



Solutions

TEST REPORT

Test Report No.: UL-RPT-RP-14684854-816

Customer : Eliwell Controls srl
Model No. / PMN : AIR EDGE WiFi-Eth RS485 SD
HVIN : AIR EDGE WiFi Eth RS485
FVIN : EDGEWIFI
FCC ID : 2AMLEEDGEWIFI
ISED Certification No. : IC: 9727A-EDGEWIFI
Technology : *Bluetooth – Low Energy*
Test Standard(s) : **FCC Parts 15.207, 15.209(a) & 15.247**
ISED RSS-247 ISSUE 4
ISED RSS-GEN ISSUE 5+A1+A2

For details of applied tests refer to test result summary

1. This test report shall not be reproduced in full or partial, without the written approval of UL International Germany GmbH.
2. The results in this report apply only to the sample tested.
3. The test results in this report are traceable to the national or international standards.
4. Test Report Version 1.0
5. Result of the tested sample: **Pass**
6. All information marked with a (*) were provided by customer / applicant or authorized representative



Prepared by: Yixiang Lin
Title: Project Engineer
Date: 28 August 2025



Approved by: Muhammad Faiq Khan
Title: Project Engineer
Date: 28 August 2025



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D-PL-19381-02-00

This laboratory is accredited by DAkkS.
The tests reported herein have been performed in
accordance with its' terms of accreditation.

UL INTERNATIONAL GERMANY GMBH

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Customer Information

Company Name:	Eliwell Controls srl
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Report Revision History

Version Number	Issue Date	Revision Details	Revised By
1.0	15/08/2025	Initial Version	Yixiang Lin

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1 Attestation of Test Results

1.1 Description of EUT

The equipment under test was a Modbus to WiFi/Ethernet interface with BLE connectivity, supporting Bluetooth Low Energy operations in 2400-2483.5MHz ISM band.

1.2 General Information

Specification Reference:	47CFR15.247
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) – Section 15.247
Specification Reference:	47CFR15.207 and 47CFR15.209
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) – Sections 15.207 and 15.209
Specification Reference:	RSS-Gen Issue 5, February 2021
Specification Title:	General Requirements for Compliance of Radio Apparatus
Specification Reference:	RSS-247 Issue 4, July 2025
Specification Title:	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
Site Registration:	FCC: 399704, ISEDC: 22511
FCC Lab. Designation No.:	DE0019
ISEDC CABID:	DE0008
Location of Testing:	Hedelfinger Strasse. 61,70327 Stuttgart, GERMANY
Test Dates:	4 July 2023 to 28 July 2023

1.3 Summary of Test Results

FCC Reference (47CFR)	ISED Canada Reference	Measurement	Result
Part 15.35(c)	-	Transmitter Duty Cycle	Note 1
N/A	RSS-Gen 6.7	Transmitter 99% Occupied Bandwidth	
Part 15.247(a)(2)	RSS-Gen 6.7 / RSS-247 6.3.1(a)	Transmitter Minimum 6 dB Bandwidth	
Part 15.247(b)(3)	RSS-Gen 6.12 / RSS-247 6.3.2	Transmitter Maximum Peak Output Power	
Part 15.247(e)	RSS-247 6.3.1(b)	Transmitter Power Spectral Density	Note 2
Part 15.247(d)	RSS-Gen 6.13 / RSS-247 6.6	Transmitter Conducted Emissions	Note 3
Part 15.247(d) & 15.209(a)	RSS-Gen 6.13 / RSS-247 6.6	Transmitter Band Edge Conducted Emissions	Note 3
Part 15.247(d) & 15.209(a)	RSS-Gen 6.13 / RSS-247 6.6	Transmitter Radiated Emissions	
Part 15.247(d) & 15.209(a)	RSS-Gen 6.13 / RSS-247 6.6	Transmitter Band Edge Radiated Emissions	
Part 15.207	RSS-Gen 8.8	Transmitter AC Conducted Emissions	
Key to Results  = Complied  = Did not comply			

Note(s):

1. The measurement was performed to assist in the calculation of the level of the emissions. The EUT cannot transmit continuously and sweep triggering/signal gating cannot be implemented .
2. In accordance with ANSI C63.10 Section 11.10.1, PSD measurements are not required if the maximum conducted output power is less than the PSD limit of 8 dBm / 3 kHz. The PSD level is therefore deemed to be equal to the measured output power.
3. The Spurious emission measurements were performed Radiated and therefore conducted emissions were not required.

1.4 Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

2 Summary of Testing

2.1 Facilities and Accreditation

The test site and measurement facilities used to collect data are located at Hedelfinger Strasse. 61,70327 Stuttgart, GERMANY. The following table identifies which facilities were utilised for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

SR1	X
SR9	X
SR7/8	X

UL International Germany GmbH is accredited by the DAkkS. DAkkS is one of the signatories to the International Laboratory Accreditation Co-operation (ILAC) Arrangement for the mutual recognition of test reports. The tests reported herein have been performed in accordance with its terms of accreditation.

2.2 Methods and Procedures

Reference:	FCC: ANSI C63.10-2020 + Cor. 1-2023 / ISED: ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024
Title:	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Reference:	KDB 558074 D01 15.247 Meas Guidance v05r02, April 2, 2019
Title:	Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under Section 15.247 of the FCC Rules
Reference:	KDB 174176 D01 Line Conducted FAQ v01r02 August 7, 2025
Title:	AC Power-Line Conducted Emissions Frequently Asked Questions

2.3 Calibration and Uncertainty

Measuring Instrument Calibration

In accordance with DAkkS requirements all the measurement equipment is on a calibration schedule. All equipment was within the calibration period on the date of testing.

Measurement Uncertainty & Decision Rule

Overview

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

Decision Rule

Measurement system instrumentation shall be used with an accuracy specification meeting the accuracy specification limits according to IEC/IECEE OD-5014.

As applicable, unless specified otherwise in this quotation, the compliance "Decision Rule" is based on Simple Acceptance. If the measured value is on the limit, the result is defined as a pass. In this case the risk of a false positive is 50%. For further information regarding risk assessment refer to ILAC G8:09/2019.

Measurement Uncertainty

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	95%	±2.49 dB
Conducted Maximum Peak Output Power	95%	±0.59 dB
Radiated Spurious Emissions	95%	±3.10 dB
Band Edge Radiated Emissions	95%	±3.10 dB
Transmitter Duty Cycle	95%	±3.4%
Minimum 6 dB Bandwidth	95%	±0.87 %
Transmitter 99% Occupied Bandwidth	95%	±0.87 %
Spectral Power Density	95%	±0.59 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

2.4 Test and Measurement Equipment

Test site: SR 1/2

ID	Manufacturer	Type	Model	Serial	Calibration Date	Cal. Cycle (months)
1	Rohde& Schwarz	Antenna, Loop	HFH2-Z2	831247/012	18/07/2023	36
377	BONN Elektronik	Amplifier, Low Noise Pre	BLMA 0118-1A	025294B	18/07/2023	12
460	Deisel	Turntable	DT 4250 S	n/a	n/a	n/a
465	Schwarzbeck	Antenna, Trilog Broadband	VULB 9168	9168-240	02/09/2020	42
496	Rohde& Schwarz	Antenna, log. - periodical	HL050	100297	22/08/2022	24
588	Maturo	Controller	NCD	029/7180311	n/a	n/a
591	Rohde& Schwarz	Receiver	ESU 40	100244/040	13/07/2023	12
607	Schwarzbeck	Antenna broadband horn antenna	BBHA 9170	9170-561	10/05/2024	36
669	Rohde& Schwarz	EMI Test Receiver	ESW 44	103087	13/07/2023	18
694	Rohde& Schwarz	Signal Analyzer	FSW 50	101847	09/05/2023	12
608	Rohde& Schwarz	Switch Matrix	OSP 120	101227	lab verification	n/a
628	Maturo	Antenna mast	CAM 4.0-P	224/19590716	n/a	n/a
629	Maturo	Kippeinrichtung	KE 2.5-R-M	MAT002	n/a	n/a
-/-	Testo	Thermo-Hygrometer	608-H1	01	lab verification	n/a
328	SPS	AC/DC power distribution system	PAS 5000	A2464 00/2 0200	lab verification	n/a
1603665	Siemens Matsushita Components	semi-anechoic chamber SR1/ 2	-/-	B83117-A1421-T161	n/a	n/a
681	Maturo	Antenna mast, tilting	BAM4.5-P	402/0718.1	n/a	n/a

Note: Calibration dates are logged based on the equipment data on time of use for measurements, not based on the report issue dates.

Test site: SR 9

ID	Manufacturer	Type	Model	Serial	Calibration Date	Cal. Cycle (months)
625	Schwarzbeck	Antenna, H-field	HFSL 7101	109	lab verification only relative measurements	n/a
637	Rohde & Schwarz	Spectrum Analyser	FSV40	101587	12/07/2023	12
-/-	Testo	Thermo-Hygrometer	608-H1	07	lab verification	n/a
645	Weiss Umwelttechnik	Climatic Chamber	LabEvent T/110/70/3	5822619794 0010	lab verification	n/a
327	SPS	AC/DC power distribution system	PAS 5000	A2464 00/1 0200	lab verification	n/a
-/-	Huber+Suhner	SMA RF	SMA-SMA	284009-1	lab verification	n/a
-/-	Huber+Suhner	SMA RF	SMA-SMA	263152-2	lab verification	n/a

Note: Calibration dates are logged based on the equipment data on time of use for measurements, not based on the report issue dates.

Test site: SR 7/8

ID	Manufacturer	Type	Model	Serial No.	Calibration Date	Cal. Cycle
22	Rohde& Schwarz	Artificial Mains	ESH3-Z5	831767/014	18.07.2023	12
23	Rohde& Schwarz	Artificial Mains	ESH3-Z5	831767/013	18.07.2023	12
28	Rohde& Schwarz	Passive Probe	ESH2-Z3	none	13.07.2022	36
215	Rohde& Schwarz	Artificial Mains Network	ESH2-Z5	879675/002	18.07.2023	24
349	Rohde& Schwarz	Receiver, EMI Test	ESIB7	836697/009	18.07.2023	12
351	Rohde& Schwarz	network, Artificial Mains	ESH3-Z5	862770/018	18.07.2023	12
505	Rohde& Schwarz	Absorbing Clamp	MDS21	100005	21.07.2023	48

Note: Calibration dates are logged based on the equipment data on time of use for measurements, not based on the report issue dates.

