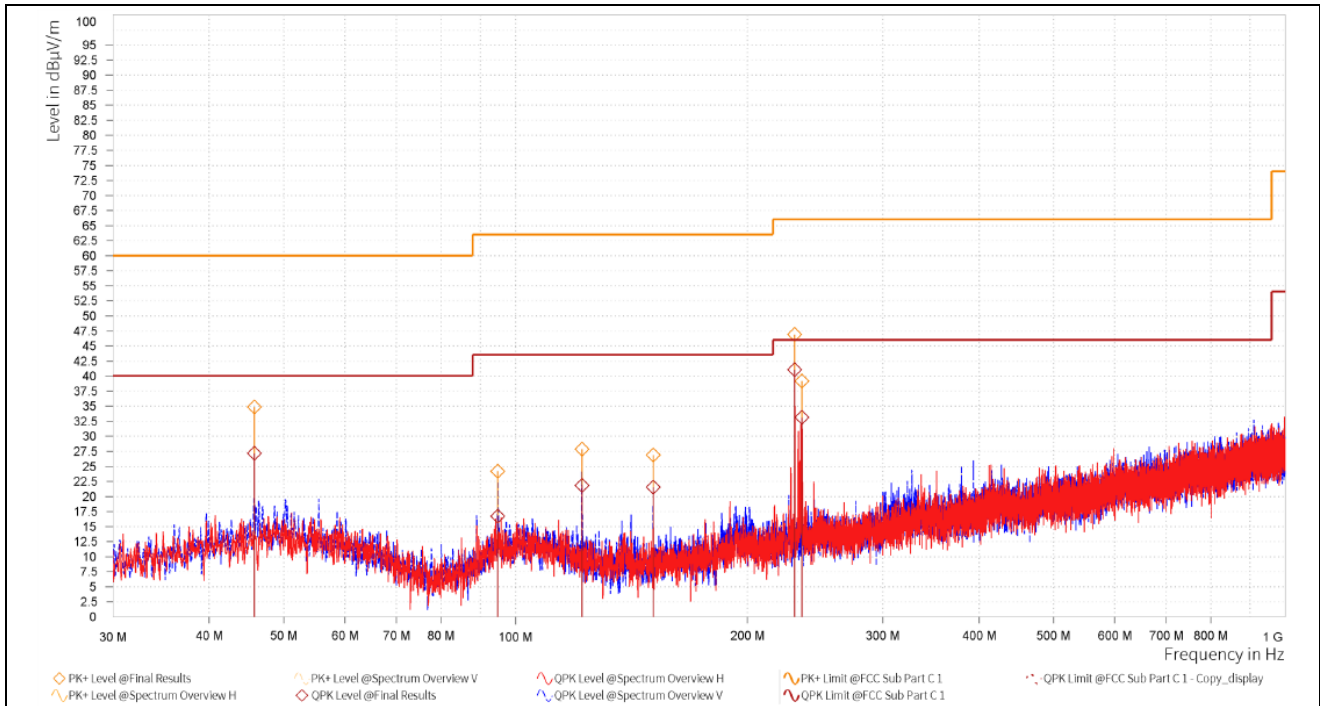
- Spurious emission within the bands 12.290 MHz – 12.293 MHz



- Spurious emission within the bands 14.010 MHz – 30 MHz

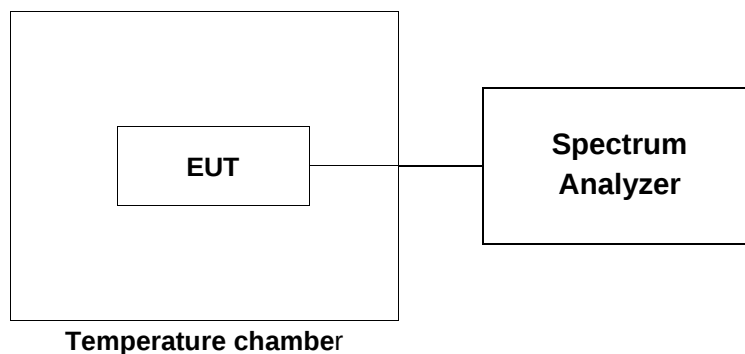


- Spurious emission above 30 MHz



3. Frequency Stability

3.1. Test Setup



3.2. Limit

According to RSS-210 Issue 11, Annex B, Section B.6
 The carrier frequency stability shall not exceed ± 100 ppm.

