

FCC and ISED Test Report

Manufacturer: DOMO Tactical Communications (DTC)

Model: BluSDR-30-C

In accordance with FCC 47 CFR Part 15C and ISED RSS-247 and ISED RSS-GEN

Prepared for: DOMO Tactical Communications (DTC)
The Cobham Centre Parkway Fusion 2 Solent
Business Park Fareham PO15 7AB

FCC ID: XRF BLUSDR30198270 IC: 8638A BLU30198270

COMMERCIAL-IN-CONFIDENCE

Document 75964615-02 Issue 02



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RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Wenceslao Acosta Carrazco	22 April 2026	
Testing	Thomas Biddlecombe	22 April 2026	
Testing	Ahmad Javid	22 April 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: 2024, ISED RSS-247: Issue 3 (2023-08) and ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02) for the tests detailed in section 1.3. The sample tested was found to comply with the requirements defined in the applied rules.

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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	27-Oct-2025
02	Conducted setup diagrams, PMN, HVIN and FVIN added	22-April-2026

Table 1

1.2 Introduction

Applicant	DOMO Tactical Communications (DTC)
Manufacturer	DOMO Tactical Communications (DTC)
Product Marketing Name (PMN)	BluSDR-30-C-198270-C (SOL8SDR2x1W-UC-198270)
Hardware Version Identification Number (HVIN)	SA4678
Serial Number(s)	FR009550
Hardware Version(s)	8
Firmware Version Identification Number (FVIN)	8.4.1
Number of Samples Tested	1
Test Specification/Issue/Date	FCC 47 CFR Part 15C: 2024 ISED RSS-247: Issue 3 (2023-08) ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02)
Order Number	PO-071314-1
Date	13-May-2025
Date of Receipt of EUT	03-March-2025
Start of Test	20-May-2025
Finish of Test	14-August-2025
Name of Engineer(s)	Wenceslao Acosta Carrazco, Thomas Biddlecombe and Ahmad Javid
Related Document(s)	ANSI C63.10 (2020) KDB 662911 D01 v02r01



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
	FCC Part 15C	RSS-247	RSS-GEN			
Configuration and Mode: COFDM Transmitter						
2.1	15.203			Antenna Requirement	N/T	The device complies with the provisions of this section, as it must be professionally installed.
2.2	15.205	3.3	8.10	Restricted Band Edges	Pass	ANSI C63.10 (2020)
2.3	15.247 (a)(2)	5.2	6.7	Emission Bandwidth	Pass	ANSI C63.10 (2020)
2.4	15.247 (b)	5.4	6.12	Maximum Conducted Output Power	Pass	ANSI C63.10 (2020), KDB 662911 D01 v02r01
2.5	15.247 (d)	5.5	N/A	Authorised Band Edges	Pass	ANSI C63.10 (2020)
2.6	15.247 (d) and 15.209	3.3 and 5.5	6.13 and 8.9	Spurious Radiated Emissions	Pass	ANSI C63.10 (2020)
2.7	15.247 (e)	5.2	6.12	Power Spectral Density	Pass	ANSI C63.10 (2020), KDB 662911 D01 v02r01

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>		Small form factor software-defined radio conceived primarily for systems integration into unmanned platforms (including controllers) and into other professional user communications infrastructure.	
Manufacturer:		DOMO Tactical Communications (DTC)	
Product Marketing Name (PMN)		BluSDR-30-C-198270-C (SOL8SDR2x1W-UC-198270)	
Hardware Version Identification Number (HVIN)		SA4678	
Hardware Version:		8	
Firmware Version Identification Number (FVIN)		8.4.1	
FCC ID of the product under test – see guidance here		XRF BLUSDR30198270	
IC ID of the product under test – see guidance here		8638A BLU30198270	
Device Category	Mobile ☒	Portable ☐	Fixed ☐
Equipment is fitted with an Audio Low Pass Filter		Yes ☐	No ☒

Intentional Radiators

Technology				
Frequency Range (MHz to MHz)	1980	2700		
Conducted Declared Output Power (dBm)	2 x1W RMS Power			
Antenna Gain (dBi)	External Antenna			
Supported Bandwidth(s) (MHz) (e.g. 1 MHz, 20 MHz, 40 MHz)	1.25MHz	2.5MHz	5MHz	10MHz
Modulation Scheme(s) (e.g. GFSK, QPSK etc)	BPSK	QPSK	16QAM	64QAM
ITU Emission Designator (see guidance here) (not mandatory for Part 15 devices)	1M25D7W	2M50D7W	5M00D7W	10M0D7W
Bottom Frequency (MHz)	1980			
Middle Frequency (MHz)	2340			
Top Frequency (MHz)	2700			



Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	2.7GHz
Lowest frequency generated or used in the device or on which the device operates or tunes	1.98GHz
Class A Digital Device (Use in commercial, industrial or business environment) ☒	
Class B Digital Device (Use in residential environment only) ☐	

AC Power Source (Supplied with Mean Well GST90A-12-P1M PSU but this is usually not used by end customers)

AC supply frequency:	110 to 250Vac	Hz
Voltage	12	V
Max current:	6.67A	A
Single Phase ☒ Three Phase ☐		

DC Power Source

Nominal voltage:	12	V
Extreme upper voltage:	17	V
Extreme lower voltage:	8	V
Max current:	2	A

Battery Power Source (N/A)

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

Charging

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

Temperature

Minimum temperature:	-10°C	°C
Maximum temperature:	+55°C (must be heat sunk at this temperature)	°C



Cable Loss

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

Antenna Characteristics

Antenna connector ☒			State impedance	50	Ohm
Temporary antenna connector ☐			State impedance		Ohm
Integral antenna ☐	Type:		Gain		dBi
External antenna ☒	Type:	SMA	Gain	2.5dB typical	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.

Ancillaries (if applicable)

Manufacturer:		Part Number:	
Model:		Country of Origin:	

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

Name: Neil McSparron
 Position held: Consultant
 Date: 20 May 2025

1.5 Product Information

1.5.1 Technical Description

Small form factor software-defined radio conceived primarily for systems integration into unmanned platforms (including controllers) and into other professional user communications infrastructure.