Test Measurement Software/Firmware Used:

Name	Manufacturer	Version
EMI Software; CE measurement software	Toyo	EP5/CE Ver 4.0.1.
EMC32	Rohde & Schwarz	11.30.00

3 Equipment Under Test (EUT)

3.1 Identification of Equipment Under Test (EUT)

Brand Name:	Eliwell Controls
Model Name or Number / PMN:	AIR EDGE WiFi-Eth RS485 SD
HVIN:	AIR EDGE WiFi Eth RS485
FVIN:	EDGEWIFI
Test Sample Serial Number:	111909 + 111934 (Radiated Test Sample)
Hardware Version:	111909C + 111934C
Software Version:	0.1.21t
FCC ID:	2AMLEEDGEWIFI
ISED Canada Certification Number:	IC: 9727A-EDGEWIFI
Date of Receipt:	21 June 2023

Brand Name:	Eliwell Controls
Model Name or Number / PMN:	AIR EDGE WiFi-Eth RS485 SD
HVIN:	AIR EDGE WiFi Eth RS485
FVIN:	EDGEWIFI
Test Sample Serial Number:	111909 + 111934 (Conducted Test Sample)
Hardware Version:	111909C + 111934C
Software Version:	0.1.21t
FCC ID:	2AMLEEDGEWIFI
ISED Canada Certification Number:	IC: 9727A-EDGEWIFI
Date of Receipt:	21 June 2023

3.2 Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.3 Additional Information Related to Testing

Technology Tested:	Bluetooth Low Energy (Digital Transmission System)		
Type of Unit:	Transceiver		
Channel Spacing:	2 MHz		
Modulation:	GFSK		
Data Rate: LE	1 Mbps		
Power Supply Requirement(s):	120V AC / 60 Hz		
Maximum Conducted Output Power:	1.56 dBm		
Transmit Frequency Range:	2402 MHz to 2480 MHz		
Transmit Channels Tested:	Channel ID	Channel Number	Channel Frequency (MHz)
	Bottom	37	2402
	Middle	18	2442
	Top	39	2480

3.4 Description of Available Antennas

The radio utilizes an integrated antenna, with the following maximum gain:

Frequency Range (MHz)	Antenna Gain (dBi)
2400-2480	Integral 4.89 dBi External 2.89 dBi

3.5 Description of Test Setup

Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	Test Laptop with PuTTY
Brand Name:	HP
Model Name or Number:	Probook 650 G1
Serial Number:	5CG6143YWB

Operating Modes

The EUT was tested in the following operating mode(s):

- ☒ BT-LE Test Mode: Continuously transmitting modulated carrier with combination of
 - Data Rate: 1 Mbps | Packet Type: PRBS9 | Channel: Bottom / Middle / Top

Configuration and Peripherals

The EUT was tested in the following configuration(s):

Test Mode Activation:

- The EUT can be connected with the Test laptop via USB-UART cables supplied by the customer. The cable was used only for configuration and was removed during the measurement.
- The test modes were activated by the terminal software 'PuTTY'. The commands to setup the respective modes and power were defined by the customer in the setup instructions.
- The transmitter test mode was configured to power settings according to the customer setup instruction.

AC Conducted Emissions Measurements:

- The EUT radiated sample was used for AC conducted emissions measurements.
- The measurements were carried out with 120 VAC/60Hz & 240 VAC/60Hz.
- The Toyo EMI Software EP5/CE Ver 4.0.1. was used for these measurements.

Conducted Measurements:

- All conducted measurements were carried out by using the EUT RF sample with SMA cable soldered on to the PCB. The SMA RF cable's attenuation (maximum 0.7 dB@2.4GHz) was added to as a reference level offset to each of the conducted plots.

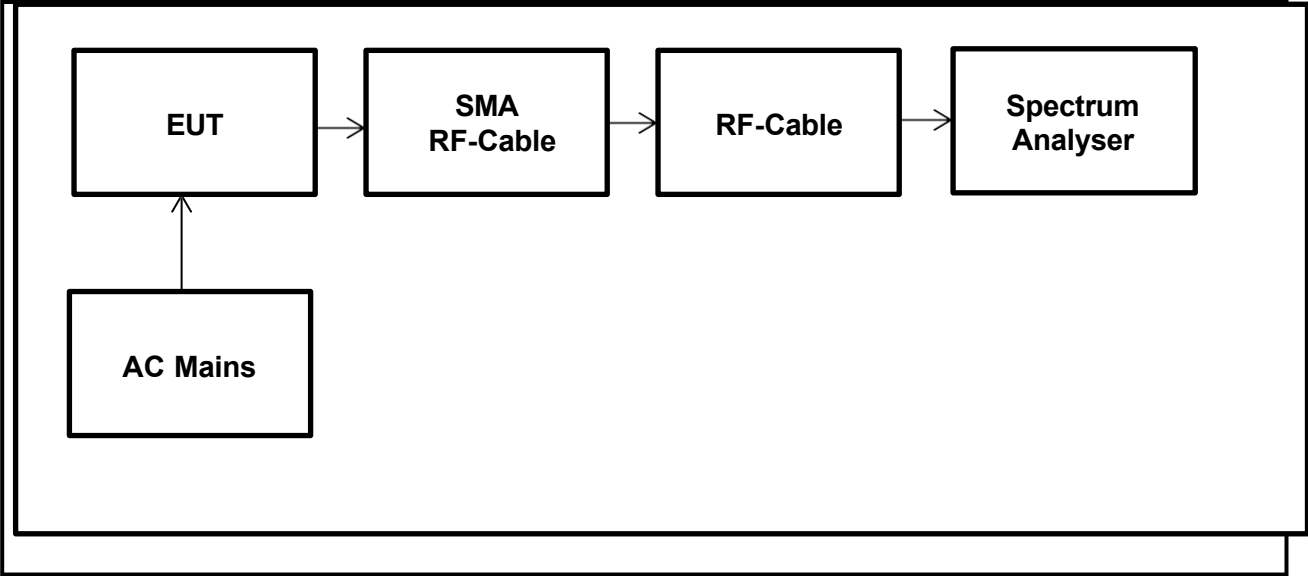
Radiated Measurements:

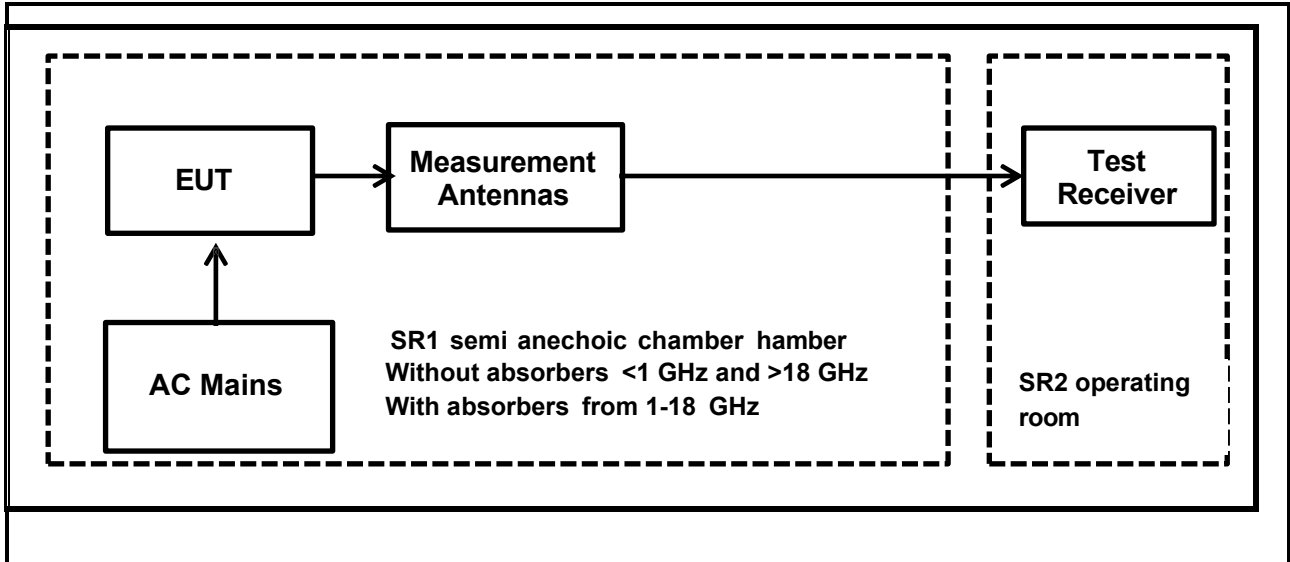
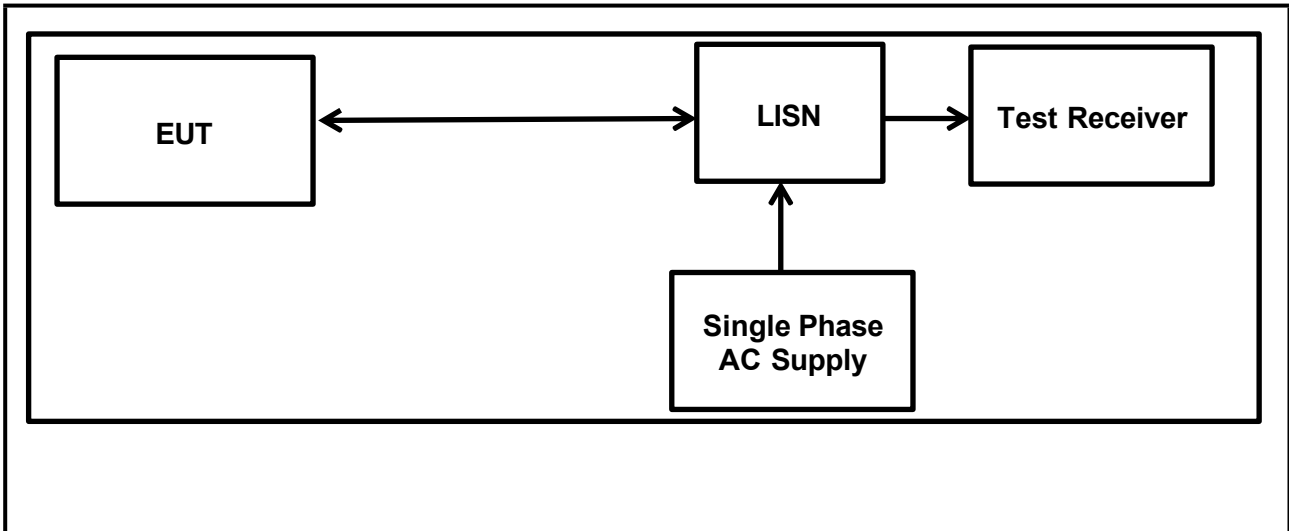
- For radiated measurements were performed with the radiated test sample.
- Before starting the measurements EUT in standing and laying position with its antenna was evaluated for the worst-case position w.r.t to maximum radiated power measured and following positions of the antenna were found out to be the worst case. Therefore, this report includes relevant results.
- External Antenna (External): Vertically placed in y-axis parallel to the vertical standing EUT.
- PCB Antenna (Internal): EUT in horizontal position.
- Radiated measurements below 30 MHz were performed with the EUT positioned on the turn table and rotating 360 degrees while the loop antenna height was set at 100 cm.
- Radiated measurements above 30 MHz were performed with the EUT positioned on the turn table and rotating 360° while the antenna height varies from 1 to 4 m over the measurement frequency range.
- R&S® EMC32 V11.30 Software was used for the Radiated spurious emission measurements.
- As the continuous transmission of the EUT ($D \geq 98\%$) cannot be achieved and EUT was transmitting continuously with 61.98% duty cycle (+/- 2% tolerance). Duty Cycle Correction Factor of 2.08 dB was added to all average measurements.

