

**Test Report for the
FCC and ISED Testing of a
PV1525-IV (915MHz) Installation
Analyser
to FCC Rule 47CFR 15.247
and ISED RSS-247 Issue 4 for
Seaward Electronic Ltd**

Report number: C16749TR3

Project number: C9968

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Issue	Description						Issue by	Date
2	Copy 1		Copy 2		PDF	√	JB	10 th July 2026

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Test Report Change History

Issue	Date	Modification Details
1	27 th April 2026	First Issue
2	16 th June 2026	FCC ID added
3	10 th July 2026	Typographical errors corrected and channel list added
4		
5		
6		
7		
8		
9		
10		

Section 1 Test Location

All testing was performed at;

Eurofins E&E UK Ltd	Unit 5
	Speedwell Road
	Castleford
	WF10 5PY
Tel:	01977 731173
Website	http://www.yorkemc.co.uk
UKAS Testing No.	1574

UKAS Accreditation

Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation.

Eurofins E&E UK Ltd latest accreditation schedule can be found at:

[UKAS Scope of accreditation](#)

Eurofins E&E UK Castleford Laboratory, is an Accredited facility recognised by the Federal Communications Commission (FCC) for certification testing. The appropriate FCC Designation Number is UK2013, dated 1st March 2021.

Eurofins E&E UK Castleford Laboratory is recognised by ISED for certification testing.

ISED Assigned Code: 22959

Section 2 Customer Information

Company name	Seaward Electronic Ltd
Address	18 Bracken Hill
	South West Industrial Estate
	Peterlee
	Co. Durham
	SR8 2SW
	United Kingdom
Contact	Mr Anthony Barker
Email	AnthonyB@seaward.com

Section 3 Equipment Details**Equipment Under Test (EUT)**

Date received:	8 th January 2026		
EUT name:	PV1525-IV (915MHz) Installation Analyser		
Model:	PV1525		
PMN:	PV1525-IV (915MHz) Installation Analyser		
HVIN:	A:V1, M:V1		
FVIN:	A:D2.2.0_dev0_emc, B:2.1.4, F:2.1.0		
FCC ID:	2BV6F-PV1525		
IC:	TBC		
Serial no:	51S-0055		
EUT description:	The EUT in conjunction with its companion device is used to measure the effectiveness of a solar panel installation. The EUT contains a LoRa 915MHz radio for communication with the companion device, as well as a pretested Bluetooth module.		
Antenna	Internal strip antenna		
Peak Antenna Gain	4.07 dBi		
Transmission	Digital Transmission System (DTS)		
Modulation schemes	LoRa – Spread factor 10		
Operating frequency bands	902MHz to 928MHz		
No of units tested:	One		
EUT power:	11.55Vdc Rechargeable Lithium Ion Battery		
Highest internal frequency:	2.480GHz		
Size of EUT (mm)	Width: 115	Length: 265	Height: 80
Mode/s of operation:	Continuous transmission of packetized data. Ch0 915MHz Continuous transmission of packetized data. Ch5 920MHz Continuous transmission of packetized data. Ch9 924MHz		
Test software:	The EUT was programmed to the correct test modes via buttons on the front panel. The EUT was supplied with the output power level set to a level of 6 in control software.		
Modifications incorporated during testing:	None		

Ports and Cables	Cable Length	Screened/ unscreened	Connected to
-	-	-	-

Channel Number	Frequency
0	915 MHz
1	916 MHz
2	917 MHz
3	918 MHz
4	919 MHz
5	920 MHz
6	921 MHz
7	922 MHz
8	923 MHz
9	924 MHz

Device Channelization**EUT Photographs**

Photographs are supplied separately.

Configuration of EUT

The apparatus was supplied in one single possible configuration.

EUT Monitoring/Auxiliary Equipment

None.

Monitoring Software

None. The mode required was selected via buttons on the front panel prior to the testing.

Section 4 Test Specifications**For USA:**

Regulation / Test Standard	Regulation: Title 47 of the Code of Federal Regulations (CFR) Part 15 (47CFR15) Subpart C – Intentional Radiators Measurement standard: ANSIC63.10-2020/Cor1-2023 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
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Requirement	FCC Rule Part	Comments	Result Summary
6 dB Bandwidth	FCC § 15.247(a)(2)	Applies	Pass
Maximum peak conducted power	FCC § 15.247(b)(3)	Applies	Pass
Power spectral density	FCC § 15.247(e)	Applies	Pass
Band edge compliance	FCC § 15.247(d)	Applies	Pass
Conducted spurious emissions	FCC § 15.247(d)	Applies	Pass
Transmitter radiated spurious emissions – restricted bands	FCC § 15.247(d) FCC § 15.209	Applies	Pass

For Canada:

Regulation / Test Standard	Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands Issue 4 July 2025 And, RSS-Gen — General Requirements for Compliance of Radio Apparatus Issue 5 April 2018 +A1 March 2019 +A2 February 2021
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Requirement	ISED Ragulation	Comments	Results Summary
99% Occupied Bandwidth	RSS-Gen § 6	Applies	Pass
6 dB Bandwidth	ISED RSS-247 § 6.3.1	Applies	Pass
Maximum peak conducted power	ISED RSS-247 § 6.3.2	Applies	Pass
Power spectral density	ISED RSS-247 § 6.3.1	Applies	Pass
Band edge compliance	ISED RSS-247 § 6.6 ISED RSS-GEN § 8.10	Applies	Pass
Conducted spurious emissions	ISED RSS-247 § 6.6	Applies	Pass
Transmitter radiated spurious emissions	ISED RSS-GEN § 8.9	Applies	Pass

Knowledge Database References

The following KDBs were referenced during the testing.

The latest knowledge database references are available via the FCC KDB website at:

<https://apps.fcc.gov/kdb>

4.1.1 Radiated Emissions (30MHz to 1000MHz)

Publication Number	Keyword	Publication Date
913591	Measurement of radiated emissions at the band-edge for a Part 15 RF Device	04/05/2017

4.1.2 Radiated Emissions (1GHz to 40GHz)

Publication Number	Keyword	Publication Date
414788	Test Site Validation Requirements above 1 GHz.	07/12/2018
414788	Comparison Noise Emitter (CNE), reference noise source, .pdf	07/12/2018
913591	Measurement of radiated emissions at the band-edge for a Part 15 RF Device	04/05/2017
414788	Comparison Noise Emitters (CNE), test equipment, Broadband.pdf	07/12/2018

Compliance Statement

The PV1525-IV (915MHz) Installation Analyser, as tested, was shown to meet requirements of the standards listed in Section 4 of this report.

Decision Rule Statement

The Decision Rule is applied on the basis of the ILAC-G8:09/2019

This guidance document has been prepared to assist laboratories in the use of decision rules when declaring statements of conformity to a specification or standard as required by ISO/IEC 17025:2017

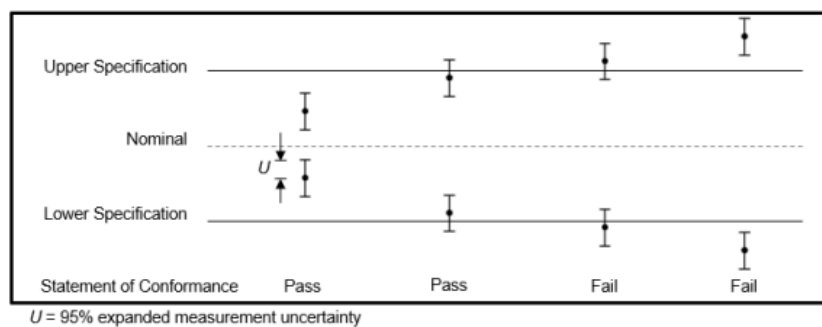
Where a result is considered marginal in respect of its proximity to the limit line, for example, the customer would be made aware of situation so that they can make an informed decision on how to proceed.

A binary decision rule exists when the result is limited to two choices (pass or fail). A non-binary decision rule exists when multiple terms may express the result (pass, conditional pass, conditional fail, fail). These are further explained below.

The laboratory recommends to use Binary Statement for Simple Acceptance Rule ($w = 0$)

Statements of conformity are reported as:

- Pass - the measured value is below the acceptance limit, $AL = TL$.
- Fail - the measured value is above the acceptance limit, $AL = TL$



Section 5 Spurious Emission Results – Radiated and Conducted

Test Specification

FCC Rule Part	47CFR 15.247 (d)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty Radiated tests	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is +/- 6.26dB for the frequency range 30MHz to 1GHz +/- 5.14dB for the frequency range from 1GHz to 6GHz +/- 5.45dB for the frequency range from 6GHz to 18GHz
Measurement Uncertainty Conducted tests	± 1.4 dB

Procedure and Test Software Version

Radiated tests:- 47CFR15.205 and 47CFR15.209

Eurofins E&E UK test procedure (30MHz to 1GHz)	CEP23 Issue 12
Eurofins E&E UK test procedure (1GHz to 40GHz)	CEP64 Issue 13
Test software	RadiMation Version 2023.1.6

Conducted Tests 47CFR 15.247(d)

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	11.11
Test software	N/A

Radiated Emissions (30MHz to 1GHz)

Radiated electric field emission measurements are applied as defined in 47CFR15.205 and 47CFR15.209.

5.1.1 Limits at 3m

Frequency (MHz)	Electric Field Strength Limit (dBµV/m) at 3m measurement distance
	Quasi Peak
30 - 88	40.0
88 -216	43.5
216 - 960	46.0
960- 1000	54.0

Note: FCC 47 CFR Part 15 Section 15.209 and 15.205 specifies test limits at 3m

Receiver Settings

Receiver Parameters	Setting
Detector Function	Quasi Peak
Start Frequency	30MHz
Stop Frequency	1000MHz
Resolution Bandwidth	120kHz
Video Bandwidth	Auto

5.1.2 Emissions measurements**5.1.3 Date of Test**

12th January

5.1.4 Test Area

LAB 1 (SAC)

5.1.5 Tested by

J Beevers

5.1.6 Test Setup

The EUT was configured in the SAC on an 80cm high polystyrene table.

The measurement was performed with an antenna to EUT separation distance of 3m. The results were maximised in orientation 0-360 degrees and height 1-4m.

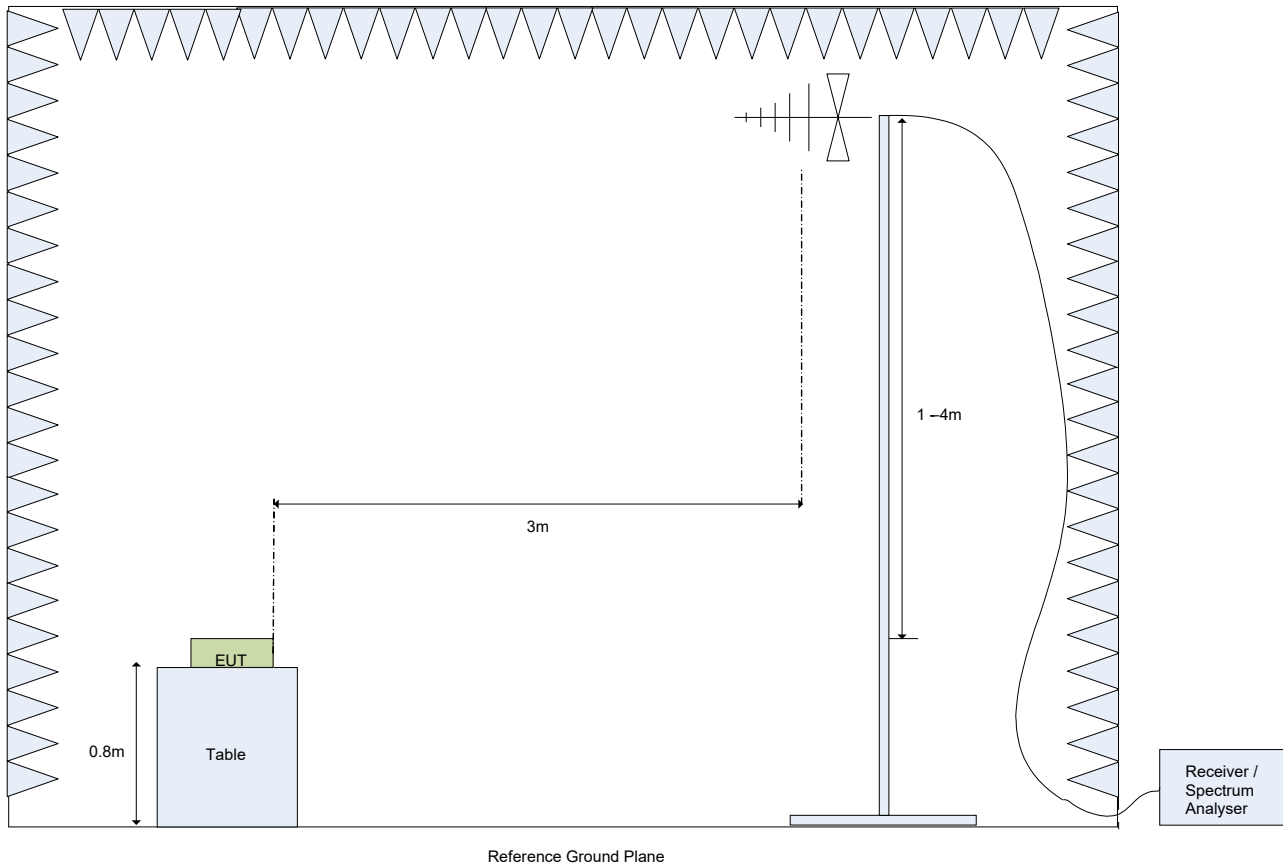


Figure 1 Test Setup for E-Field Measurements from 30MHz to 1GHz

Note 1 : With the EUT de-energized the ambient radio noise and signals met the 6dB peak detection requirement of ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024.