1.6 Deviations from the Standard

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

1.7 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
BluSDR-30-C, Model: BluSDR-30-C, Serial Number: FR009550			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 3

1.8 Test Location

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

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: COFDM Transmitter		
Restricted Band Edges	Wenceslao Acosta Carrazco	UKAS
Emission Bandwidth	Thomas Biddlecombe	UKAS
Maximum Conducted Output Power	Thomas Biddlecombe	UKAS
Authorised Band Edges	Wenceslao Acosta Carrazco	UKAS
Spurious Radiated Emissions	Ahmad Javid	UKAS
Power Spectral Density	Thomas Biddlecombe	UKAS

Table 4

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

2 Test Details

2.2 Restricted Band Edges

2.2.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.205
ISED RSS-247, Clause 3.3
ISED RSS-GEN, Clause 8.10

2.2.2 Equipment Under Test and Modification State

BluSDR-30-C, S/N: FR009550 - Modification State 0

2.2.3 Date of Test

20-May-2025 to 21-May-2025

2.2.4 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.

For the duration of the test, the EUT was operated in a 2x2 MIMO configuration.

The EUT was powered by 120 VAC for the duration of the test.

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

2.2.5 Environmental Conditions

Ambient Temperature	21.6 - 23.8 °C
Relative Humidity	23.8 - 44.5 %



2.2.6 Test Results

COFDM Transmitter

Bandwidth (MHz)	Data Rate/MCS	Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBμV/m)
1.25	64QAM	2401.875	2390.000	62.59	50.97
1.25	64QAM	2475.625	2483.500	67.35	51.98
2.50	64QAM	2403.750	2390.000	66.85	52.36
2.50	64QAM	2468.750	2483.500	67.70	52.37
5.00	64QAM	2407.500	2390.000	65.25	52.90
5.00	64QAM	2467.500	2483.500	65.94	53.03
10.00	64QAM	2420.000	2390.000	64.81	53.50
10.00	64QAM	2445.000	2483.500	65.19	53.05

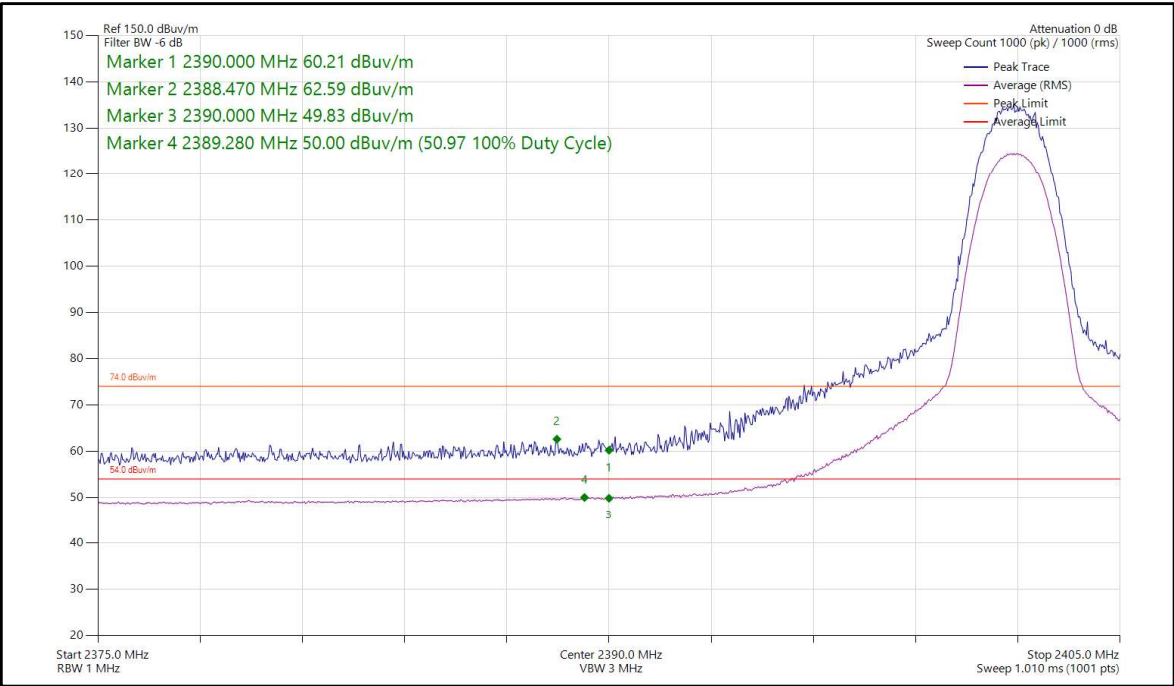


Figure 1 - BOT_RBE, 2401.875 MHz, 1.25 MHz Bandwidth, Band Edge Frequency 2390 MHz

