

FCC and ISED Test Report

Paxton Access Ltd

Paxlock Pro 2 – Latch Eclipse, Model: 900-725

Paxlock Pro 2 – Mortice Eclipse, Model: 900-735



In accordance with FCC 47 CFR Part 15C and
ISED RSS-247 and ISED RSS-GEN
Technology: (2.4 GHz Zigbee)

Prepared for: Paxton Access Ltd
Paxton House Home Farm Road Brighton
BN1 9HU

FCC ID: USE-900710

IC ID: 10217A-900710

COMMERCIAL-IN-CONFIDENCE

Document 75966453-03 Issue 05

SIGNATURE			
NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Steve Marshall	Senior Engineer	Authorised Signatory	25 August 2026
Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD document control rules.			
RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Mohiuddin Mohammed	25 August 2026	
	Ahmad Javid	25 August 2026	
	Wenceslao Acosta Carrazco	25 August 2026	

FCC Accreditation: 492497/UK2010 Octagon House, Fareham Test Laboratory

ISED Accreditation: 12669A/UK0003 Octagon House, Fareham Test Laboratory

EXECUTIVE SUMMARY / ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on the test pages A sample of this product was tested to demonstrate limited compliance with FCC 47 CFR Part 15C Issue 4 (2025-07), ISED RSS-247 Issue 5 (2018-04) + A2 (2021-02) and ISED RSS-GEN: 2024, and for the tests detailed in section 1.3. The sample tested was found to comply with the requirements defined in the applied rules.

DISCLAIMER AND COPYRIGHT	
	This non-binding report has been prepared by TÜV SÜD with all reasonable skill and care. The document is confidential to the potential Client and TÜV SÜD. No part of this document may be reproduced without the prior written approval of TÜV SÜD. © 2026 TÜV SÜD. This report relates only to the actual item/items tested.
	ACCREDITATION Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation. Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited). Results of tests covered by our Flexible UKAS Accreditation Schedule are marked FS (Flexible Scope).

TÜV SÜD
is a trading name of TÜV SÜD Ltd
Registered in Scotland at East Kilbride,
Glasgow G75 0QF, United Kingdom
Registered number: SC215164

TÜV SÜD Ltd is a
TÜV SÜD Group Company

Phone: +44 (0) 1489 558100
Fax: +44 (0) 1489 558101
www.tuvsud.com/en

TÜV SÜD
Octagon House
Concorde Way
Fareham
Hampshire
PO15 5RL
United Kingdom



Contents

1	Report Summary	2
1.1	Report Modification Record	2
1.2	Introduction	2
1.3	Brief Summary of Results	4
1.4	Customer Supplied Form	5
1.5	Manufacturer Declared Variants	9
1.6	Product Information	10
1.7	Deviations from the Standard	10
1.8	EUT Modification Record	10
1.9	Test Location	11
2	Test Details	12
2.1	Restricted Band Edges	12
2.2	Authorised Band Edges	17
2.3	Spurious Radiated Emissions	21
2.4	Emission Bandwidth	32
2.5	Maximum Conducted Output Power	36
2.6	Power Spectral Density	40
3	Photographs	43
4	Measurement Uncertainty	46



1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
01	First version	26-Jun-2026
02	Correction of mW values in Table 26	03-Jul-2026
03	Correction of kHz in Table 24	06-Aug-2026
04	Updated Introduction (1.2) in Report Summary	07-Aug-2026
05	Updated FCC ID to USE-900710	25-Aug-2026

Table 1

1.2 Introduction

Applicant	Paxton Access Ltd
Manufacturer	Paxton Access Ltd
Product Marketing Name (PMN) or Host Marketing Name (HMN)	900-725 900-735
Hardware Version Identification Number (HVIN)	900-725 900-735
Serial Number(s)	9128172AQ 9128133ND
Hardware Version(s)	z-lm02 & z-lmb1 – ppc-lm02 & ppc-lmb1
Firmware Version Identification Number (FVIN)	3.45
Number of Samples Tested	2
Test Specification/Issue/Date	FCC 47 CFR Part 15C, ISED RSS-247 and ISED RSS- GEN: 2024, Issue 4 (2025-07), Issue 5 (2018-04) + A2 (2021-02)
Order Number	237192
Date	21-November-2025
Date of Receipt of EUT	13-May-2026
Start of Test	15-May-2026



Finish of Test	19-May-2026
Name of Engineer(s)	Mohiuddin Mohammed, Ahmad Javid and Wenceslao Acosta Carrazco
Related Document(s)	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024 FCC KDB 996369 D04 V02



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15C and ISSED RSS-247 and ISSED RSS-GEN is shown below.

Section	Specification Clause			Test Description	Result	Comments/Base Standard
	Part 15C	RSS-247	RSS-GEN			
Configuration and Mode: IEEE 802.15.4 (ZIGBEE).						
2.1	15.205	2.4	8.10	Restricted Band Edges	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.2	15.247 (a)(2)	6.3.1	6.7	Emission Bandwidth	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.3	15.247 (b)	6.3.2	6.12	Maximum Conducted Output Power	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.4	15.247 (d),	6.6	-	Authorised Band Edges	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.5	15.247 (d) and 15.209	2.4 & 6.6	6.13 & 8.9	Spurious Radiated Emissions	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.6	15.247 (e),	6.3.1	6.12	Power Spectral Density	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
	15.203	-	-	Antenna	N/T	The device complies with the provisions of this section as it uses an integral antenna

Table 2



1.4 Customer Supplied Form

Equipment Description

Technical Description: <i>(Please provide a brief description of the intended use of the equipment including the technologies the product supports)</i>		The Paxlock is the battery powered smart electronic lock providing both access control and reader functions. The unit combines a 125kHz and 13.56 MHz proximity reader, a wireless bluetooth & Zigbee interface both 2.4GHz and a locking mechanism. PaxLock is a complete standalone system, there's nothing to wire together and no mains connection is required. The unit is powered by four replaceable AA batteries. The purpose of the equipment is to receive validated user input via a radio signal from a passive proximity token (card or keyfob) and then provide a digital output to the internal locking mechanism for access control. An event of this process is then transmitted to the PC through the wireless interface and stored as an archive. User's access rights are configured at the PC and the PaxLock unit is then updated as required using the same wireless method.	
Manufacturer:		Paxton Access Limited	
Product Marketing Name (PMN) or Host Marketing Name (HMN): (If Applicable; HMN is applicable for devices integrating pre-approved modules, otherwise use PMN)		900-725 900-735	
Hardware Version Identification Number (HVIN): (Formally Model Number)		900-725 900-735	
Hardware Version		z-lm02 & z-lmb1 – ppc-lm02 & ppc-lmb1	
Firmware Version Identification Number (FVIN)		3.45	
Manufacturer Declared Variants		900-710 PaxLock Pro 2 – Latch (2-3/8" backset) Galaxy	
		900-715 PaxLock Pro 2 – Latch (2-3/8 backset) Eclipse	
		900-720 PaxLock Pro 2 - Latch (2-3/4" backset) Galaxy	
		900-730 PaxLock Pro 2 - Mortice Galaxy	
For definitions of the above terms refer to RSS-GEN Section 9.			
Radio Module used for BLE and Zigbee		Silicon Labs EFR32MG13P.	
FCC ID of the product under test – see guidance here		Contains QOQMGM13P	
IC ID of the product under test – see guidance here		Contains 5123A-MGM13P	
Device Category	Mobile ☐	Portable ☐	Fixed ☒
Equipment is fitted with an Audio Low Pass Filter		Yes ☐	No ☒

Table 3

Intentional Radiators

Technology	BLE 2.4GHz	Zigbee IEEE 802.15.4	RFID 13.56MHz	RFID 125kHz		
Frequency Range (MHz to MHz)	2.4 GHz (2400 MHz)	2.4 GHz (2400 MHz)	13.56MHz	0.125MHz		
Conducted Declared Output Power (dBm)	10dBm	10dBm				
Antenna Gain (dBi)	-4 dBi	-4 dBi				
Supported Bandwidth(s) (MHz) (e.g. 1 MHz, 20 MHz, 40 MHz)	40 channels of 2MHz total 80MHz bandwidth	16 Channels 11-26 5MHz each channel				
Modulation Scheme(s) (e.g. GFSK, QPSK etc)	BT LE	802.15.4	RFID	RFID		
ITU Emission Designator (see guidance here) (not mandatory for Part 15 devices)	1M00F1D	2M45G1D	5K33K1D	5K33K1D		
Bottom Frequency (MHz)	2402 MHz	2405 MHz				
Middle Frequency (MHz)	2440 MHz	2440 MHz	13.56MHz	0.125MHz		
Top Frequency (MHz)	2480 MHz	2475 MHz				

Table 4

Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	The highest clock frequency that we generate is 38.4 Mhz **Note that the radio circuitry has a 2.4GHz oscillator in it
Lowest frequency generated or used in the device or on which the device operates or tunes	125KHz
Class A Digital Device (Use in commercial, industrial or business environment) ☐	
Class B Digital Device (Use in residential environment only) ☒	

Table 5

AC Power Source

AC supply frequency:		Hz
Voltage		V
Max current:		A
Single Phase ☐ Three Phase ☐		

Table 6

DC Power Source

Nominal voltage:		V
Extreme upper voltage:		V
Extreme lower voltage:		V
Max current:		A

Table 7

Battery Power Source

Voltage:	6	V
End-point voltage:	4.5	V (Point at which the battery will terminate)
Alkaline ☒ Leclanche ☐ Lithium ☐ Nickel Cadmium ☐ Lead Acid* ☐ *(Vehicle regulated)		
Other ☐	Please detail:	

Table 8

Charging

Can the EUT transmit whilst being charged	Yes ☐ No ☒
---	---

Table 9

Temperature

Minimum temperature:	-20°	°C
Maximum temperature:	+55°	°C

Table 10

Cable Loss

Adapter Cable Loss (Conducted sample)	0.5	dB
--	-----	----

Table 11



Antenna Characteristics

Antenna connector ☐			State impedance		Ohm
Temporary antenna connector ☐			State impedance		Ohm
Integral antenna ☒	Type:	Chip Antenna WE-MCA	Gain	-4	dBi
External antenna ☐	Type:		Gain		dBi

For external antenna only:
 Standard Antenna Jack ☐ If yes, describe how user is prohibited from changing antenna (if not professional installed):
 Equipment is only ever professionally installed ☐
 Non-standard Antenna Jack ☐
 All part 15 applications will need to show how the antenna gain was derived either from a manufacturer data sheet or a measurement. Where the gain of the antenna is inherently accounted for as a result of the measurement, such as field strength measurements on a part 15.249 or 15.231 device, so the gain does not necessarily need to be verified. However, enough information regarding the construction of the antenna shall be provided. Such information maybe photographs, length of wire antenna etc.