Note 2 : There were no significant environmental temperature changes during the test duration and hence it was not considered necessary to consider any variation in cable loss.

Operating Mode During testing

During spurious emission testing the equipment under test was set to transmit at the same frequency on the following channels:

- Ch0 915MHz.
- Ch5 920MHz.
- Ch9 924MHz.

The equipment under test was pre-scanned using peak detection. Final measurements were performed with the equipment under test operating on Ch9 924MHz.

5.1.7 Electric field emissions, 30MHz to 1GHz



Figure 2 Electric field emissions Plot, 30MHz to 1GHz, Operation on channel 9 924MHz

Frequency MHz	Quasi- Peak dBμV/m	Quasi Peak Limit dBμV/m	Quasi- Peak Difference dB	Quasi- Peak Status	Angle degrees	Height m	Polarization
30.18	18.4	40.0	-21.6	Pass	205	4.0	Vertical
62.52	16.5	40.0	-23.5	Pass	115	1.0	Vertical
224.04	32.9	46.0	-13.1	Pass	90	1.2	Horizontal
272.04	33.2	46.0	-12.8	Pass	75	1.0	Horizontal
352.50	28.0	46.0	-18.0	Pass	0	1.5	Vertical
592.02	30.4	46.0	-15.6	Pass	270	1.4	Horizontal
984.84	21.9	54.0	-32.1	Pass	175	1.9	Horizontal

Table 1 Electric Field Emissions Peaks, 30MHz to 1GHz, Operation on channel 9 924MHz

RadiMation



Figure 3 Electric field emissions Plot, 30MHz to 1GHz, Operation on channel 0 915MHz - Peak detector scan

RadiMation

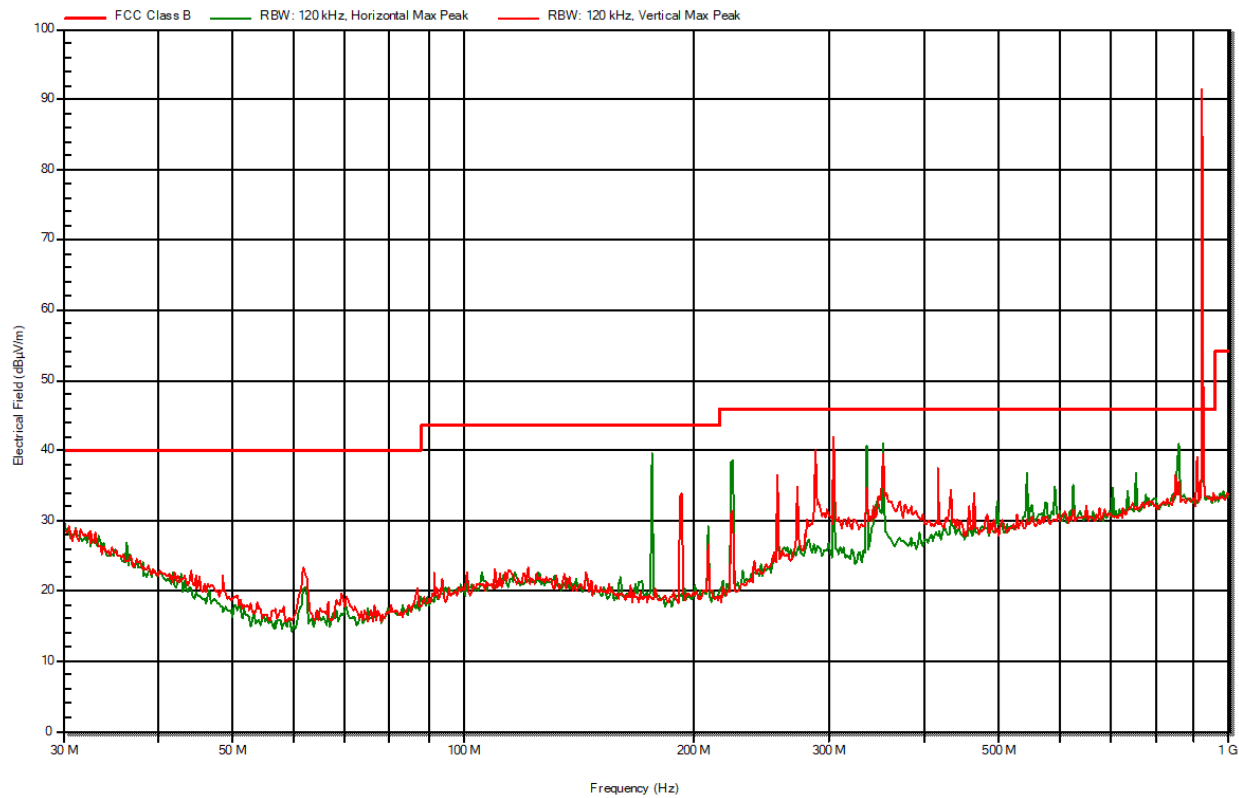


Figure 4 Electric field emissions Plot, 30MHz to 1GHz, Operation on channel 5 920MHz - Peak detector scan

Radiated Emissions (1GHz to 10GHz)**5.1.8 Limits**

Frequency (GHz)	Limit (dB μ V/m)	Limit (dB μ V/m)
	Peak	Average
1-10	74.0	54.0

5.1.9 Receiver Settings

Receiver Parameters	Setting
Detector Function	Average and Peak
Start Frequency	1GHz
Stop Frequency	10GHz
Resolution Bandwidth	1MHz
Video Bandwidth	Auto

5.1.10 Emissions measurements**5.1.11 Date of Test**16th January 2026**5.1.12 Test Area**

LAB 1 (SAC)

5.1.13 Tested by

J Beevers

5.1.14 Test Setup

The EUT was configured in the SAC on a 1.5m high table. Exploratory measurements on the EUT were carried out to identify suspect frequencies and worst case orientations, see Section 5.1.15.

The measurement was then performed with an antenna to EUT separation distance of 3m.

The antenna was kept in the “cone of radiation” from the EUT and pointed at the area both in azimuth and elevation using the tilt mechanism on the antenna mast.

The results were maximised in orientation 0-360 degrees and height 1-4m.

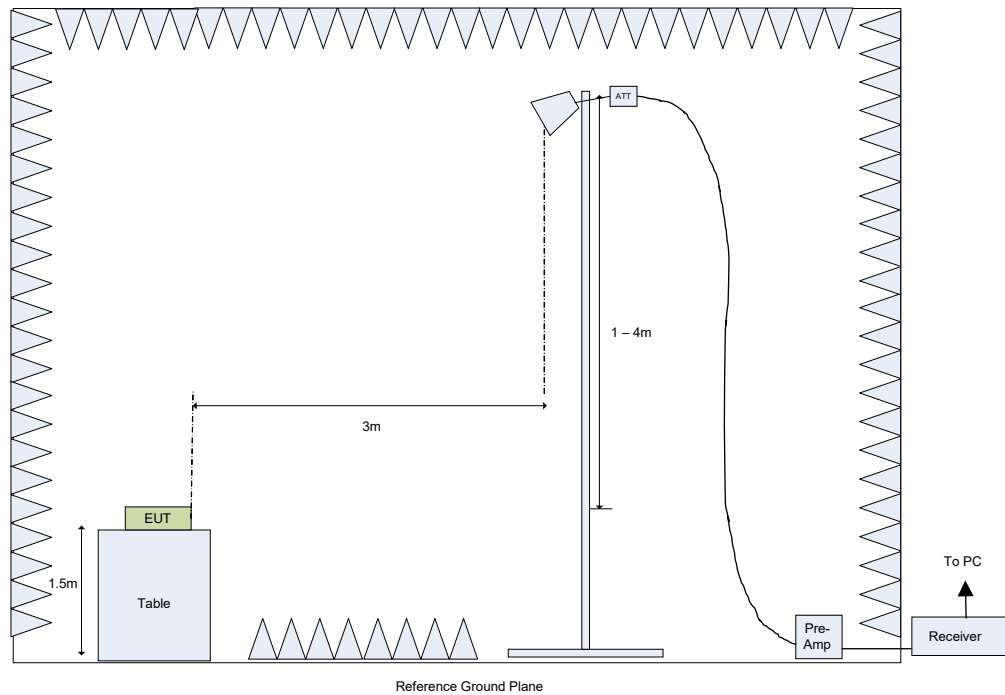


Figure 5.4.7.1: Test Setup for Final E-Field Measurements from 1GHz to 18GHz

- Note 1 : With the EUT de-energized the ambient radio noise and signals met the 6dB peak detection requirement of ANSIC63.10-2020/Cor1-2023.
- Note 2 : There were no significant environmental temperature changes during the test duration and hence it was not considered necessary to consider any variation in cable loss.
- Note 3: On all swept and final measurements made between 1GHz and 10GHz a Microtronics HPM50108 1.2GHz high-pass filter was placed in the measurement chain between the antenna and pre-amplifier in order to prevent the artificial generation of harmonics within the pre-amplifier.

5.1.15 Exploratory Radiated Emission Maximization

During exploratory testing, suspect emissions from the EUT were identified both in terms of the frequency and directionality. This was achieved by manually positioning the antenna close to the EUT and also by scanning it over all sides of the EUT whilst observing a spectral display. The typical distance between the surface of the EUT and the scanning antenna was circa 30cm.

