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TEST REPORT

Invenco G6-400NFC Radio Module

tested to the specification

47 Code of Federal Regulations

Part 15 - Radio Frequency Devices

Subpart C – Intentional Radiators

Section 15.225

Operation within the band 13.110 -14.010 MHz

for

Invenco Group Ltd

A handwritten signature in black ink, appearing to read "Andrew Cutler".

This test report is issued with the authority of:

Andrew Cutler - General Manager



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1. STATEMENT OF COMPLIANCE

The **Invenco G6-400NFC Radio Module** complies with FCC Part 15 Subpart C Section 15.225 as an Intentional Radiator when the methods as described in ANSI C63.10 2020 + Corrigendum 1-2023 are applied.

2. RESULTS SUMMARY

The results from testing carried out between the 16th March and the 18th May 2023, 5th March 2026 and 16th October 2026 are detailed in the following table:

Clause	Parameter	Result
15.201	Equipment authorisation requirement	Certification required
15.203	Antenna requirement	Complies. Antenna internal to the device
15.204	External PA and antenna modifications	Not applicable. No external devices
15.205	Restricted bands of operation	Complies. Device transmits on a nominal frequency of 13.560 MHz
15.207	Conducted limits	Complies
15.209	Radiated emission limits - Emissions < 30 MHz	Complies
15.209	Radiated emission limits – Emissions > 30 MHz	Complies
15.225	Radiated emission limits - Fundamental	Complies
15.225	Frequency stability	Complies

3. INTRODUCTION

This report describes the tests and measurements performed for the purpose of determining compliance with the specification.

The client selected the test sample.

This report relates only to the sample tested.

Any corrections or erasures in this report are detailed in the revision table below.

Testing was carried out in accordance with EMC Technologies NZ Ltd designation as a FCC Accredited Laboratory (FCC Registration no:767552) by International Accreditation New Zealand, designation number: NZ0002 under the APEC TEL MRA.

The equipment has been tested in accordance with the requirements contained in the appropriate Commission regulations.

Testing was carried out using measurement procedures that are consistent with industry or Commission standards and demonstrate that the equipment complies with the appropriate standards.

All compliance statements have been made with respect of the specification limit with no reference to the measurement uncertainty.

Laboratory measurements were made at 47 Mackevlie Street, Grey Lynn, Auckland, New Zealand (Postal and Actual Address).

Radiated emissions testing was carried out at the laboratory's open area test site - located at 670 Kawakawa-Orere Road, RD5, Papakura, New Zealand (Postal and Actual Address).

Report Revision Table

Version	Change Made	Date
260111.1	Initial Issue	15 th September 2026
260111.1A	FCC Registration number added Chamber radiated emission plots added	17 th October 2026

4. CLIENT INFORMATION

Company Name	Invenco Group Ltd
Address	7-11 Kawana Street, Northcote, 0627
City	Auckland
Country	New Zealand
Contact	Mr Chris Henry

5. DESCRIPTION OF TEST SAMPLE

Brand Name	Invenco
Model Number	G6-400NFC
Product	Radio Module
Hardware ID	-
Manufacturer	Invenco Group Ltd
Country of Origin	New Zealand
Serial Number	SBLB0006
FCC ID	2AC7B-G6400NFC

The device tested is a NFC Radio Module that would be part of a Payment Terminal System with a number of features that would typically be used for the payment of fuel at a petrol station.

The NFC Radio Module operates on 13.560 MHz.

Testing was originally carried out in 2023 as detailed in test report number 230104.2

Additional testing has been carried out to ensure continued compliance of the NFC Radio Module when the following non radio module changes were made:

- Bar Code Reader (BCR) and Flexible Printed Circuit (FPC)
- Integrated Circuit Card or Integrated Circuit Card Reader (ICC)
- Magnetic Stripe Reader
- Point of Sale Board

6. SETUPS AND PROCEDURES

Standard

The sample was tested in accordance with 47 CFR Part 15 Subpart C.

Methods and Procedures

The measurement methods and procedures as described in ANSI C63.10 – 2020 + Corrigendum 1-2023 were used.

Section 15.201: Equipment authorisation requirement

Certification as detailed in Subpart J of Part 2 is required for this device.

Section 15.203: Antenna requirement

The device has a permanently attached internal 13.560 MHz antenna.

Result: Complies.

Section 15.204: External radio frequency power amplifiers and antenna modifications

It is NOT possible to attach an external power amplifier to this transmitter.

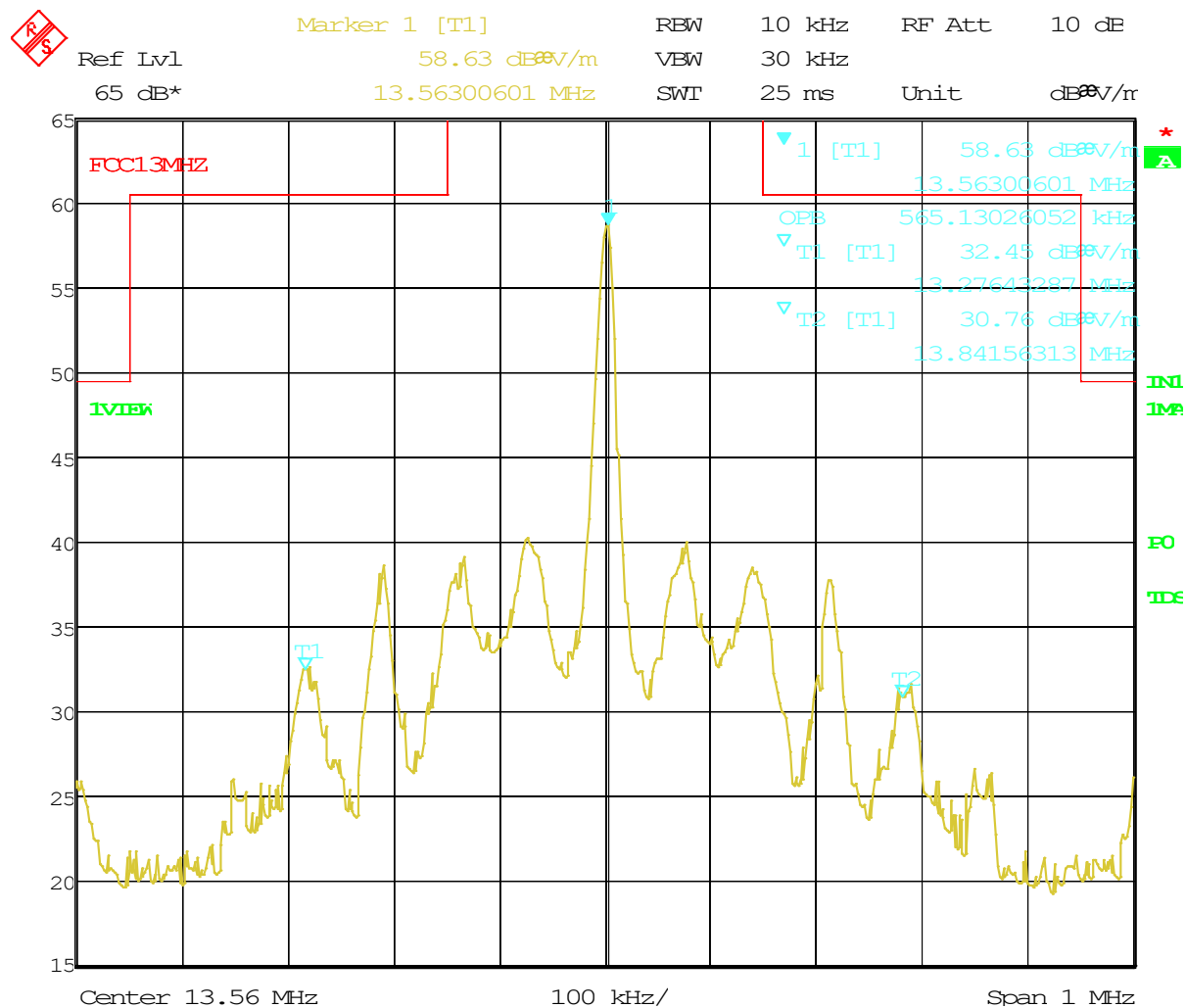
Result: Complies.

Section 15.205: Restricted bands of operation

The device transmits on a nominal frequency of 13.560 MHz.

13.560 MHz transmissions would fall into the 13.110 – 14.010 MHz band that is covered by Section 15.225.

Below is a plot of the device transmitting on 13.560 MHz with a 99% occupied power bandwidth of 565.1302 kHz



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Result: Complies.

Conducted emissions testing

Conducted Emissions testing was carried out over the frequency range of 150 kHz to 30 MHz which was carried out at the laboratory's MacKelvie Street premises in a 2.4 m x 2.4 m x 2.4 m screened room

As it is possible for this device to be directly or indirectly connected to the Public AC mains supply testing was carried out using a representative AC power supply system that was powered at 120 Vac 60 Hz which supplied DC to the device under test.

The NFC Card Reader operates at 13.560 MHz.

Initial testing was carried out when the NFC Card Reader was operating normally with the internal antenna connected.

A second test was then carried out with the NFC Card Reader was de-activated.

The device is deemed to comply providing if the deactivated test complies and the overall emission signature for the product remains similar in both test configurations with no additional emissions being detected.

The device was placed on top of the emissions table, which is 0.8 m x 0.8 m, 80 cm above the screened room floor which acts as the horizontal ground plane.

In addition the device was positioned 40 cm away from the screened room wall which acts as the vertical ground plane.

The artificial mains network was bonded to the screened room floor.

At all times the device was kept more than 80 cm from the artificial mains network.

The supplied plot is combined plot showing the worst case quasi peak and average results of both the phase and neutral lines to the representative AC power supply.

Quasi peak and average detectors have been used with resolution bandwidths of 9 kHz.

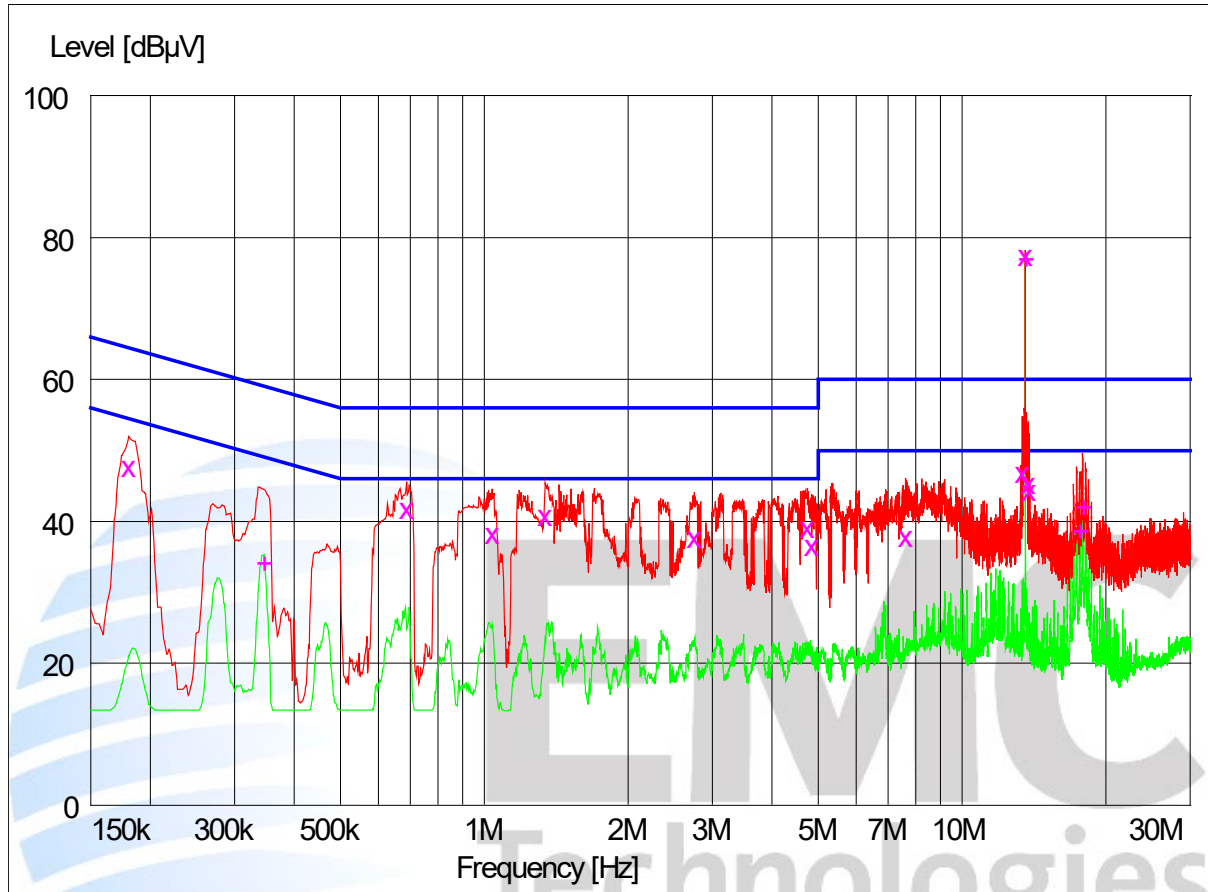
Measurement uncertainty with a confidence interval of 95% is:

- AC Mains port (0.15-30 MHz) ± 2.8 dB

Conducted Emissions – AC Input Power Port

Setup: Device tested when powered at 120 Vac 60 Hz running a script to produce Video and Audio and to print a receipt print with the NFC device ON.