Table 12

Ancillaries (if applicable)

Manufacturer:		Part Number:	
Model:		Country of Origin:	

Table 13

I hereby declare that the information supplied is correct and complete.

Name: Kevin Feeney
 Position held: Compliance Engineer
 Date: 23.04.2026

1.5 Manufacturer Declared Variants

All the variants have identically the same electrical & electronic design, housed within all the products. The only variations between them, as will be explained below, is the handle shape and length of deadlatch. These minor changes will have no effect on Radio or EMC performance.

There are two main variants of the “**Paxlock Pro 2**” the “**Paxlock Pro 2 Latch**” and “**Paxlock Pro 2 Mortice**”.

The latch uses a Cylindrical Cartridge with a 60mm or 70mm backset deadlatch. The Mortice variant encompasses a Morice lock with a mortice key cylinder.

With each of the two variants we produce the products with two types of handle version, the “SQUARE” and “ROUNDED”, these are called **Galaxy** and **Eclipse**. So, we have two variants of each of the Latch and Mortice handles.

We also produce two backset lengths of the “Paxlock pro 2 Latch” as described earlier, the 60mm and 70mm. Hence, therefore we have four sales codes for the “Paxlock pro 2 Latch” as we have two backset’s and the two handle types.

The mortice has only the one lock type with the two handles variants, hence the “Paxlock pro 2 Mortice” has two sales codes.

The sales codes for the various variants are shown below.

SALES CODES	Description
900-710	Paxlock Pro 2 - Latch (2-3/8” backset) Galaxy
900-715	Paxlock Pro 2 - Latch (2-3/8” backset) Eclipse
900-720	Paxlock Pro 2 - Latch (2-3/4” backset) Galaxy
900-725	Paxlock Pro 2 - Latch (2-3/4” backset) Eclipse
900-730	Paxlock Pro 2 - Mortice Galaxy
900-735	Paxlock Pro 2 - Mortice Eclipse

All the variants have exactly the same design of electronics housed within all the products, the only variations between them, as has been explained above, is the handle type and length of deadlatch, which has no effect on EMC or Radio testing.



1.6 Product Information

1.6.1 Technical Description

The Paxlock is the battery powered smart electronic lock providing both access control and reader functions. The unit combines a 125kHz and 13.56 MHz proximity reader, a wireless bluetooth & Zigbee interface both 2.4GHz and a locking mechanism.

PaxLock is a complete standalone system, there's nothing to wire together and no mains connection is required. The unit is powered by four replaceable AA batteries.

The purpose of the equipment is to receive validated user input via a radio signal from a passive proximity token (card or keyfob) and then provide a digital output to the internal locking mechanism for access control. An event of this process is then transmitted to the PC through the wireless interface and stored as an archive. User's access rights are configured at the PC and the PaxLock unit is then updated as required using the same wireless method.

1.7 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.8 EUT Modification Record

The table below details modifications made to the EUT during the test programme.

The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Paxlock Pro 2 Latch (2-3/4" backset) Eclipse, Model: 900-725, Serial Number: 9128172AQ			
0	As supplied by the customer	Not Applicable	Not Applicable
Paxlock Pro 2 Mortice Eclipse, Model: 900-735, Serial Number: 9128133ND			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 14



1.9 Test Location

TÜV SÜD conducted the following tests at our Octagon House Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: IEEE 802.15.4 (Zigbee)		
Restricted Band Edges	Mohiuddin Mohammed	UKAS
Authorised Band Edges	Mohiuddin Mohammed	UKAS
Spurious Radiated Emissions	Ahmad Javid	UKAS
Emission Bandwidth	Wenceslao Acosta Carrazco	UKAS
Maximum Conducted Output Power	Wenceslao Acosta Carrazco	UKAS
Power Spectral Density	Wenceslao Acosta Carrazco	UKAS

Table 15

Laboratory Address: TÜV SÜD, Octagon House,
Concorde Way, Fareham, Hampshire,
PO15 5RL, United Kingdom

2 Test Details

2.1 Restricted Band Edges

2.1.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.205
ISED RSS-247, 2.4
ISED RSS-GEN, 8.10

2.1.2 Equipment Under Test and Modification State

900-735, S/N: 9128133ND - Modification State 0

2.1.3 Date of Test

18-May-2026

2.1.4 Test Method

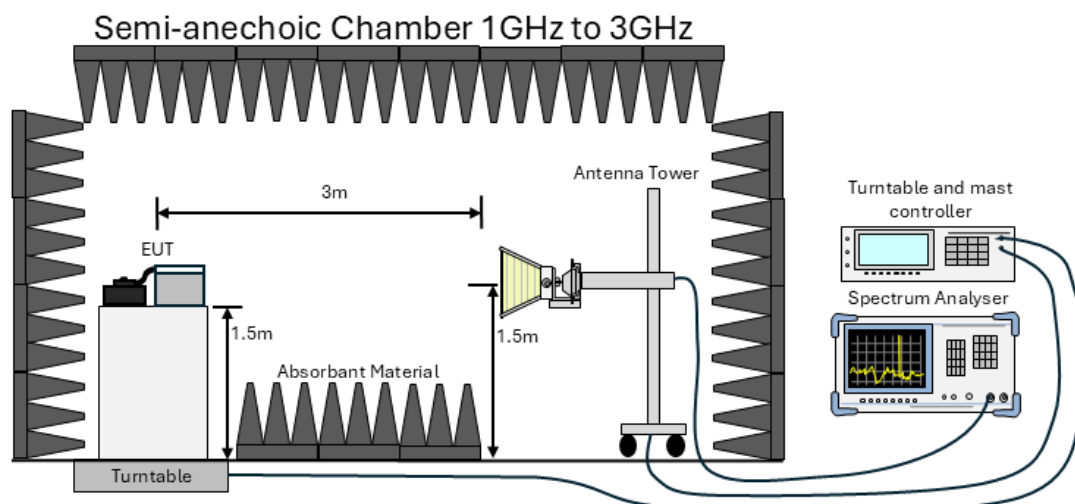
This test was performed in accordance with ANSI C63.10, clause 6.10.5 and 11.12.1.

Plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2.

The following conversion can be applied to convert from dB μ V/m to μ V/m:
 $10^{(\text{Field Strength in dB}\mu\text{V/m}/20)}$.

EUT was powered with 4 AA (1.5V) batteries for the duration of the measurement.

2.1.5 Set Up Diagram



2.1.6 Environmental Conditions

Ambient Temperature	20.9 °C
Relative Humidity	39.7 %



2.1.7 Test Results

IEEE 802.15.4 (Zigbee)

Mode	Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBμV/m)
ZIGBEE (802.15.4)	2405	2390	52.34	40.86
ZIGBEE (802.15.4)	2475	2483.5	51.61	41.38