Test Setup Diagrams

Conducted Tests:

Test Setup for Transmitter Minimum 6 dB Bandwidth, Duty Cycle, Power Spectral Density & Maximum Peak Output Power



Test Setup Diagrams (continued)**Radiated Tests:****Test Setup for Transmitter Radiated Emissions****Test Setup for Transmitter AC Conducted Spurious Emissions**

4 Antenna Port Test Results

4.1 Transmitter Duty Cycle

Test Summary:

Test Engineer:	Al-hussainy Abbas	Test Date:	4 July 2023
Test Sample Serial Number:	111909 + 111934 (Conducted Test Sample)		

FCC Reference:	Part 15.35(c)
Test Method Used:	FCC KDB 558074 Section 6 referencing ANSI C63.10 Section 11.6

Environmental Conditions:

Temperature (°C):	22.7
Relative Humidity (%):	53.0

Note(s):

1. In order to assist with the determination of the average level of spurious emissions field strength in LE mode, measurements were made of duty cycle to determine the transmission duration and the silent period time of the transmitter. The transmitter duty cycle was measured using a spectrum/signal analyser in the time domain and calculated by using the following calculation:

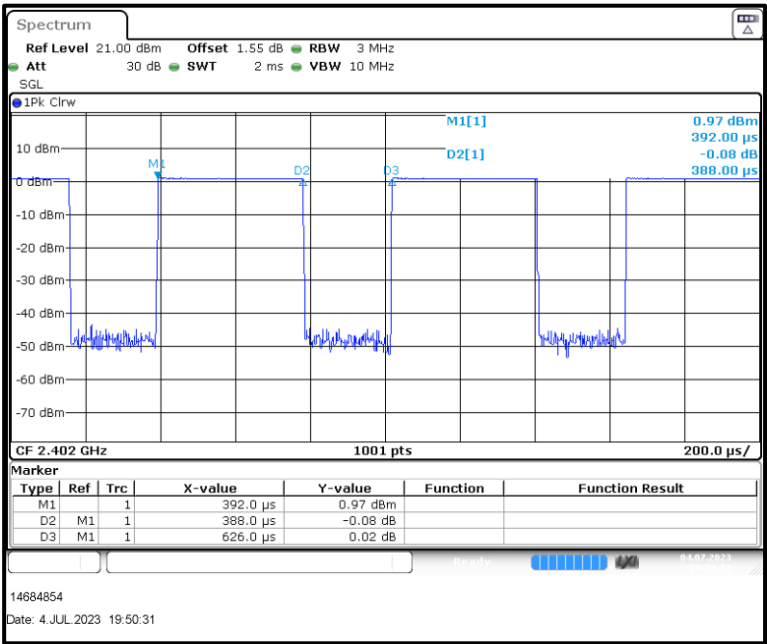
$$10 \log (1 / (\text{On Time} / [\text{Period or } 100 \text{ ms whichever is the lesser}])).$$

Duty Cycle Correction Factor for BT-LE 1 Mbps: 2.08 dB

2. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.

Results: LE

Pulse Duration (ms)	Period (ms)	Duty Cycle (dB)
0.388	0.626	2.08



4.2 Transmitter 99% Occupied Bandwidth

Test Summary:

Test Engineer:	Al-hussainy Abbas	Test Date:	28 July 2023
Test Sample Serial Number:	111909 + 111934 (Conducted Test Sample)		

FCC Reference:	N/A
ISED Canada Reference:	RSS-Gen 6.7
Test Method Used:	RSS-Gen 6.7 and Notes below

Environmental Conditions:

Temperature (°C):	22.7
Relative Humidity (%):	67.4

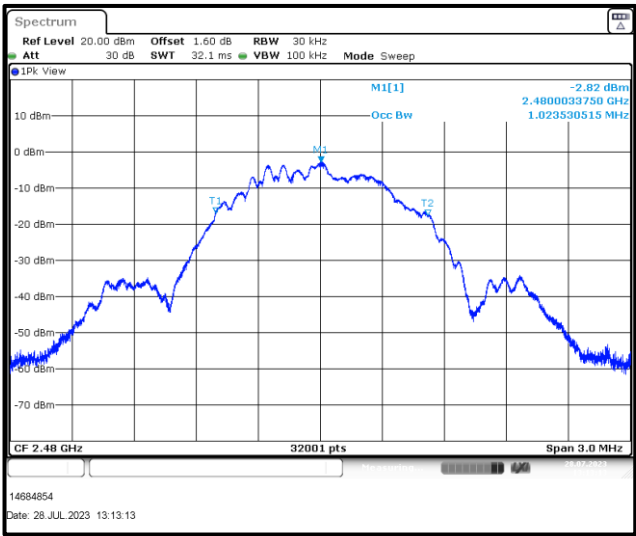
Note(s):

1. The 99% emission bandwidth was measured using the signal analyser occupied bandwidth function. The resolution bandwidth was set in the range of 1% to 5% of the occupied bandwidth and the video bandwidth set to 3 times the resolution bandwidth. The span was set to capture all products of the modulation process including emission skirts.
2. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
3. Example plots of each modulation on top channel, for one antenna configuration, can be seen below to show setting parameters comply with testing method/procedure. All other plots are archived on the UL IT server and available for inspection if required.

Transmitter 99% Occupied Bandwidth (continued)

Results: LE

Channel	99% Occupied Bandwidth (MHz)
Bottom	1.023
Middle	1.022
Top	1.024



Top Channel

4.3 Transmitter Minimum 6 dB Bandwidth

Test Summary:

Test Engineer:	Al-hussainy Abbas	Test Date:	28 July 2023
Test Sample Serial Number:	111909 + 111934 (Conducted Test Sample)		

FCC Reference:	Part 15.247(a)(2)
ISED Canada Reference:	RSS-Gen 6.7 / RSS-247 6.3.1
Test Method Used:	FCC KDB 558074 Section 8.2 referencing ANSI C63.10 Section 11.8.1

Environmental Conditions:

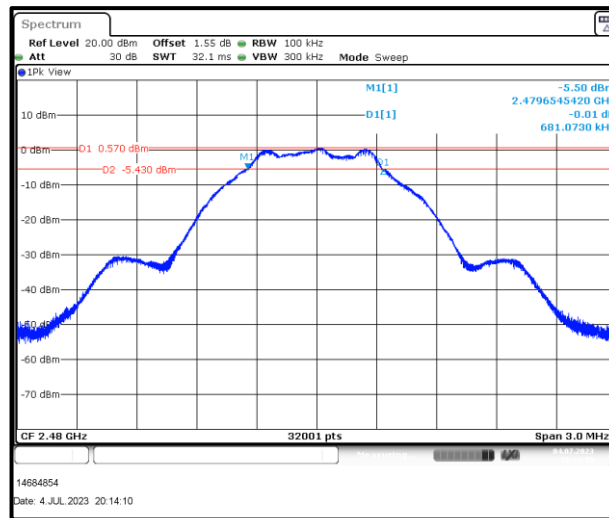
Temperature (°C):	22.7
Relative Humidity (%):	67.4

Note(s):

1. 6 dB DTS bandwidth tests were performed using a signal analyser in accordance with ANSI C63.10 Section 11.8.1 Option 1 measurement procedure RBW shall be in the range of 1% to 5% of the OBW but not less than 100 kHz. Therefore, signal analyser resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and the trace mode was Max Hold. The DTS bandwidth was measured at 6 dB down from the peak of the signal.
2. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
3. Example plots of each modulation on top channel, for one antenna configuration, can be seen below to show setting parameters comply with testing method/procedure. All other plots are archived on the UL IT server and available for inspection if required.

Transmitter Minimum 6 dB Bandwidth (continued)**Results: LE**

Channel	6 dB Bandwidth (kHz)	Limit (kHz)	Margin (kHz)	Result
Bottom	682.04	≥500	182.04	Complied
Middle	683.13	≥500	183.13	Complied
Top	681.07	≥500	181.07	Complied

**Top Channel**

4.4 Transmitter Maximum Peak Output Power

Test Summary:

Test Engineer:	Al-hussainy Abbas	Test Date:	28 July 2023
Test Sample Serial Number:	111909 + 111934 (Conducted Test Sample)		

FCC Reference:	Part 15.247(b)(3)
ISED Canada Reference:	RSS-Gen 6.12 / RSS-247 6.3.2
Test Method Used:	FCC KDB 558074 Section 8.3.1.3 referencing ANSI C63.10 Section 11.9.1.2 and Notes below

Environmental Conditions:

Temperature (°C):	22.7
Relative Humidity (%):	67.4

Note(s):

1. Conducted power tests were performed using a signal analyser in accordance with ANSI C63.10 Section 11.9.1.2 with the PKPM1 procedure.
2. The RF port on the EUT was connected to the power meter using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
3. The conducted power was added to the declared antenna gain to obtain the EIRP.