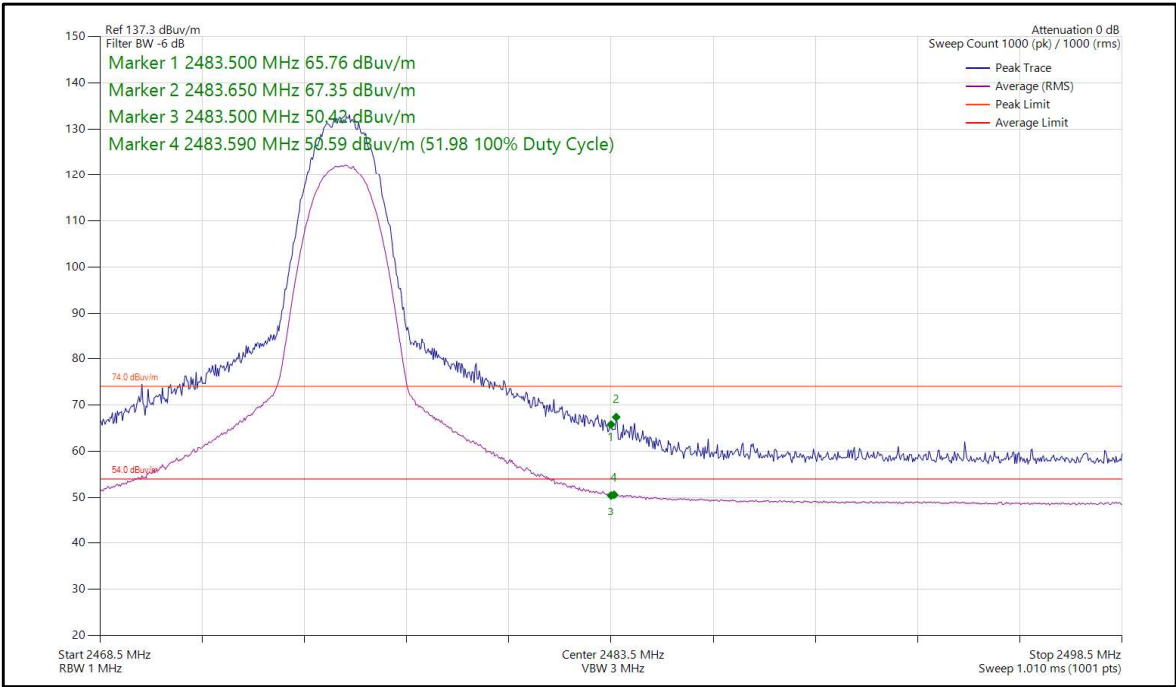


Figure 2 - TOP_RBE, 2475.625 MHz, 1.25 MHz Bandwidth, Band Edge Frequency 2483.5 MHz