Peak --- Average -- Quasi Peak X Average +



Final Quasi-Peak Measurements

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Phase	Rechecks (dBμV)
0.180000	48.00	64.5	16.5	L1	Fundamental
0.687000	42.20	56.0	13.8	L1	
1.038000	38.70	56.0	17.3	L1	
1.341000	41.20	56.0	14.8	N	
2.751500	38.10	56.0	17.9	N	
4.745000	39.60	56.0	16.4	L1	
4.835000	37.00	56.0	19.0	L1	
7.616000	38.30	60.0	21.7	L1	
13.349000	47.20	60.0	12.8	N	
13.560500	77.80	60.0	-17.8	L1	
13.767500	45.80	60.0	14.2	L1	
13.776500	44.80	60.0	15.2	L1	

Final Average Measurements

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Phase	Rechecks (dBμV)
0.345000	34.40	49.1	14.7	L1	
13.560500	77.30	50.0	-27.3	L1	
17.633000	38.90	50.0	11.1	N	
17.880500	42.30	50.0	7.7	N	

Conducted Emissions – AC Input Power Port

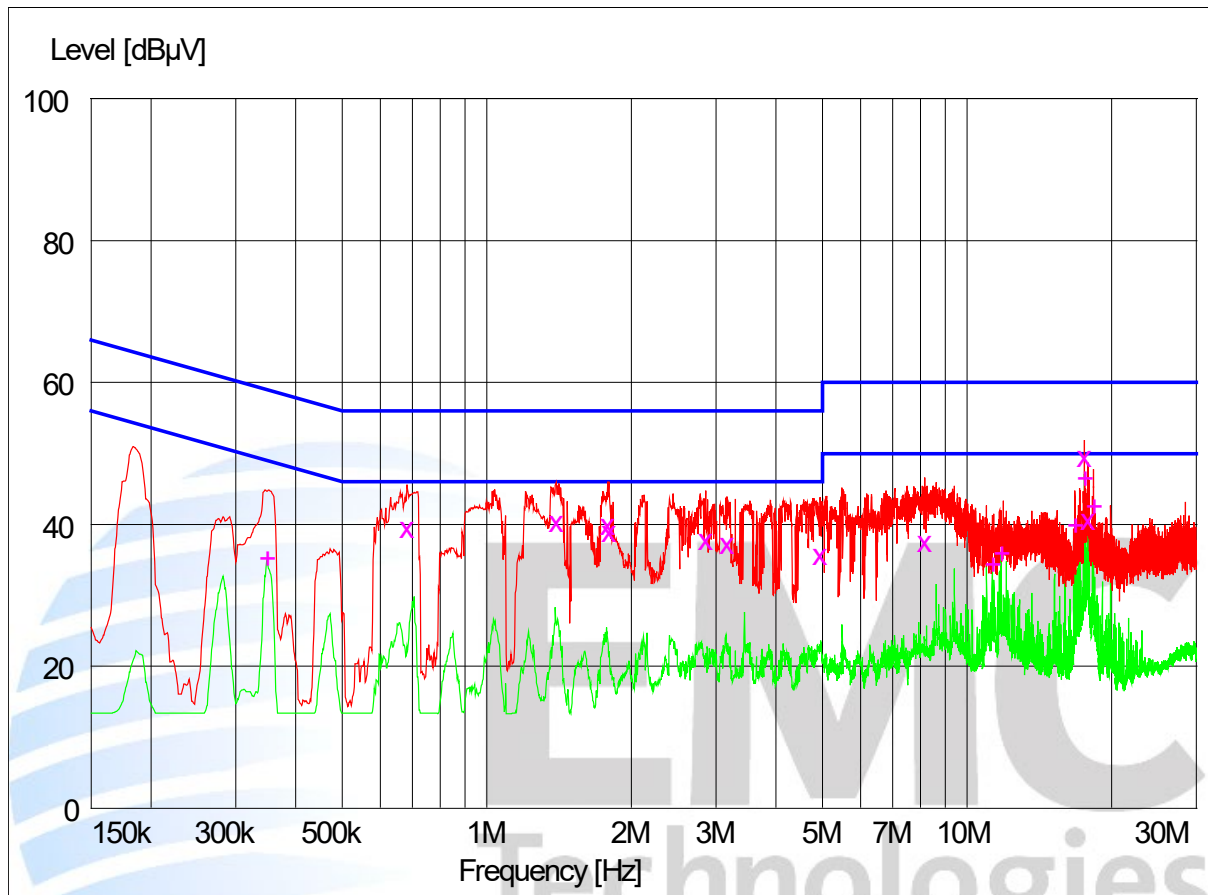
Setup: Device tested when powered at 120 Vac 60 Hz running a script to produce Video and Audio and to print a receipt print with the NFC device OFF

Peak ---

Average --

Quasi Peak X

Average +



Final Quasi-Peak Measurements

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Phase	Rechecks (dBμV)
0.681000	39.90	56.0	16.1	L1	
1.395000	40.70	56.0	15.3	L1	
1.785000	40.30	56.0	15.7	N	
1.794000	39.40	56.0	16.6	L1	
2.855000	38.30	56.0	17.7	L1	
3.161000	37.70	56.0	18.3	L1	
4.943000	36.10	56.0	19.9	N	
8.151500	38.00	60.0	22.0	L1	
17.552000	49.90	60.0	10.1	L1	
17.840000	41.10	60.0	19.0	L1	

Final Average Measurements

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Phase	Rechecks (dBμV)
0.348000	35.60	49.0	13.4	L1	
11.279000	34.70	50.0	15.3	L1	
11.760500	36.30	50.0	13.7	L1	
16.769000	40.20	50.0	9.8	L1	
17.547500	46.80	50.0	3.2	L1	
18.335000	42.80	50.0	7.2	L1	

Section 15.209: Radiated emission limits, general requirements

Radiated emission testing was carried out over the frequency range of 150 kHz to 6000 MHz at the request of the client.

Formal radiated emissions testing was carried out at the laboratory's open area test site - located at 670 Kawakawa-Orere Road, RD5, Papakura, New Zealand.

Due to the presence of high level ambient emissions at the test site radiated emissions testing was also carried out in the laboratory's semi anechoic chamber located at 47 Mackelvie Street, Grey Lynn, Auckland New Zealand to ensure compliance.

Before testing was carried out a receiver self-calibration was undertaken along with a check of all cables and programmed antenna factors were carried out.

Testing was carried out using a representative AC power supply at 120 Vac 60 Hz that powered the device under test.

The device tested when placed in the centre of the test table flat 0.8 m above the test site ground plane.

All interconnecting cables were bundled in 40 cm long bundles.

The NFC device was transmitting continuously on 13.560 MHz.

When an emission is located, it is positively identified and its maximum level is found by rotating the automated turntable, and by varying the antenna height, where appropriate, with an automated antenna tower.

Below 30 MHz a magnetic loop is used with the centre of the loop being 1 metre above the ground with measurements being made using a Quasi Peak detector at a distance of 10 metres.

Above 30 MHz the emission is measured in both vertical and horizontal antenna polarisations at a distance of 3 metres.

Below 1000 MHz a Quasi Peak detector with a 120 kHz bandwidth is used.

Above 1000 MHz an Average detector and a Peak detector with bandwidths of 1 MHz are used.

The emission level was determined in field strength by taking the following into consideration:

Level (dB μ V/m) = Receiver Reading (dB μ V) + Antenna Factor (dB/m) + Coax Loss (dB)

For example, if an emission of 30 dB μ V was observed at 30 MHz.

$$45.5 \text{ dB}\mu\text{V/m} = 30.0 \text{ dB}\mu\text{V} + 14 \text{ dB/m} + 1.5 \text{ dB}$$

Section 15.209: 13.560 MHz transmitter below 30 MHz spurious emission measurements

The emission below was derived from the raw data plots and then it was individually measured.

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
27.120	14.5	48.6	34.1	Pass

The NFC device was transmitting continuously on 13.560 MHz.

Magnetic loop measurements were made at a distance of 10 metres.

Measurement receiver with a quasi-peak detector with a 9 kHz bandwidth was used.

The 30 metre limit has been scaled by a factor of 40 dB per decade, as per section 15.31 (f) (2).

The limit at 27.120 MHz when measured at 30 metres is 30 uV/m or 29.54 dBuV/m.

Therefore the scaled limit at 10 metres will be 48.6 dBuV/m.

The spurious emission observed does not exceed the level of the fundamental emission.

No other low frequency spurious emissions were detected from the device when measurements were attempted from 10 kHz - 30.0 MHz

Result: Complies.

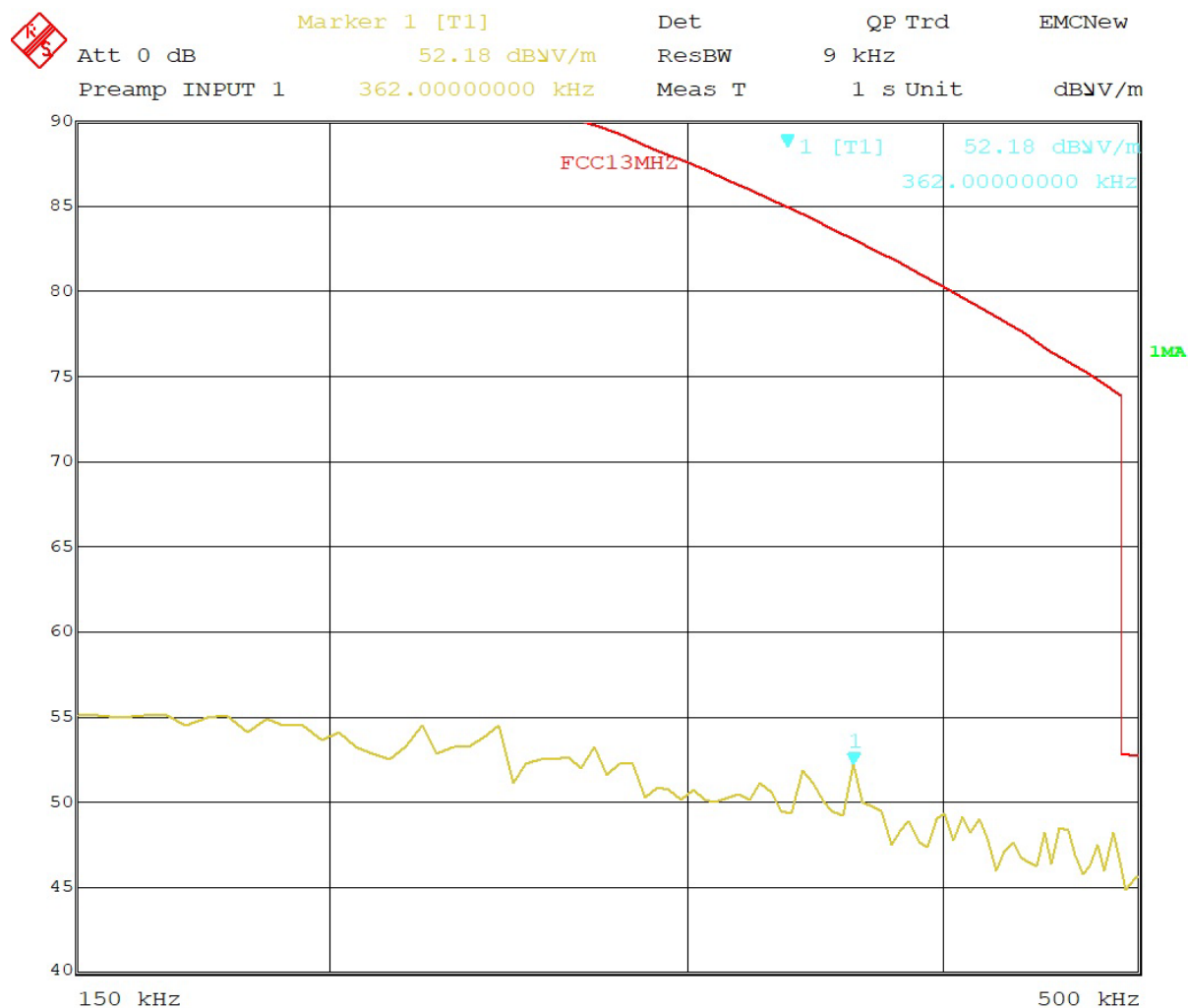
Measurement uncertainty with a confidence interval of 95% is:

- Free radiation tests (10 kHz – 30 MHz) ± 4.8 dB

Spurious Emissions (less than 30 MHz)

Frequency Range: 150 – 500 kHz (Test site plot)

Antenna: Loop



Date: 16.MAR.2023 13:20:51

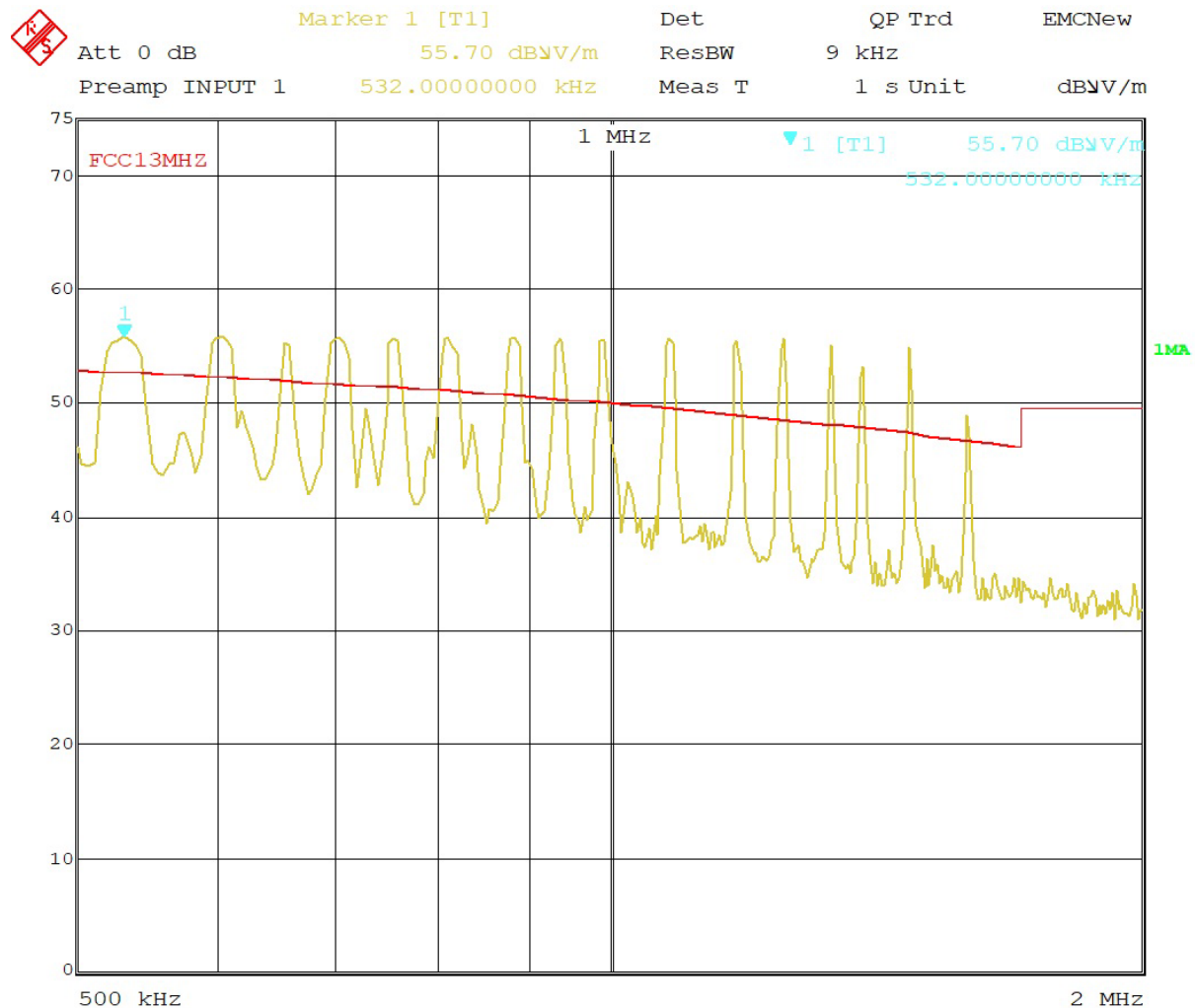
Notes

No emissions detected from the product at the test site

Testing in the anechoic chamber in the laboratory is not required as there are no ambient emissions in this frequency range.