Transmitter Maximum Peak Output Power (continued)**Results: LE**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	1.56	30.0	28.44	Complied
Middle	1.11	30.0	28.89	Complied
Top	1.13	30.0	28.87	Complied

External Antenna

Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	1.56	2.89	4.45	36.00	31.55	Complied
Middle	1.11	2.89	4.00	36.00	32.00	Complied
Top	1.13	2.89	4.02	36.00	31.98	Complied

PCB Antenna

Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	1.56	4.89	6.45	36.00	29.55	Complied
Middle	1.11	4.89	6.00	36.00	30.00	Complied
Top	1.13	4.89	6.02	36.00	29.98	Complied

5 Radiated Test Results

5.1 Transmitter Radiated Emissions <1 GHz

Test Summary:

Test Engineer:	Abbas Al-Hussainy	Test Date:	13 July 2023 and 14 July 2023
Test Sample Serial Number:	111909 + 111934 (Radiated Test Sample)		

FCC Reference:	Parts 15.247(d) & 15.209(a)
ISED Canada Reference:	RSS-Gen 6.13 & 8.9 / RSS-247 6.6
Test Method Used:	ANSI C63.10 Sections 6.3, 6.4 and 6.5
Frequency Range	9kHz-1000MHz

Environmental Conditions:

Temperature (°C):	24.8 to 26.8
Relative Humidity (%):	39.9 to 45.1

Note(s):

- The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the bottom channel only.
- Measurements below 30 MHz were performed in a semi-anechoic chamber (Asset Number 1603665) at 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. The measurement values were extrapolated to 3 metres in accordance with ANSI C63.10 clause 6.4.3 using the method described in clause 6.4.4.2. ANSI C63.10 clause 5.2 states an alternative test site that can demonstrate equivalence to an open area test site may be used for measurements below 30 MHz. Therefore, measurements were performed in a semi-anechoic chamber. The correlation data between semi-anechoic chamber and an open field test site is available upon request.
- FCC rule part 15.209(a) specifies limits at 300 m / 30 m in $\mu\text{V}/\text{m}$ but RSS GEN specifies limits at 300 m / 30 m in $\mu\text{A}/\text{m}$. The relevant limits are the same after accounting for E-field to H-field correction. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table). According to Notice 2020-DRS0023 converting the magnetic field strength into electrical field strength using the following equation while considering free space impedance of 377Ω results in a factor of 51.5 dB Ω .

$$AF^E [\text{dB}(\text{m}^{-1})] = AF^H [\text{dB}(\Omega^{-1}\text{m}^{-1})] + Z_0[\text{dB}\Omega]$$

For example, the measurement frequency X KHz resulted in a level of Y dB $\mu\text{V}/\text{m}$, which is equivalent to Y -51.5 = Z dB $\mu\text{A}/\text{m}$, which has the same margin, W dB, to the corresponding RSS-GEN Section 8.9, Table 6 limit as it has to the 15.209(a) limit.

Transmitter Radiated Emissions (continued)**Note(s):**

5. The limits are specified at a test distances of 30 and 300 metres. However, as specified in FCC Section 15.31 (f)(2) & ANSI C63.10 clause 6.4.3, measurements may be performed at a closer distance and the measured level extrapolated to the specified measurement distance using the method described in clauses 6.4.4, specifically sub-clause 6.4.4.1 which specifies that the measured level shall be extrapolated to the specified distance by conservatively presuming that the field strength decays at 40 dB/decade.

Therefore, measurements were performed at a measurement distance of 3 m.

The measured values at 3 m were extrapolated to the required measurement distances of 300 m and 30 m and compared the specified limits at those distances as follows:

•9 kHz- 490 kHz: measured value extrapolated from 3 m to 300 m by subtracting 80 dB at 40 dB /decade.

•490 kHz-30 MHz: measured value extrapolated from 3 m to 30 m by subtracting 40 dB at 40 dB /decade.

The results table shows both the measured levels at 3 m and the same measurement values extrapolated to the actual measurement distance for the limits specified at 30 and 300 metres.

Conversely, the limit line shown on the spectrum plot was extrapolated to 3 m from 300 m and 30 m using the 40 dB /decade rule.

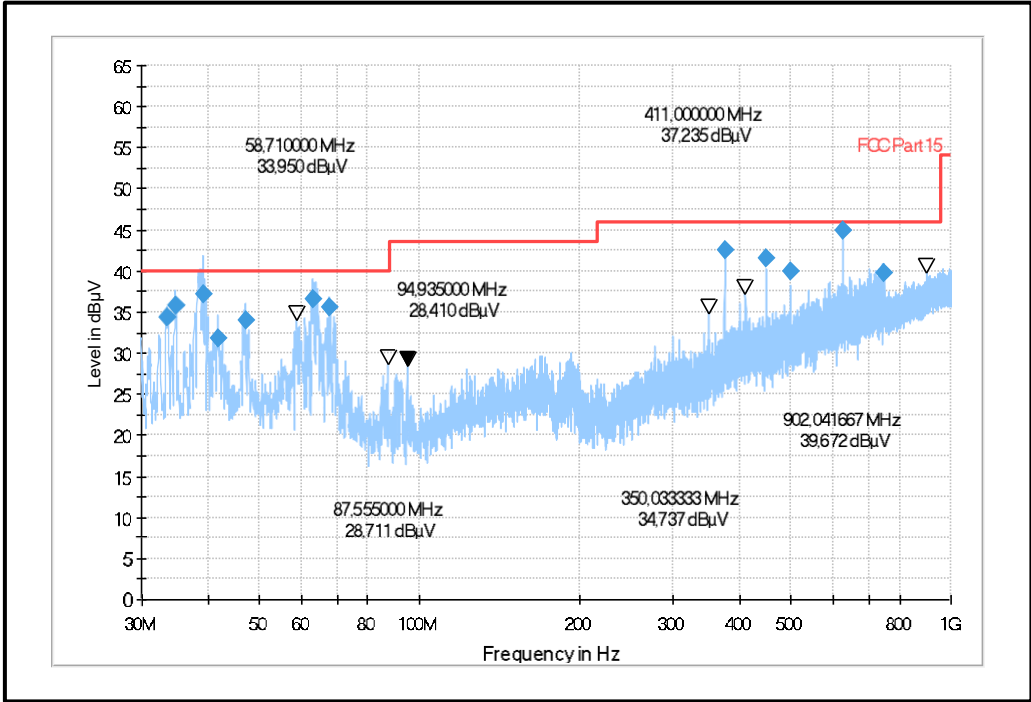
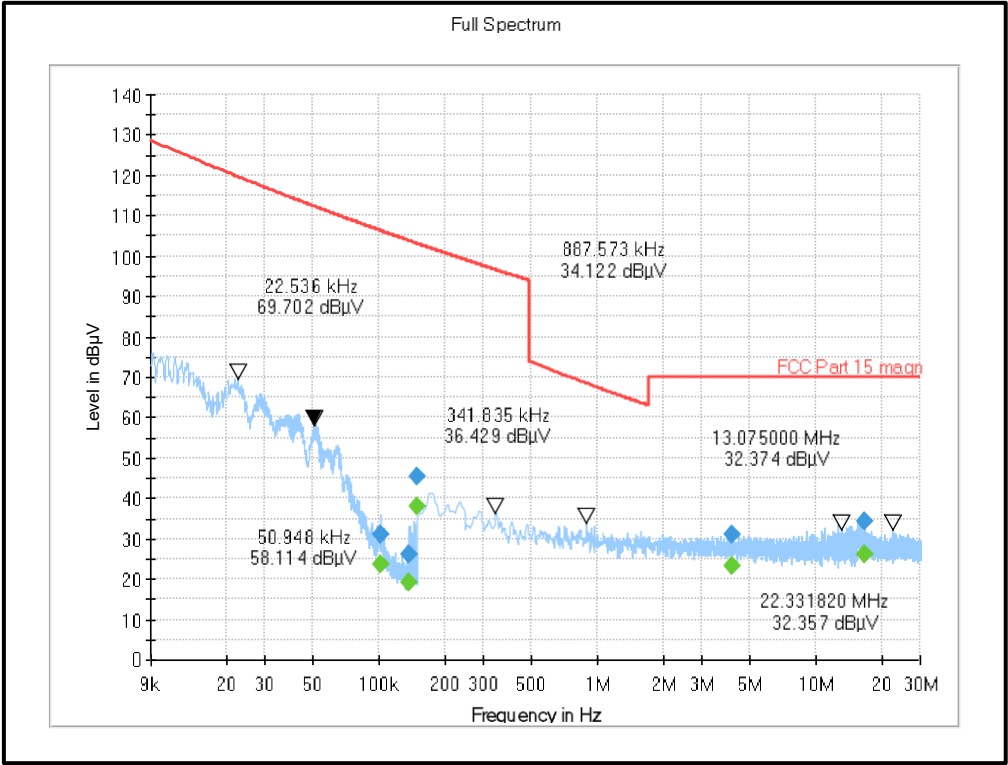
6. Measurements from below 1 GHz were performed in a semi-anechoic chamber (Asset Number 1603665) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
7. Pre-scans were performed and markers placed on the highest measured levels. The test receiver was configured as follows: During 9 kHz to 150 kHz tests, the resolution bandwidth was set to 300 Hz and video bandwidth 1 kHz. A peak detector was used and trace mode was Max Hold. For 150 kHz to 490 kHz, the resolution bandwidth was set to 10 kHz and video bandwidth 30 kHz. An average detector was used and trace mode was Max Hold. For 490 kHz to 30 MHz, the resolution bandwidth was set to 10 kHz and video bandwidth 30 kHz. A peak detector was used and trace mode was Max Hold.
8. For 30 MHz to 1 GHz, the resolution bandwidth was set to 120 kHz and video bandwidth 500 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. Final measurements were performed on the marker frequencies and the results entered into the table below. The test receiver resolution bandwidth was set to 120 kHz, using a CISPR quasi-peak detector and span wide enough to see the whole emission.