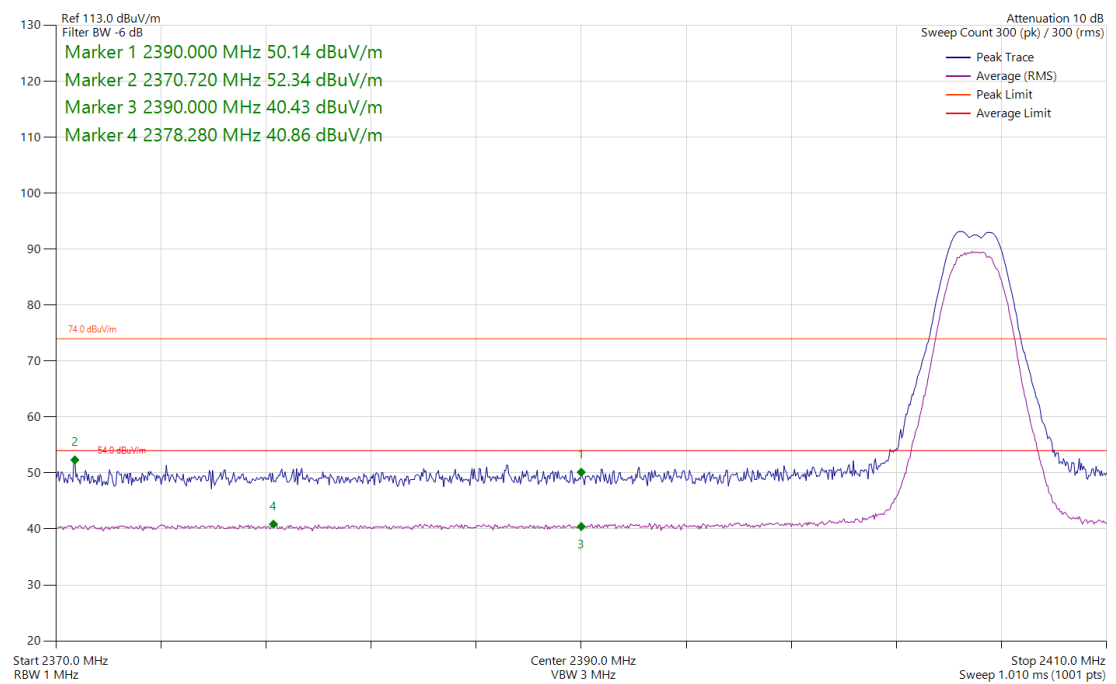


Figure 1 -Zigbee 2405 MHz, Band Edge Frequency 2390 MHz

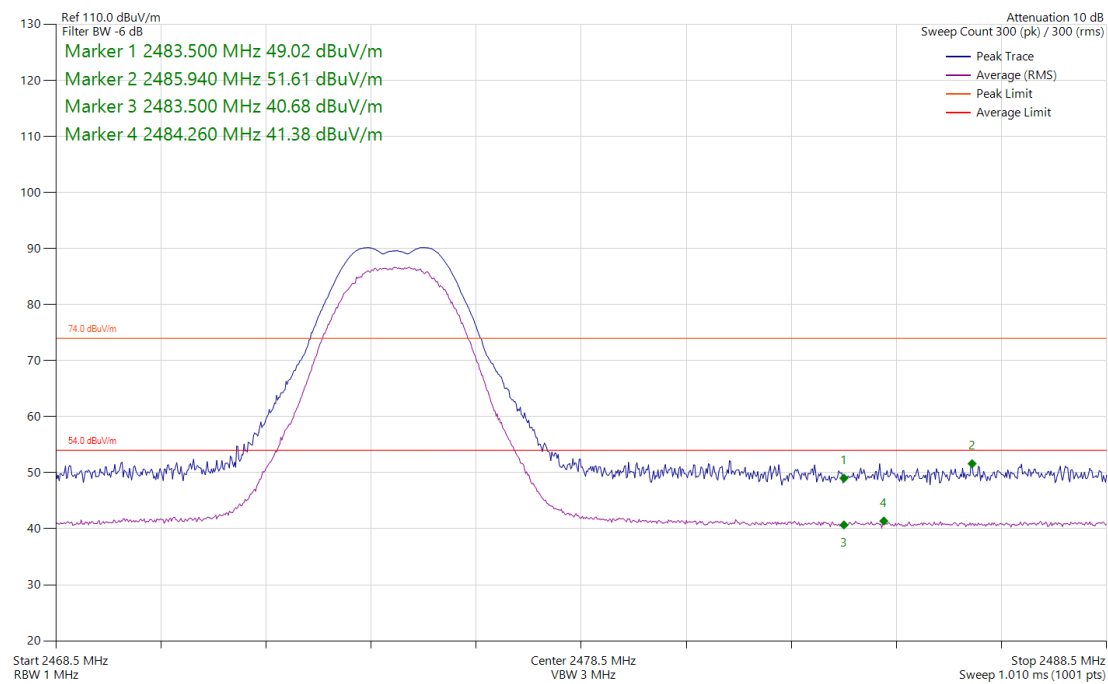


Figure 2 -Zigbee 2475 MHz, Band Edge Frequency 2483.5 MHz

FCC 47 CFR Part 15, Limit Clause 15.209

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$ at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 16

ISED RSS-GEN, Limit Clause 8.9

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$ at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960*	500

Table 17

*Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for licence-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.



2.1.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
3m Semi-Anechoic Chamber	Rainford	RF Chamber 11	5136	36	14-Nov-2027
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	5215	12	05-Jul-2026
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5476	12	05-Feb-2027
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/B	6926	12	09-Dec-2026
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7049	12	01-Jun-2026
Test Receiver	Rohde & Schwarz	ESW44	5527	12	14-Aug-2026

Table 18

TU - Traceability Unscheduled

2.2 Authorised Band Edges

2.2.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d)
ISED RSS-247 Clause 6.6.
ISED RSS-GEN, N/A

2.2.2 Equipment Under Test and Modification State

S/N: 9128172AQ - Modification State 0

2.2.3 Date of Test

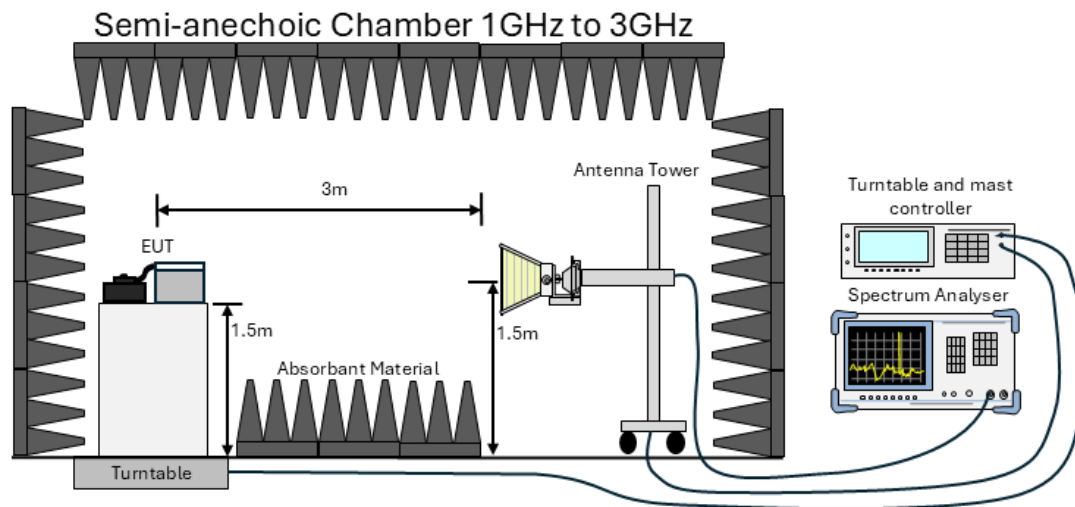
18-May-2026

2.2.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.10.4.

EUT was powered with 4 AA (1.5V) batteries for the duration of the measurement.

2.2.5 Set Up Diagram



2.2.6 Environmental Conditions

Ambient Temperature	20.9 °C
Relative Humidity	39.7 %



2.2.7 Test Results

IEEE 802.15.4 (Zigbee)

Mode	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
ZIGBEE	2405	2405	-45.94

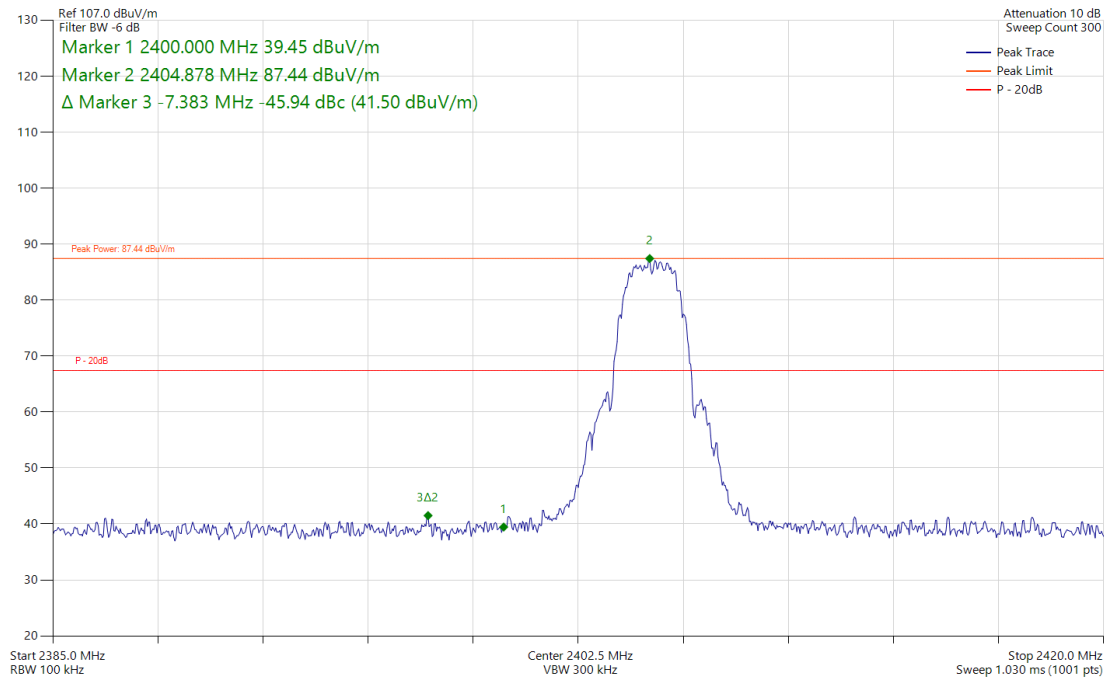


Figure 3 - Zigbee 2405 MHz, Authorized Band Edge Frequency 2390 MHz



FCC 47 CFR Part 15, Limit Clause 15.247 (d)

20 dB below the fundamental measured in a 100 kHz bandwidth using a peak detector. If the transmitter complies with the conducted power limits, based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB below the fundamental instead of 20 dB.

ISED RSS-247, Limit Clause 6.6

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.



2.2.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Test Receiver	Rohde & Schwarz	ESW44	5527	12	14-Aug-2026
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
3m Semi-Anechoic Chamber	Rainford	RF Chamber 11	5136	36	14-Nov-2027
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	5215	12	05-Jul-2026
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5476	12	05-Feb-2027
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/B	6926	12	09-Dec-2026

Table 19

TU - Traceability Unscheduled

2.3 Spurious Radiated Emissions

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d) and 15.209
ISED RSS-247, 2.4 and 6.6
ISED RSS-GEN, 6.13 and 8.9

2.3.2 Equipment Under Test and Modification State

900-735, S/N: 9128133ND - Modification State 0

2.3.3 Date of Test

18-May-2026 to 19-May-2026

2.3.4 Test Method

Ports on the EUT were terminated with loads as described in ANSI C63.4 clause 6.2.4. For EUT's with multiple connectors of the same type, additional interconnecting cables were connected, and pre-scans performed to determine whether the level of the emissions were increased by >2 dB.

The plots shown are the characterisation of the EUT. The limits on the plots represent the most stringent case for restricted bands, (74/54 dBuV/m) when compared to 20 dBc outside restricted bands. The limits shown have been used as a threshold to determine where further measurements are necessary. Where results are within 10 dB of the limits shown on the plots, further investigation was carried out and reported in results tables.

The following conversion can be applied to convert from dBμV/m to μV/m:
 $10^{(\text{Field Strength in dB}\mu\text{V/m}/20)}$.

At a measurement distance of 1 meter the limit line was increased by $20 \cdot \text{LOG}(3/1) = 9.54$ dB.

EUT was powered with four AA (1.5V) batteries for the duration of the measurement.