Frequency (GHz)	Mode of operation	EUT face *	Emissions Angle (w.r.t. turntable)	Height	Polarization
1.1526	Transmitting on channel 5 920MHz	top face	0	1.0	V
1.2318	Transmitting on channel 5 920MHz	top face	0	1.0	V
1.2327	Transmitting on channel 9 924MHz	top face	0	1.0	V
1.2642	Transmitting on channel 9 924MHz	top face	0	1.0	V
1.8249	Transmitting on channel 0 915MHz	top face	0	1.0	V
1.8294	Transmitting on channel 0 915MHz	top face	0	1.0	V
1.8402	Transmitting on channel 5 920MHz	top face	0	1.0	V
1.8474	Transmitting on channel 9 924MHz	top face	0	1.0	V
1.9653	Transmitting on channel 0 915MHz	top face	0	1.0	V
2.7726	Transmitting on channel 9 924MHz	top face	0	1.0	V
2.7447	Transmitting on channel 0 915MHz	top face	0	1.0	V
2.7600	Transmitting on channel 5 920MHz	top face	0	1.0	V
3.6609	Transmitting on channel 0 915MHz	top face	0	1.0	V
3.6807	Transmitting on channel 5 920MHz	top face	0	1.0	V
3.6951	Transmitting on channel 9 924MHz	top face	0	1.0	V
4.5753	Transmitting on channel 0 915MHz	top face	0	1.0	V
4.5996	Transmitting on channel 5 920MHz	top face	0	1.0	V
4.6203	Transmitting on channel 9 924MHz	top face	0	1.0	V
5.4888	Transmitting on channel 0 915MHz	top face	0	1.0	V
5.5185	Transmitting on channel 5 920MHz	top face	0	1.0	V
5.5212	Transmitting on channel 5 920MHz	top face	0	1.0	V
5.5437	Transmitting on channel 9 924MHz	top face	0	1.0	V
6.4059	Transmitting on channel 0 915MHz	top face	0	1.0	V
6.4401	Transmitting on channel 5 920MHz	top face	0	1.0	V
6.4662	Transmitting on channel 9 924MHz	top face	0	1.0	V
7.3203	Transmitting on channel 0 915MHz	top face	0	1.0	V

8.2815	Transmitting on channel 5 920MHz	top face	0	1.0	V
8.2329	Transmitting on channel 0 915MHz	top face	0	1.0	V
8.3139	Transmitting on channel 9 924MHz	top face	0	1.0	V

Table 2 Frequencies identified during Exploratory Radiated Emission maximization

Note 1 : The front face of the EUT is deemed to be 0°, which is then turned in a clockwise direction through 360°.

5.1.16 Electric field emissions, 1GHz to 10GHz

The equipment under test was pre-scanned using peak detection when operating on all three channels. Final measurements were performed with the equipment under test operating on channel 9 924MHz

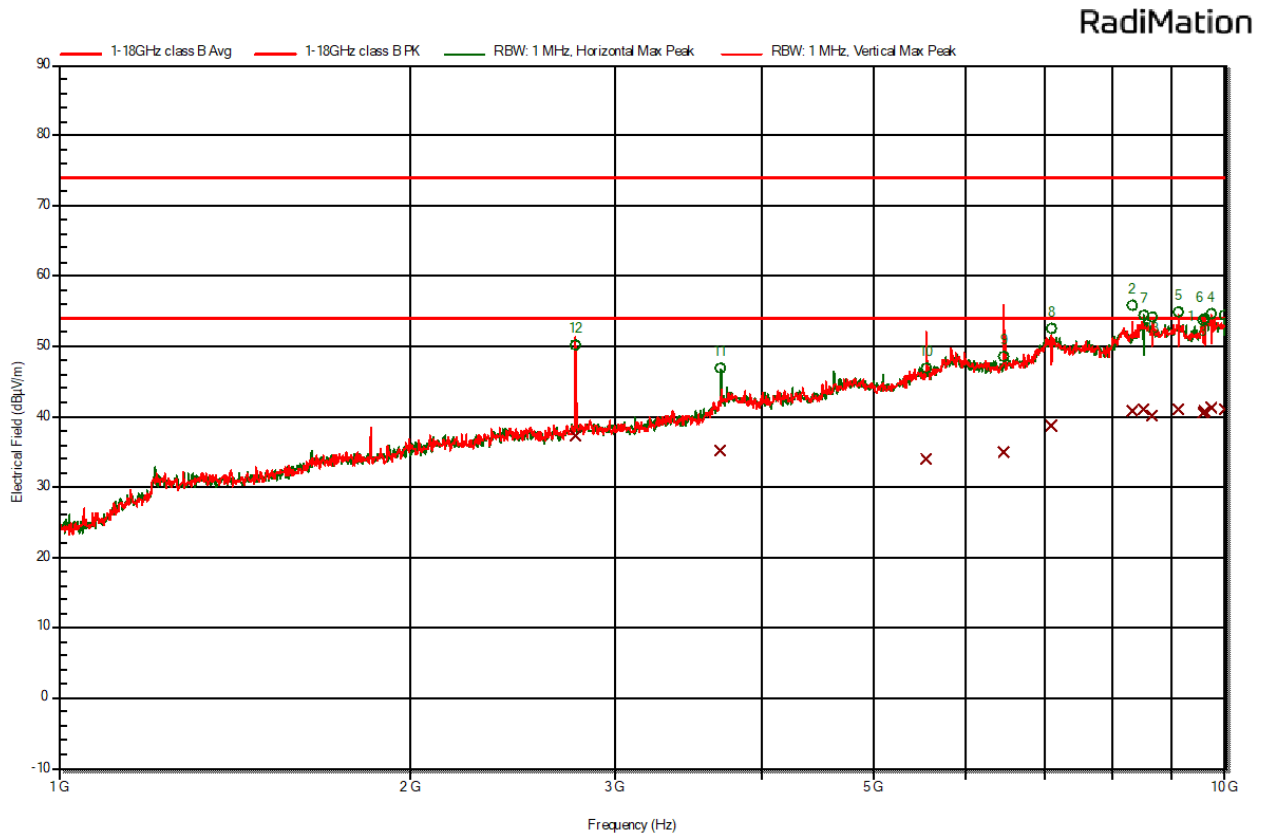


Figure 5 Electric field emissions Plot, 1GHz to 10GHz. Operation on channel 9 924MHz

Frequency GHz	Peak dB μ V/m	Peak Limit dB μ V/m	Peak Difference dB	Average dB μ V/m	Average Limit dB μ V/m	Average Difference dB	Status	Angle degrees	Height m	Polarization
9.589	54.1	74.0	-19.9	40.9	54.0	-13.1	Pass	20	1.9	Vertical
8.315	55.9	74.0	-18.1	40.7	54.0	-13.3	Pass	95	3.2	Vertical
9.585	53.7	74.0	-20.3	40.7	54.0	-13.3	Pass	100	3.6	Vertical
9.987	54.4	74.0	-19.6	41.1	54.0	-12.9	Pass	215	1.4	Horizontal
9.120	54.9	74.0	-19.1	41.1	54.0	-12.9	Pass	265	1.3	Vertical
9.737	54.6	74.0	-19.4	41.3	54.0	-12.7	Pass	330	3.1	Vertical
8.500	54.4	74.0	-19.6	41.0	54.0	-13.0	Pass	270	3.5	Horizontal
7.105	52.6	74.0	-21.4	38.7	54.0	-15.3	Pass	85	3.5	Vertical
6.467	48.7	74.0	-25.3	35.0	54.0	-19.0	Pass	120	1.9	Vertical
5.543	47.0	74.0	-27.0	33.9	54.0	-20.1	Pass	275	2.6	Vertical
3.696	47.0	74.0	-27.0	35.2	54.0	-18.9	Pass	75	1.5	Horizontal
2.771	50.2	74.0	-23.8	37.2	54.0	-16.8	Pass	10	2.9	Vertical
8.662	54.2	74.0	-19.8	40.2	54.0	-13.8	Pass	265	3.4	Vertical

Table 3 Electric Field Emissions Peaks, 1GHz to 10GHz – Operation on channel 9 924MHz

RadiMation

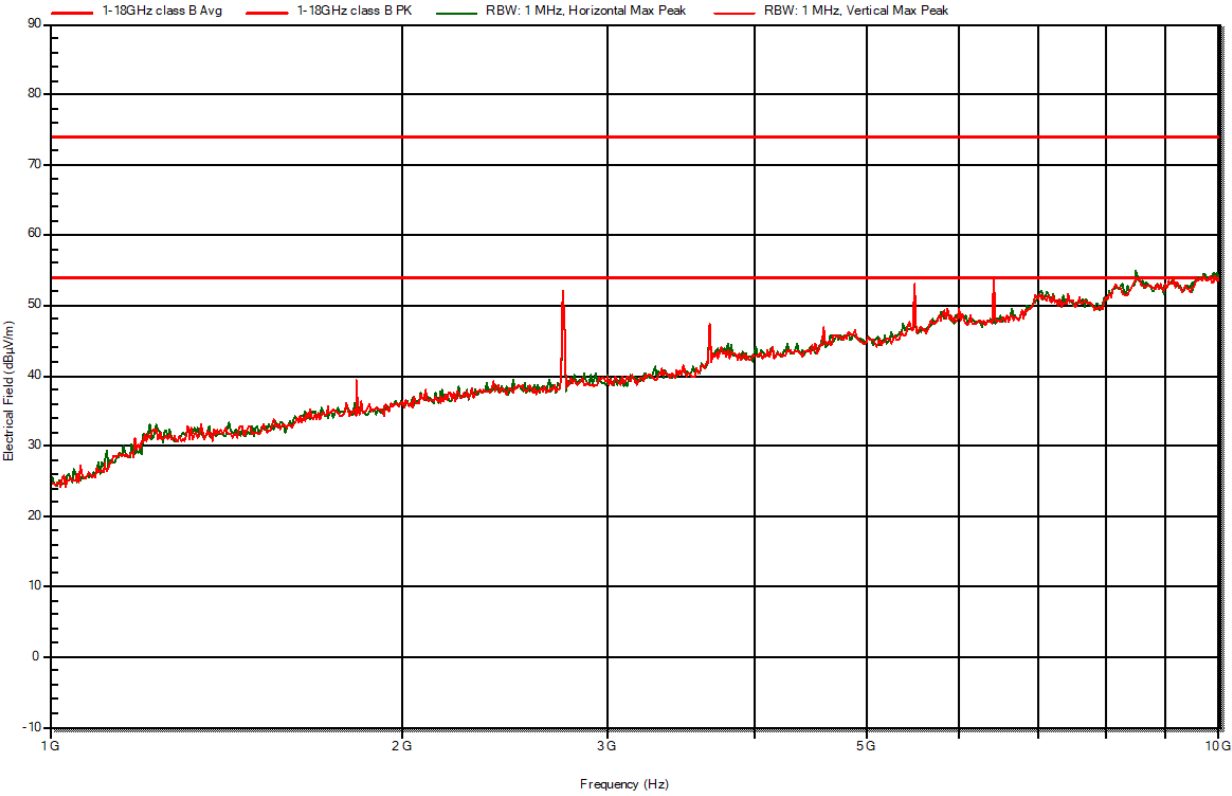


Figure 6 Electric field emissions Plot, 1GHz to 10GHz, Operation on channel 0 915MHz - Peak detector scan

RadiMation

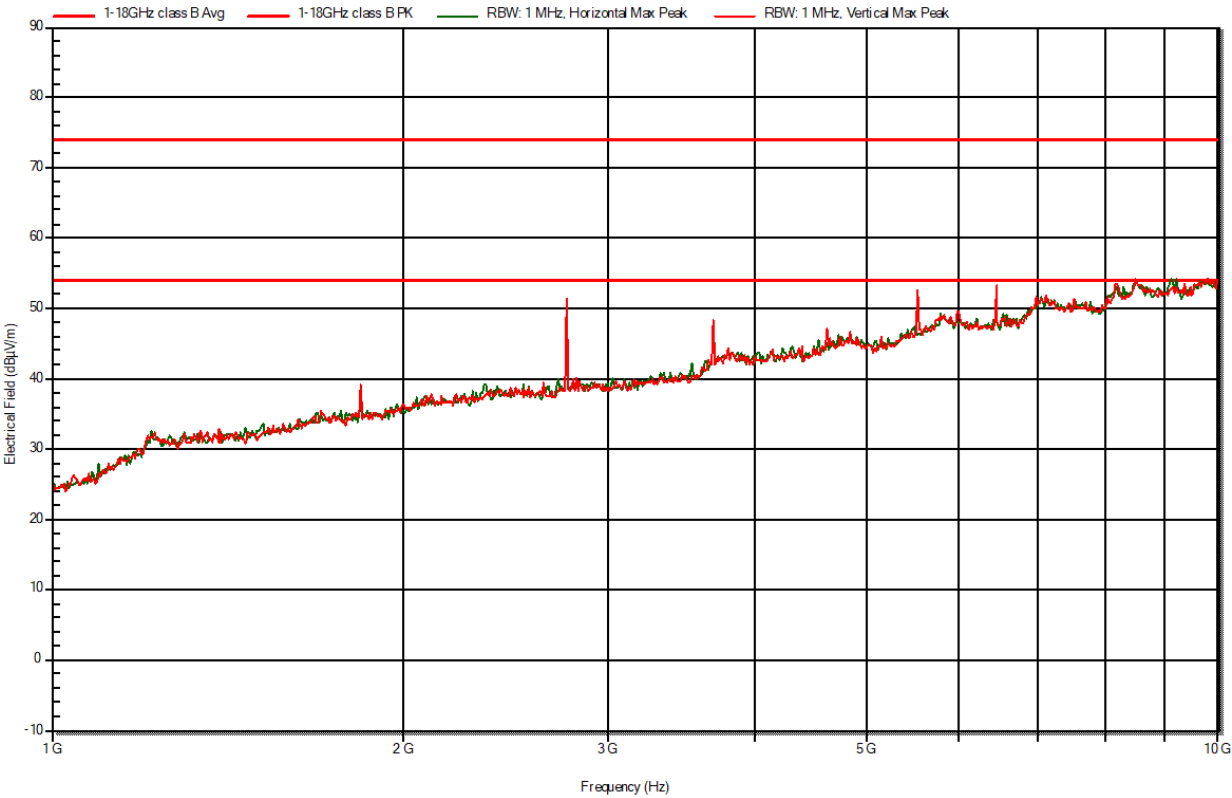


Figure 7 Electric field emissions Plot, 1GHz to 10GHz, Operation on channel 5 920MHz – Peak detector scan

5.1.17 Example field strength calculation

The total average corrections are shown in the above table. This correction figure consists of Preamplifier gain (PG), Antenna factor (AF); and Cable loss (CL), and where necessary distance extrapolation factor (dB).