Transmitter Radiated Emissions (continued)**Results: External Antenna / Quasi-Peak / Bottom Channel****9kHz to 30MHz**

Frequency (MHz)	Antenna Polarity	Level@3m (dBμV/m)	Level extrapolated (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
0.101426	90° to EUT	30.94	-49.06	26.19	75.25	Complied
0.137240	0° to EUT	26.04	-53.96	23.69	77.65	Complied
0.150000	0° to EUT	45.54	-34.46	22.96	57.42	Complied
4.138845	0° to EUT	31.30	-8.70	30.00	38.70	Complied
16.595375	90° to EUT	34.38	-5.62	30.00	35.62	Complied
0.101426	90° to EUT	30.94	-49.06	26.19	75.25	Complied

30MHz to 1 GHz

Frequency (MHz)	Antenna Polarization	MaxPeak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
33.690000	Vertical	33.02	40.00	6.98	Complied
34.725000	Vertical	32.96	40.00	7.04	Complied
39.225000	Vertical	37.24	40.00	2.76	Complied
41.970000	Vertical	30.58	40.00	9.42	Complied
47.280000	Vertical	33.40	40.00	6.60	Complied
63.210000	Vertical	33.66	40.00	6.34	Complied
68.070000	Vertical	33.42	40.00	6.58	Complied
374.900000	Vertical	38.95	46.00	7.05	Complied
450.000000	Vertical	40.16	46.00	5.84	Complied
500.041667	Vertical	36.90	46.00	9.10	Complied
625.041667	Vertical	42.78	46.00	3.22	Complied
750.000000	Vertical	39.67	46.00	6.33	Complied



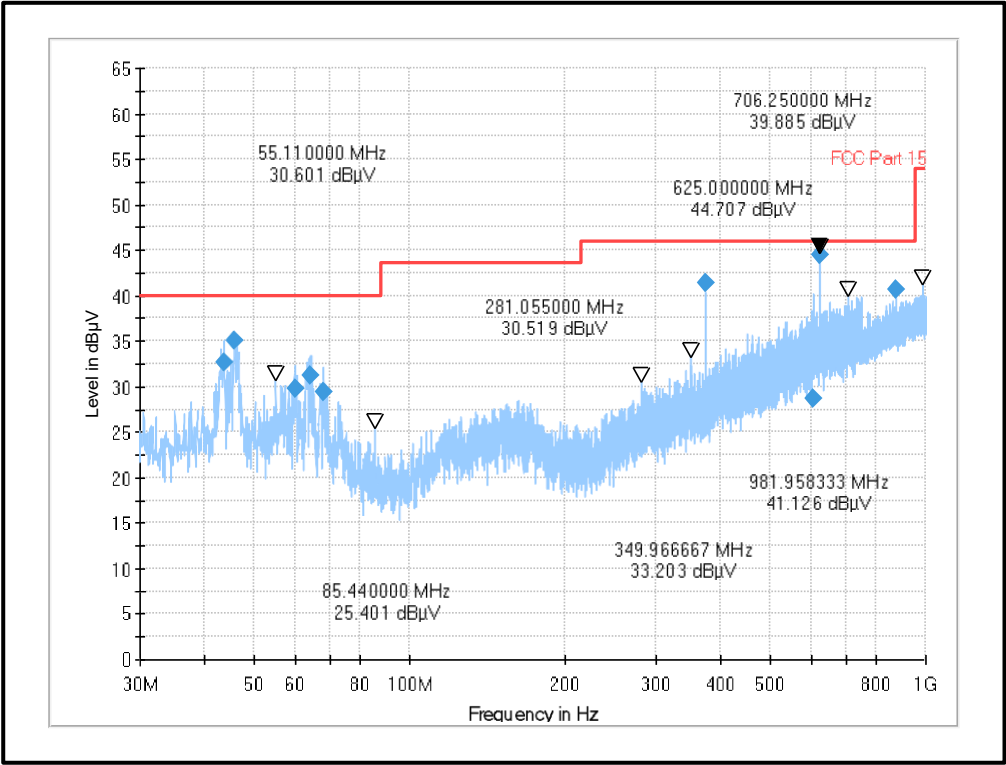
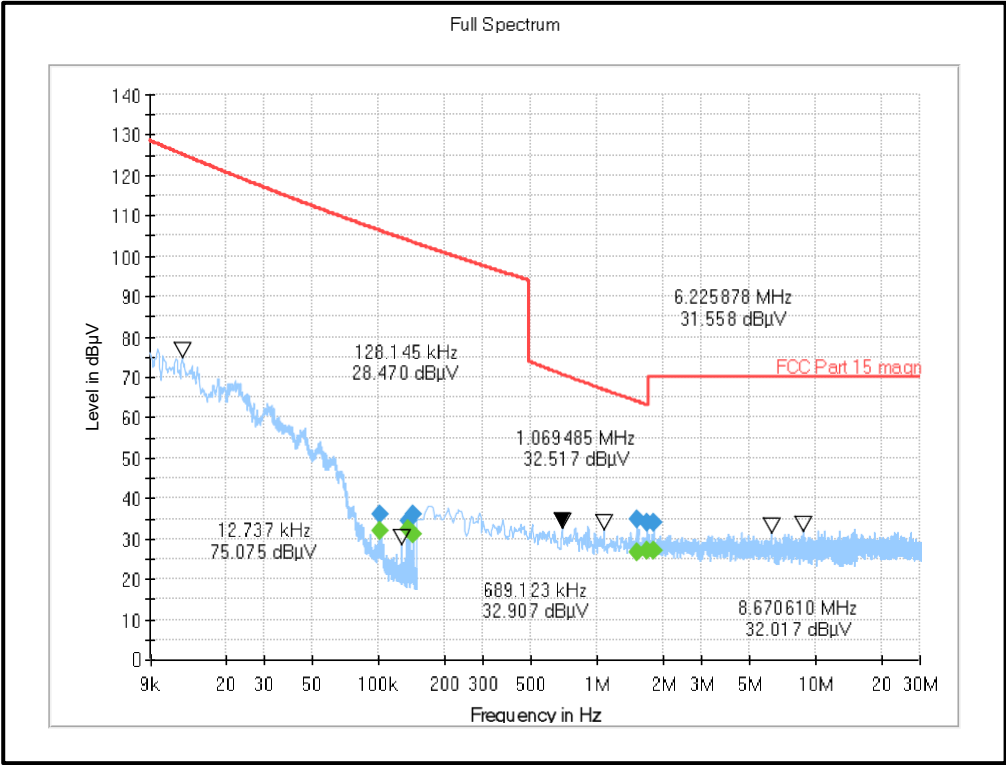
Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying table .

Transmitter Radiated Emissions (continued)**Results: PCB Antenna / Quasi-Peak / Bottom Channel****9kHz to 30MHz**

Frequency (MHz)	Loop Antenna Orientation	Level @ 3m (dB μ V/m)	Extrapolated Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
0.101849	90° to EUT	36.05	-44.95	26.15	70.10	Complied
0.136605	0° to EUT	34.44	-45.56	23.73	69.29	Complied
0.144854	0° to EUT	36.21	-43.79	23.25	67.04	Complied
1.509383	0° to EUT	34.65	-5.35	23.95	29.30	Complied
1.681373	90° to EUT	33.90	-6.10	23.08	29.18	Complied
1.813673	0° to EUT	33.93	-6.07	30.00	36.07	Complied

30MHz to 1 GHz

Frequency (MHz)	Antenna Polarization	MaxPeak Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
43.770000	Vertical	32.63	40.00	7.37	Complied
45.705000	Vertical	35.12	40.00	4.88	Complied
60.060000	Vertical	29.69	40.00	10.31	Complied
64.380000	Vertical	31.23	40.00	8.77	Complied
68.205000	Vertical	29.40	40.00	10.60	Complied
375.000000	Vertical	41.34	46.00	4.66	Complied
606.791667	Vertical	28.70	46.00	17.30	Complied
625.000000	Vertical	44.49	46.00	1.51	Complied
874.958333	Vertical	40.69	46.00	5.31	Complied



5.2 Transmitter Radiated Emissions >1 GHz

Test Summary:

Test Engineer:	Abbas Al-Hussainy	Test Date:	5 July 2023 and 14 July 2023
Test Sample Serial Number:	111909 + 111934 (Radiated Test Sample)		

FCC Reference:	Parts 15.247(d) & 15.209(a)
ISED Canada Reference:	RSS-Gen 6.13 & 8.9 / RSS-247 6.6
Test Method Used:	FCC KDB 558074 Sections 8.1 c)3), 8.5 & 8.6 referencing ANSI C63.10 Sections 6.3, 6.6, 11.11 & 11.12
Frequency Range	1 GHz to 25 GHz

Environmental Conditions:

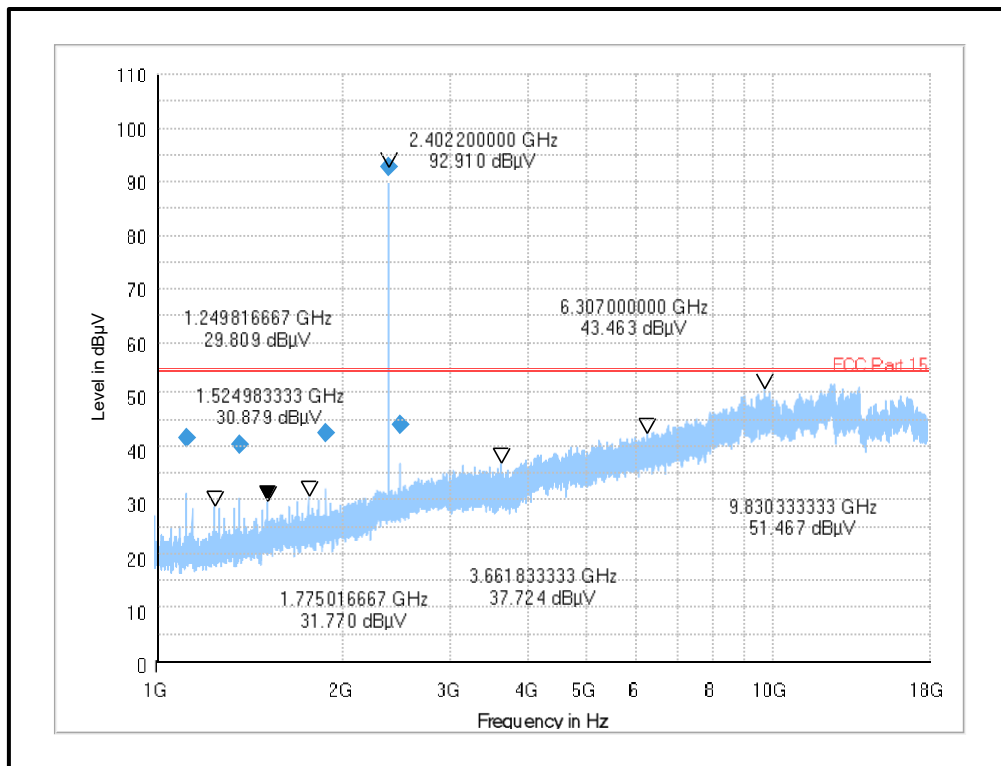
Temperature (°C):	24.8 to 25.8
Relative Humidity (%):	44.2 to 45.1

Note(s):

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. The emission shown at 2.4 GHz is the EUT fundamental.
3. *In accordance with ANSI C63.10 Section 6.6.4.3, Note 1, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
4. Pre-scans above 1 GHz were performed in a fully anechoic chamber (Asset Number 1603665) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 metres above the test chamber floor, in line with the EUT.
5. Final measurements above 1 GHz up to 18GHz were performed in a semi-anechoic chamber (Asset Number 1603665) at a distance of 3 metres. The EUT was placed at a height of 1.5 m above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
6. In accordance with ANSI C63.10 section 5.3.3 & 6.5.3 measurements above 18 GHz were performed at closer distance @1m without height scan; because at specified measurement distance (3m) for compliance the instrumentation noise floor was typically close to the radiated emission limit.
7. For frequency range between 18 GHz and 25 GHz, no critical emissions were found. All emissions shown on the pre-scans were investigated and found to be below the noise floor of the measurement system.
8. The test receiver resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. The sweep time was set to auto. Peak and average measurements were performed with their own appropriate detectors during the pre-scan measurements.