2.3.5 Example Test Setup Diagram

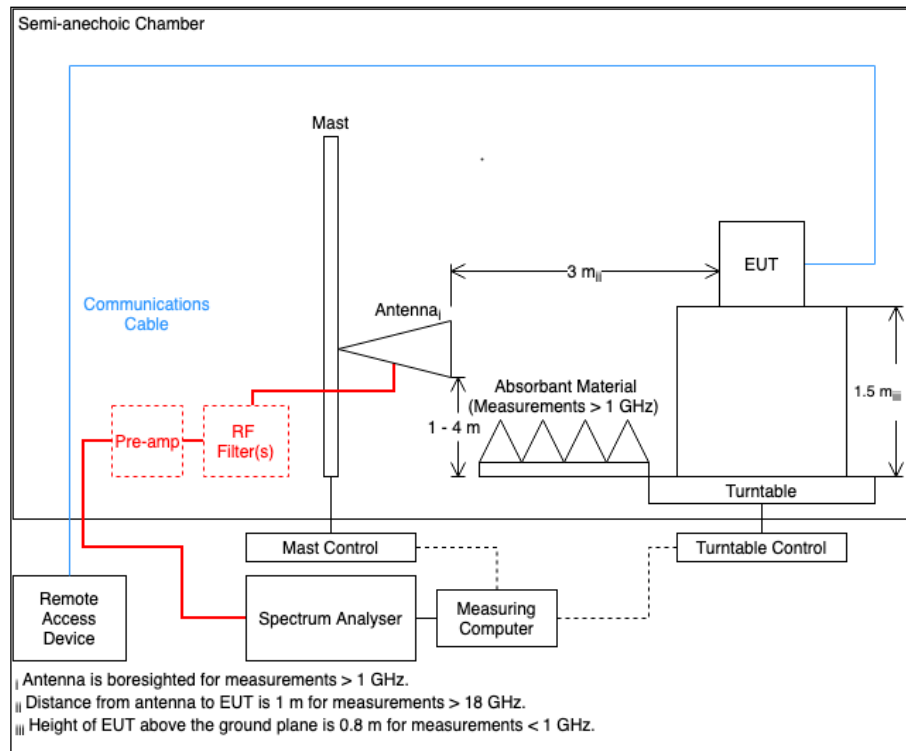


Figure 4

2.3.6 Environmental Conditions

Ambient Temperature	20.9 - 23.2 °C
Relative Humidity	34.0 - 39.7 %



2.3.7 Test Results

IEEE 802.15.4 (Zigbee)

Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
*								

Table 20 - Bottom Channel_802.15.4, 2405 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

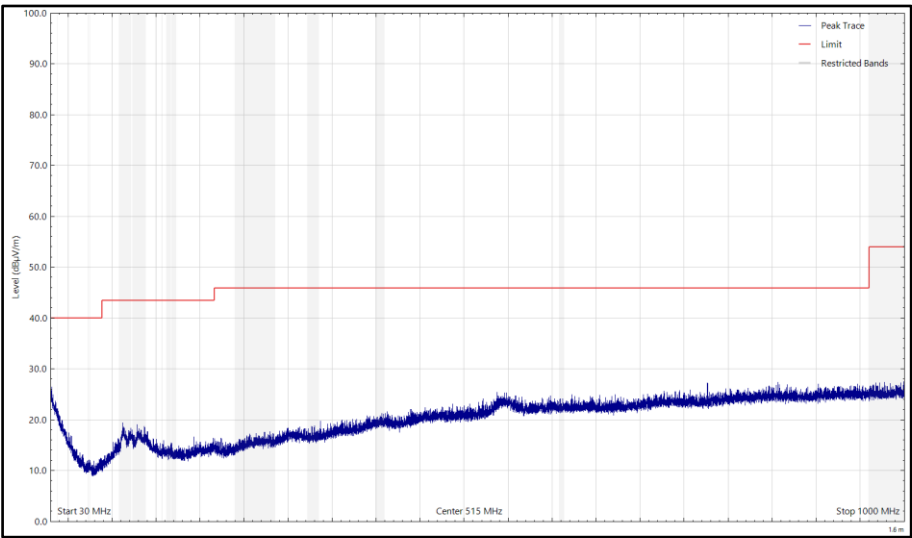


Figure 5 - Bottom Channel_802.15.4, 2405 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

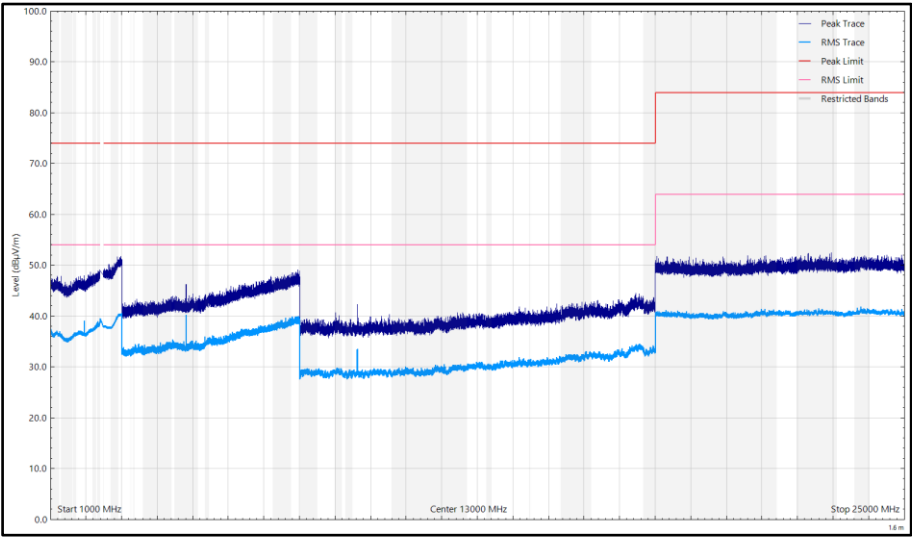


Figure 6 - Bottom Channel_802.15.4, 2405 MHz, 1 GHz to 25 GHz, Horizontal

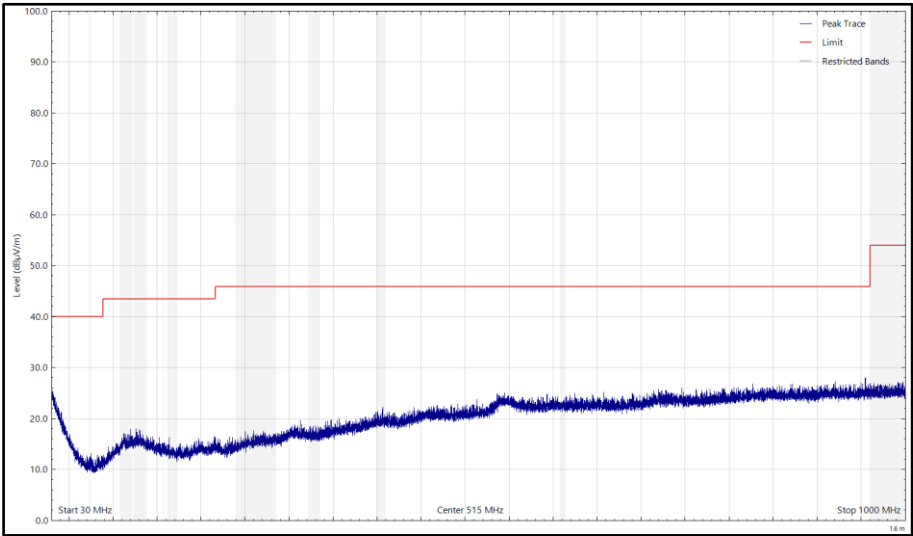


Figure 7 - Bottom Channel_802.15.4, 2405 MHz, 30 MHz to 1 GHz, Vertical (Peak)

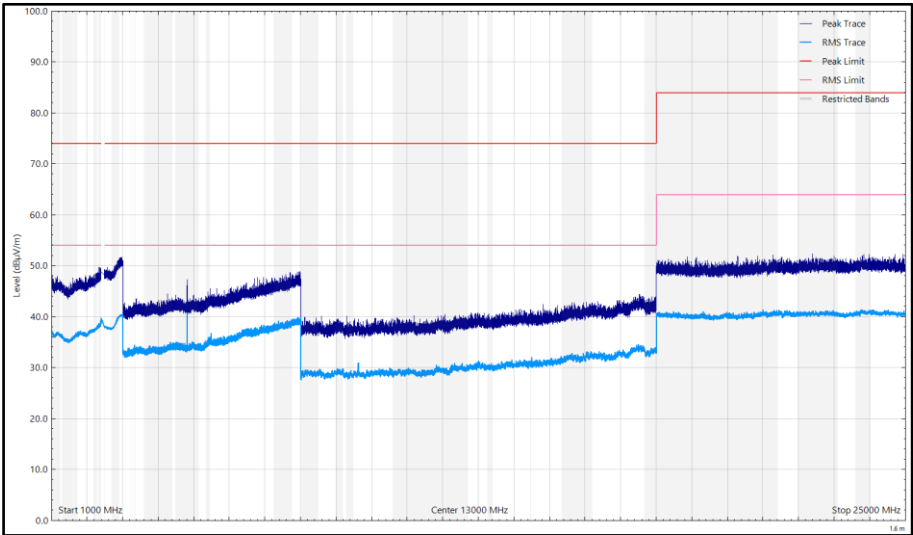


Figure 8 - Bottom Channel_802.15.4, 2405 MHz, 1 GHz to 25 GHz, Vertical



Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
*								

Table 21 - Mid Channel_802.15.4, 2440 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