Field strength (FS) is calculated as follows:

$$\text{FS (dB}\mu\text{V/m)} = \text{Indicated Signal Level (dB}\mu\text{V/m)} - \text{PG (dB)} + \text{AF (dB)} + \text{CL (dB)}$$

5.1.18 Sample Data

From Figure 5 and table 3, The Average level at 9.589GHz is calculated as follows:

$$\text{FS (dB}\mu\text{V/m)} = 41.1(\text{dB}\mu\text{V/m}) - 53.3(\text{dB}) + 43.1(\text{dB/m}) + 10.0 (\text{dB}) = 40.9\text{dB}\mu\text{V/m}$$

Conducted Spurious Emissions 9kHz to 10GHz**5.1.19 Limits**

Frequency (MHz)	Limit, 47CFR 15.247(d)
	Peak
0.009 – 10000	-20dBc

Spectrum analyser settings as specified by ANSI C63.10-2020/Cor1-2023 Clause 11.11.2

Receiver Parameters	Setting
Detector Function	Peak
Start Frequency	9KHz
Stop Frequency	10000MHz
Resolution Bandwidth	100kHz
Video Bandwidth	300kHz
Sweep rate	Auto couple
Trace mode	Max hold

5.1.20 Emissions measurements**5.1.21 Date of Test**

9th January 2026

5.1.22 Test Area

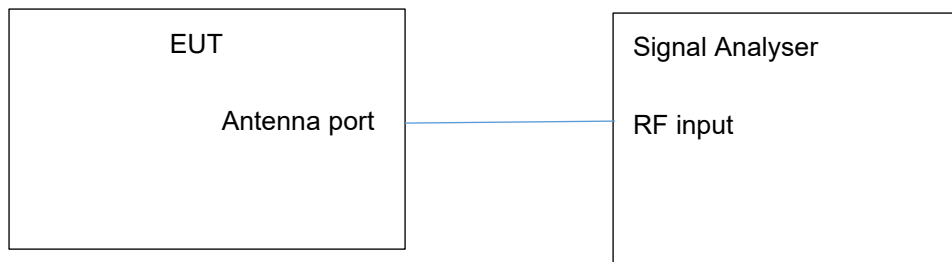
LAB 5

5.1.23 Tested by

L Trickett

5.1.24 Test Setup

The antenna port was connected directly to the signal analyser.



5.1.25 Test Results

The results of the conducted spurious emissions are stated below and by the signal analyser images.

All disturbances detected were > 20dB below the carrier.

5.1.26 Antenna port conducted emissions, 9kHz to 10GHz

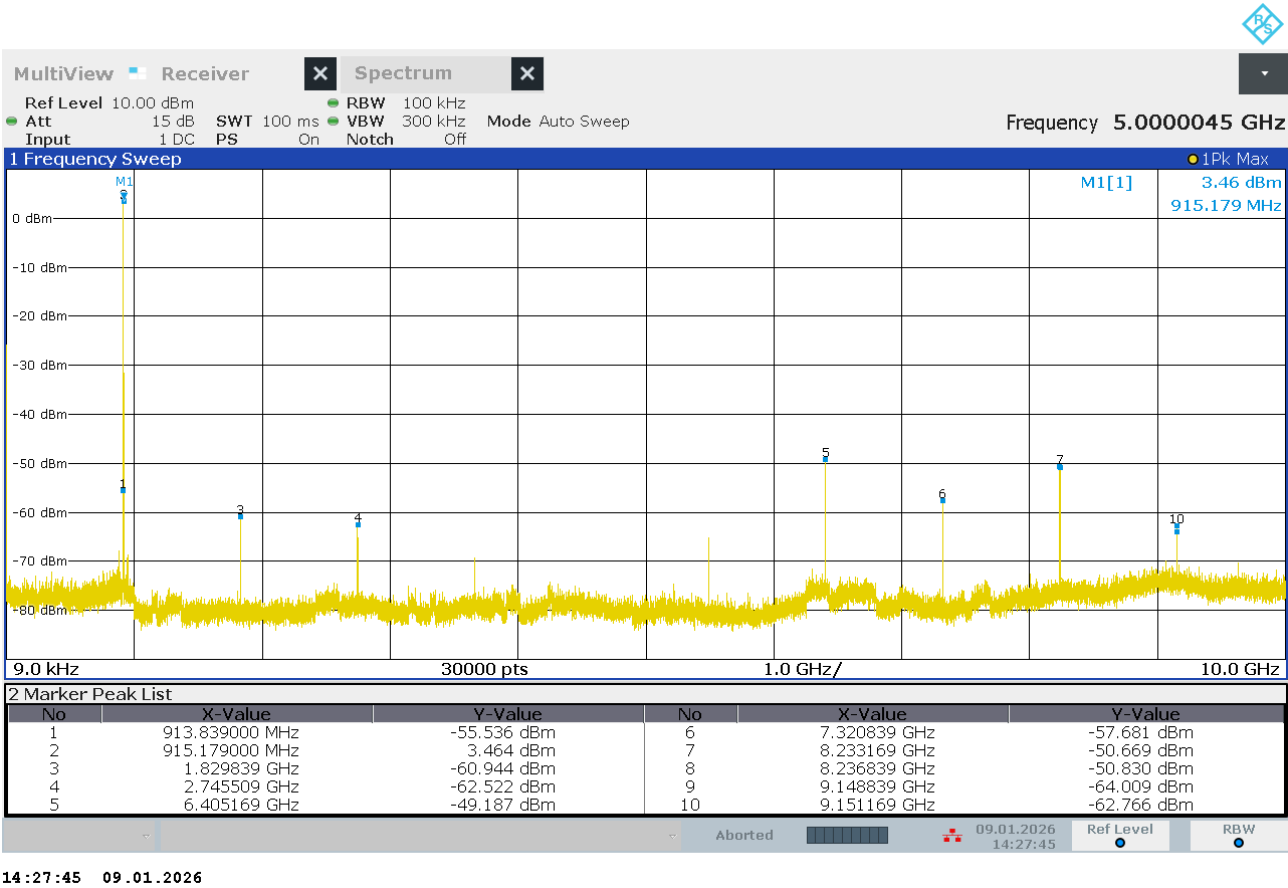


Figure 8 Conducted emissions 9kHz to 10GHz. Operation on channel 0 915MHz.

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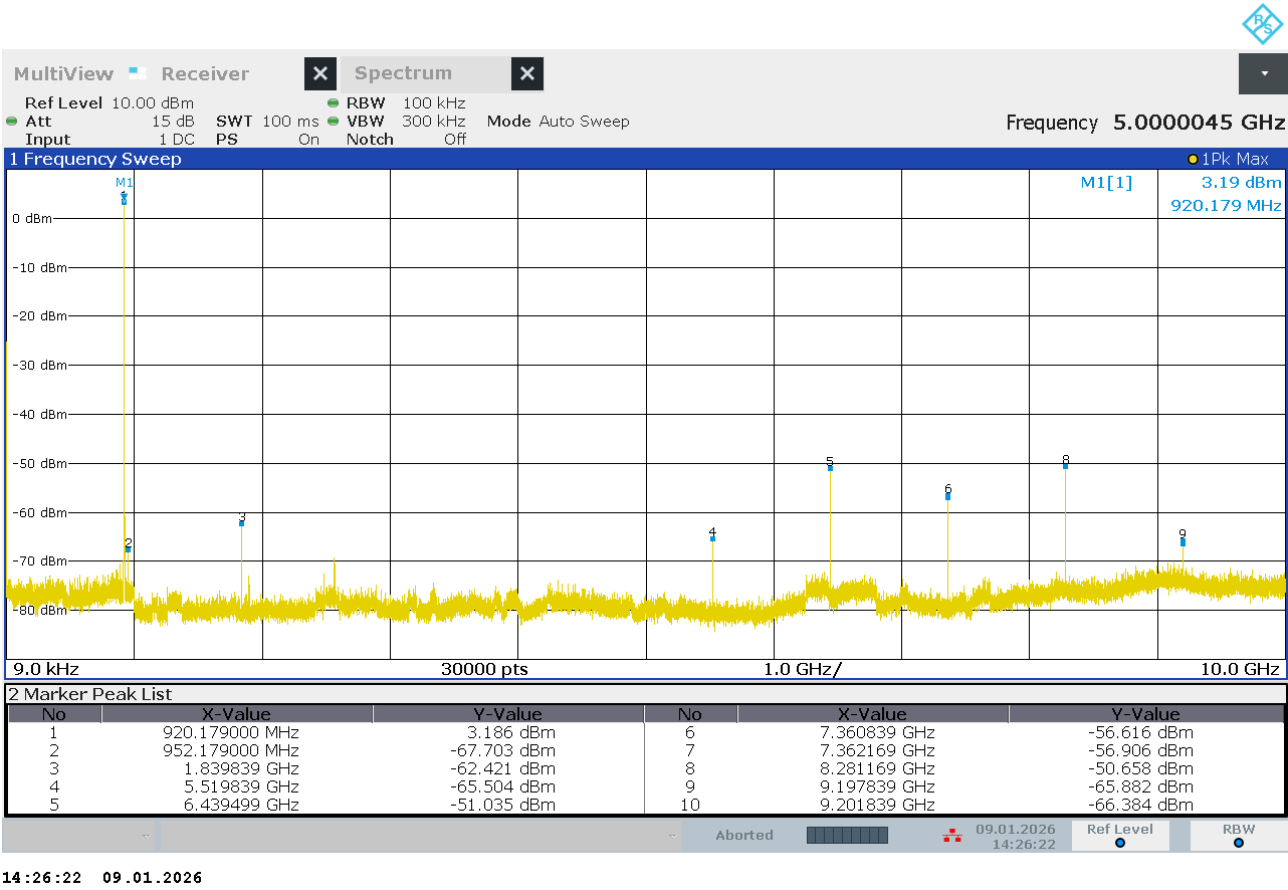


Figure 9 Conducted emissions 9kHz to 10GHz. Operation on channel 5 920MHz.