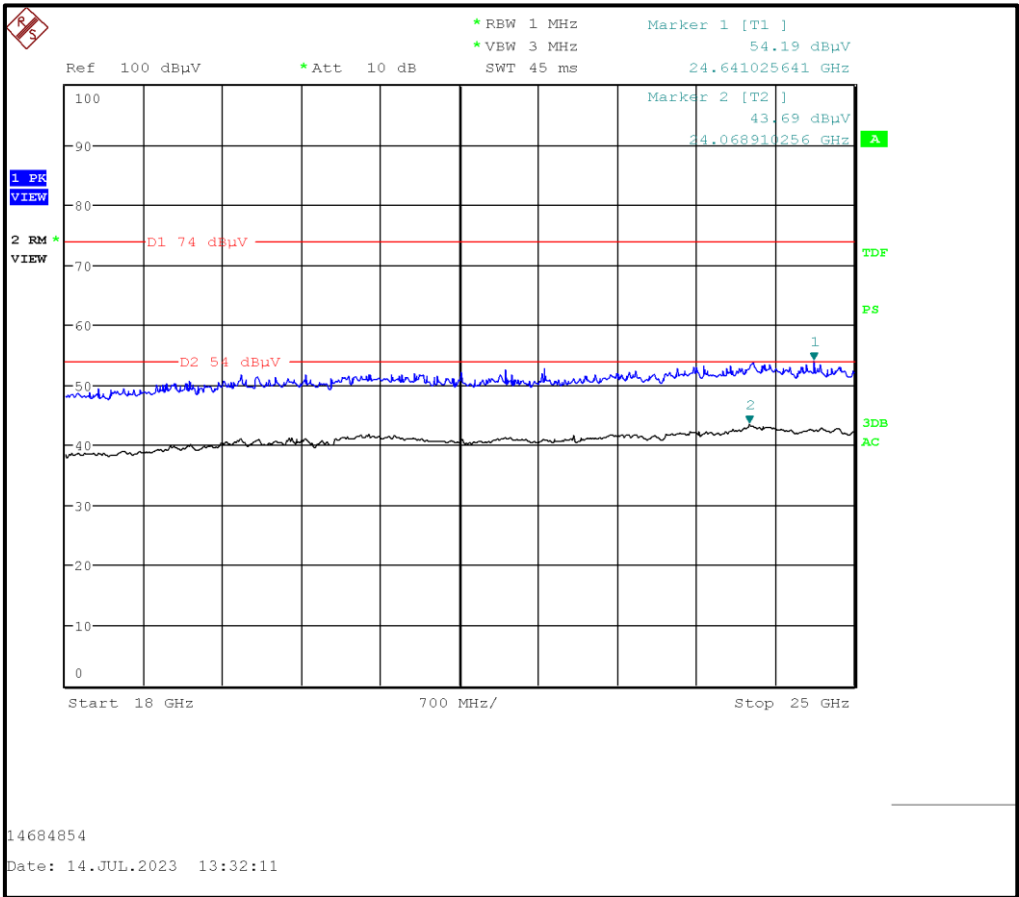
Results: External Antenna / Bottom Channel / LE

Frequency (MHz)	Antenna Polarization	Peak Level (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)	Result
1124.800000	Horizontal	42.37	54.00	11.63	Complied
1374.833333	Horizontal	41.10	54.00	12.90	Complied
1900.033333	Horizontal	43.42	54.00	10.58	Complied
2499.966667	Horizontal	44.72	54.00	9.28	Complied



Note: The plots are pre-scans and for indication purposes only.

For final measurements, see accompanying tables.



Note: The plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Results: External Antenna / Middle Channel / LE

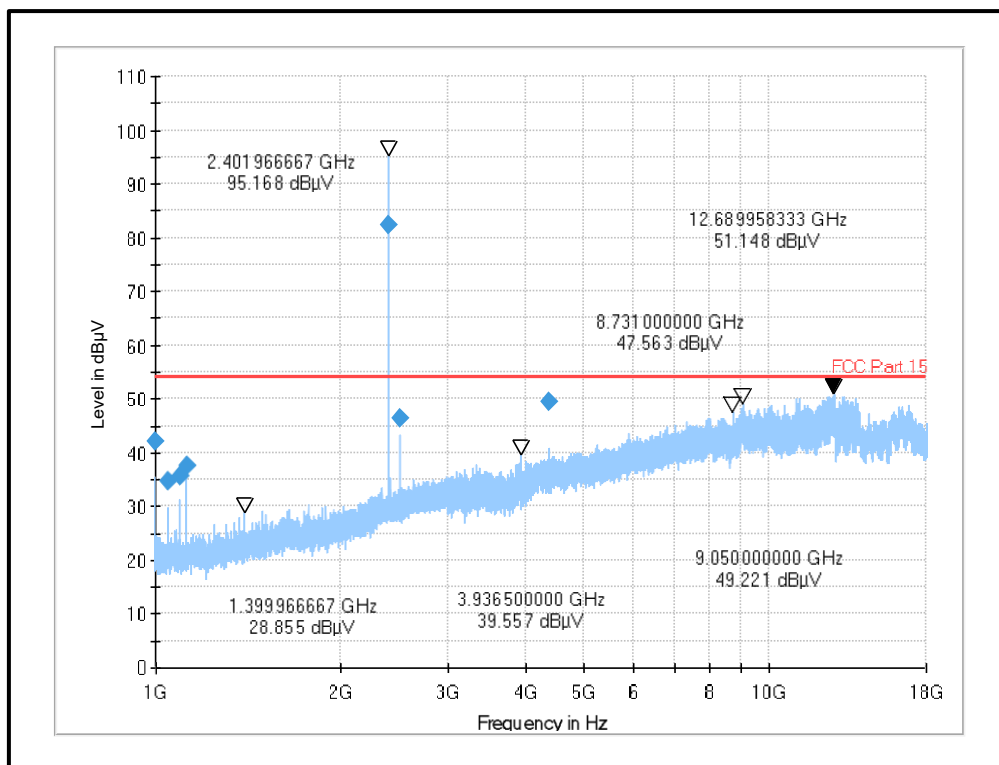
Frequency (MHz)	Antenna Polarization	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
No critical emissions were detected					

Results: External Antenna / Top Channel / LE

Frequency (MHz)	Antenna Polarization	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
No critical emissions were detected					

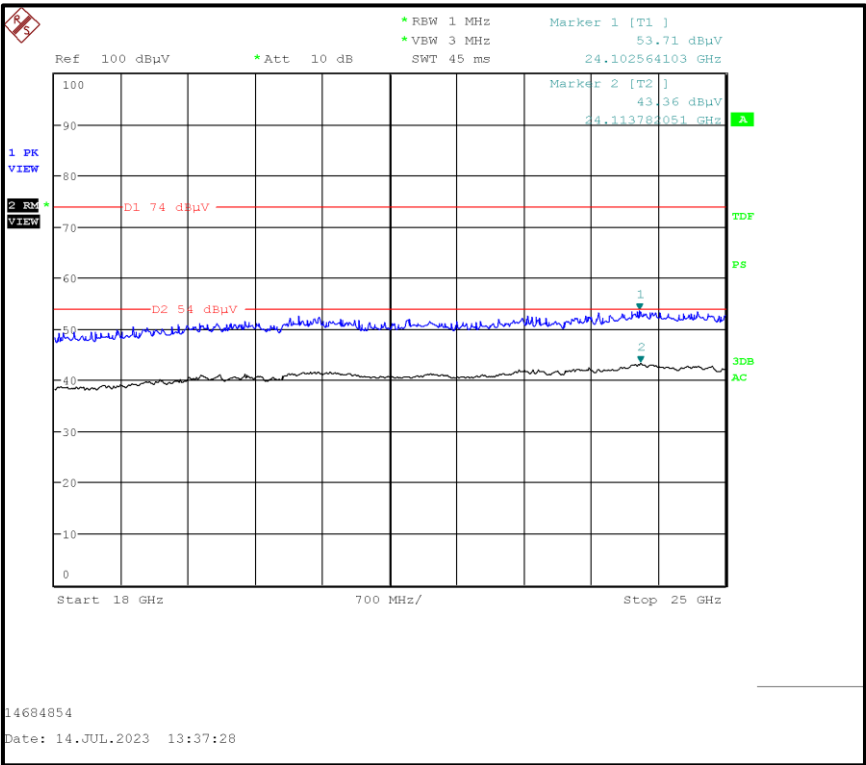
Results: Internal Antenna / Bottom Channel / LE

Frequency (MHz)	Antenna Polarization	MaxPeak Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
1000.000000	Vertical	42.03	54.00	11.97	Complied
1049.833333	Vertical	34.83	54.00	19.17	Complied
1099.883333	Vertical	35.60	54.00	18.40	Complied
1124.800000	Vertical	37.38	54.00	16.62	Complied
2499.966667	Vertical	46.52	54.00	7.48	Complied
4380.333333	Vertical	49.34	54.00	4.66	Complied

Transmitter Radiated Emissions (continued)

Note: The plots are pre-scans and for indication purposes only.

For final measurements, see accompanying tables.