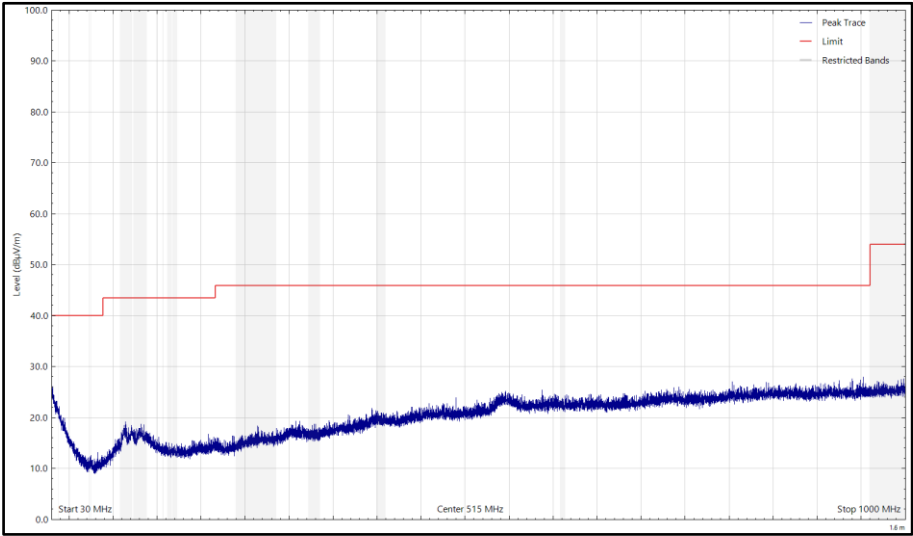


Figure 9 - Mid Channel_802.15.4, 2440 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

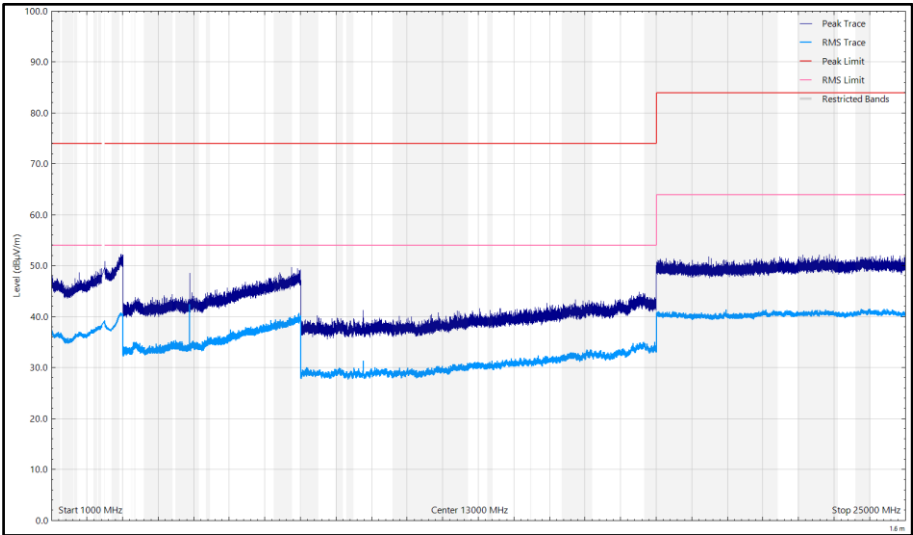


Figure 10 - Mid Channel_802.15.4, 2440 MHz, 1 GHz to 25 GHz, Horizontal

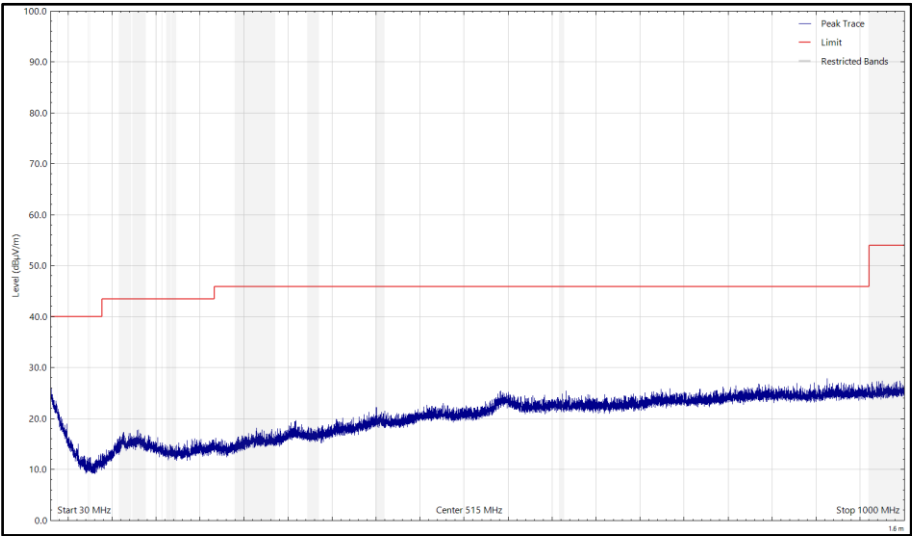


Figure 11 - Mid Channel_802.15.4, 2440 MHz, 30 MHz to 1 GHz, Vertical (Peak)

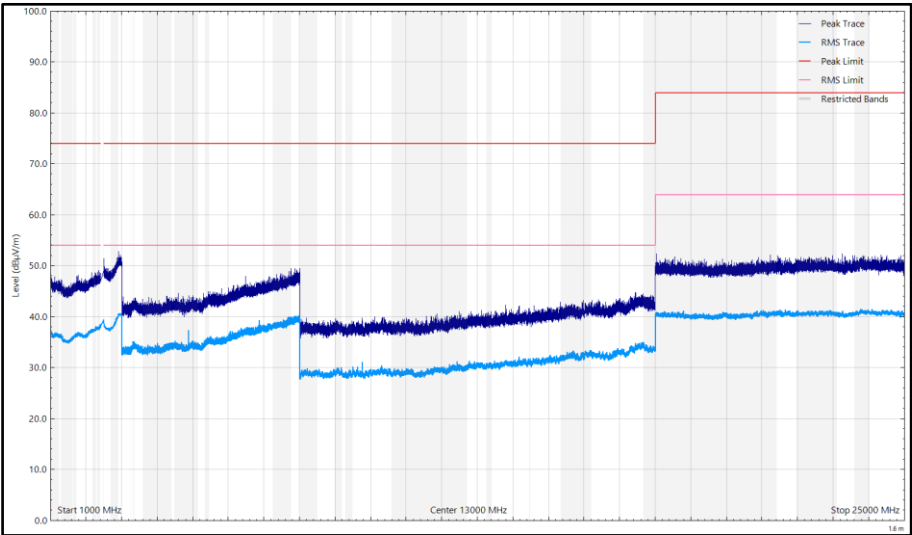


Figure 12 - Mid Channel_802.15.4, 2440 MHz, 1 GHz to 25 GHz, Vertical



Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
*								

Table 22 - Top Channel_802.15.4, 2475 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

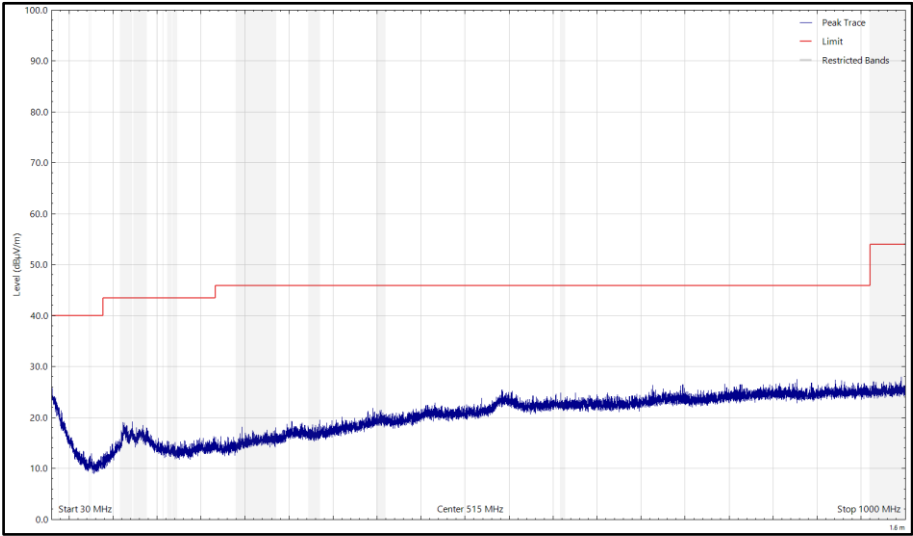


Figure 13 - Top Channel_802.15.4, 2475 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

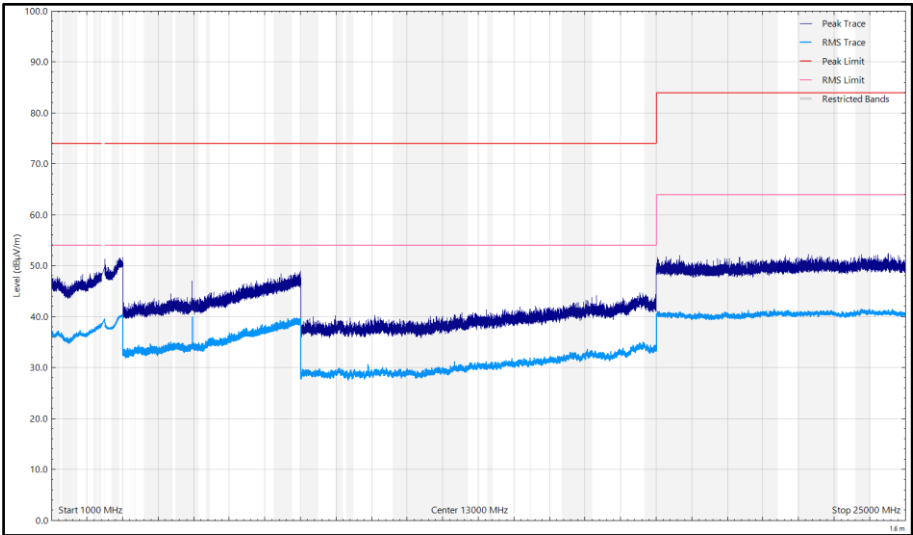


Figure 14 - Top Channel_802.15.4, 2475 MHz, 1 GHz to 25 GHz, Horizontal

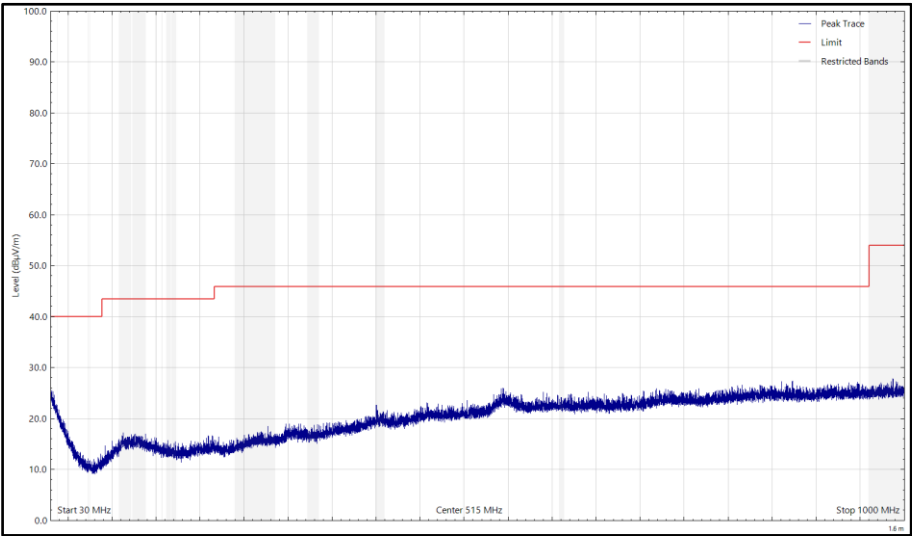


Figure 15 - Top Channel_802.15.4, 2475 MHz, 30 MHz to 1 GHz, Vertical (Peak)