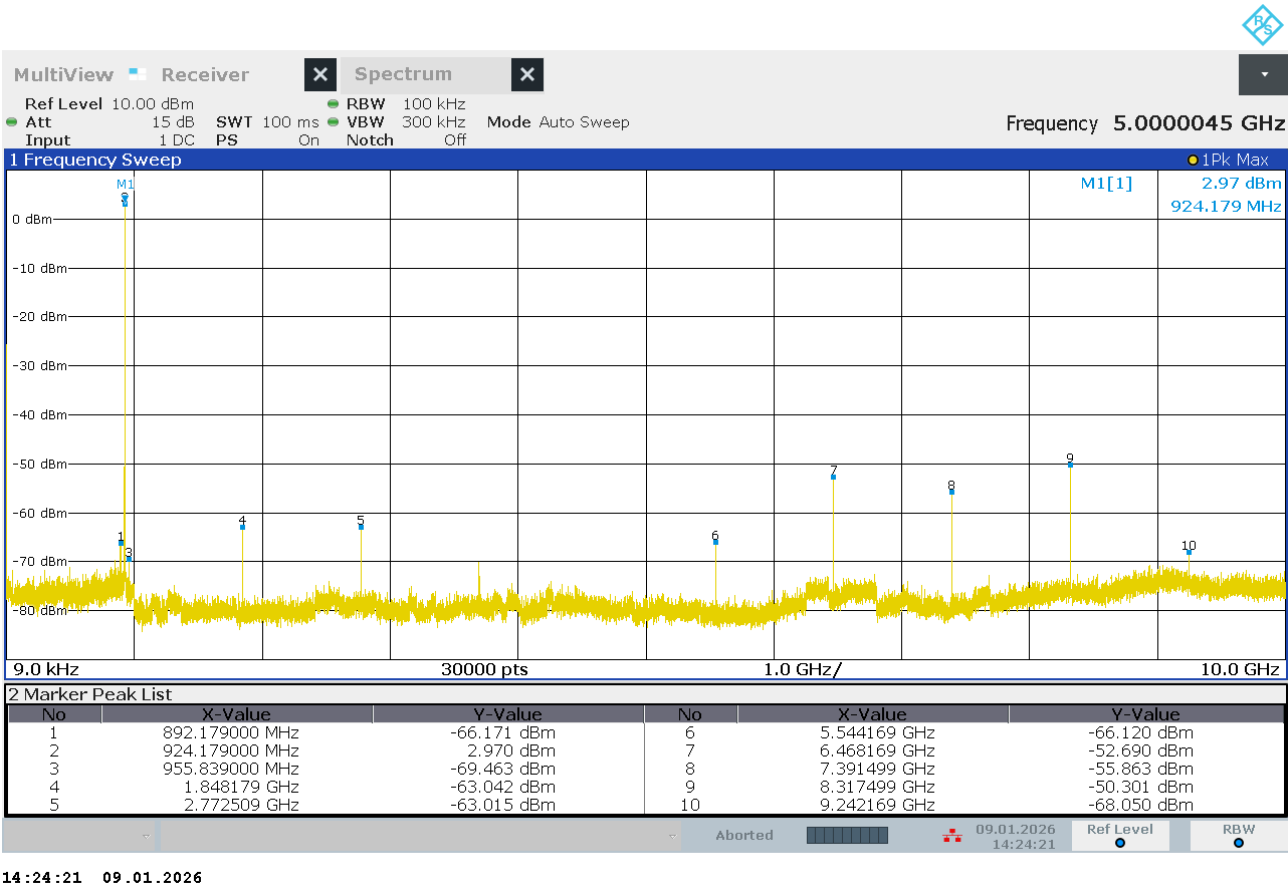


Figure 10 Conducted emissions 9kHz to 10GHz. Operation on channel 9 924MHz.

Section 6 6dB Bandwidth and 99% Occupied Bandwidth**Test Specification**

FCC Rule Part	46CFR 15.247 (b)(2)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 1.4\text{dB}$

Procedure and Test Software Version**Conducted Tests**

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	11.8
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(a)(2) 6dB bandwidth
	Peak
902MHz to 928MHz	At least 500kHz

Spectrum analyser settings as specified by ANSIC63.10-2020/Cor1-2023 Clause 11.8.1

Receiver Parameters	Setting
Detector Function	Peak
Resolution Bandwidth	100kHz (1% to 5% of OBW but not less than 100kHz)
Video Bandwidth	300kHz ($\geq 3 \times \text{RBW}$)
Sweep rate	Auto couple
Trace mode	Max hold

6.1.1 Emissions measurements**6.1.2 Date of Test**9th January 2026**6.1.3 Test Area**

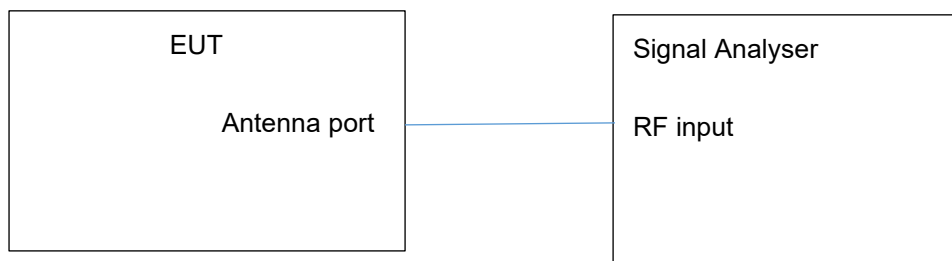
LAB 5

6.1.4 Tested by

L Trickett

6.1.5 Test Setup

The antenna port was connected directly to the signal analyser.

**6.1.6 Test Results**

The results of the bandwidth measurements are stated in the table below and by the signal analyser images.

Channel (MHz)	99% Occupied Bandwidth (MHz)	Measured 6dB bandwidth (kHz)	Minimum requirement (kHz)	Figure	Result
915	594.9	586.2	500.0	11 & 12	Pass
920	563.2	581.2	500.0	13 & 14	Pass
924	654.7	544.3	500.0	15 & 16	Pass

Table 4 Bandwidth Measurements

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Figure 11 Bandwidth at 6dB Point. Operation on channel 0 915MHz



Figure 12 99% Occupied Bandwidth. Operation on channel 0 915MHz



Figure 13 Bandwidth at 6dB Point. Operation on channel 5 920MHz



Figure 14 99% Occupied Bandwidth. Operation on channel 5 920MHz

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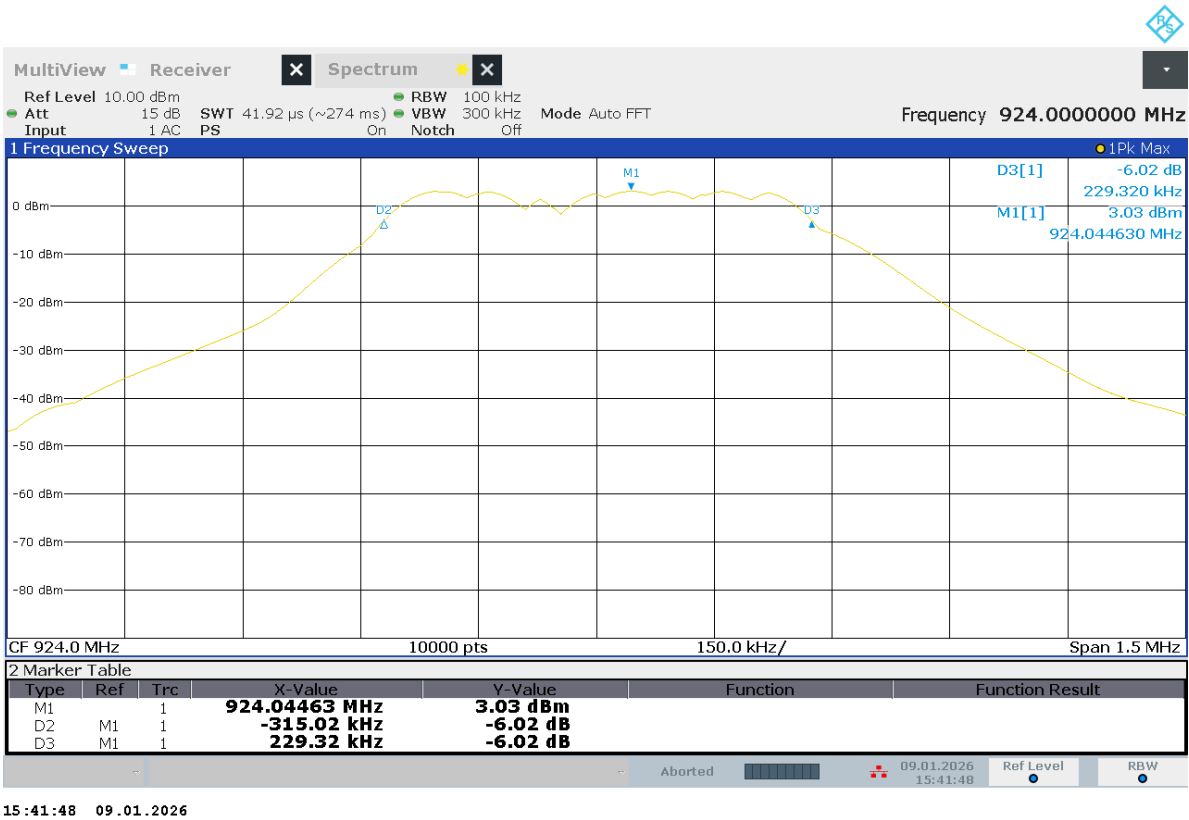


Figure 15 Bandwidth at 6dB Point. Operation on channel 9 924MHz



Figure 16 99% Occupied Bandwidth. Operation on channel 9 924MHz

Section 7 Peak Output Power

Test Specification

FCC Rule Part	46CFR 15.247 (b)(3)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 1.4\text{dB}$

Procedure and Test Software Version

Conducted Tests

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	11.9.1.1 (RBS>DTS bandwidth)
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(b)(2)
	Peak
902MHz to 928MHz	1 Watt

Spectrum analyser settings as specified by ANSIC63.10-2020/Cor1-2023 Clause 11.9.1.1

Receiver Parameters	Setting
Detector Function	Peak
Span	5MHz ($\geq 3 \times \text{RBW}$)
Resolution Bandwidth	1MHz (>DTS Bandwidth)
Video Bandwidth	3MHz ($3 \times \text{RBW}$)
Sweep rate	Auto couple
Trace mode	Max hold

7.1.1 Emissions measurements

7.1.2 Date of Test

9th January 2026

7.1.3 Test Area

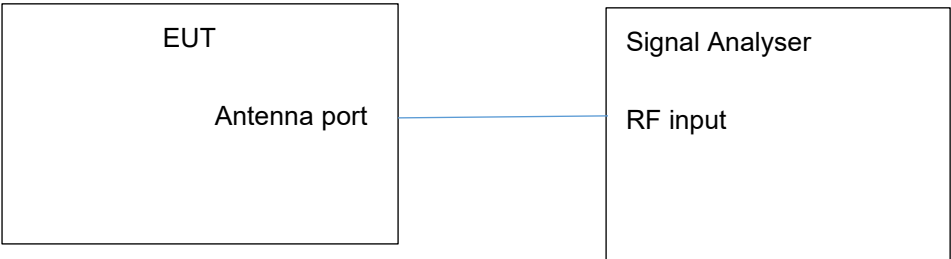
LAB 5

7.1.4 Tested by

L Trickett

7.1.5 Test Setup

The antenna port was connected directly to the signal analyser.



7.1.6 Test Result

The results of the peak output power measurements are stated in the table below and by the signal analyser images.