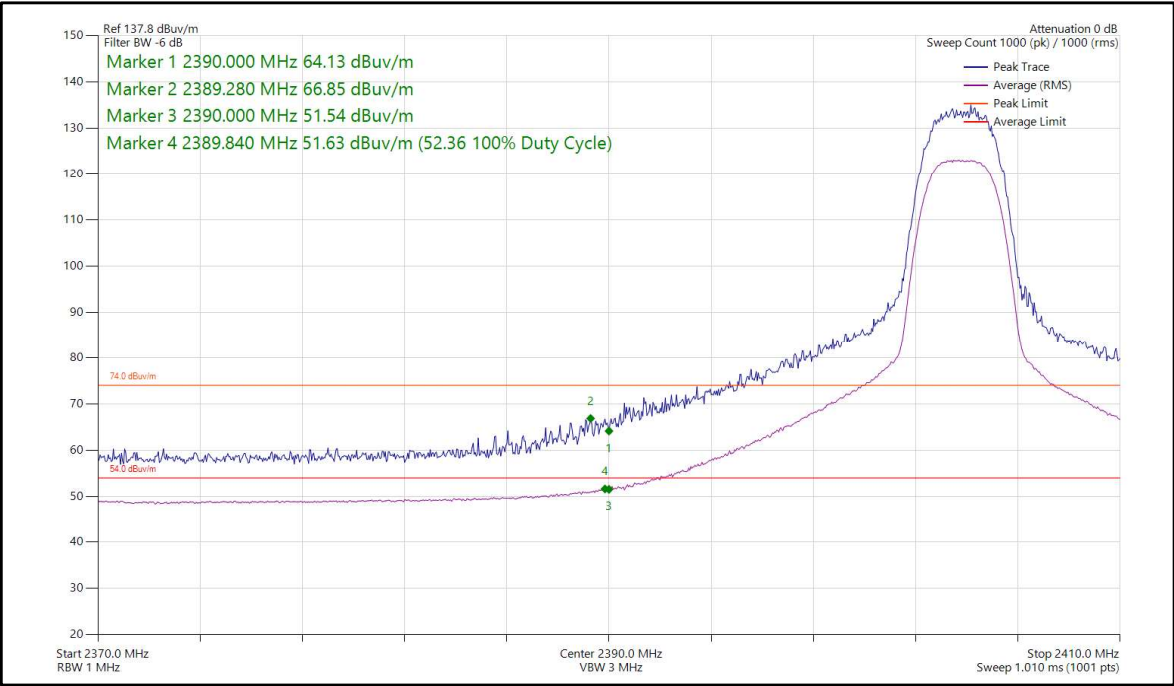


Figure 3 - BOT_RBE, 2403.75 MHz, 2.5 MHz Bandwidth, Band Edge Frequency 2390 MHz

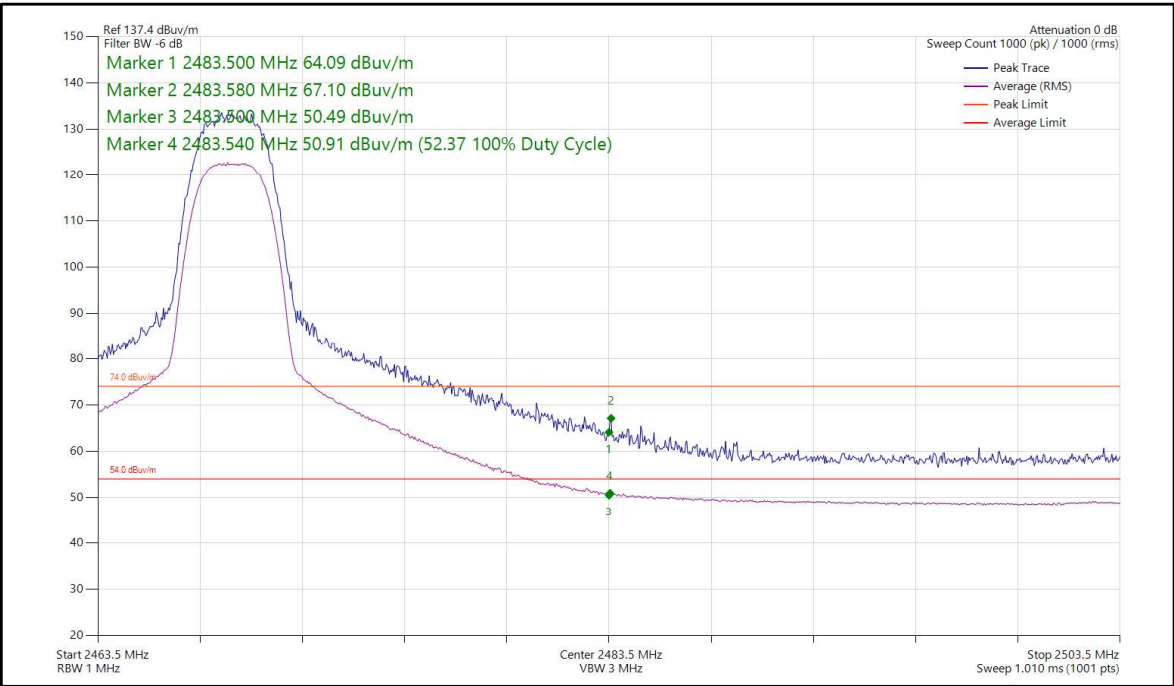


Figure 4 - TOP_RBE, 2468.75 MHz, 2.5 MHz Bandwidth, Band Edge Frequency 2483.5 MHz