Frequency Range: 500 – 2000 kHz (Test site plot)

Antenna: Loop



Date: 16.MAR.2023 13:19:07

Notes

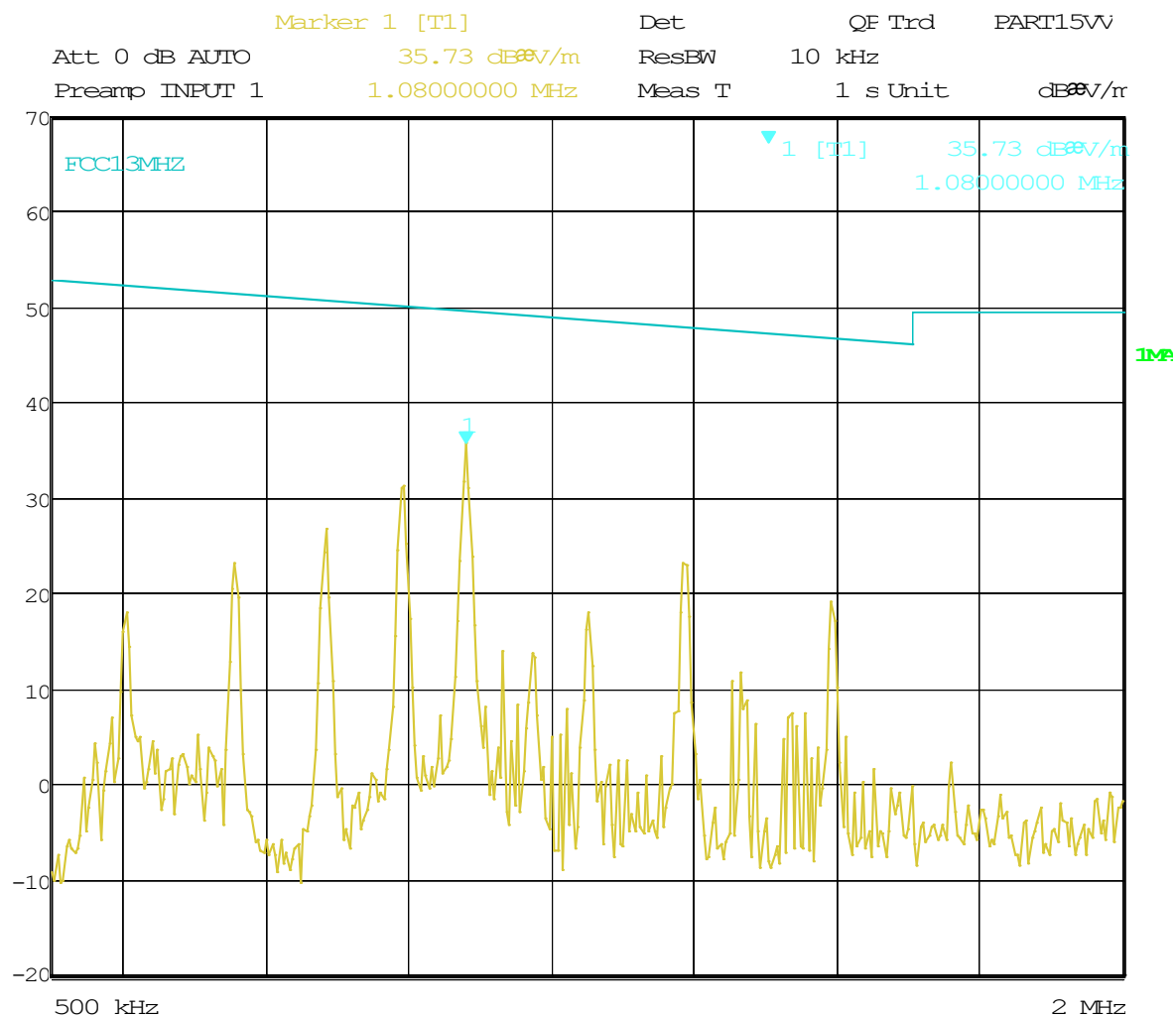
No emissions detected from the product at the test site

AM broadcast emissions observed between 550 – 1705 kHz

Testing is required in the anechoic chamber in the laboratory to ensure that are no emissions from the device that have been supressed by the presence of ambient emissions.

Frequency Range: 500 – 2000 kHz (Anechoic chamber plot)

Antenna: Loop



Date: 15.OCT.2026 11:42:51

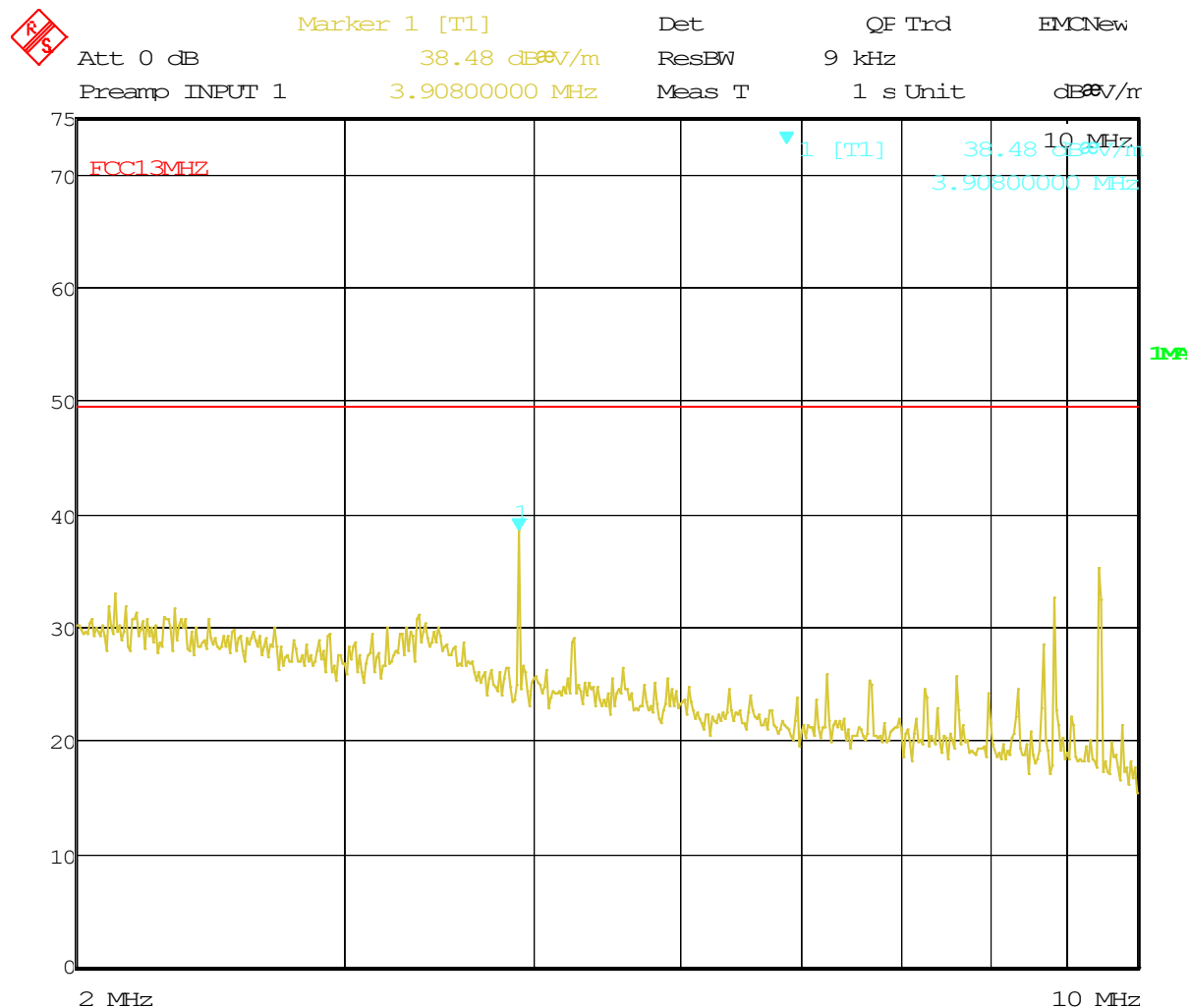
Notes

No emissions detected from the product in the anechoic chamber

AM broadcast emissions observed between 550 – 1705 kHz were observed but are below the applicable limit.

Frequency Range: 2.0 – 10.0 MHz (Test site plot)

Antenna: Loop



Date: 16.MAR.2023 13:17:56

Notes

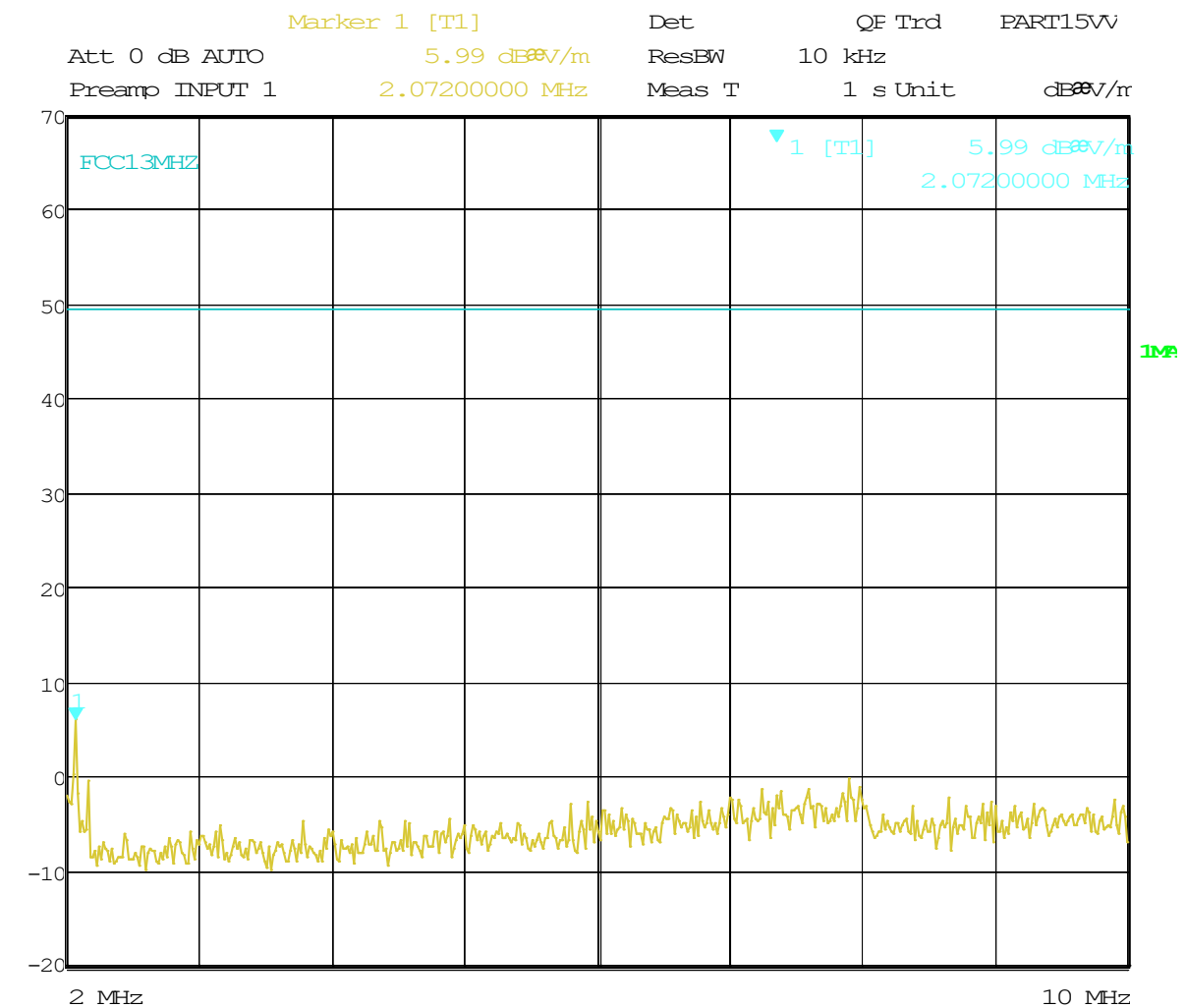
No emissions detected from the device at the test site.

Maritime FAX observed at 3908 kHz

Testing is required in the anechoic chamber in the laboratory to ensure that are no emissions from the device that have been suppressed by the presence of ambient emissions.

Frequency Range: 2.0 – 10.0 MHz (Anechoic chamber plot)

Antenna: Loop



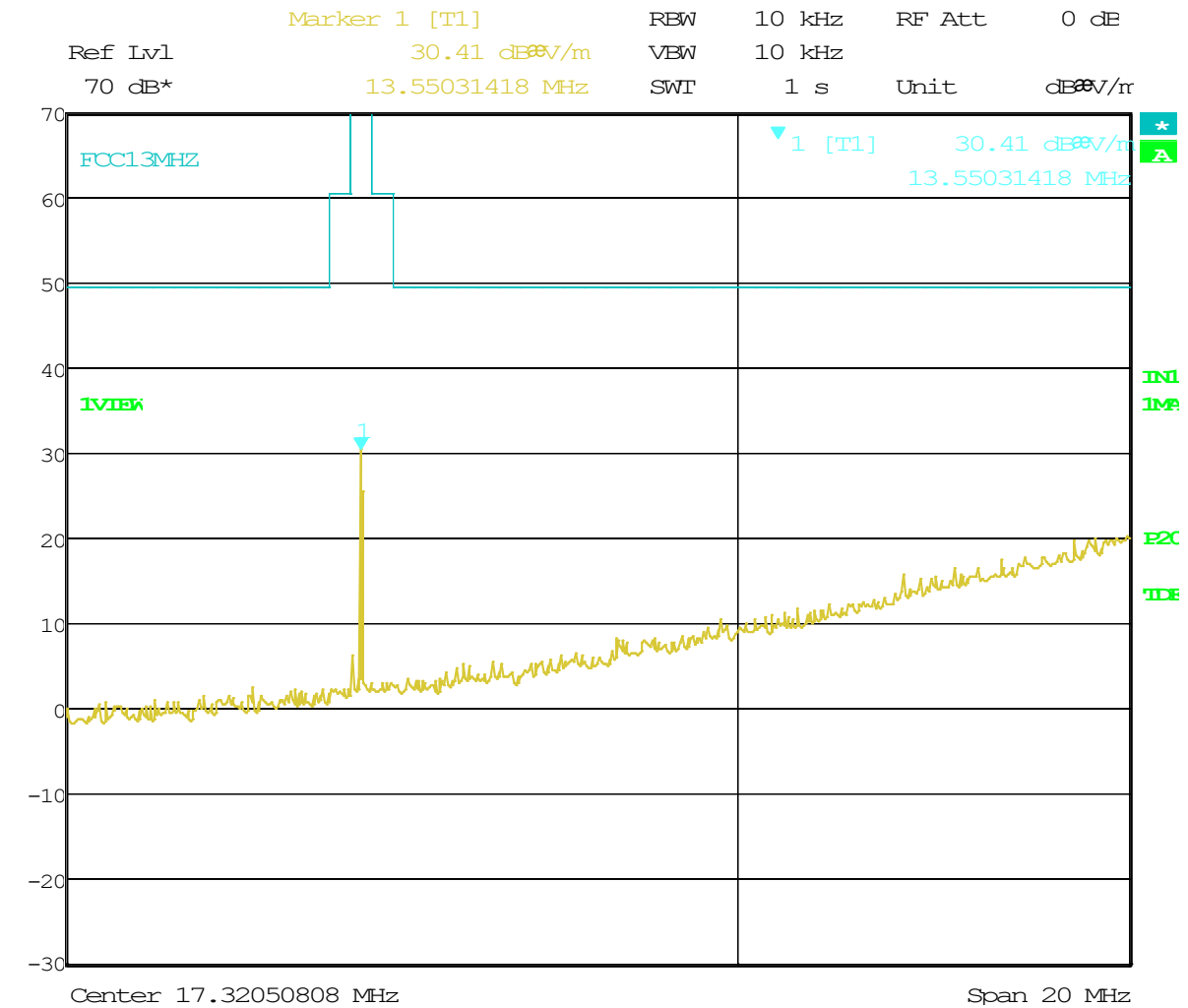
Date: 15.OCT.2026 11:43:36

Notes

No emissions detected from the product in the anechoic chamber

Frequency Range: 10.0 – 30.0 MHz (Anechoic chamber plot)

Antenna: Loop



Date: 15.OCT.2026 14:13:21

Notes

Device observed transmitting on 13.560 MHz

No emissions detected from the product in the anechoic chamber

Section 15.209: Spurious Emissions (30 – 1000 MHz)

Measurements between 30 – 1000 MHz have been made at a distance of 3 metres.