Channel (MHz)	Peak Power (dBm)	Peak Power (Watts)	Limit (Watts)	Figure
915	3.47	0.0022	1	17
920	3.18	0.0021	1	18
924	3.02	0.0020	1	19

Table 5 Peak Output Power Measurements

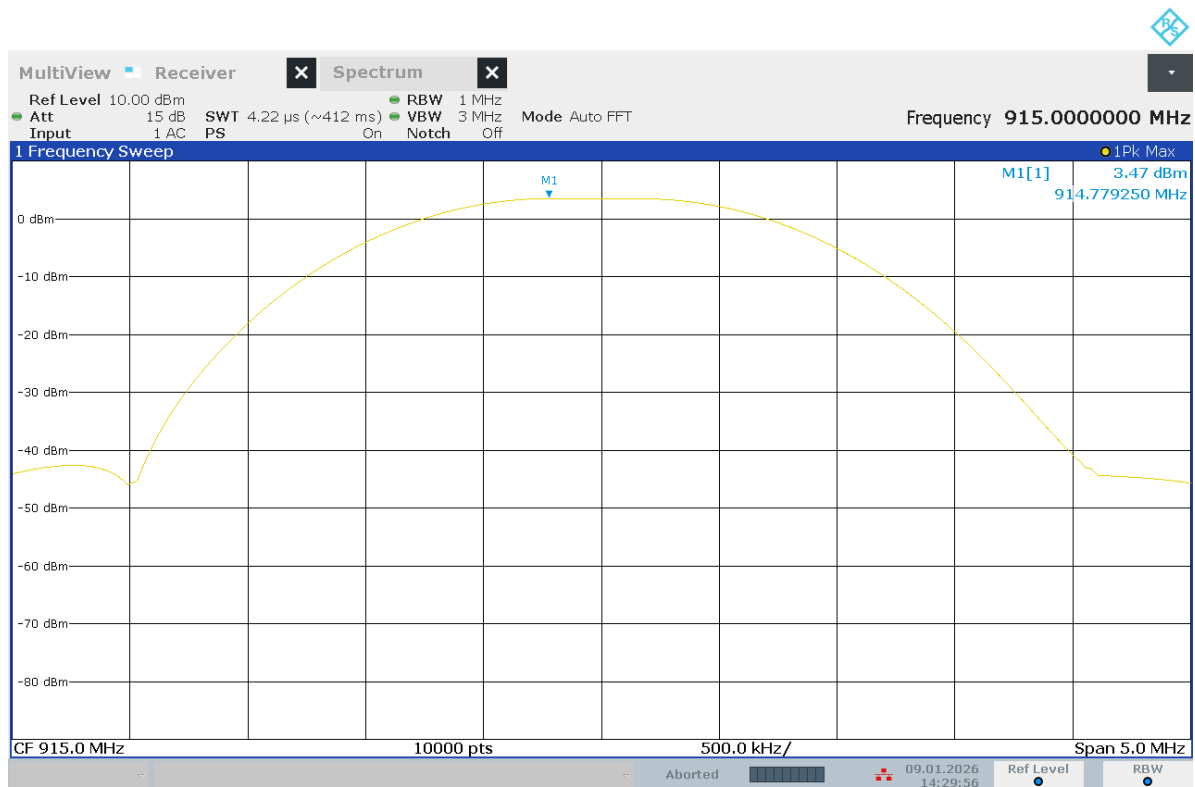


Figure 17 Peak output power, Operation on channel 0 915MHz

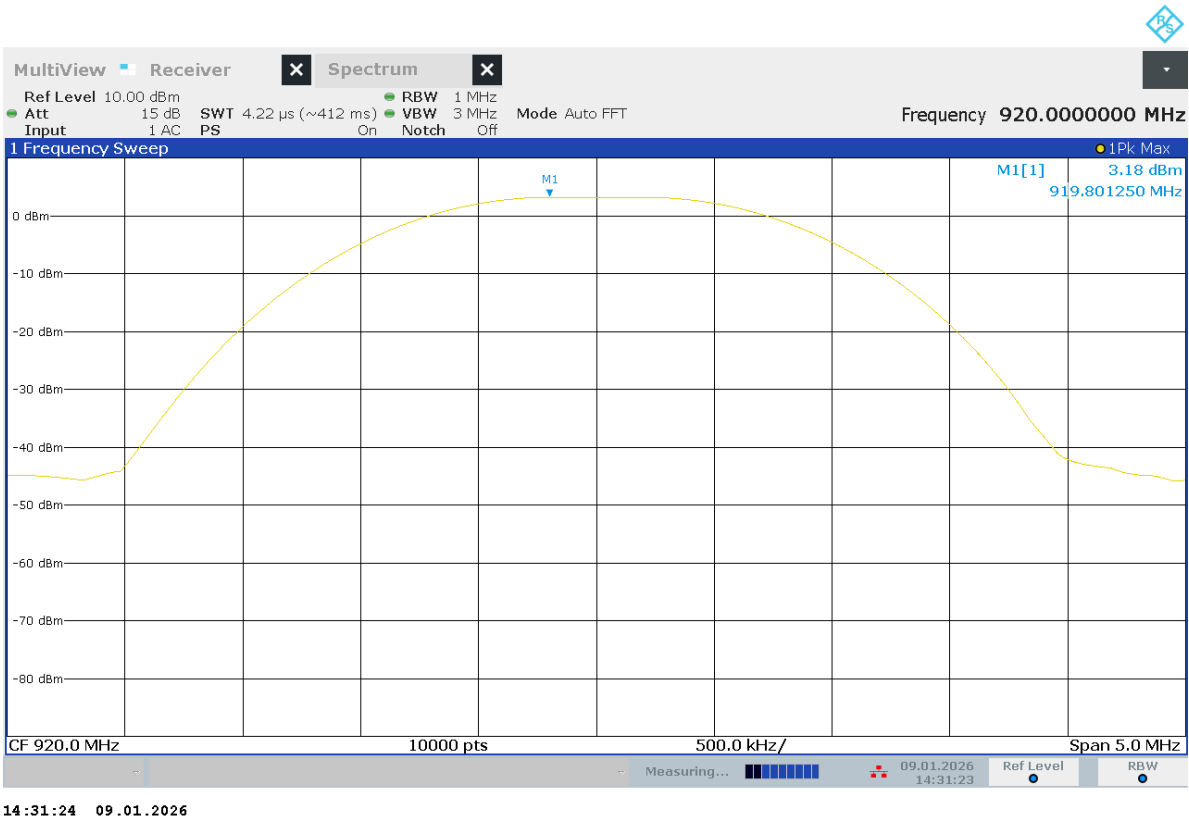


Figure 18 Peak output power, Operation on channel 5 920MHz

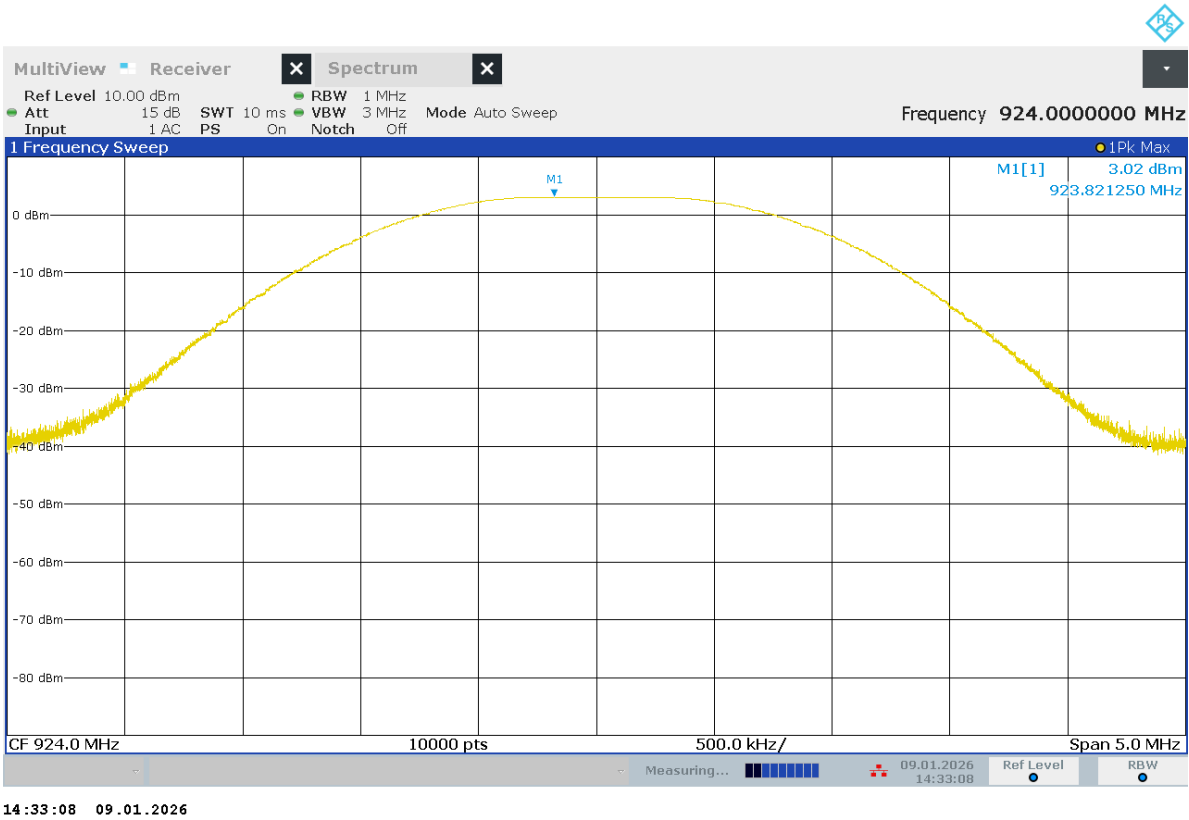


Figure 19 Peak output power, Operation on channel 9 924MHz

Section 8 Power Spectral Density

Test Specification

FCC Rule Part	46CFR 15.247 (e)
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 1.4\text{dB}$

Procedure and Test Software Version

Conducted Tests

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	Clause 11.10.2 (peak PSD)
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(e)
	Peak
902MHz to 928MHz	<8dBm in any 3kHz band during any time interval of complete transmission

Spectrum analyser settings as specified by ANSIC63.10-2020/Cor1-2023 Clause 11.10.2

Receiver Parameters	Setting
Detector Function	Peak
Span	>1.5 x DTS bandwidth
Resolution Bandwidth	3kHz $\leq$ RBW $\leq$ 100kHz
Video Bandwidth	3 x RBW
Sweep rate	Auto couple
Trace mode	Max hold

8.1.1 Emissions measurements

8.1.2 Date of Test

9th January 2026

8.1.3 Test Area

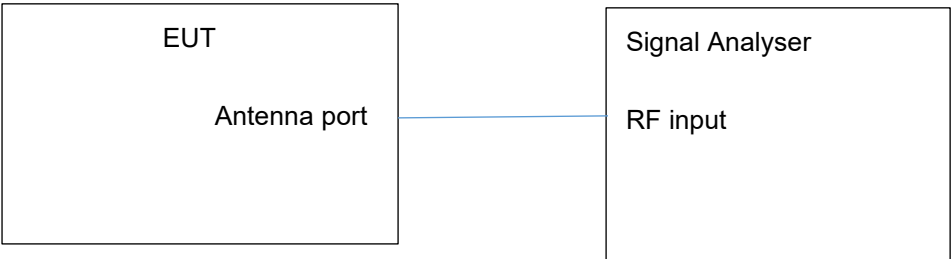
LAB 5

8.1.4 Tested by

L Trickett

8.1.5 Test Setup

The antenna port was connected directly to the signal analyser.