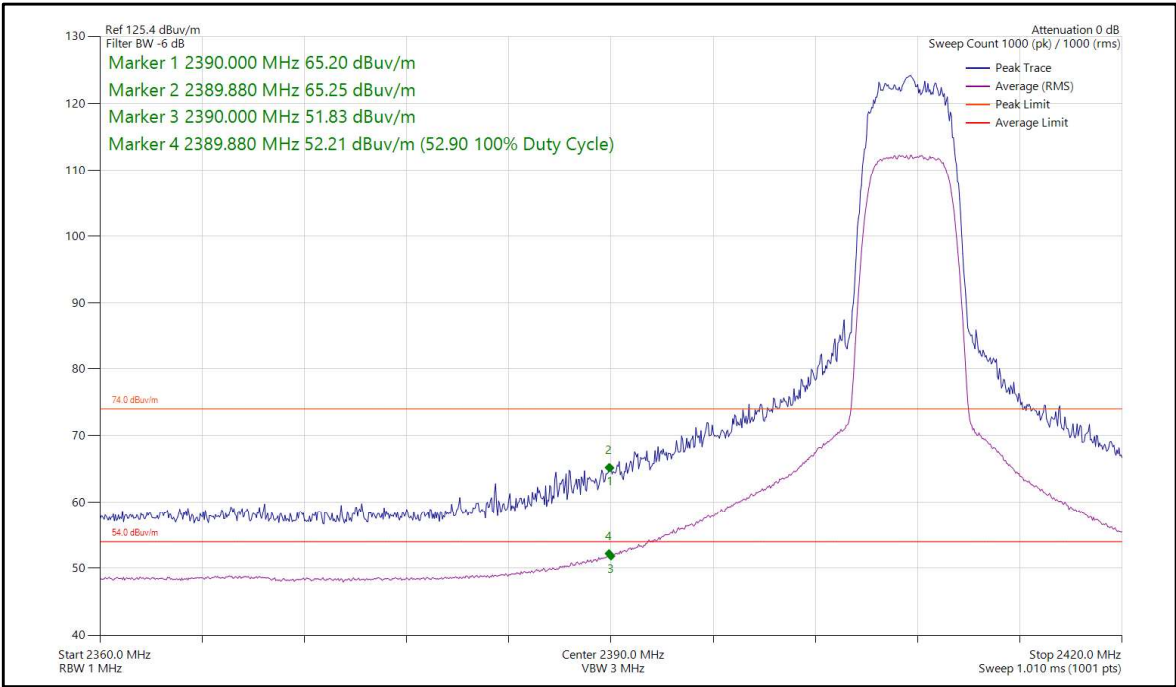


Figure 5 - BOT_RBE, 2407.5 MHz, 5 MHz Bandwidth, Band Edge Frequency 2390 MHz

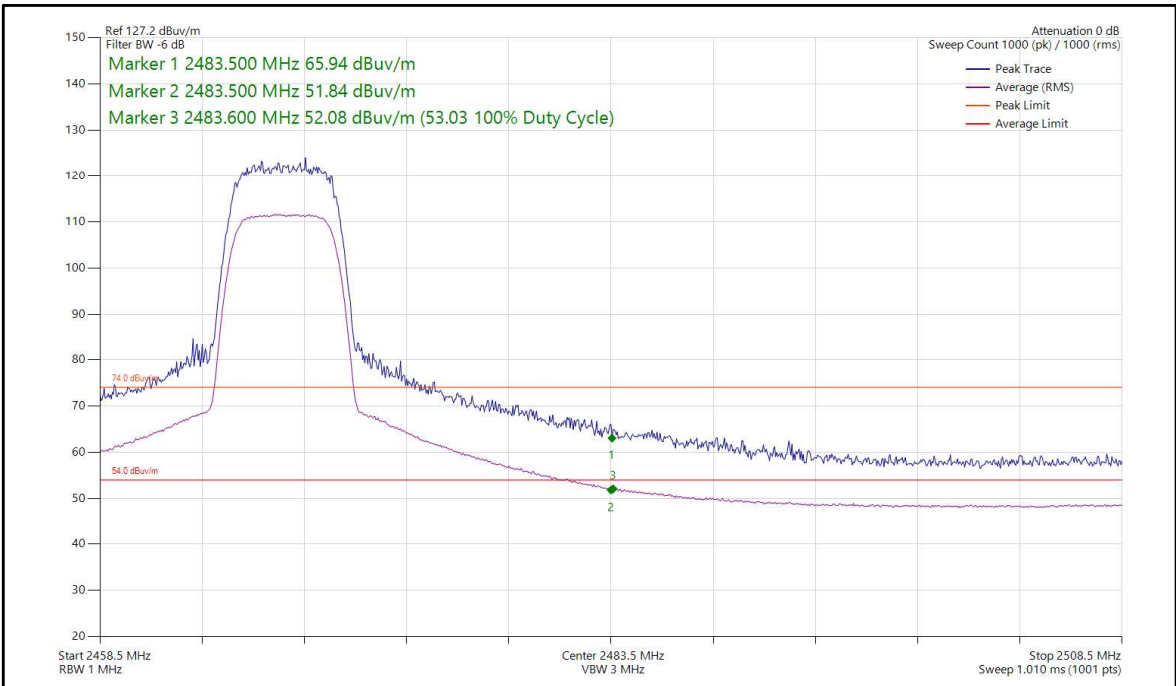


Figure 6 – TOP_RBE, 2467.5 MHz, 5 MHz Bandwidth. Band Edge Frequency 2483.5 MHz

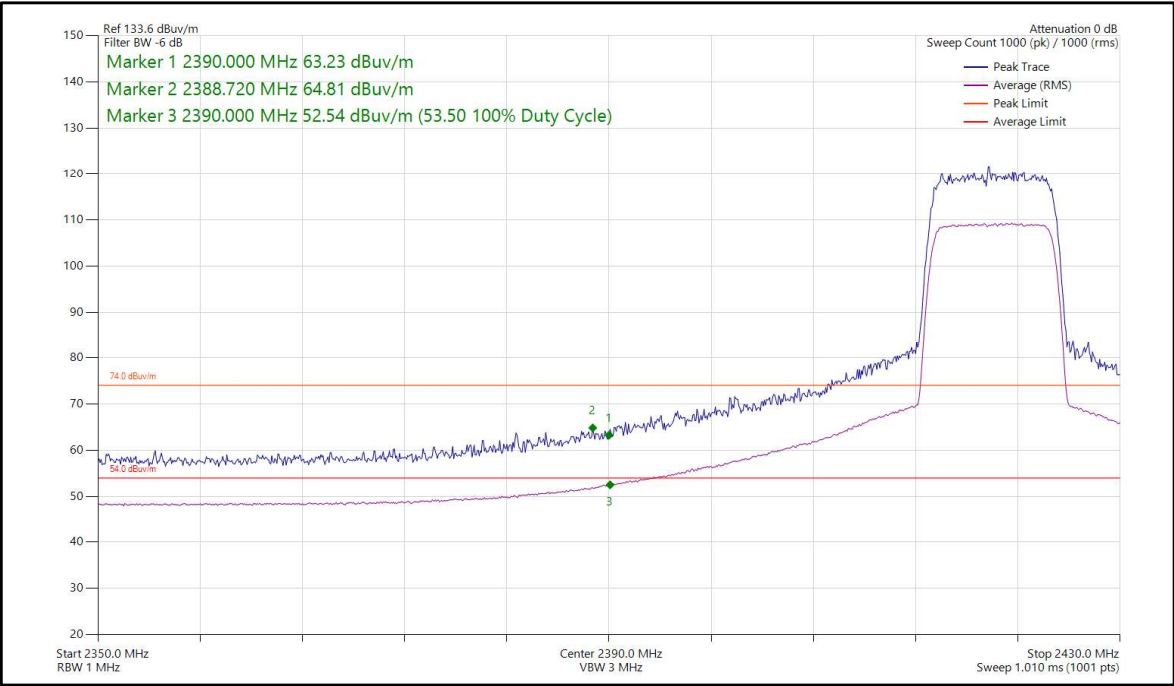


Figure 7 - BOT_RBE, 2420 MHz, 10 MHz Bandwidth, Band Edge Frequency 2390 MHz

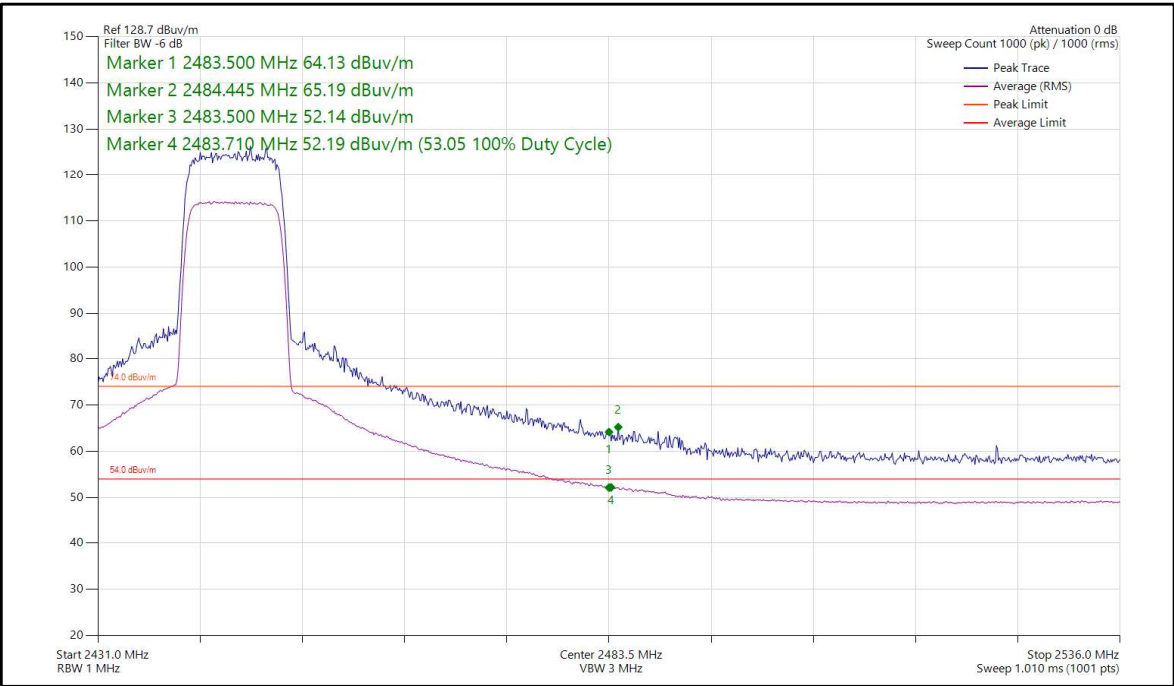


Figure 8 - TOP_RBE, 2445 MHz, 10 MHz Bandwidth, Band Edge Frequency 2483.5 MHz

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 5

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 6

*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.