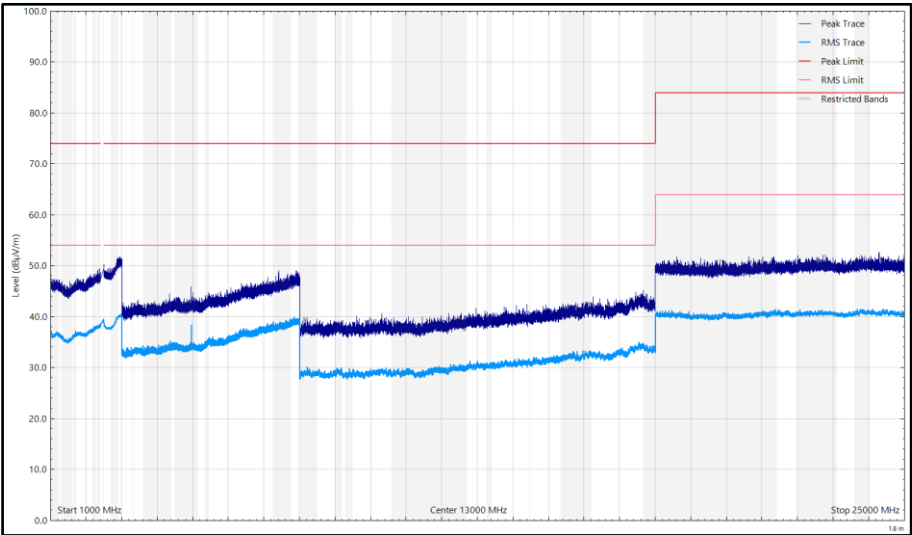


Figure 16 - Top Channel_802.15.4, 2475 MHz, 1 GHz to 25 GHz, Vertical



FCC 47 CFR Part 15, Limit Clause 15.247 (d)

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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in 15.209(a)

ISED RSS-247, Limit Clause 6.6

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

In addition, radiated emissions which fall in the restricted bands, as defined in RSS-GEN, clause 8.10, must also comply with the radiated emission limits specified in RSS-GEN clause 8.9.

2.3.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Antenna (DRG, 18 GHz to 40 GHz)	Link Microtek Ltd	AM180HA-K-TU2	230	24	08-Oct-2026
Antenna (Bilog with attenuator, 30 MHz to 3 GHz)	Schaffner	CBL6143	287	24	29-Aug-2026
Multimeter	Fluke	79 Series III	611	12	04-Feb-2027
Pre-Amplifier (18 GHz to 40 GHz)	Phase One	PSO4-0087	1534	12	20-Oct-2026
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
3m Semi-Anechoic Chamber	Rainford	RF Chamber 11	5136	36	14-Nov-2027
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	5215	12	05-Jul-2026
Antenna (DRG, 7.5 GHz to 18 GHz)	Schwarzbeck	HWRD750	5216	12	12-Jul-2026
3.5 mm 1m Cable	Junkosha	MWX221-01000DMS	5417	12	06-Jun-2026
Pre-Amplifier (1 GHz to 26.5 GHz)	Agilent Technologies	8449B	5445	12	10-Jul-2026
Cable (SMA to SMA, 1 m)	Junkosha	MWX221-01000AMSAMS/A	5515	12	21-Oct-2026
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	14-Aug-2026
3 GHz High pass Filter	Wainwright	WHKX12-2580-3000-18000-80SS	5548	12	31-Aug-2026
7 GHz High pass Filter	Wainwright	WHKX12-5850-6800-18000-80SS	5550	12	30-May-2026
Power Supply	TTI	EX355R	5573	-	TU
Pre-Amplifier (8 GHz to 18 GHz)	Wright Technologies	APS06-0061	5595	12	28-Oct-2026



Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Cable (K-Type to K-Type, 2 m)	Junkosha	MWX241-02000KMSKMS/B	5934	12	12-Jun-2026
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/B	6926	12	09-Dec-2026
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7049	12	01-Jun-2026

Table 23

TU - Traceability Unscheduled
 O/P Mon – Output Monitored using calibrated equipment

2.4 Emission Bandwidth

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (a)(2)
ISED RSS-247 Clause 6.3.1.
ISED RSS-GEN Clause 6.7

2.4.2 Equipment Under Test and Modification State

900-725, S/N: 9128172AQ - Modification State 0

2.4.3 Date of Test

15-May-2026

2.4.4 Test Method

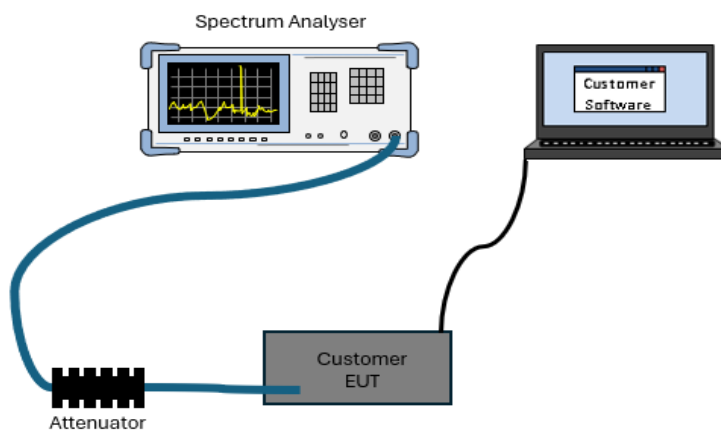
This test was performed in accordance with ANSI C63.10, clause 11.8.1 for 6 dB BW and 6.9.3 for 99% occupied bandwidth measurements.

EUT was powered with 4 AA batteries for the duration of the measurement.

2.4.5 Environmental Conditions

Ambient Temperature	19.9 °C
Relative Humidity	34.9 %

Test Set Up Diagram





2.4.6 Test Results

IEEE 802.15.4 (Zigbee)

Frequency (MHz)	99 % Occupied Bandwidth (kHz)	6 dB Bandwidth (kHz)
2405	2265.4	1701.0
2440	2261.6	1695.0
2475	2268.5	1692.0