The emissions below were derived from the raw data plots that were then individually measured.

The limits as described in Section 15.209 have been applied.

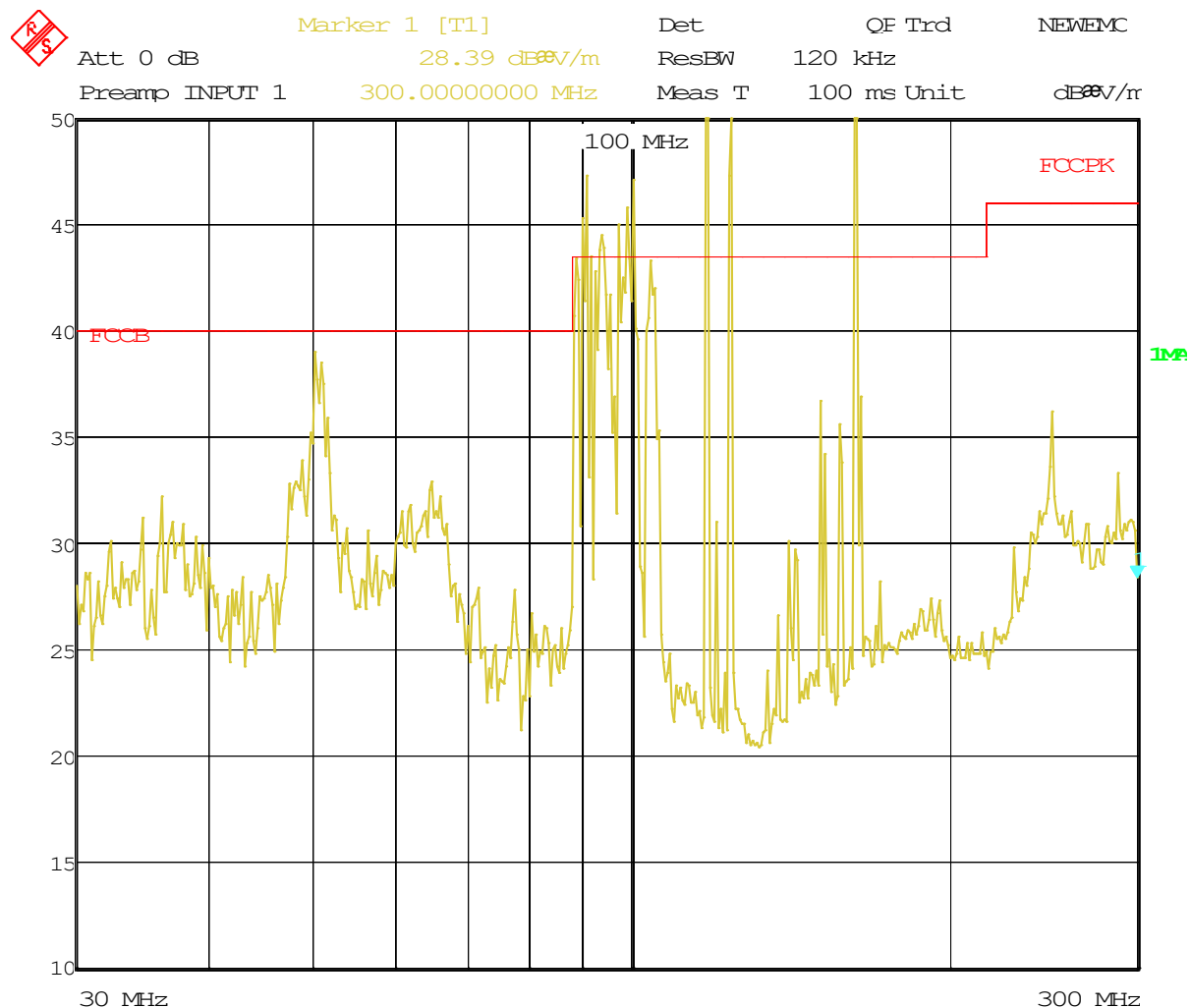
Frequency (MHz)	Vertical (dBuV/m)	Horizontal (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna	Detector
36.160	29.1		40.0	10.9	Vertical	Quasi Peak
47.760	29.1		40.0	10.9	Vertical	Quasi Peak
49.000	31.7		40.0	8.3	Vertical	Quasi Peak
50.440	36.0		40.0	4.0	Vertical	Quasi Peak
51.040	35.8		40.0	4.2	Vertical	Quasi Peak
65.080	28.3		40.0	11.7	Vertical	Quasi Peak
124.960		21.5	43.5	22.0	Horizontal	Quasi Peak
134.360		23.6	43.5	19.9	Horizontal	Quasi Peak
143.280	25.1	29.3	43.5	14.2	Horizontal	Quasi Peak
172.040		33.9	43.5	9.6	Horizontal	Quasi Peak
174.840		28.6	43.5	14.9	Horizontal	Quasi Peak
221.200		28.9	46.0	17.1	Horizontal	Quasi Peak
240.000		33.2	46.0	12.8	Horizontal	Quasi Peak
250.000	34.1	38.5	46.0	7.5	Horizontal	Quasi Peak
288.000	29.6		46.0	16.4	Vertical	Quasi Peak
350.000	35.4	35.2	46.0	10.6	Vertical	Quasi Peak
355.040	33.8		46.0	12.2	Vertical	Quasi Peak
356.640		32.6	46.0	13.4	Horizontal	Quasi Peak
371.240		35.8	46.0	10.2	Horizontal	Quasi Peak
384.000	31.6	38.2	46.0	7.8	Horizontal	Quasi Peak
393.200	31.6		46.0	14.4	Vertical	Quasi Peak
417.760	32.6	37.1	46.0	8.9	Horizontal	Quasi Peak
431.960		36.9	46.0	9.1	Horizontal	Quasi Peak
442.360		40.3	46.0	5.7	Horizontal	Quasi Peak
450.000	39.8	45.6	46.0	0.4	Horizontal	Quasi Peak
466.920	34.6	39.6	46.0	6.4	Horizontal	Quasi Peak
480.000	33.8	40.8	46.0	5.2	Horizontal	Quasi Peak
491.520		36.8	46.0	9.2	Horizontal	Quasi Peak
550.000	35.8	35.5	46.0	10.2	Vertical	Quasi Peak
750.000	34.6	35.4	46.0	10.6	Horizontal	Quasi Peak
960.000	40.3	38.5	46.0	5.7	Vertical	Quasi Peak

All other emissions detected had a margin to the limit that exceeded at least 15 dB when measurements were made between 30 - 1000 MHz using both vertical and horizontal polarisations.

Spurious Emissions (above 30 MHz)

Frequency Range: 30 – 300 MHz (Test site plot)

Antenna polarisation: Vertical



Date: 4.MAR.2026 09:58:55

Notes:

88 – 108 MHz: FM Broadcast ambient emissions

163.240 MHz: Local VHF land mobile repeater – intermittent ambient emission

140 – 160 MHz: VHF land mobile emissions

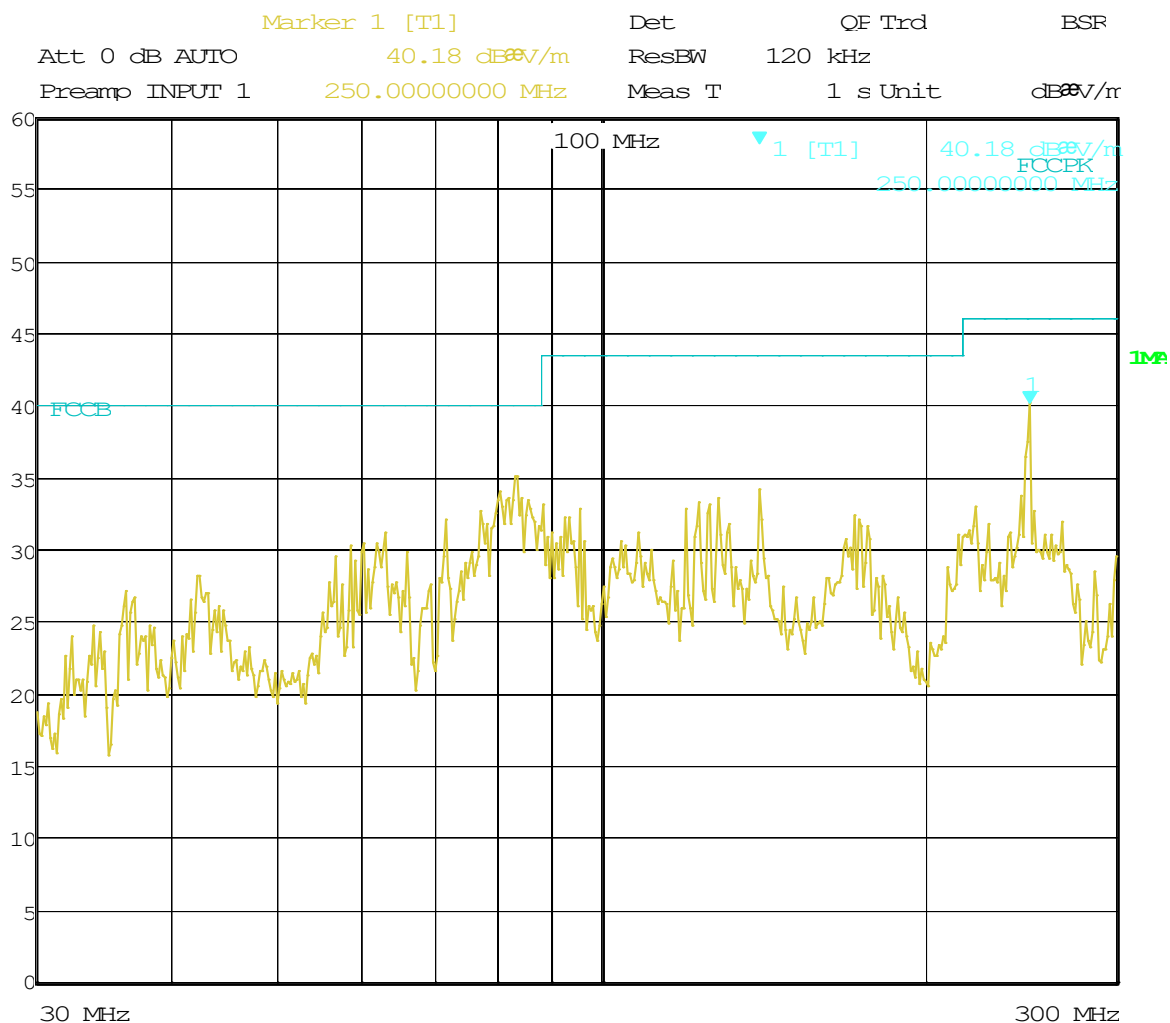
118 – 130 MHz: VHF Aeronautical emissions

Testing is required in the anechoic chamber in the laboratory to ensure that there are no emissions from the device that have been suppressed by the presence of ambient emissions.