2.2.7 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
True RMS Multimeter	Fluke	79 Series III	411	12	09-Jan-2026
Hygrometer	Rotronic	I-1000	3220	12	02-Dec-2025
Emissions Software	TUV SUD	EmX V3.5.3	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	14-Jul-2025
Cable (N-Type to N-Type, 8 m)	Junkosha	MWX221-08000NMSNMS/B	5521	6	19-Aug-2025
Cable (SMA to SMA 3m)	Junkosha	MWX221-03000AMSAMS/B	6000	12	12-Jun-2026

Table 7

TU - Traceability Unscheduled

2.3 Emission Bandwidth

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (a)(2)
ISED RSS-247, Clause 5.2
ISED RSS-GEN, Clause 6.7

2.3.2 Equipment Under Test and Modification State

BluSDR-30-C, S/N: FR009550 - Modification State 0

2.3.3 Date of Test

13-August-2025

2.3.4 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.

The EUT was supplied with 120 VAC with an AC PSU to a customer supplied AC/DC converter, resulting in 12 VDC at the EUT input.

For the duration of the test, the EUT was operated in a 2x2 MIMO configuration.

To force the EUT to transmit, a second sample was connected via the conducted path and Iperf was used to force packets to be sent from the EUT to the second sample. This was connected via a directional coupler and enough attenuation to not be seen while measuring the EUT.

2.3.5 Test Setup Diagram

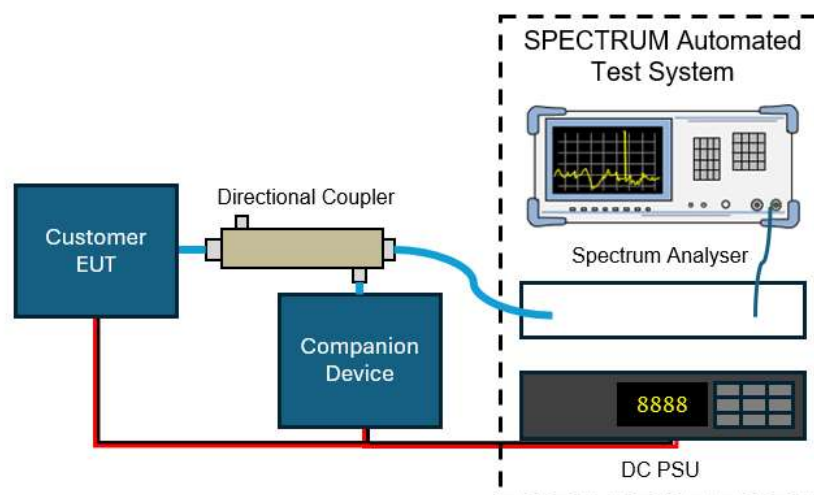


Figure 9 – Test Setup Diagram for Emission Bandwidth

2.3.6 Environmental Conditions

Ambient Temperature 22.0 °C
Relative Humidity 66.9 %

2.3.7 Test Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 (a)	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	1.25 MHz	Duty Cycle (%):	-
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2401.875	1.192	1.160	-	-	≥500.0
2438.75	1.184	1.180	-	-	≥500.0
2475.625	1.160	1.164	-	-	≥500.0

Table 8 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2401.875	1.144	1.144	-	-	-
2438.75	1.148	1.144	-	-	-
2475.625	1.148	1.148	-	-	-

Table 9 - 99% Bandwidth Results



Figure 10 - A (A) 2401.875 MHz (CH1251) 99% Bandwidth



Figure 11 - A (A) 2401.875 MHz (CH1251) 6 dB Bandwidth



Figure 12 - B (B) 2401.875 MHz (CH1251) 99% Bandwidth



Figure 13 - B (B) 2401.875 MHz (CH1251) 6 dB Bandwidth



Figure 14 - A (A) 2438.75 MHz (CH1252) 99% Bandwidth



Figure 15 - A (A) 2438.75 MHz (CH1252) 6 dB Bandwidth



Figure 16 - B (B) 2438.75 MHz (CH1252) 99% Bandwidth



Figure 17 - B (B) 2438.75 MHz (CH1252) 6 dB Bandwidth



Figure 18 - A (A) 2475.625 MHz (CH1253) 99% Bandwidth



Figure 19 - A (A) 2475.625 MHz (CH1253) 6 dB Bandwidth



Figure 20 - B (B) 2475.625 MHz (CH1253) 99% Bandwidth



Figure 21 - B (B) 2475.625 MHz (CH1253) 6 dB Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 (a)	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	2.50 MHz	Duty Cycle (%):	-
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2403.75	2.360	2.344	-	-	≥500.0
2436.25	2.320	2.288	-	-	≥500.0
2468.75	2.360	2.312	-	-	≥500.0

Table 10 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2403.75	2.288	2.288	-	-	-
2436.25	2.288	2.288	-	-	-
2468.75	2.288	2.288	-	-	-