8.1.6 Test Results

Channel (MHz)	Power in 3kHz RBW (dBm)	Limit (dBm)	Figure	Result
915	-4.88	8.0	20	Pass
920	-6.52	8.0	21	Pass
924	-6.56	8.0	22	Pass

Table 6 Peak Spectral Density Measurements

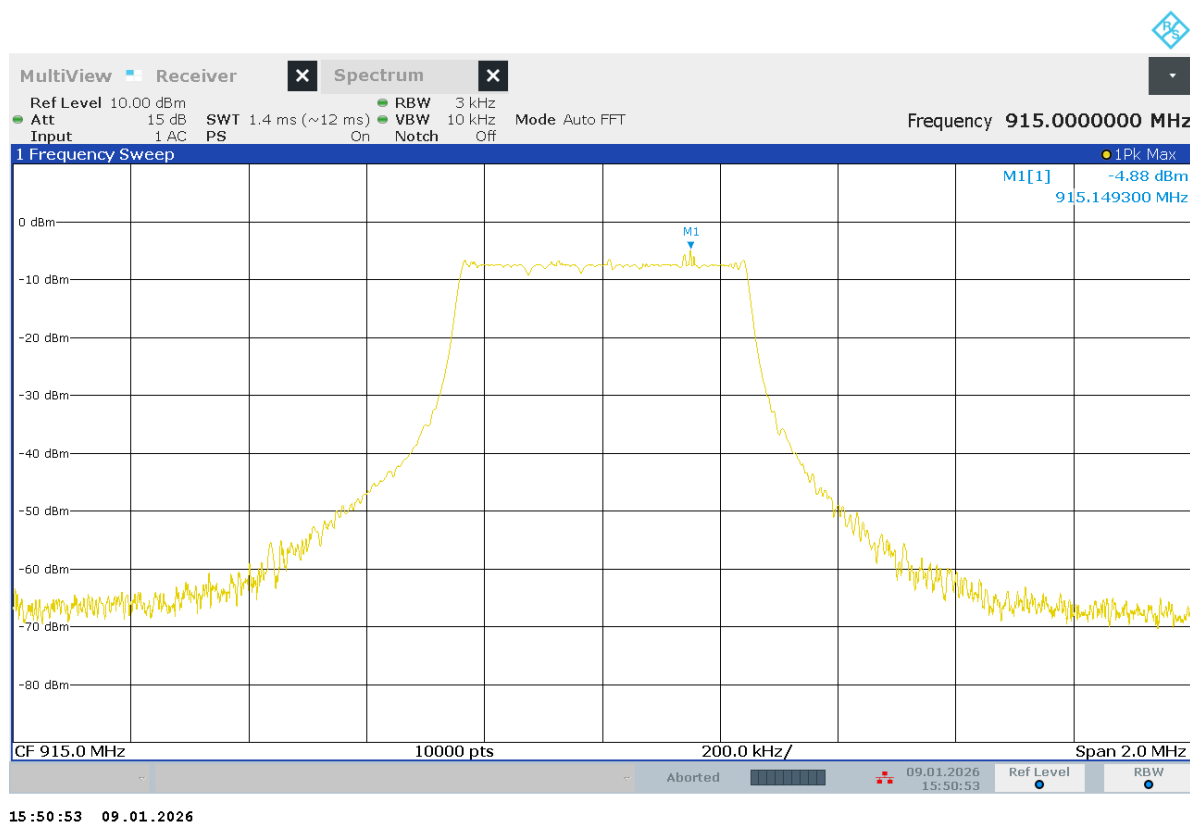


Figure 20 Power spectral density, Operation on channel 0 915MHz

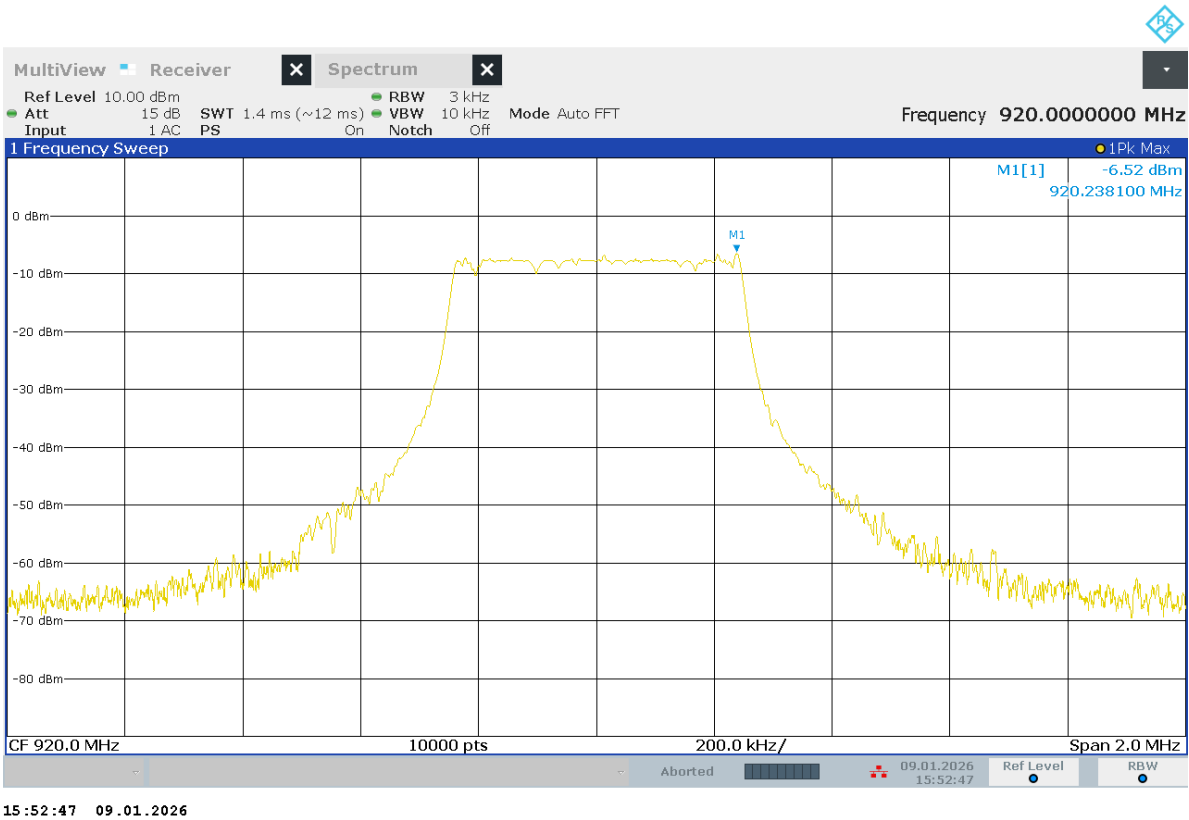


Figure 21 Power spectral density, Operation on channel 5 920MHz

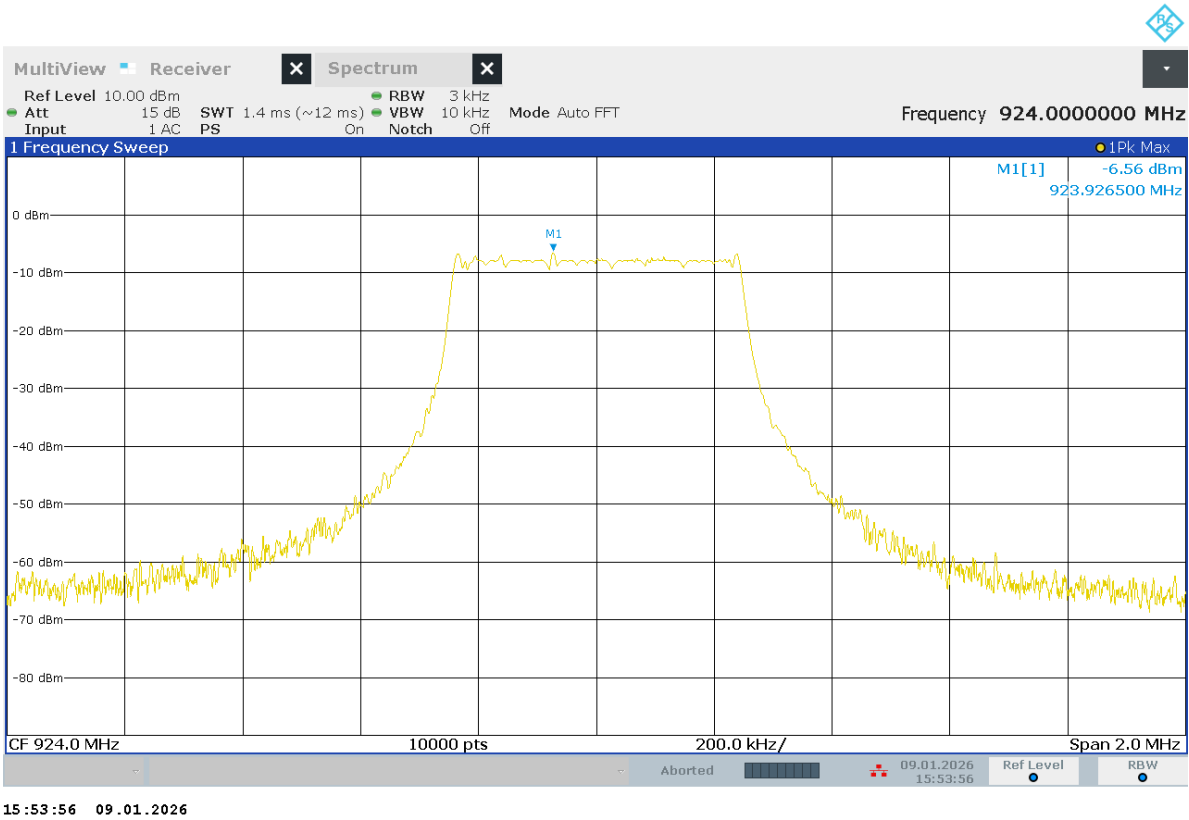


Figure 22 Power spectral density, Operation on channel 9 924MHz

Section 9 Band Edge Compliance**Test Specification**

FCC Rule Part	46CFR 15.205 and 47CFR15.209
Standard	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Measurement Uncertainty	The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% is $\pm 1.4\text{dB}$

Procedure and Test Software Version**Conducted Tests**

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause reference:	Clause 6.10.4 Authorised band-edge measurements
Test software	N/A

Frequency (MHz)	Limit, 47CFR 15.247(e)
	Peak
902MHz to 928MHz	For a 902MHz to 928MHz device, there are no restricted bands adjacent to the band edge. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Spectrum analyser settings as specified by ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Clause 6.10.5 "Restricted band-edge measurements"

Receiver Parameters	Setting
Detector Function	Peak
Span	As necessary
Resolution Bandwidth	1MHz
Video Bandwidth	3 x RBW
Sweep rate	Auto couple
Trace mode	Max hold

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9.1.1 Emissions measurements

9.1.2 Date of Test

12th January 2026

9.1.3 Test Area

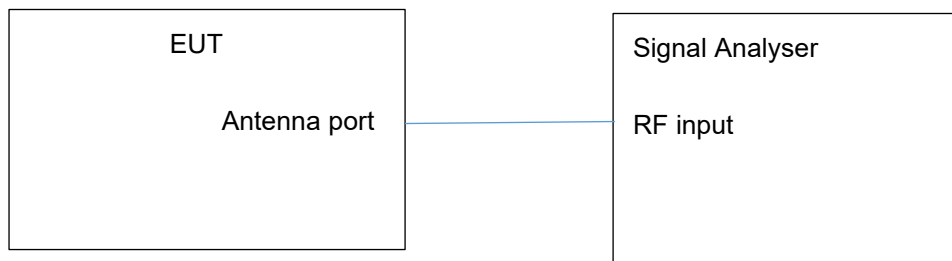
LAB 8

9.1.4 Tested by

L Trickett

9.1.5 Test Setup

The antenna port was connected directly to the signal analyser.



9.1.6 Test Results

The plots below demonstrate that at the band edge the power is more than 20 dB below the carrier power in the 100kHz bandwidth. Therefore, this demonstrates compliance.