Table 24

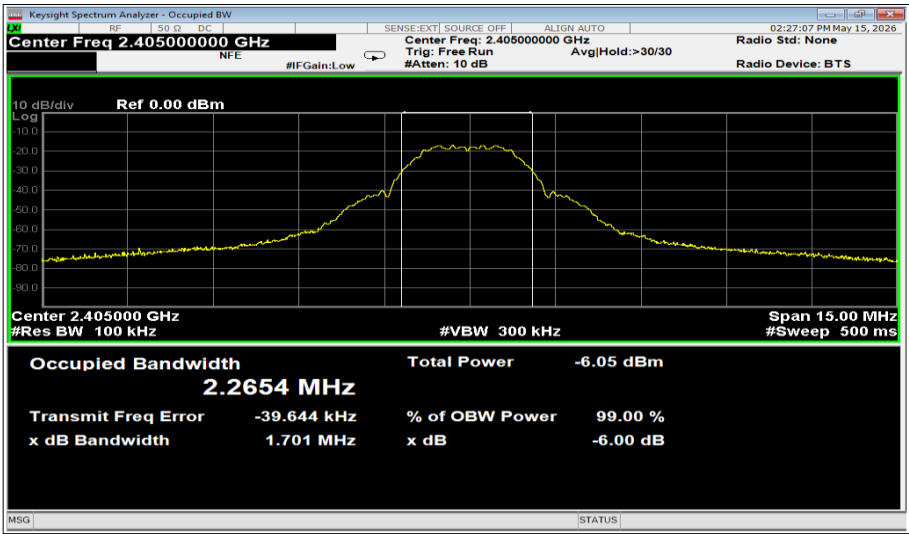


Figure 17 - 2405 MHz

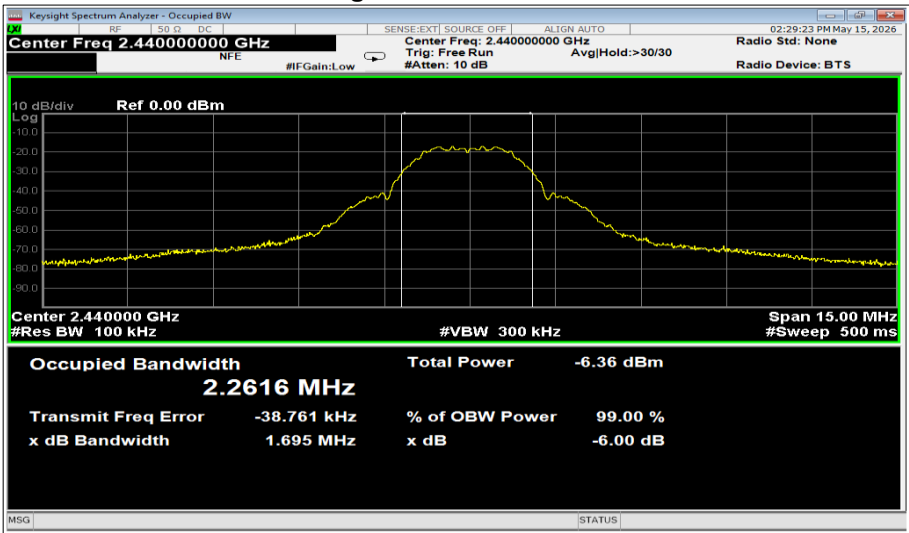


Figure 18 - 2440 MHz

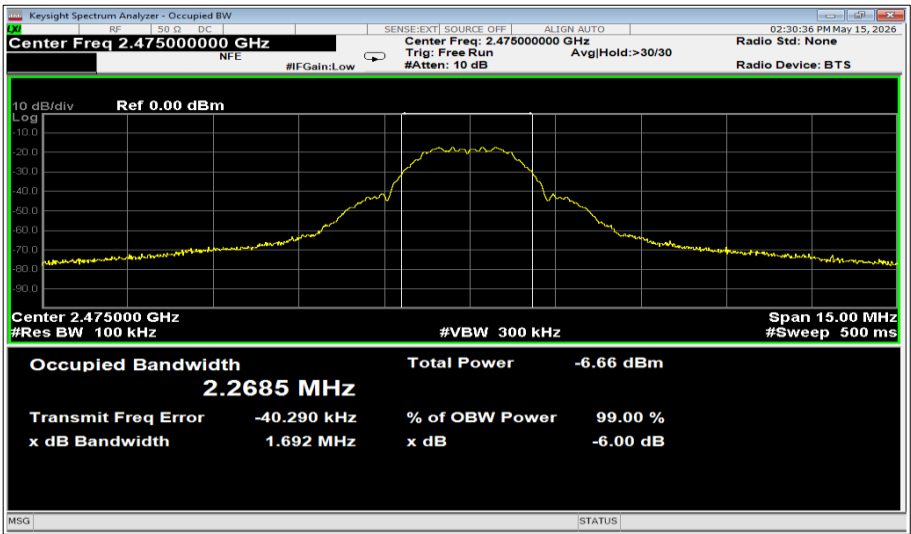


Figure 19 - 2475 MHz



FCC 47 CFR Part 15, Limit Clause 15.247(a)(2) and ISED RSS-247, Clause 6.3.1(a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

2.4.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Hygrometer	Rotronic	I-1000	2891	12	23-Dec-2026
GPSDR Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	17-Sep-2026
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	06-Mar-2027
Attenuator 5W 20dB DC-18GHz	Aaren	AT40A-4041-D18-20	5499	12	28-Oct-2026
1m Coaxial Cable Assy	Junkosha	MWX221-01000AMSAMS/A	6377	12	06-Sep-2026

Table 25

2.5 Maximum Conducted Output Power

2.5.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (b)
ISED RSS-247 Clause 6.3.2.
ISED RSS-GEN 6.12.

2.5.2 Equipment Under Test and Modification State

900-725, S/N: 9128172AQ - Modification State 0

2.5.3 Date of Test

15-May-2026

2.5.4 Test Method

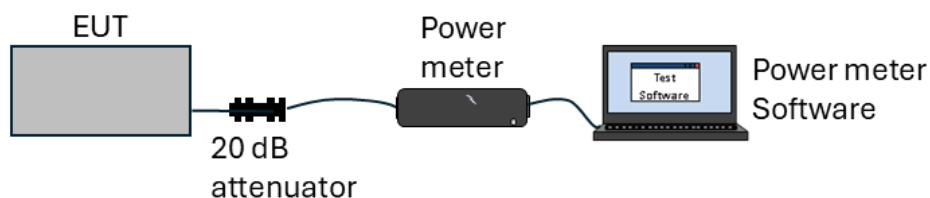
The test was performed in accordance with ANSI C63.10 clause 11.9.1.2 Method PKPM1.

EUT was powered with 4 AA batteries for the duration of the measurement.

2.5.5 Environmental Conditions

Ambient Temperature	19.9 °C
Relative Humidity	34.9 %

2.5.6 Test Set Up Diagram



2.5.7 Test Results

IEEE 802.15.4 (Zigbee)

Frequency (MHz)	Maximum Output Power	
	dBm	mW
2405	7.896	6.160
2440	7.592	5.744
2475	7.350	5.433

Table 26



FCC 47 CFR Part 15, Limit Clause 15.247 (b)(3)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

ISED RSS-247, Limit Clause 6.3.2

For DTS operating in the band 902-928 MHz, the maximum peak conducted output power shall not exceed 1W, and the e.i.r.p. shall not exceed 4 W.

For DTS operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W, and the e.i.r.p. shall not exceed 4 W, except as provided in RSS-247 section 6.5 a) and b).

As an alternative to a peak power measurement, compliance can be based on a measurement of the maximum conducted output power.



2.5.8 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Hygrometer	Rotronic	I-1000	2891	12	23-Dec-2026
Vector Signal Generator	Rohde & Schwarz	SMBV100A	4886	36	30-Nov-2026
Attenuator 5W 20dB DC-18GHz	Aaren	AT40A-4041-D18-20	5499	12	28-Oct-2026
USB Power Sensor	Boonton	RTP5008	5831	12	05-Feb-2027
1m Coaxial Cable Assy	Junkosha	MWX221-01000AMSAMS/A	6377	12	06-Sep-2026

Table 27

2.6 Power Spectral Density

2.6.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (e)
ISED RSS-247 Clause 6.3.1
ISED RSS-GEN Clause 6.12

2.6.2 Equipment Under Test and Modification State

900-725, S/N: 9128172AQ - Modification State 0

2.6.3 Date of Test

15-May-2026

2.6.4 Test Method

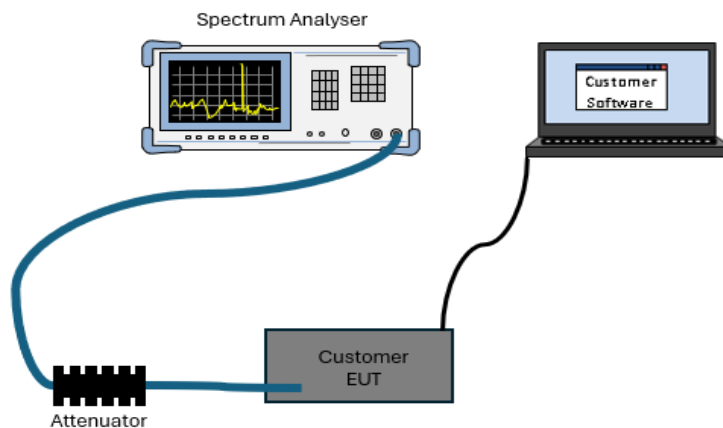
This test was performed in accordance with ANSI C63.10, clause 11.10.2

EUT was powered with 4 AA batteries for the duration of the measurement.

2.6.5 Environmental Conditions

Ambient Temperature	19.9 °C
Relative Humidity	34.9 %

2.6.6 Block Diagram





2.6.7 Test Results

IEEE 802.15.4 (Zigbee)

Frequency (MHz)	Power Spectral Density (dBm)	Measurement Bandwidth (kHz)
2405	3.472	100
2440	3.133	100
2475	2.877	100