Note: The plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Results: Internal Antenna / Middle Channel / LE

Frequency (MHz)	Antenna Polarization	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
No critical emissions were detected					

Results: Internal Antenna / Top Channel / LE

Frequency (MHz)	Antenna Polarization	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
No critical emissions were detected					

5.3 Transmitter Band Edge Radiated Emissions

Test Summary:

Test Engineer:	Abbas Al-Hussainy	Test Date:	05 July 2023
Test Sample Serial Number:	111909 + 111934 (Radiated Test Sample)		

FCC Reference:	Parts 15.247(d) & 15.209(a)
ISED Canada Reference:	RSS-Gen 6.13 / RSS-247 6.6
Test Method Used:	KDB 558074 Section 8.7 referencing ANSI C63.10 Sections 11.11, 11.12

Environmental Conditions:

Temperature (°C):	25.8
Relative Humidity (%):	44.2

Note(s):

- The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- As the lower band edge is adjacent to a non-restricted band, only peak measurements are required. In accordance with ANSI C63.10 Section 11.11.1, the test method in Section 11.11.3 was followed: the test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. The test receiver was left to sweep for a sufficient length of time in order to maximise the carrier level and out-of-band emissions. A marker and corresponding reference level line were placed on the peak of the carrier. As the maximum peak conducted output power was measured using an peak detector in accordance with ANSI C63.10 Section 11.9.1.1 an out-of-band limit line was placed 20 dB (ANSI C63.10 Section 11.11.1(a)) below the peak level. A marker was placed on the band edge spot frequencies. Marker frequency and levels were recorded.
- As the upper band edge is adjacent to a restricted band, both peak and average measurements were recorded by placing a marker at the edge of the band. For peak measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. For average measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz. An RMS detector was used, sweep time was set to auto and trace mode was Max Hold. A marker was placed on the band edge spot frequencies and a second marker placed on the highest emission level in the adjacent restricted band of operation (where a higher level emission was present). Marker frequencies and levels were recorded.
- There is a restricted band 10 MHz below the lower band edge. The test receiver was set up as follows: the RBW set to 1 MHz, the VBW set to 3 MHz, with the sweep time set to auto couple. Peak and average measurements were performed with peak and RMS detectors respectively. Markers were placed on the highest point on each trace.
- * -20 dBc limit.
- **As the EUT had a duty cycle < 98% the duty cycle correction factor has been applied to the LE upper band edge average result. The corrected level is shown below:

Upper Band Average result + duty cycle = Corrected band edge level

Corrected band edge level at 2483.5 MHz : 35.75 + 2.08 = 37.83 dB μ V/m

Transmitter Band Edge Radiated Emissions (continued)**Results: External Antenna****Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBμV/m)	-20 dBc Limit (dBμV/m)	Margin (dB)	Result
2395.60	35.72	71.69	35.97	Complied
2400.00	34.85	71.69	36.84	Complied

Results: Lower Band Edge / 2310 to 2390 MHz Restricted Band / Peak

Frequency (MHz)	Peak Level (dBμV/m)	Peak Limit (dBμV/m)	Margin (dB)	Result
2336.73	46.86	74.00	27.14	Complied

Results: Lower Band Edge / 2310 to 2390 MHz Restricted Band / Average

Frequency (MHz)	Average Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBμV/m)	Average Limit (dBμV/m)	Margin (dB)	Result
2386.60	34.91	2.08	36.99**	54.00	17.01	Complied

Results: Upper Band Edge / Peak

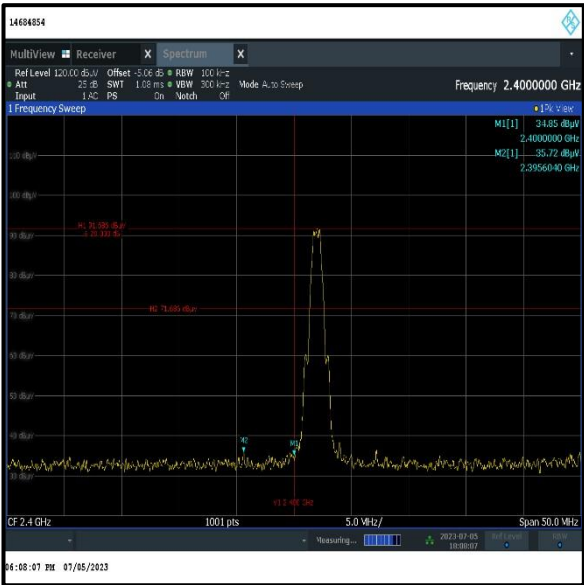
Frequency (MHz)	Peak Level (dBμV/m)	Peak Limit (dBμV/m)	Margin (dB)	Result
2483.50	46.70	74.00	27.30	Complied
2488.06	47.57	74.00	26.43	Complied

Results: Upper Band Edge / Average

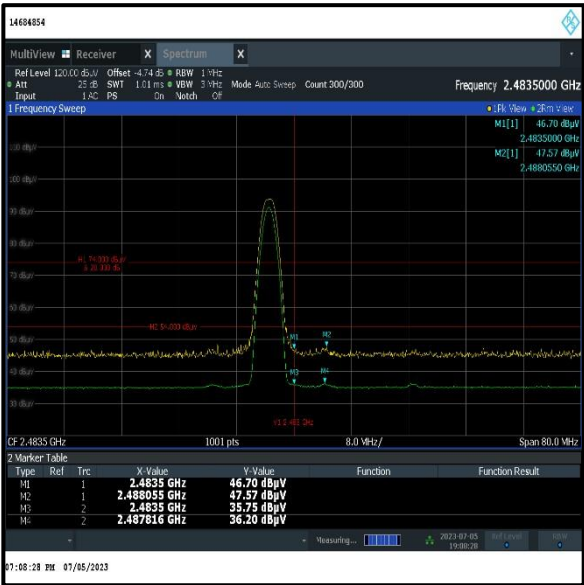
Frequency (MHz)	Peak Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBμV/m)	Average Limit (dBμV/m)	Margin (dB)	Result
2483.50	35.75	2.08	37.83**	54.00	16.17	Complied
2487.82	36.20	2.08	38.28**	54.00	15.72	Complied

Transmitter Band Edge Radiated Emissions (continued)

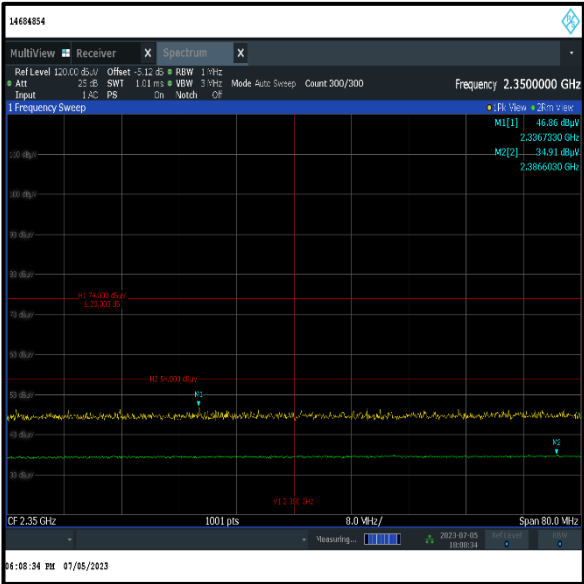
Results: External Antenna



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: Internal Antenna****Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2399.45	38.49	78.51	40.02	Complied
2400.00	38.33	78.51	40.18	Complied

Results: Lower Band Edge / 2310 to 2390 MHz Restricted Band / Peak

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2389.96	47.47	74.00	26.53	Complied

Results: Lower Band Edge / 2310 to 2390 MHz Restricted Band / Average

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2385.72	35.37	2.08	37.45**	54.00	16.55	Complied

Results: Upper Band Edge / Peak

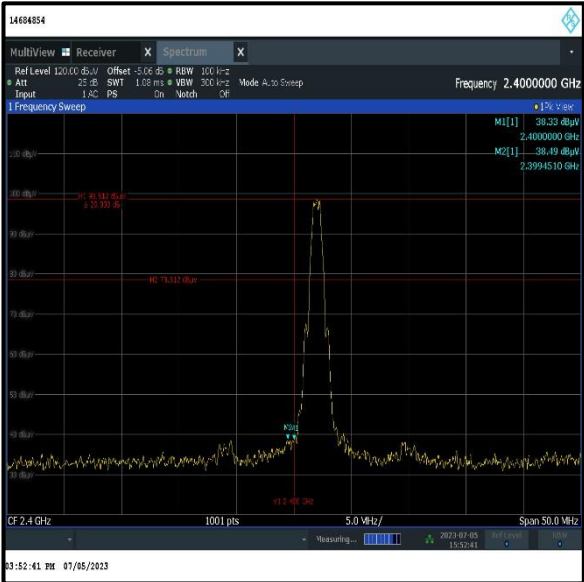
Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	51.38	74.00	22.62	Complied
2483.58	50.14	74.00	23.86	Complied

Results: Upper Band Edge / Average

Frequency (MHz)	Peak Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	36.67	2.08	38.75**	54.00	15.25	Complied
2500.04	42.65	2.08	44.73**	54.00	9.27	Complied

Transmitter Band Edge Radiated Emissions (continued)

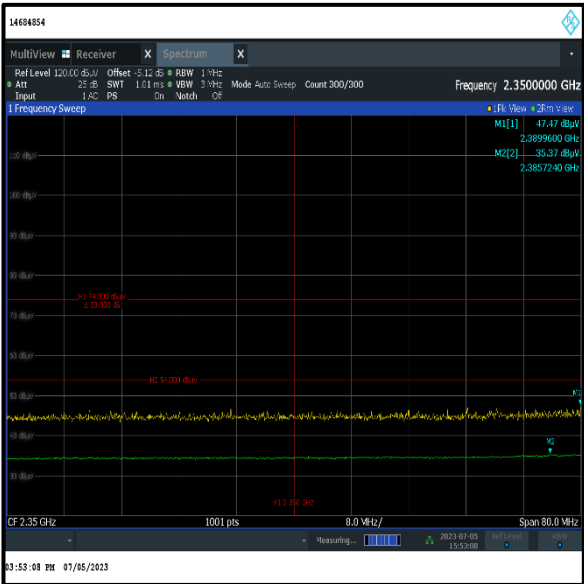
Results: Internal Antenna



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

6 AC Power Line Conducted Emissions Test Results

6.1 Transmitter AC Conducted Spurious Emissions

Test Summary:

Test Engineer:	Al-hussainy Abbas	Test Date:	28 July 2023
Test Sample Serial Number:	111909 + 111934 (Radiated Test Sample)		

FCC Reference:	Part 15.207
ISED Canada Reference:	RSS-Gen 8.8
Test Method Used:	ANSI C63.10 Section 6.2 / FCC KDB 174176 and notes below

Environmental Conditions:

Temperature (°C):	22.3
Relative Humidity (%):	69.6

Note(s):