Spurious Emissions (above 30 MHz)

Frequency Range: 30 – 300 MHz (Anechoic chamber plot)

Antenna polarisation: Vertical



Date: 15.OCT.2026 10:38:48

Notes:

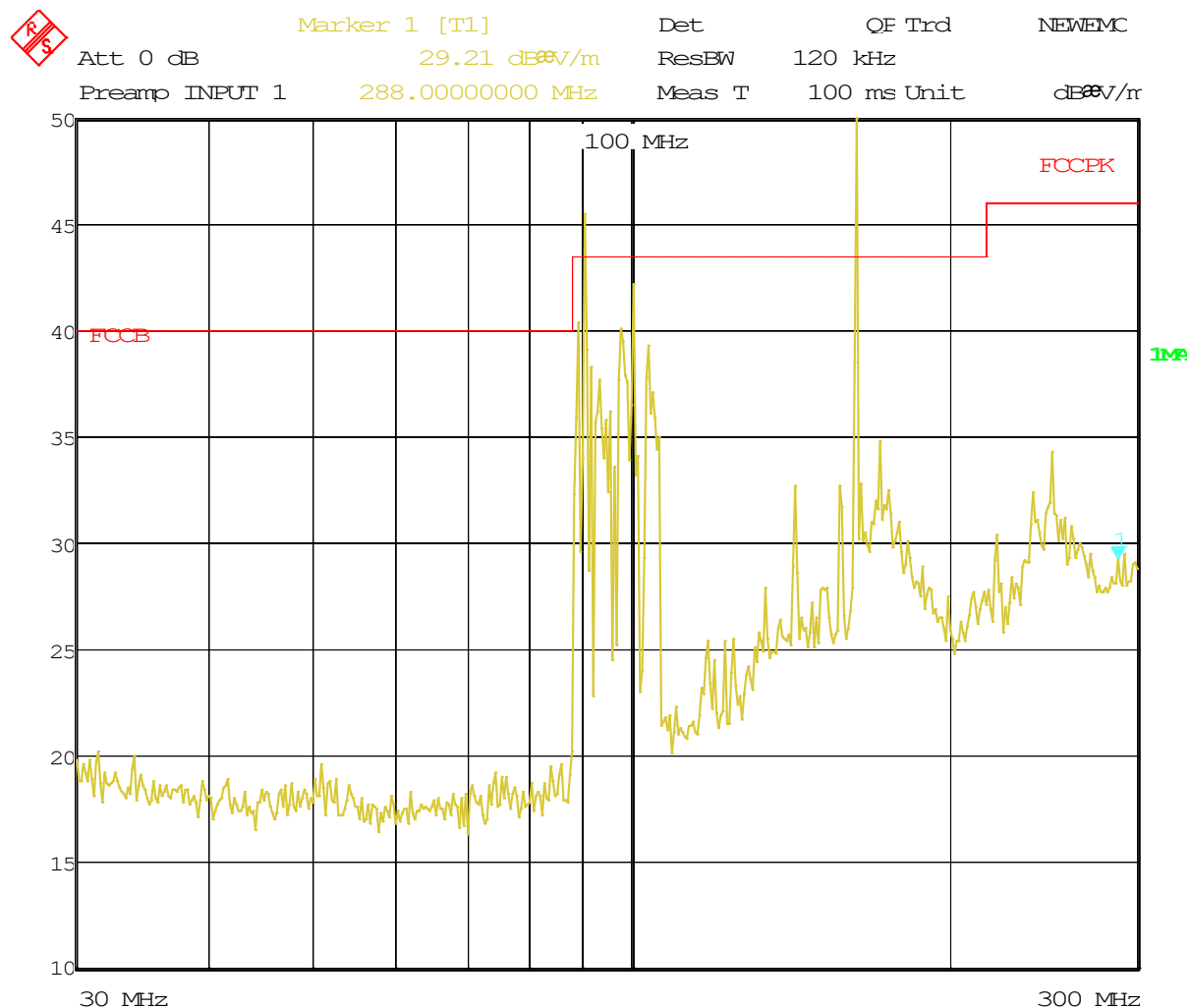
No significant emissions from the product were observed to have been suppressed by the presence of ambient emissions.

All device emissions observed to be below the appropriate limits.

Spurious Emissions (above 30 MHz)

Frequency Range: 30 – 300 MHz (Test site plot)

Antenna polarisation: Horizontal



Date: 4.MAR.2026 10:22:21

Notes:

88 – 108 MHz: FM Broadcast ambient emissions

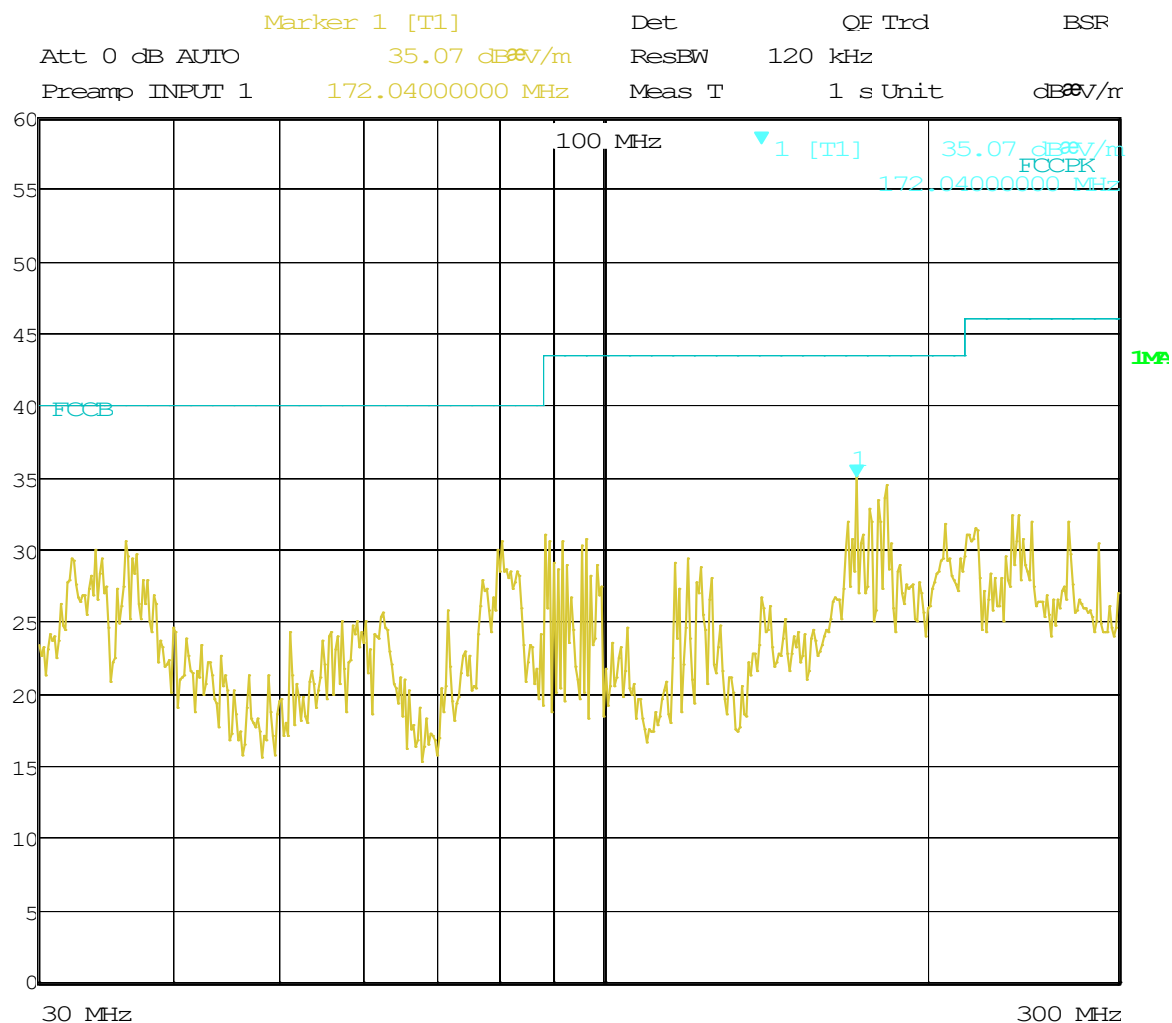
163.240 MHz: VHF land mobile local high level intermittent emission

Testing is required in the anechoic chamber in the laboratory to ensure that there are no emissions from the device that have been suppressed by the presence of ambient emissions.

Spurious Emissions (above 30 MHz)

Frequency Range: 30 – 300 MHz (Anechoic chamber plot)

Antenna polarisation: Horizontal



Date: 15.OCT.2026 10:43:26

Notes:

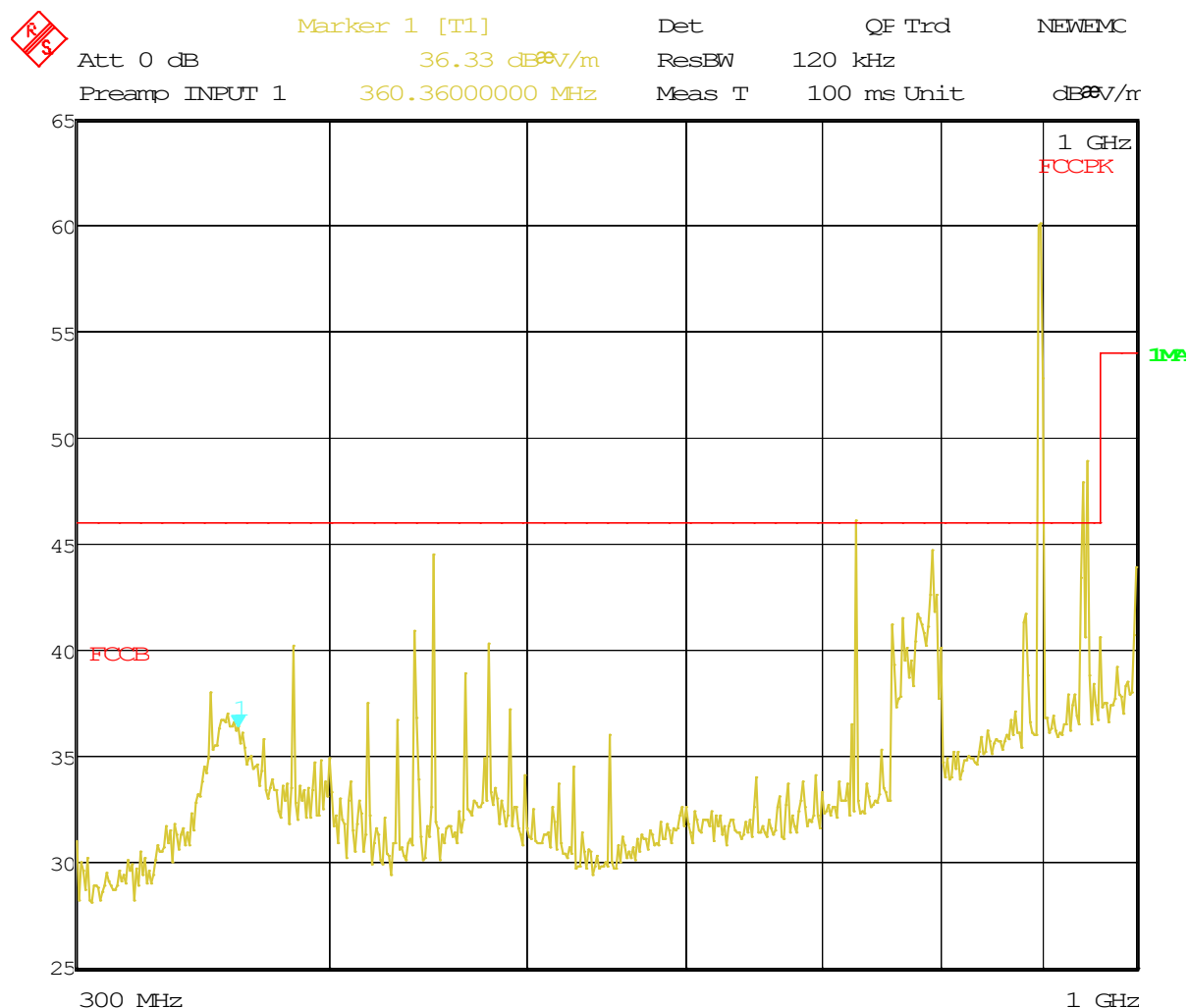
No significant emissions from the product were observed to have been suppressed by the presence of ambient emissions.

All device emissions observed to be below the appropriate limits.

Spurious Emissions (above 30 MHz)

Frequency Range: 300 – 1000 MHz (Test site plot)

Antenna polarisation: Vertical



Date: 4.MAR.2026 12:23:55

Notes

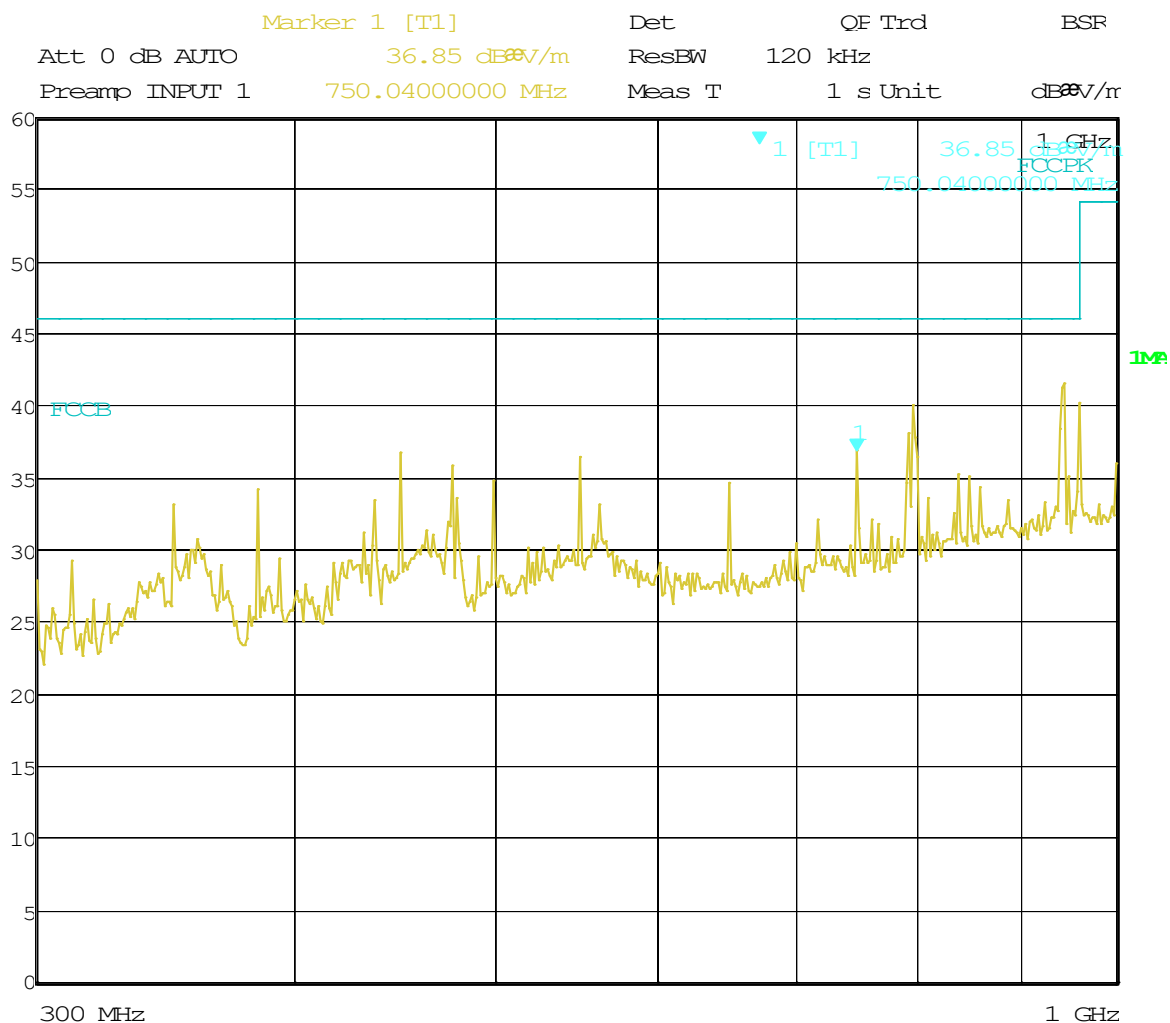
High level cellular emissions from 700 – 800 MHz, 890 MHz and 947 – 959 MHz.

Testing is required in the anechoic chamber in the laboratory to ensure that are no emissions from the device that have been suppressed by the presence of ambient emissions.