Table 11 - 99% Bandwidth Results



Figure 22 - A (A) 2403.75 MHz (CH2501) 99% Bandwidth



Figure 23 - A (A) 2403.75 MHz (CH2501) 6 dB Bandwidth



Figure 24 - B (B) 2403.75 MHz (CH2501) 99% Bandwidth



Figure 25 - B (B) 2403.75 MHz (CH2501) 6 dB Bandwidth



Figure 26 - A (A) 2436.25 MHz (CH2502) 99% Bandwidth



Figure 27 - A (A) 2436.25 MHz (CH2502) 6 dB Bandwidth



Figure 28 - B (B) 2436.25 MHz (CH2502) 99% Bandwidth



Figure 29 - B (B) 2436.25 MHz (CH2502) 6 dB Bandwidth



Figure 30 - A (A) 2468.75 MHz (CH2503) 99% Bandwidth



Figure 31 - A (A) 2468.75 MHz (CH2503) 6 dB Bandwidth



Figure 32 - B (B) 2468.75 MHz (CH2503) 99% Bandwidth



Figure 33 - B (B) 2468.75 MHz (CH2503) 6 dB Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 (a)	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	5.00 MHz	Duty Cycle (%):	-
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2407.5	4.660	4.640	-	-	≥500.0
2437.5	4.660	4.660	-	-	≥500.0
2467.5	4.640	4.680	-	-	≥500.0

Table 12 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2407.5	4.600	4.580	-	-	-
2437.5	4.580	4.600	-	-	-
2467.5	4.600	4.600	-	-	-

Table 13 - 99% Bandwidth Results



Figure 34 - A (A) 2407.5 MHz (CH5001) 99% Bandwidth



Figure 35 - A (A) 2407.5 MHz (CH5001) 6 dB Bandwidth



Figure 36 - B (B) 2407.5 MHz (CH5001) 99% Bandwidth



Figure 37 - B (B) 2407.5 MHz (CH5001) 6 dB Bandwidth



Figure 38 - A (A) 2437.5 MHz (CH5002) 99% Bandwidth



Figure 39 - A (A) 2437.5 MHz (CH5002) 6 dB Bandwidth



Figure 40 - B (B) 2437.5 MHz (CH5002) 99% Bandwidth



Figure 41 - B (B) 2437.5 MHz (CH5002) 6 dB Bandwidth



Figure 42 - A (A) 2467.5 MHz (CH5003) 99% Bandwidth



Figure 43 - A (A) 2467.5 MHz (CH5003) 6 dB Bandwidth



Figure 44 - B (B) 2467.5 MHz (CH5003) 99% Bandwidth



Figure 45 - B (B) 2467.5 MHz (CH5003) 6 dB Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 (a)	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	10.00 MHz	Duty Cycle (%):	-
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	-
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2420	9.280	9.280	-	-	≥500.0
2432.5	9.280	9.280	-	-	≥500.0
2445	9.280	9.280	-	-	≥500.0

Table 14 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2420	9.200	9.200	-	-	-
2432.5	9.160	9.160	-	-	-
2445	9.200	9.200	-	-	-

Table 15 - 99% Bandwidth Results



Figure 46 - A (A) 2420 MHz (CH10001) 99% Bandwidth



Figure 47 - A (A) 2420 MHz (CH10001) 6 dB Bandwidth



Figure 48 - B (B) 2420 MHz (CH10001) 99% Bandwidth



Figure 49 - B (B) 2420 MHz (CH10001) 6 dB Bandwidth



Figure 50 - A (A) 2432.5 MHz (CH10002) 99% Bandwidth



Figure 51 - A (A) 2432.5 MHz (CH10002) 6 dB Bandwidth



Figure 52 - B (B) 2432.5 MHz (CH10002) 99% Bandwidth



Figure 53 - B (B) 2432.5 MHz (CH10002) 6 dB Bandwidth



Figure 54 - A (A) 2445 MHz (CH10003) 99% Bandwidth



Figure 55 - A (A) 2445 MHz (CH10003) 6 dB Bandwidth



Figure 56 - B (B) 2445 MHz (CH10003) 99% Bandwidth



Figure 57 - B (B) 2445 MHz (CH10003) 6 dB Bandwidth



FCC 47 CFR Part 15, Limit Clause 15.247(a)(2) and ISED RSS-247, Clause 5.2(a)

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

2.3.8 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
Directional Coupler	Krytar	1850	58	-	TU
Hygrometer	Rotronic	I-1000	2891	12	02-Dec-2025
GPSDR Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	18-Sep-2025
Digital Multi-meter	Iso-tech	IDM93N	4435	12	06-Mar-2026
30dB Attenuator	Narda	766-30	4783	12	09-Oct-2025
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
Power Splitter, 2 way	Mini-Circuits	ZN2PD2-63-S+	5238	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5528	24	18-Sep-2025
Cable (SMA to SMA 3m)	Junkosha	MWX221-03000AMSAMS/B	6000	24	12-Jun-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Aug-2025
1m Coaxial Cable Assy	Junkosha	MWX221-01000AMSAMS/A	6376	12	06-Jun-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6638	12	02-Aug-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6639	12	02-Aug-2025
Directional Coupler	RF-Lambda	RFDC5M18G20	6913	-	O/P Mon
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/B	6926	12	08-Dec-2025

Table 16

TU – Traceability Unscheduled

O/P Mon – Output Monitored using calibrated equipment

2.4 Maximum Conducted Output Power

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (b)
ISED RSS-247, Clause 5.4
ISED RSS-GEN, Clause 6.12

2.4.2 Equipment Under Test and Modification State

BluSDR-30-C, S/N: FR009550 - Modification State 0

2.4.3 Date of Test

13-August-2025 to 14-August-2025

2.4.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 11.9.2.3.2 Method AVGPM-G.

MIMO output port summing was performed in accordance with KDB 662911 D01 F)2)d)(i).

The EUT was supplied with 120 VAC with an AC PSU to a customer supplied AC/DC converter, resulting in 12 VDC at the EUT input.

To force the EUT to transmit, a second sample was connected via the conducted path and Iperf was used to force packets to be sent from the EUT to the second sample. This was connected via a directional coupler and enough attenuation to not be seen while measuring the EUT.