3.3. Test Procedures

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the environment into appropriate environment.
4. Set the spectrum analyzer as RBW = 100 Hz, VBW = 100 Hz, Span = 10 kHz, Sweep time = auto.
5. Mark the peak frequency and measure the frequency tolerance using frequency counter function.
6. Repeat until all the results are investigated.

3.4. Test Result

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

Operating Frequency : 13 560 000 Hz
 Deviation Limit : ± 0.01 % = ± 1 356 Hz

Startup

Temperature Variations

Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
12	-20	13 560 175	175	0.001 291
	-10	13 560 150	150	0.001 106
	0	13 560 075	75	0.000 553
	+10	13 560 050	50	0.000 369
	+20	13 560 150	150	0.001 106
	+30	13 560 150	150	0.001 106
	+40	13 560 135	135	0.000 996
	+50	13 560 075	75	0.000 553

Voltage Variations

Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
115 % (13.80)	+20	13 560 175	175	0.001 291
85 % (10.20)	+20	13 560 150	150	0.001 106

2 minutes

Temperature Variations

Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
12	-20	13 560 175	175	0.001 291
	-10	13 560 150	150	0.001 106
	0	13 560 075	75	0.000 553
	+10	13 560 050	50	0.000 369
	+20	13 560 150	150	0.001 106
	+30	13 560 150	150	0.001 106
	+40	13 560 075	75	0.000 553
	+50	13 560 050	50	0.000 369

Voltage Variations

Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
115 % (13.80)	+20	13 560 150	150	0.001 106
85 % (10.20)	+20	13 560 150	150	0.001 106

5 minutes

Temperature Variations

Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
12	-20	13 560 175	175	0.001 291
	-10	13 560 150	150	0.001 106
	0	13 560 125	125	0.000 922
	+10	13 560 050	50	0.000 369
	+20	13 560 150	150	0.001 106
	+30	13 560 125	125	0.000 922
	+40	13 560 075	75	0.000 553
	+50	13 560 050	50	0.000 369

Voltage Variations

Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
115 % (13.80)	+20	13 560 150	150	0.001 106
85 % (10.20)	+20	13 560 175	175	0.001 291

10 minutes

Temperature Variations

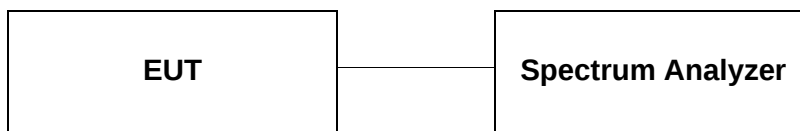
Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
12	-20	13 560 175	175	0.001 291
	-10	13 560 175	175	0.001 291
	0	13 560 125	125	0.000 922
	+10	13 560 075	75	0.000 553
	+20	13 560 150	150	0.001 106
	+30	13 560 135	135	0.000 996
	+40	13 560 075	75	0.000 553
	+50	13 560 050	50	0.000 369

Voltage Variations

Power (V _{d.c})	Temperature (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
115 % (13.80)	+20	13 560 150	150	0.001 106
85 % (10.20)	+20	13 560 150	150	0.001 106

4. 20 dB Bandwidth

4.1. Test Setup



4.2. Limit

None; for reporting purposes only.

4.3. Test Procedures

1. 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.
2. 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.

4.4. Test Result

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

Frequency (MHz)	20 dB Bandwidth (kHz)
13.56	1.018

-Test plot



6. Antenna Requirement

6.1. Standard Applicable

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

-End of the Test report-