Spurious Emissions (above 30 MHz)

Frequency Range: 300 – 1000 MHz (Anechoic chamber plot)

Antenna polarisation: Vertical



Date: 15.OCT.2026 10:40:28

Notes

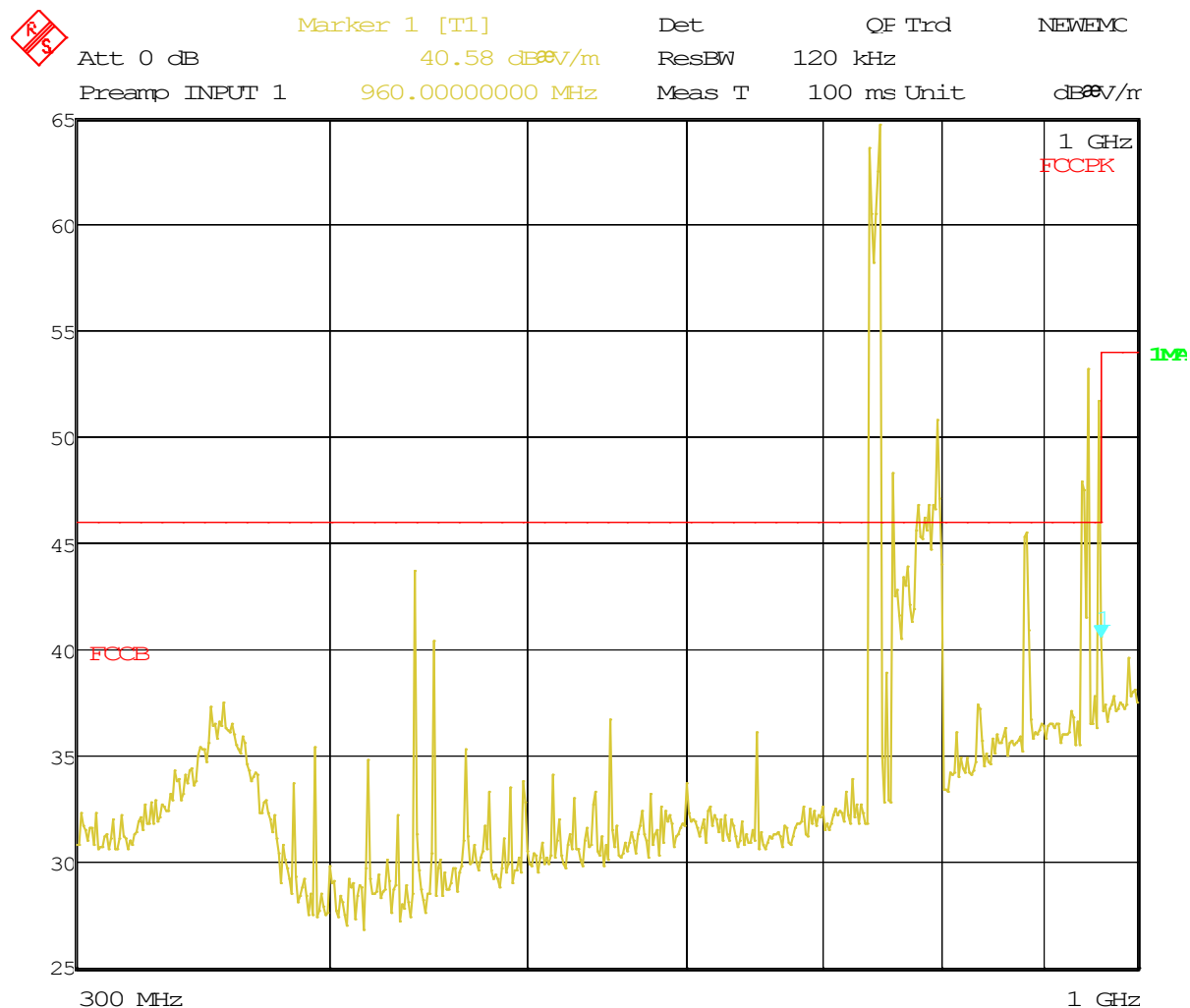
No significant emissions from the product were observed to have been suppressed by the presence of ambient emissions.

All device emissions observed to be below the appropriate limits.

Spurious Emissions (above 30 MHz)

Frequency Range: 300 – 1000 MHz (Test site plot)

Antenna polarisation: Horizontal



Date: 4.MAR.2026 12:43:44

Notes

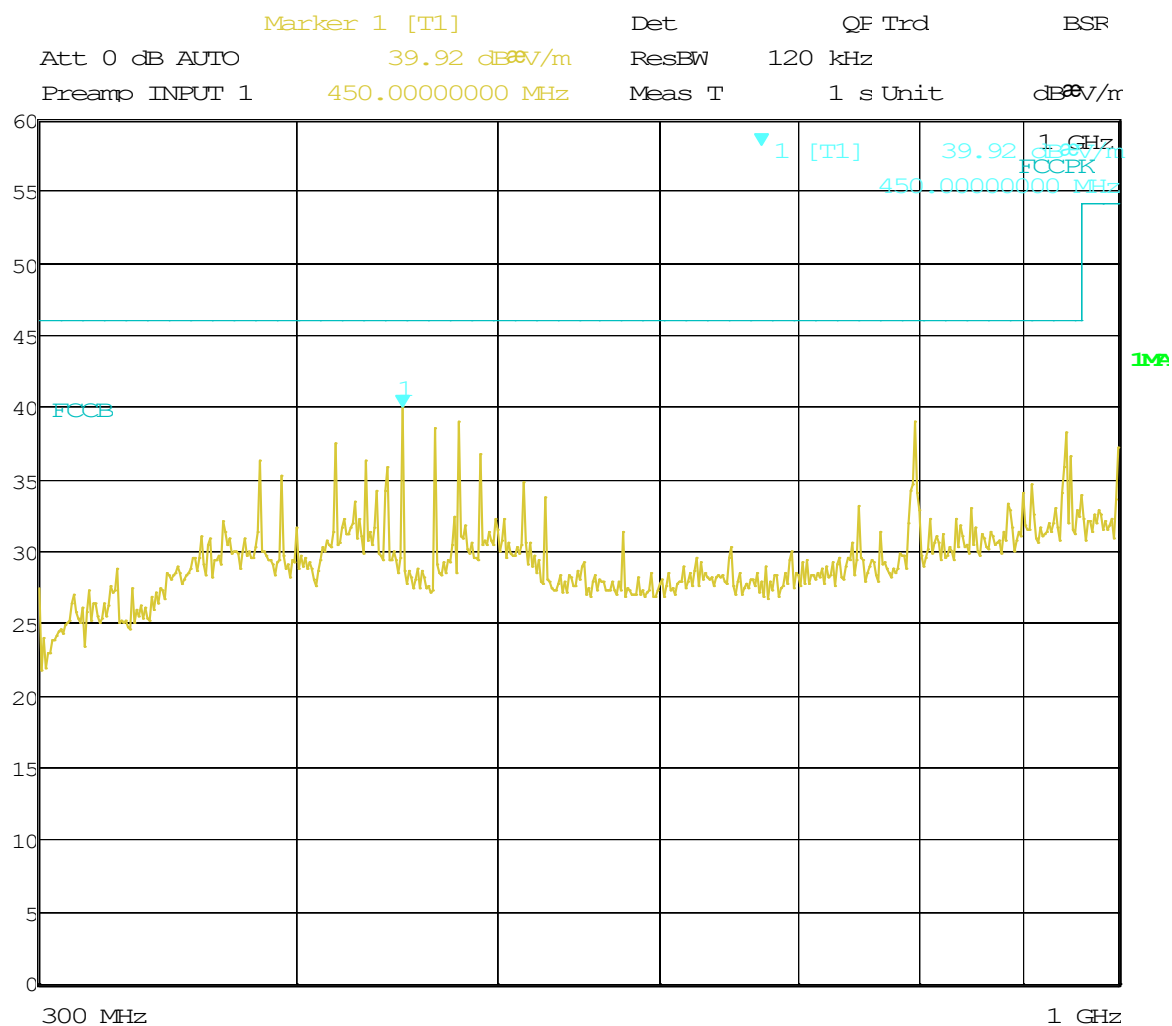
High level cellular emissions from 700 – 800 MHz, 880 MHz and 947 – 959 MHz.

Testing is required in the anechoic chamber in the laboratory to ensure that there are no emissions from the device that have been suppressed by the presence of ambient emissions.

Spurious Emissions (above 30 MHz)

Frequency Range: 300 – 1000 MHz (Anechoic chamber plot)

Antenna polarisation: Horizontal



Date: 15.OCT.2026 10:42:07

Notes

No significant emissions from the product were observed to have been suppressed by the presence of ambient emissions.

All device emissions observed to be below the appropriate limits.

Section 15.209: Spurious Emissions (1000 - 6000 MHz)

Measurements between 1000 - 6000 MHz have been made at a distance of 3 metres.

The emissions below were derived from the raw data plots that were then individually measured.

The limits as described in Section 15.209 have been applied.

Frequency MHz	Vertical dBuV/m	Horizontal dBuV/m	Limit dBuV/m	Margin dB	Antenna	Detector
1000.000		41.9	74.0	32.1	Horizontal	Peak
1000.000		32.2	54.0	21.8	Horizontal	Average
1344.000	45.9		74.0	28.1	Vertical	Peak
1344.000	34.6		54.0	19.4	Vertical	Average
1500.000	53.8	56.4	74.0	17.6	Horizontal	Peak
1500.000	39.7	41.4	54.0	12.6	Horizontal	Average
1820.800		50.3	74.0	23.7	Horizontal	Peak
1820.800		34.3	54.0	19.7	Horizontal	Average
1823.200	52.3		74.0	21.7	Vertical	Peak
1823.200	35.6		54.0	18.4	Vertical	Average
2402.000	55.8		74.0	18.2	Vertical	Peak
2402.000	34.8		54.0	19.2	Vertical	Average
2417.200		47.8	74.0	26.2	Horizontal	Peak
2417.200		34.9	54.0	19.1	Horizontal	Average
2459.600		48.0	74.0	26.0	Horizontal	Peak
2459.600		34.8	54.0	19.2	Horizontal	Average
2628.000	60.2		74.0	13.8	Vertical	Peak
2628.000	40.6		54.0	13.4	Vertical	Average
2914.400	53.5		74.0	20.5	Vertical	Peak
2914.400	36.6		54.0	17.4	Vertical	Average
2940.000	54.2		74.0	19.8	Vertical	Peak
2940.000	37.2		54.0	16.8	Vertical	Average
3004.000		50.9	74.0	23.1	Horizontal	Peak
3004.000		37.6	54.0	16.4	Horizontal	Average

All other emissions detected had a margin to the limit that exceeded at least 15 dB when measurements were made between 1000 - 6000 MHz using both vertical and horizontal polarisations.

Result: Complies.

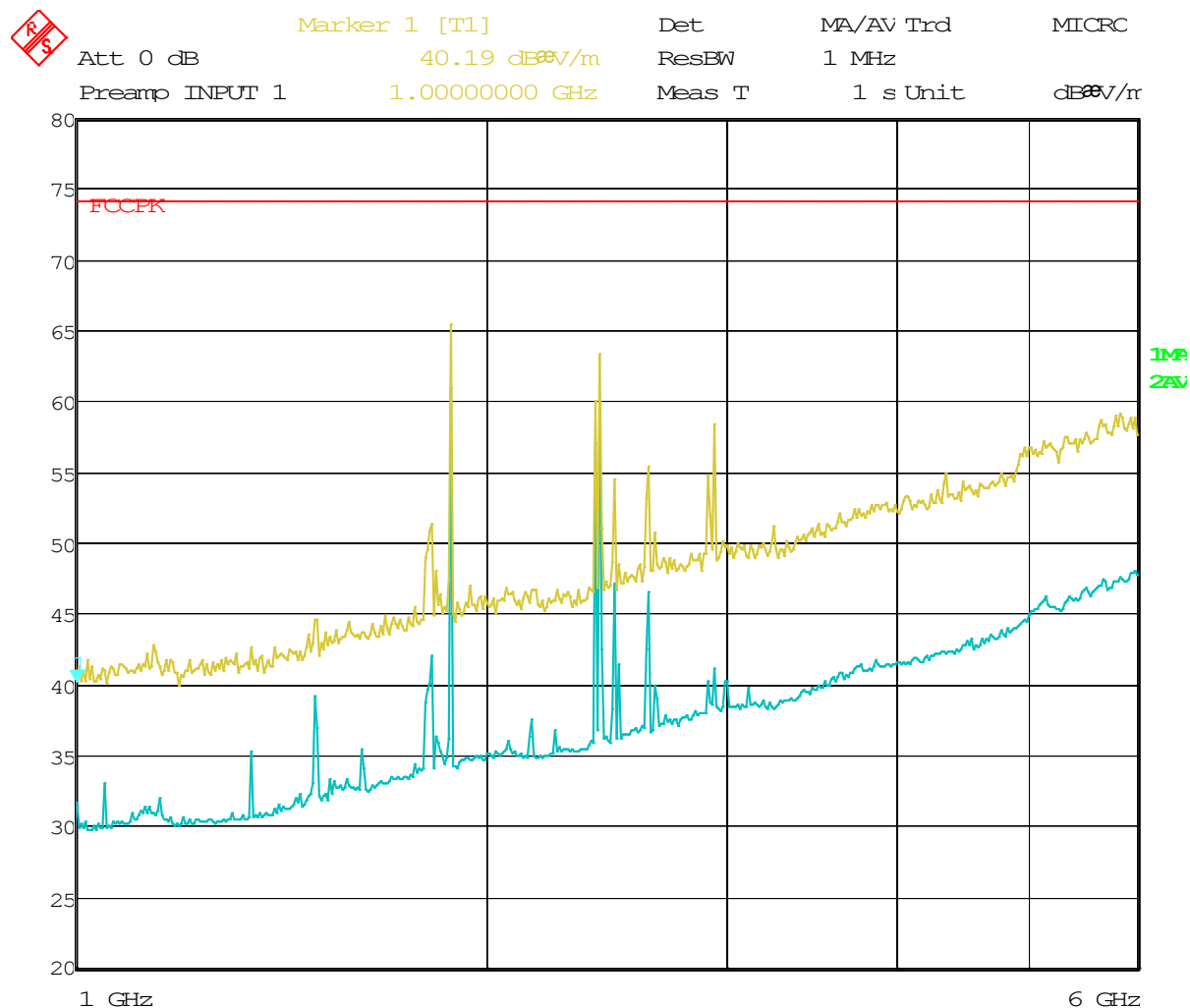
Measurement uncertainty with a confidence interval of 95% is:

- Free radiation tests (30 - 6000 MHz) ± 4.1 dB

Spurious Emissions (above 30 MHz)

Frequency Range: 1000 - 6000 MHz (Test site plot)