2.4.5 Test Setup Diagram

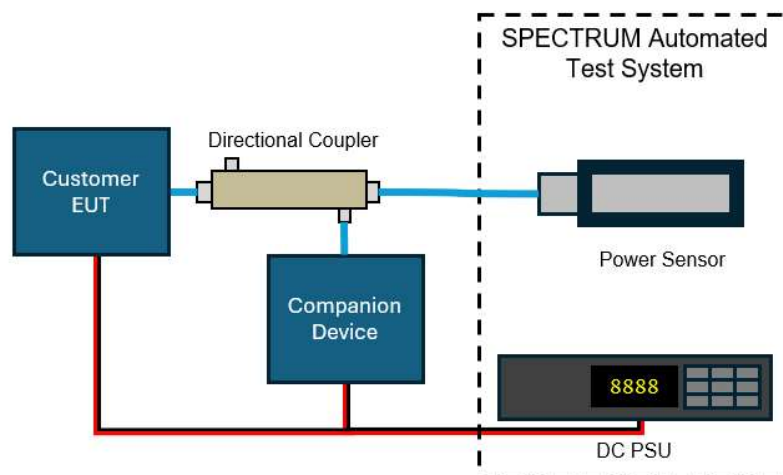


Figure 58 – Test Setup Diagram for Maximum Conducted Output Power.

2.4.6 Environmental Conditions

Ambient Temperature	22.0 - 22.7 °C
Relative Humidity	66.9 - 67.7 %

2.4.7 Test Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	1.25 MHz	Duty Cycle (%):	100.0
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	5.51
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2401.875	26.22	25.89	-	-	29.07	30.00	-0.93
2438.75	26.28	26.53	-	-	29.41	30.00	-0.59
2475.625	26.15	26.34	-	-	29.26	30.00	-0.74

Table 17 - FCC Maximum Conducted (average) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2401.875	26.22	25.89	-	-	29.07	30.00	-0.93	34.58	36.00	-1.42
2438.75	26.28	26.53	-	-	29.41	30.00	-0.59	34.92	36.00	-1.08
2475.625	26.15	26.34	-	-	29.26	30.00	-0.74	34.77	36.00	-1.23

Table 18 - ISD Maximum Conducted (average) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	2.50 MHz	Duty Cycle (%):	84.7
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	5.51
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2403.75	26.37	26.16	-	-	29.27	30.00	-0.73
2436.25	26.39	26.17	-	-	29.29	30.00	-0.71
2468.75	26.40	26.52	-	-	29.47	30.00	-0.53

Table 19 - FCC Maximum Conducted (average) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2403.75	26.37	26.16	-	-	29.27	30.00	-0.73	34.78	36.00	-1.22
2436.25	26.39	26.17	-	-	29.29	30.00	-0.71	34.80	36.00	-1.20
2468.75	26.40	26.52	-	-	29.47	30.00	-0.53	34.98	36.00	-1.02

Table 20 - ISD Maximum Conducted (average) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	5.00 MHz	Duty Cycle (%):	77.7
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	5.51
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2407.5	26.09	26.14	-	-	29.13	30.00	-0.87
2437.5	26.05	26.09	-	-	29.08	30.00	-0.92
2467.5	26.22	26.31	-	-	29.28	30.00	-0.72

Table 21 - FCC Maximum Conducted (average) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2407.5	26.09	26.14	-	-	29.13	30.00	-0.87	34.64	36.00	-1.36
2437.5	26.05	26.09	-	-	29.08	30.00	-0.92	34.59	36.00	-1.41
2467.5	26.22	26.31	-	-	29.28	30.00	-0.72	34.79	36.00	-1.21

Table 22 - ISD Maximum Conducted (average) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	10.00 MHz	Duty Cycle (%):	81.9
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	TxBF	Peak Antenna Gain (dBi):	5.51
Active Port(s):	A+B (A + B)	Active Chain(s):	0+0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2420	26.75	26.94	-	-	29.86	30.00	-0.14
2432.5	26.79	26.85	-	-	29.83	30.00	-0.17
2445	26.76	27.10	-	-	29.94	30.00	-0.06

Table 23 - FCC Maximum Conducted (average) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	Σ					
2420	26.75	26.94	-	-	29.86	30.00	-0.14	35.37	36.00	-0.63
2432.5	26.79	26.85	-	-	29.83	30.00	-0.17	35.34	36.00	-0.66
2445	26.76	27.10	-	-	29.94	30.00	-0.06	35.45	36.00	-0.55

Table 24 - ISD Maximum Conducted (average) Output Power Results

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 5.4 (d)

For DTSS employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e) of the specification.

2.4.8 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
Directional Coupler	Krytar	1850	58	-	TU
Hygrometer	Rotronic	I-1000	2891	12	02-Dec-2025
Digital Multi-meter	Iso-tech	IDM93N	4435	12	06-Mar-2026
30dB Attenuator	Narda	766-30	4783	12	09-Oct-2025
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
Power Splitter, 2 way	Mini-Circuits	ZN2PD2-63-S+	5238	-	O/P Mon
USB Power Sensor	Boonton	RTP5008	5833	12	26-Jul-2025
USB Power Sensor	Boonton	RTP5008	5834	12	26-Jul-2025
Cable (SMA to SMA 3m)	Junkosha	MWX221-03000AMSAMS/B	6000	24	12-Jun-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Aug-2025
1m Coaxial Cable Assy	Junkosha	MWX221-01000AMSAMS/A	6376	12	06-Jun-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6638	12	02-Aug-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6639	12	02-Aug-2025
Directional Coupler	RF-Lambda	RFDC5M18G20	6913	-	O/P Mon
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/B	6926	12	08-Dec-2025

Table 25

TU – Traceability Unscheduled

O/P Mon – Output Monitored using calibrated equipment



2.5 Authorised Band Edges

2.5.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d)
ISED RSS-247. Clause 5.5

2.5.2 Equipment Under Test and Modification State

BluSDR-30-C, S/N: FR009550 - Modification State 0

2.5.3 Date of Test

20-May-2025 to 21-May-2025

2.5.4 Test Method

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

The EUT was powered with 120 VAC for the duration of the test.

For the duration of the test, the EUT was operated in a 2x2 MIMO configuration.

2.5.5 Environmental Conditions

Ambient Temperature	21.6 - 23.8 °C
Relative Humidity	23.8 - 44.5 %