Table 28

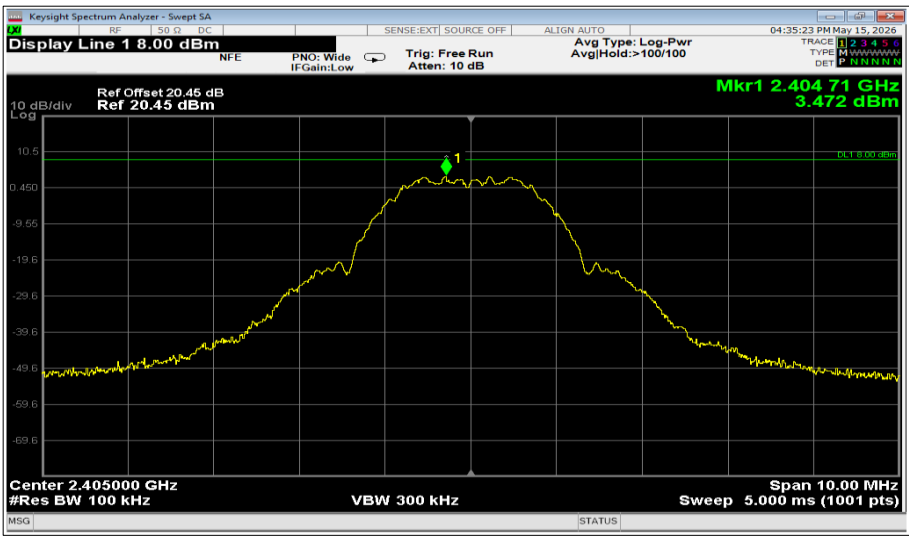


Figure 20 - 2405 MHz

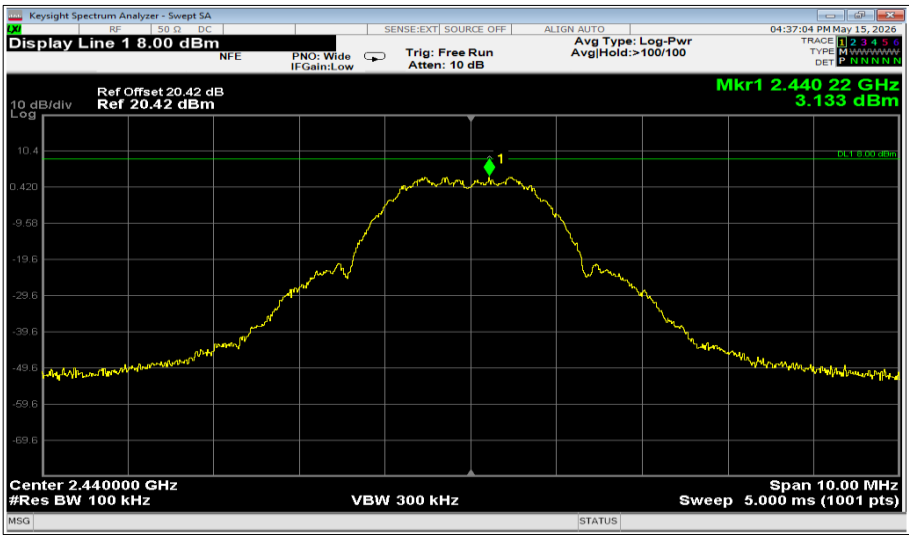


Figure 21 - 2440 MHz

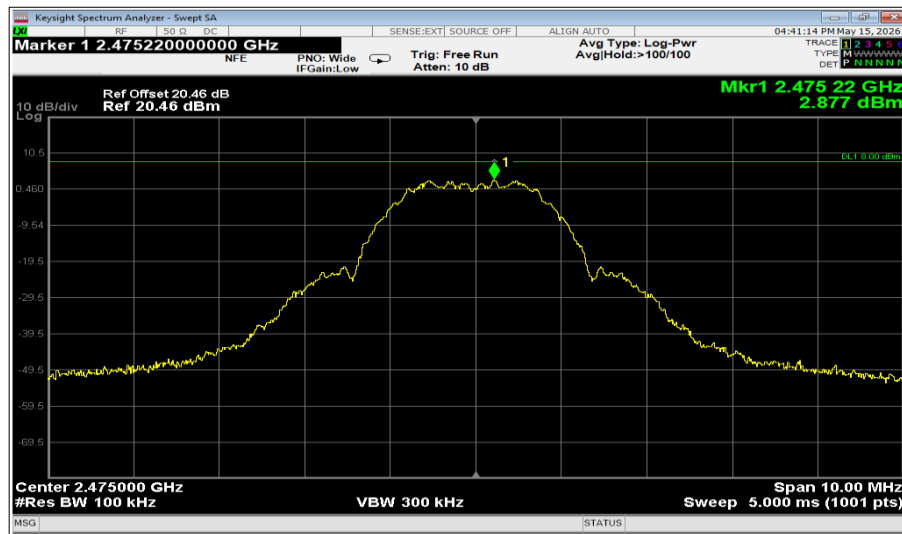


Figure 22 - 2475 MHz

FCC 47 CFR Part 15, Limit Clause 15.247 (e)

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

ISED RSS-247, Limit Clause 6.3.1(b)

The transmitter power spectral density conducted from the transmitter to the antenna(s) shall not be greater than 8 dBm/3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of RSS-247 clause 6.3.2. The power spectral density shall be determined using the same method as is used to determine the maximum conducted output power.

2.6.8 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Hygrometer	Rotronic	I-1000	2891	12	23-Dec-2026
GPSDR Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	17-Sep-2026
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	06-Mar-2027
Vector Signal Generator	Rohde & Schwarz	SMBV100A	4886	36	30-Nov-2026
Attenuator 5W 20dB DC-18GHz	Aaren	AT40A-4041-D18-20	5499	12	28-Oct-2026
1m Coaxial Cable Assy	Junkosha	MWX221-01000AMSAMS/A	6377	12	06-Sep-2026

Table 29

3 Photographs



Figure 23 – Conducted Test Setup

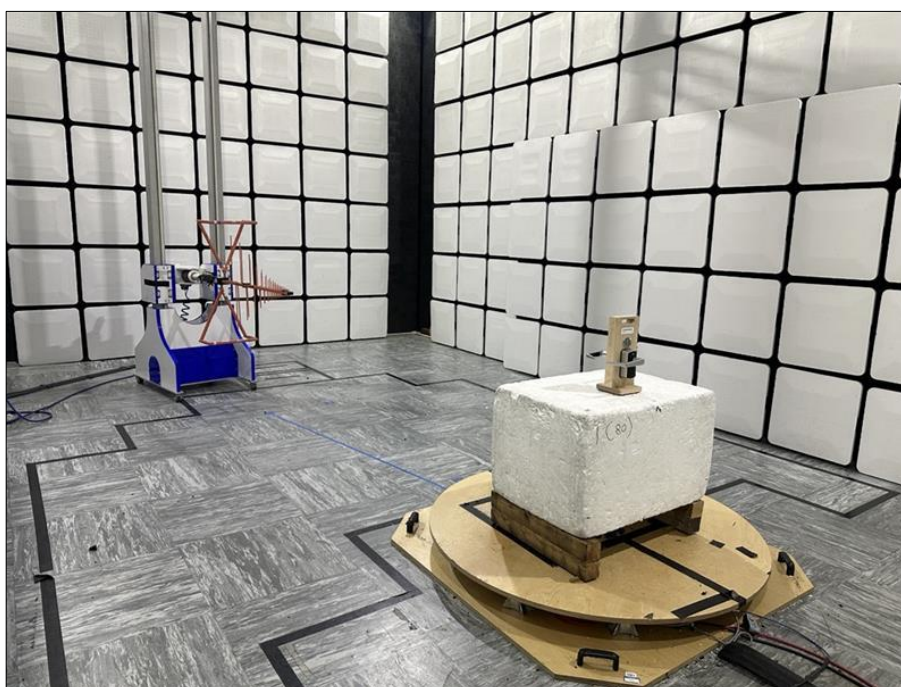


Figure 24 - Test Setup - 30 MHz to 1 GHz

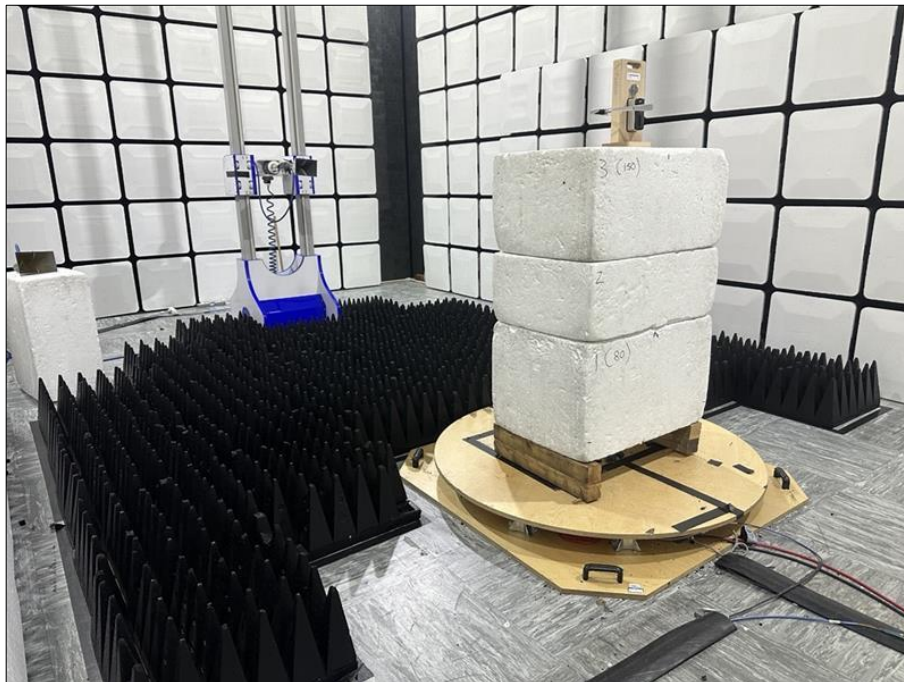


Figure 25 - Test Setup - 1 GHz to 8 GHz

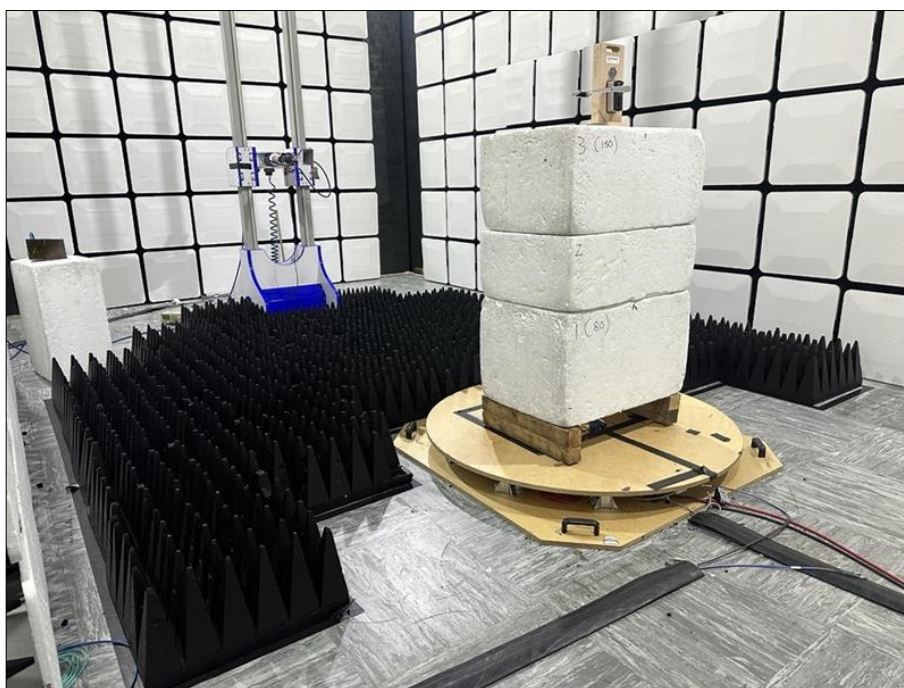


Figure 26 - Test Setup - 8 GHz to 18 GHz



Figure 27 - Test Setup - 18 GHz to 25 GHz

4 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Restricted Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Emission Bandwidth	± 101.41 KHz
Maximum Conducted Output Power	± 0.65 dB
Power Spectral Density	± 1.00 dB

Table 30

Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2023, Clause 4.3.4 (Simple Acceptance). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

Risk: The uncertainty of measurement about the measured result is negligible with regard to the final pass/fail decision. The measurement result can be directly compared with the test limit to determine conformance with the requirement (compare IEC Guide 115). The level of risk to falsely accept and falsely reject items is further described in ILAC-G8.