Antenna polarisation: Vertical



Date: 4.MAR.2026 14:28:07

Notes

DECT emission observed at approximately 1880 MHz

Cellular emissions observed at 1830 MHz and 2625 MHz approximately

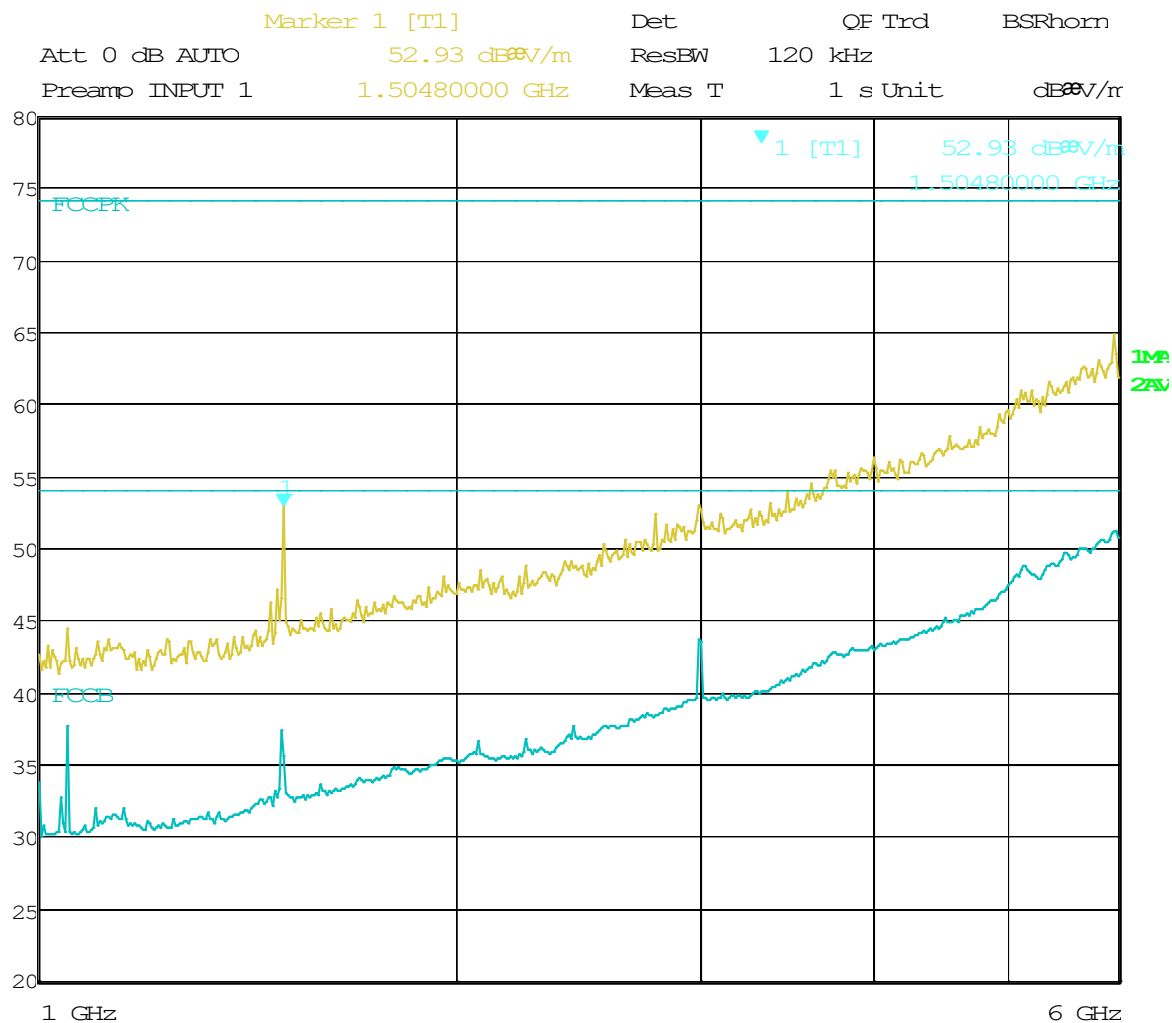
WiFi / Bluetooth emissions observed between 2400.0 – 2483.5 MHz

Testing is required in the anechoic chamber in the laboratory to ensure that there are no emissions from the device that have been suppressed by the presence of ambient emissions.

Spurious Emissions (above 30 MHz)

Frequency Range: 1000 - 6000 MHz (Anechoic chamber plot)

Antenna polarisation: Vertical



Date: 15.OCT.2026 10:53:36

Notes

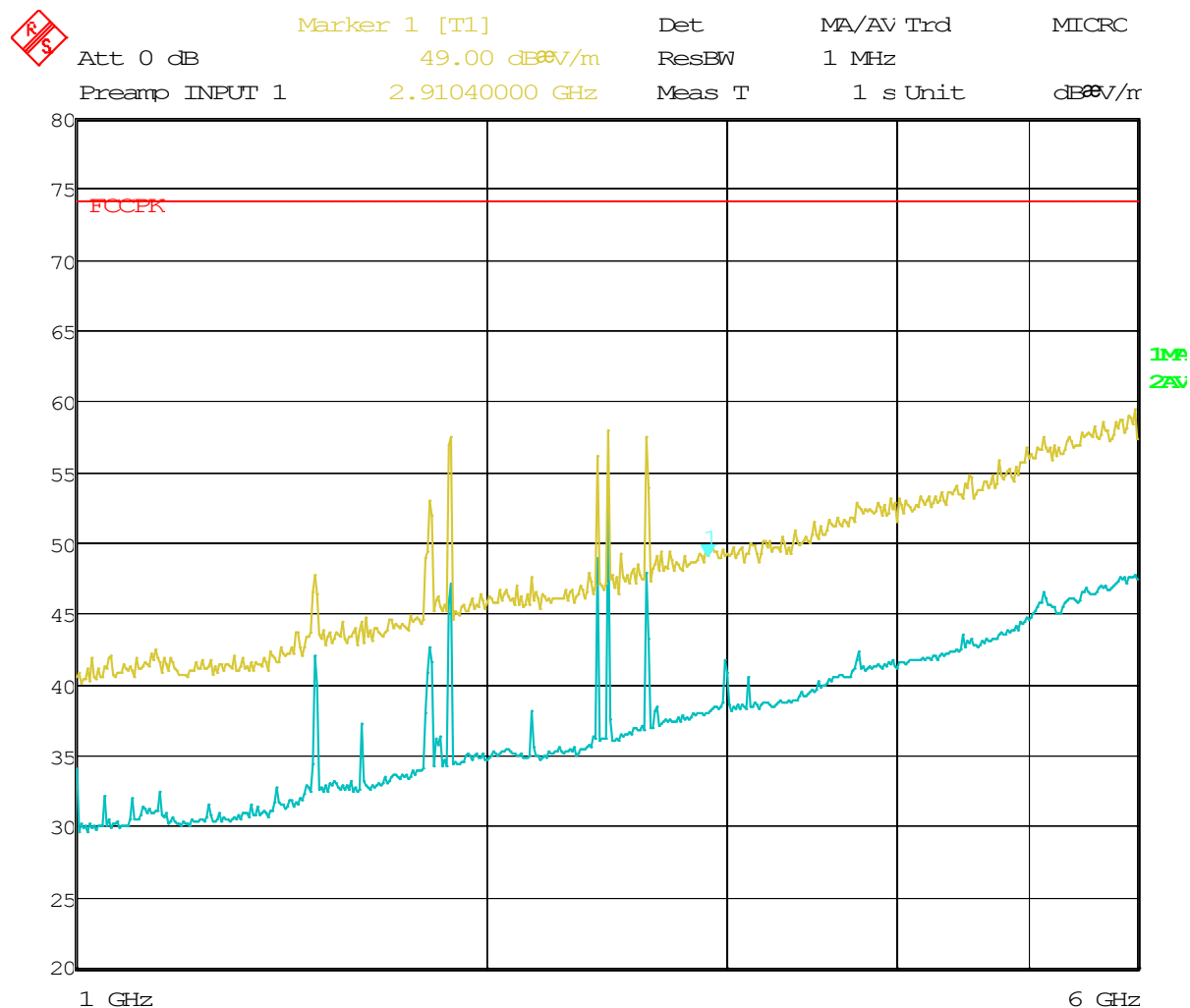
No significant emissions from the product were observed to have been suppressed by the presence of ambient emissions.

All device emissions observed to be below the appropriate limits.

Spurious Emissions (above 30 MHz)

Frequency Range: 1000 - 6000 MHz (Test site plot)

Antenna polarisation: Horizontal



Date: 4.MAR.2026 14:59:41

Notes

DECT emission observed at approximately 1880 MHz

Cellular emissions observed at 1830 MHz and 2625 MHz approximately

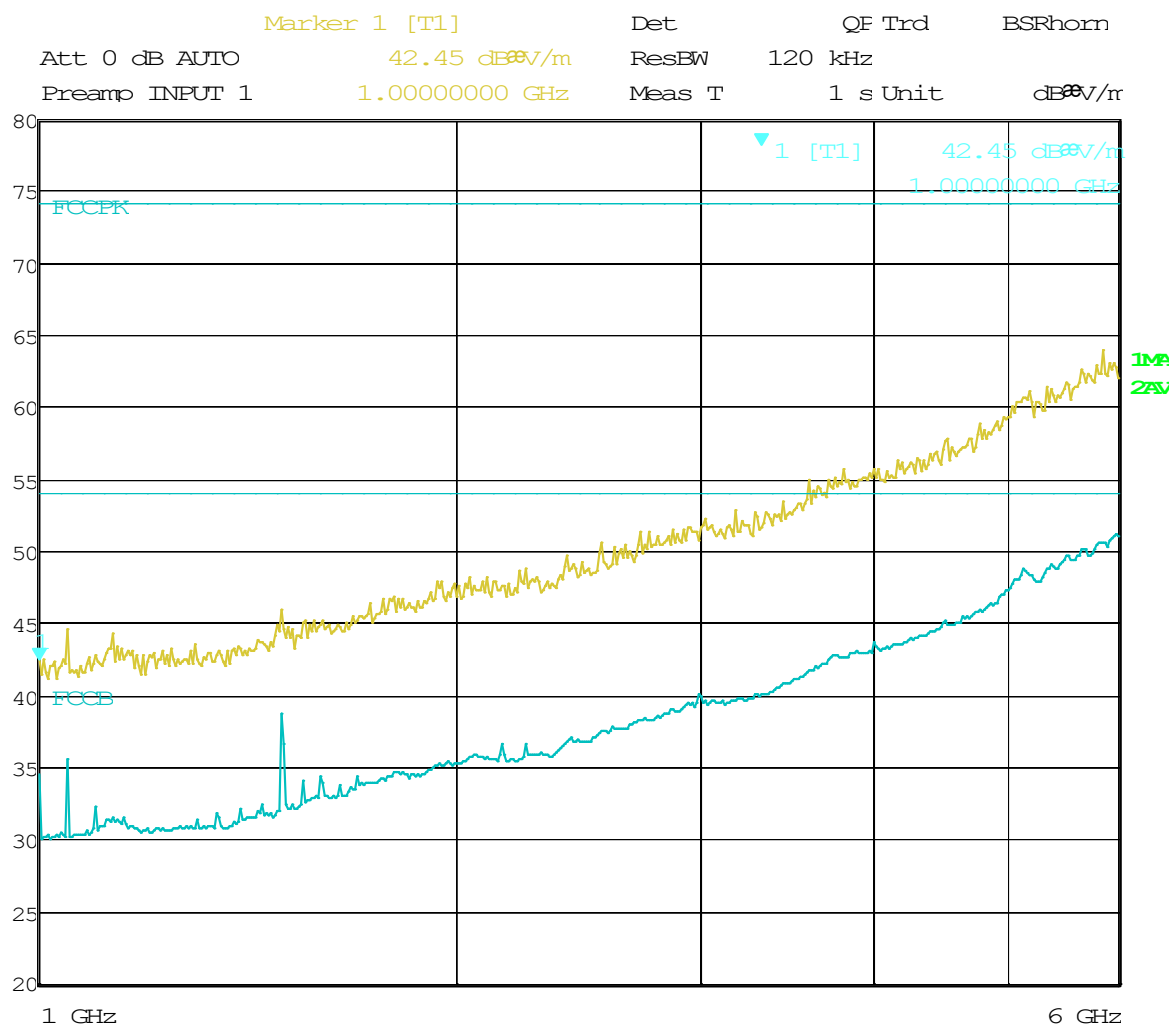
WiFi / Bluetooth emissions observed between 2400.0 – 2483.5 MHz

Testing is required in the anechoic chamber in the laboratory to ensure that there are no emissions from the device that have been suppressed by the presence of ambient emissions.

Spurious Emissions (above 30 MHz)

Frequency Range: 1000 - 6000 MHz (Anechoic chamber plot)

Antenna polarisation: Horizontal



Date: 15.OCT.2026 10:48:03

Notes

No significant emissions from the product were observed to have been suppressed by the presence of ambient emissions.

All device emissions observed to be below the appropriate limits.

Section 15.225: Fundamental emission:

Measurements were made using a magnetic loop antenna and a receiver with a Quasi Peak detector using a 9 kHz bandwidth.

Measurements were made at a distance of 10 metres with the limit being determined by using the extrapolation factor of 40 dB per decade limit, as detailed in section 15.31 f (2).