1. In accordance with FCC KDB 174176 Q4, tests were performed with 120 VAC 60 & 240 VAC 60 Hz single phase.
2. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies and the results entered into the tables below.
3. Measurement performed with both antennas but only the measurement with Internal antenna is reported as it is the worst case.
4. Preliminary measurements were performed at both 50 Hz and 60 Hz supply frequencies. There was no change to the observed emissions.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Internal PCB Antenna****Results: Live / Quasi Peak / 120 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.17547	Live	42.3	64.7	22.4	Complied
0.22356	Live	34.4	62.7	28.3	Complied
0.69203	Live	39.2	56.0	16.8	Complied
0.77399	Live	42.7	56.0	13.3	Complied
0.98651	Live	49.7	56.0	6.3	Complied
1.08201	Live	44.3	56.0	11.7	Complied
1.48963	Live	41.6	56.0	14.4	Complied
1.99931	Live	40.8	56.0	15.2	Complied
3.28431	Live	39.9	56.0	16.1	Complied
7.42660	Live	42.9	60.0	17.1	Complied
7.93030	Live	42.3	60.0	17.7	Complied
12.90275	Live	44.4	60.0	15.6	Complied

Results: Live / Average / 120 VAC 60 Hz

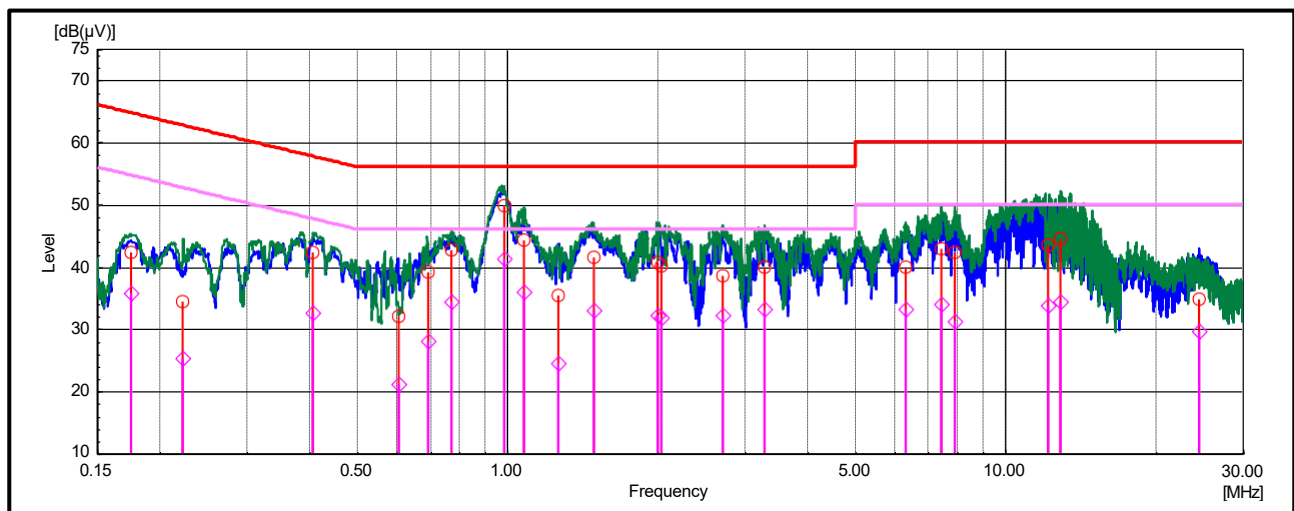
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.17547	Live	35.9	54.7	18.8	Complied
0.22356	Live	25.4	52.7	27.3	Complied
0.69203	Live	28.2	46.0	17.8	Complied
0.77399	Live	34.3	46.0	11.7	Complied
0.98651	Live	41.3	46.0	4.7	Complied
1.08201	Live	35.9	46.0	10.1	Complied
1.48963	Live	33.0	46.0	13.0	Complied
1.99931	Live	32.2	46.0	13.8	Complied
3.28431	Live	33.3	46.0	12.7	Complied
7.42660	Live	33.9	50.0	16.1	Complied
7.93030	Live	31.4	50.0	18.6	Complied
12.90275	Live	34.4	50.0	15.6	Complied

Transmitter AC Conducted Spurious Emissions (continued)**Results: Neutral / Quasi Peak / 120 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.40661	Neutral	42.4	57.7	15.3	Complied
0.60609	Neutral	32.2	56.0	23.8	Complied
1.26588	Neutral	35.4	56.0	20.6	Complied
2.04086	Neutral	40.2	56.0	15.8	Complied
2.70435	Neutral	38.6	56.0	17.4	Complied
6.29187	Neutral	40.0	60.0	20.0	Complied
12.15516	Neutral	43.6	60.0	16.4	Complied
24.50991	Neutral	34.8	60.0	25.2	Complied

Results: Neutral / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.40661	Neutral	32.7	47.7	15.0	Complied
0.60609	Neutral	21.3	46.0	24.7	Complied
1.26588	Neutral	24.6	46.0	21.4	Complied
2.04086	Neutral	31.8	46.0	14.2	Complied
2.70435	Neutral	32.2	46.0	13.8	Complied
6.29187	Neutral	33.2	50.0	16.8	Complied
12.15516	Neutral	33.8	50.0	16.2	Complied
24.50991	Neutral	29.6	50.0	20.4	Complied

Plot: Live and Neutral Line / 120 VAC 60 Hz

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Live / Quasi Peak / 240 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.28518	Live	40.0	60.7	20.7	Complied
0.58411	Live	47.9	56.0	8.1	Complied
0.84232	Live	46.2	56.0	9.8	Complied
1.02487	Live	48.8	56.0	7.2	Complied
1.54321	Live	46.5	56.0	9.5	Complied
2.66415	Live	45.2	56.0	10.8	Complied
2.80451	Live	44.6	56.0	11.4	Complied
5.85588	Live	45.7	60.0	14.3	Complied
6.95329	Live	45.8	60.0	14.2	Complied
12.73542	Live	44.7	60.0	15.3	Complied
17.93986	Live	41.1	60.0	18.9	Complied

Results: Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.28518	Live	28.2	50.7	22.5	Complied
0.58411	Live	36.7	46.0	9.3	Complied
0.84232	Live	36.6	46.0	9.4	Complied
1.02487	Live	39.9	46.0	6.1	Complied
1.54321	Live	37.4	46.0	8.6	Complied
2.66415	Live	37.7	46.0	8.3	Complied
2.80451	Live	36.9	46.0	9.1	Complied
5.85588	Live	37.8	50.0	12.2	Complied
6.95329	Live	37.5	50.0	12.5	Complied
12.73542	Live	31.8	50.0	18.2	Complied
17.93986	Live	30.5	50.0	19.5	Complied

Results: Neutral / Quasi Peak / 240 VAC 60 Hz

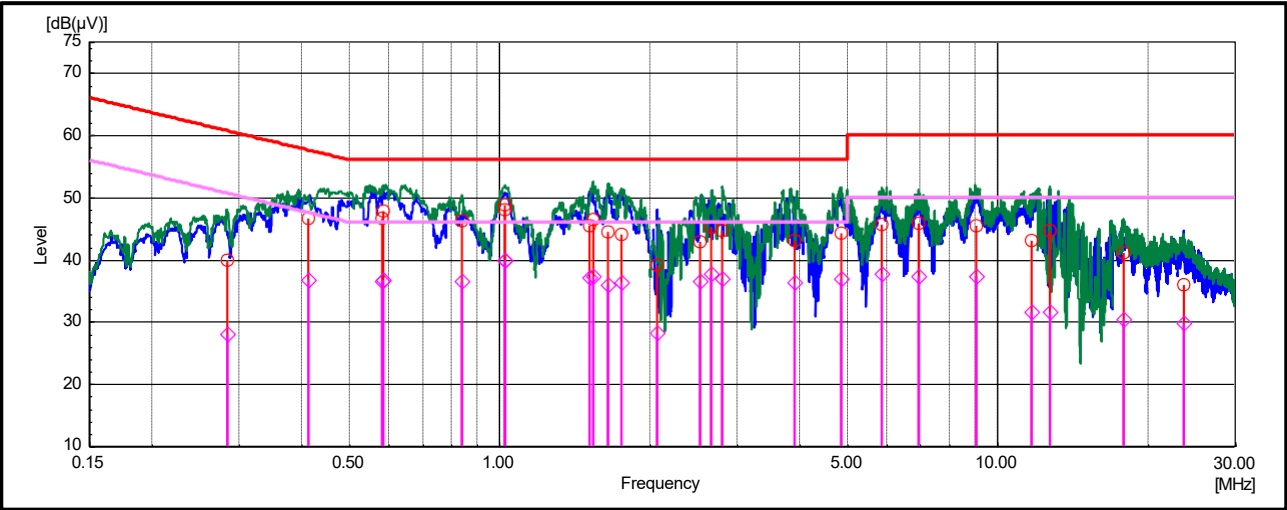
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.41504	Neutral	46.7	57.5	10.8	Complied
0.58356	Neutral	46.7	56.0	9.3	Complied
1.02584	Neutral	48.1	56.0	7.9	Complied
1.51998	Neutral	45.4	56.0	10.6	Complied
1.65531	Neutral	44.4	56.0	11.6	Complied
1.76121	Neutral	44.2	56.0	11.8	Complied
2.07325	Neutral	39.2	56.0	16.8	Complied
2.53337	Neutral	42.9	56.0	13.1	Complied
3.90483	Neutral	43.2	56.0	12.8	Complied
4.85834	Neutral	44.2	56.0	11.8	Complied
9.06404	Neutral	45.5	60.0	14.5	Complied
11.69136	Neutral	43.1	60.0	16.9	Complied
23.59346	Neutral	36.0	60.0	24.0	Complied

Results: Neutral / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.41504	Neutral	36.8	47.5	10.7	Complied
0.58356	Neutral	36.7	46.0	9.3	Complied
1.02584	Neutral	40.0	46.0	6.0	Complied
1.51998	Neutral	37.2	46.0	8.8	Complied
1.65531	Neutral	36.0	46.0	10.0	Complied
1.76121	Neutral	36.4	46.0	9.6	Complied
2.07325	Neutral	28.3	46.0	17.7	Complied
2.53337	Neutral	36.6	46.0	9.4	Complied
3.90483	Neutral	36.4	46.0	9.6	Complied
4.85834	Neutral	37.0	46.0	9.0	Complied
9.06404	Neutral	37.4	50.0	12.6	Complied
11.69136	Neutral	31.6	50.0	18.4	Complied
23.59346	Neutral	29.8	50.0	20.2	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: 240 VAC 60 Hz



Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

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