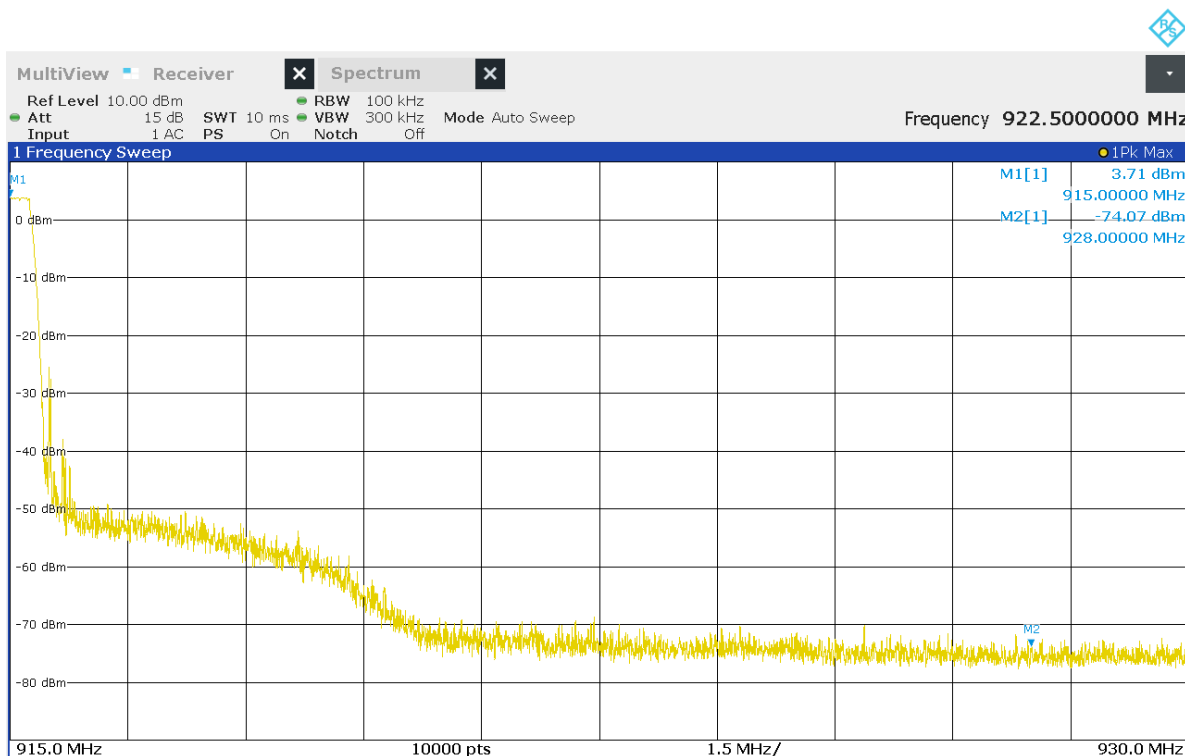


Figure 23 Band Edge Measurement Operation on channel 0 915MHz – Upper band edge

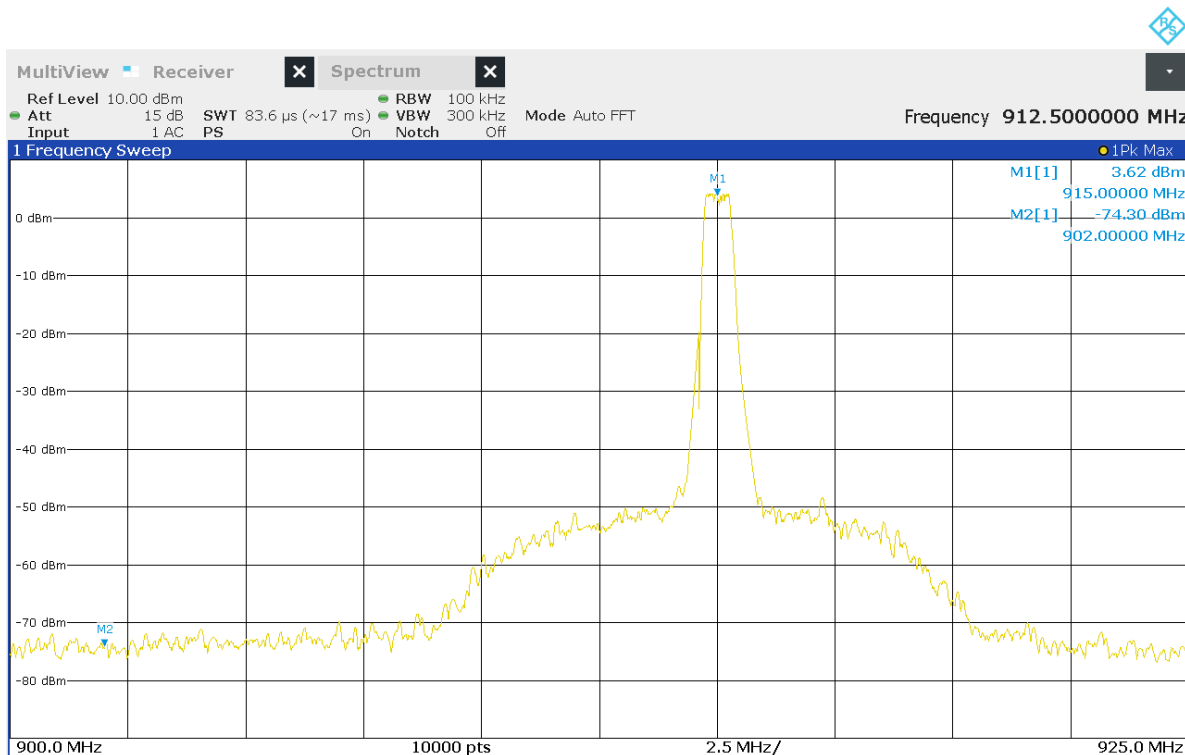


Figure 24 Band Edge Measurement Operation on channel 0 915MHz – Lower band edge

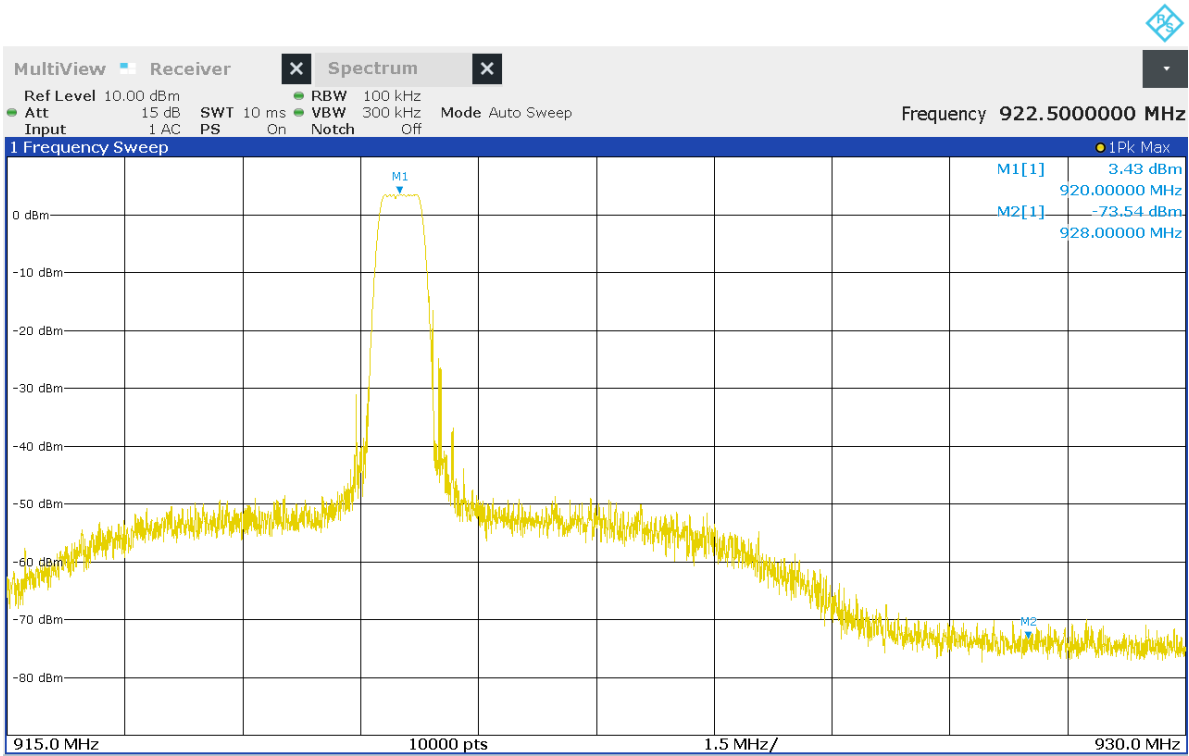


Figure 25 Band Edge Measurement Operation on channel 5 920MHz – Upper band edge



Figure 26 Band Edge Measurement Operation on channel 5 920MHz – Lower band edge

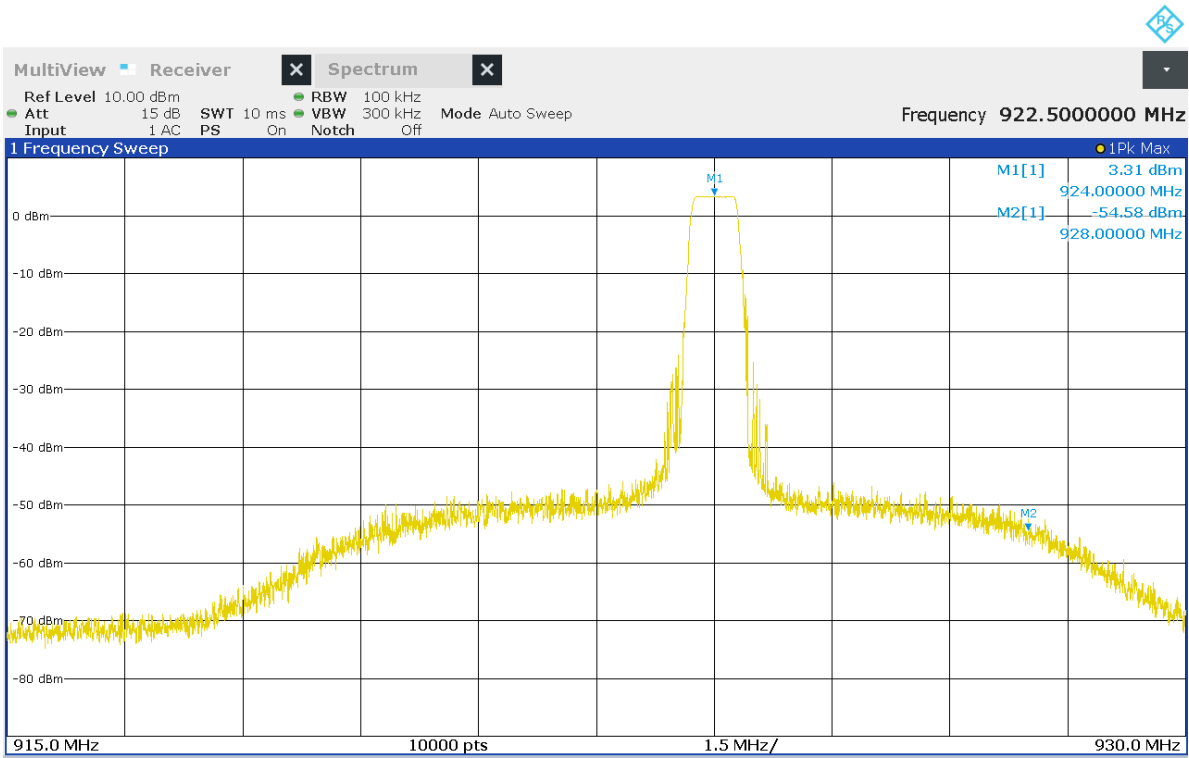


Figure 27 Band Edge Measurement Operation on channel 9 924MHz – Upper band edge



Figure 28 Band Edge Measurement Operation on channel 9 924MHz – Lower band edge

Appendix A EUT Test Photos

Test set up photographs are supplied separately.

Appendix B Test Equipment List

Conducted Emissions from Antenna Port

Item	Serial No.	Last Calibration Date	Calibration Interval
R&S ESW44 EMI Receiver	C0658	6th May 2025	12 Months

Radiated Emissions Equipment

Item	Serial No.	Last Calibration Date	Calibration Interval
Laboratory 1 Semi-Anechoic Chamber	C0471	10 th December 2025	36 Months
Laboratory 5 Fully-Anechoic Room	C0578	10 th July 2024	36 Months
ETS Lindgren 2017B Mast (1 – 4m) with tilting mechanism	--	N/A	N/A
R&S ESW44 EMI Receiver	C0751	14 th October 2025	12 Months
R&S ESW44 EMI Receiver	C0658	6 th May 2025	12 Months
Teseq CBL6112D Bilog Antenna	C0506	21 st August 2024	36 Months
Cable 18	20748.04.14.002	6 th October 2025	12 Months
Cable HF41	21068.04.12.002	6 th October 2025	12 Months
HF27 Cable	19149.03.13.004	9 th October 2025	12 Months
HF52 Cable	22293.01.30.002	9 th October 2025	12 Months
HF47 Cable	E44808	9 th October 2025	12 Months
Schwarzbeck STLP 9148 Antenna 1-18GHz	C0626	20 th March 2025	24 Months
BONN BLMA 0118-M Preamplifier	C0702	19 th August 2025	12 Months
BONN BLMA 0118-M Preamplifier	B1754	22 nd January 2025	12 Months
Micro-Tronics High pass filter (1.2-18GHz Passband)	C0534	15 th November 2025	12 Months

-----END OF REPORT-----