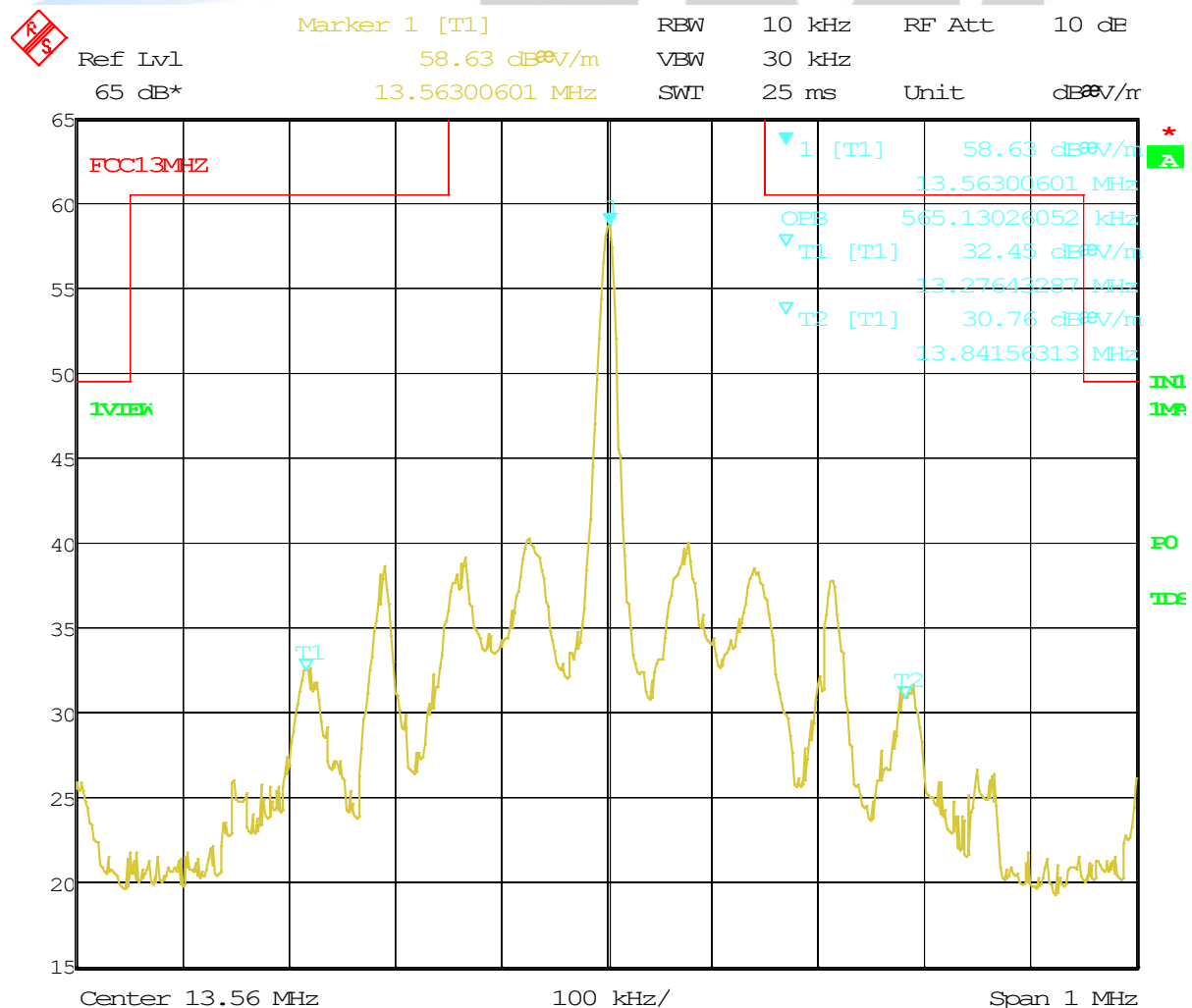
The limit at 30 m at 13.560 MHz is 15,848 uV/m or 84.0 dBuV/m.

Applying the extrapolation factor of 40 dB/ per decade, the limit at 10 m is 103.1 dBuV/m.

The 24 Vdc supply to the device was varied by +/- 15% to determine whether a change in field strength would occur.

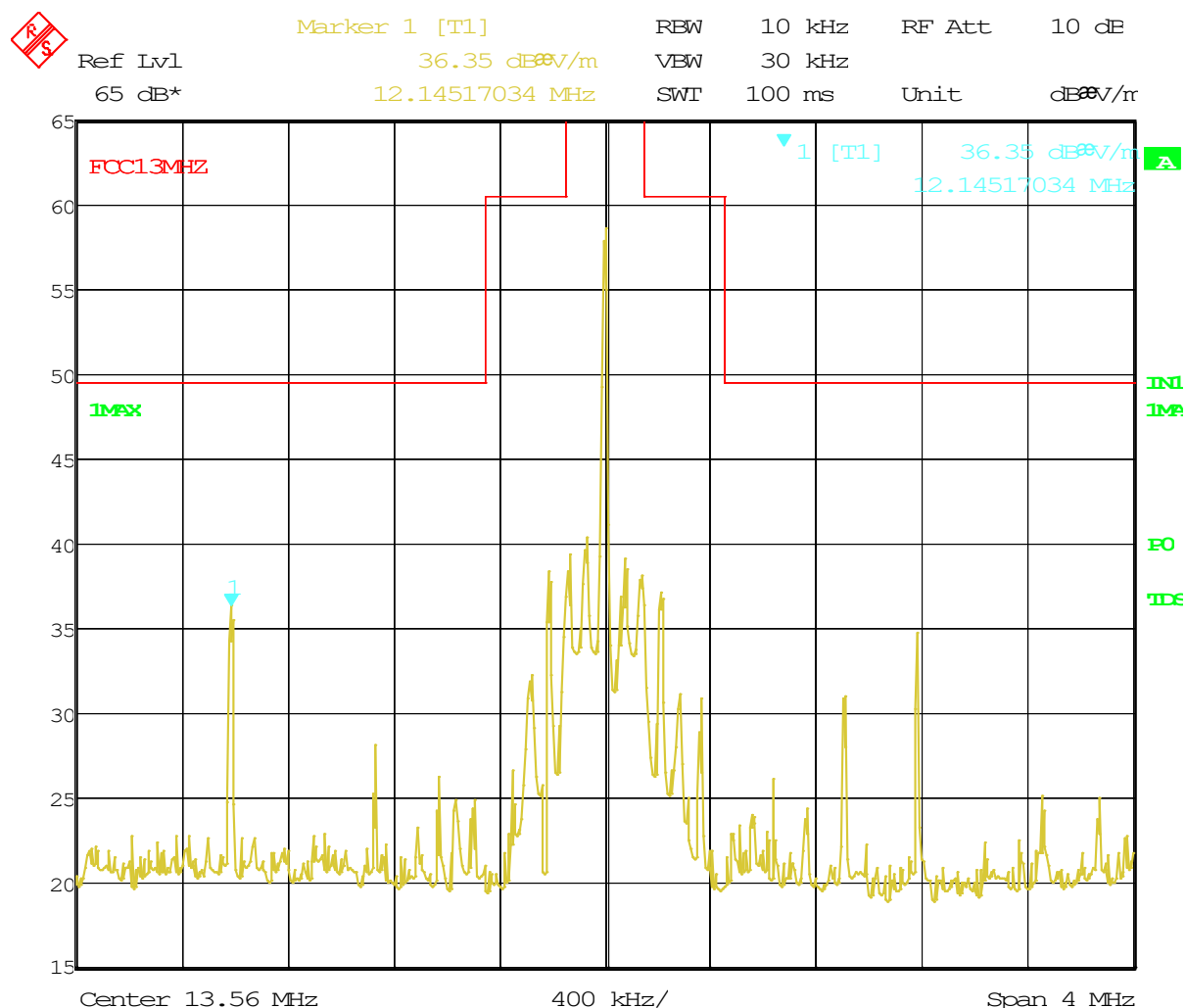
Voltage (Vdc)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
20.4	13.560	58.2	103.1	44.9
24.0	13.560	58.2	103.1	44.9
27.6	13.560	58.2	103.1	44.9

Spectrum analyser plot showing the carrier and modulation peaks within +/- 500 kHz.



Date: 16.MAR.2023 13:09:51

Spectrum analyser plot showing the carrier and modulation peaks within +/- 2 MHz



Date: 16.MAR.2023 13:11:29

Measurement was made at the open area test site with high level ambient emissions detected and confirmed at 12.145 MHz and 14.742 MHz.

Result: Complies.

Measurement uncertainty with a confidence interval of 95% is:

- Free radiation tests (100 kHz – 30 MHz) ± 4.8 dB

Section 15.225: Frequency tolerance:

The frequency tolerance of the carrier is required to be +/- 0.01% of operating frequency when the temperature is varied between -20 degrees C and +50 degrees C.

The device operates nominally on 13.560 MHz which gives a frequency tolerance of +/- 1,356.0 Hz.

Temperature (°C)	Frequency (MHz)	Difference (Hz)
50.0	13.559 605	-395
40.0	13.559 640	-360
30.0	13.559 570	-430
20.0	13.559 538	-462
10.0	13.559 542	-458
0.0	13.559 548	-452
-10.0	13.559 571	-429
-20.0	13.559 643	-357

As a worst case scenario the 24 Vdc supply to the device was varied by +/- 15% at 20 degrees C (ambient).

Voltage (Vdc)	Frequency (MHz)	Difference (Hz)
20.4	13.559 547	-453
24.0	13.559 552	-448
27.6	13.559 543	-457

The frequency tolerance above has been calculated by subtracting the Measured Frequency from the Nominal Frequency (13.560 MHz).

Result: Complies.

Measurement uncertainty with a confidence interval of 95% is:

Frequency tolerance ± 50 Hz

7. TEST EQUIPMENT USED

Instrument	Manufacturer	Model	Serial No	Asset Ref	Cal Due	Period
Aerial Controller	EMCO	1090	9112-1062	RFS 3710	N/A	N/A
Aerial Mast	EMCO	1070-1	9203-1661	RFS 3708	N/A	N/A
Turntable	EMCO	1080-1-2.1	9109-1578	RFS 3709	N/A	N/A
Loop	EMCO	6502	9003-2485	3798	24 Jun 2026	5 years
Biconical	Schwarzbeck	BBA 9106	9124-420 + 04272023E	3802	02 May 2026	3 years
VHF Balun	Schwarzbeck	VHBB9124	9124-420 + 04272023E	3801	02 May 2026	3 years
Log Periodic	Schwarzbeck	VUSLP 9111B	9111-113 + 04272023D	EMC4026	02 May 2026	3 years
Horn Antenna	EMCO	3115	9511-4629	E1526	24 Jun 2030	5 years
Heliac cable	Andrews	L6PNM-RPD	22869	Oats Cable	09 Jan 2027	1 year
Succoflex cable	H and S	104 10m n-n	340368/4	OR003	29 Jan 2027	1 year
Receiver	R & S	ESIB-40	100295	EMC4030	30 May 2026	3 years
Receiver	R & S	ESHS 10	828404/005	3728	03 Dec 2026	2 years
Pulse Limiter	R & S	ESH3-Z2	100363	EMC4032	05 Dec 2026	2 years
Mains Network	R & S	ESH2-Z5	881362/034	3628	09 Jul 2027	3 years
Power Supply	APT	7008	4170003	-	N/A	N/a
Thermal chamber	Contherm	M180F	86025	N/a	N/A	N/a
Thermometer	DSIR	RT200	35	EMC4029	9 April 2025	5 years

All test equipment was within calibration at the time of testing.

8. ACCREDITATIONS

All testing was carried out in accordance with the terms of EMC Technologies (NZ) Ltd International Accreditation New Zealand (IANZ) Accreditation to NZS/ISO/IEC 17025, Accreditation Number 424 dated 26th June 1991.

All measurement equipment has been calibrated in accordance with the terms of the EMC Technologies (NZ) Ltd International Accreditation New Zealand (IANZ) Accreditation to NZS/ISO/IEC 17025.

International Accreditation New Zealand has International Laboratory Accreditation Council (ILAC) Mutual Recognition Arrangements for testing and calibration with various accreditation bodies in a number of economies.

This includes NATA (Australia), UKAS (UK), SANAS (South Africa), NVLAP (USA), A2LA (USA), SWEDAC (Sweden).

Further details can be supplied on request

9. PHOTOGRAPHS

Radiated Emissions Test Set Up



Radiated Emissions Test Set Up



Radiated Emissions Test Set Up



Radiated Emissions Test Set Up



Radiated Emissions Test Set Up



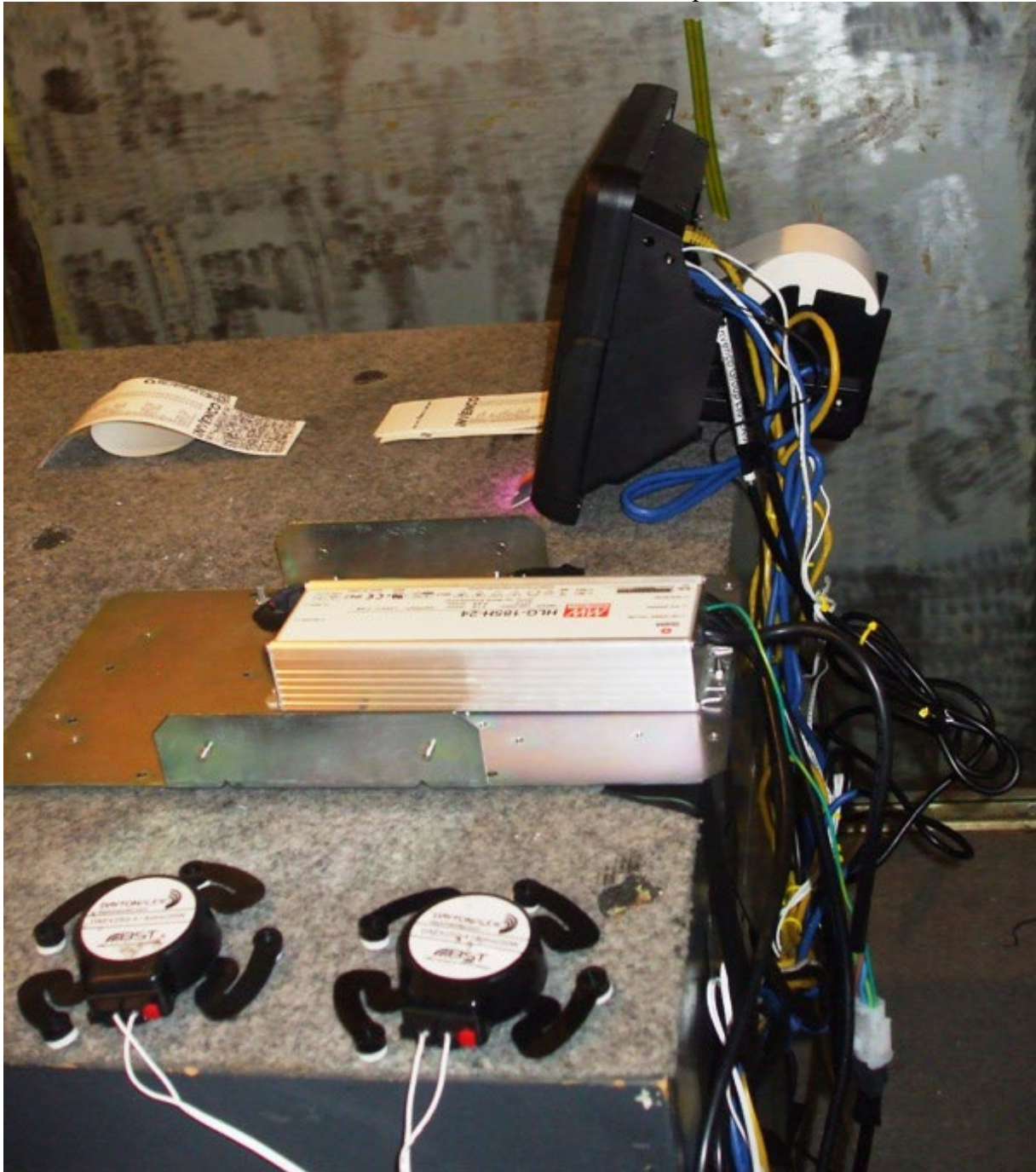
Radiated Emissions Test Set Up



Conducted Emissions Test Set Up



Conducted Emissions Test Set Up



Radiated Emissions Test Site - Loop Antenna



Radiated Emissions Test Site - Biconical Antenna



Radiated Emissions Test Setup - Log Periodic Antenna



Radiated Emissions Test Setup - Horn Antenna

