

FCC and ISED Test Report

Apple Inc
Model: A3592



In accordance with FCC 47 CFR Part 15C
ISED RSS-247 and ISED RSS-GEN
(2.4 GHz Bluetooth DTS)

Prepared for: Apple Inc
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SIGNATURE

NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Steven White	Senior Technical Support	Authorised Signatory	03 August 2026

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD document control rules.

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15C, ISED RSS-247 and ISED RSS-GEN. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Report Generation	Malwina Kowalska	03 August 2026	

FCC Accreditation

553713/UK2026 Concorde Park, Fareham Test Laboratory

ISED Accreditation

28798/UK0003 Concorde Park, Fareham Test Laboratory

EXECUTIVE SUMMARY

A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15C: 2024, ISED RSS-247: Issue 4 (2025-07), ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02) for the tests detailed in section 1.3.



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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
1	First Issue	03 August 2026

Table 1

1.2 Introduction

Applicant	Apple Inc
Manufacturer	Apple Inc
EUT/Sample Identification	Refer to section 1.6
Test Specification/Issue/Date	FCC 47 CFR Part 15C: 2024 ISED RSS-247: Issue 4 (2025-07) ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02)
Start of Test	08-June-2026
Finish of Test	03-July-2026
Name of Engineer(s)	Mahmud Chowdhury, Jayvir Makwanam,
Related Document(s)	ANSI C63.4 (2014) ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024



1.3 Brief Summary of Results

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

Section	Specification Clause			Test Description	Result	Comments/Base Standard
	Part 15C	RSS-247	RSS-GEN			
Configuration and Mode: 2.4 GHz Bluetooth DTS						
-	15.203	-	-	Antenna Requirement	N/T	The device complies with the provisions of this section, as it uses permanently attached integral antennas.
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	15.209 and 15.247 (d)	2.4 and 6.6	6.13 and 8.9	Spurious Radiated Emissions	Pass	ANSI C63.4 (2014) 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

Table 2



1.4 Product Information

1.4.1 Technical Description

The equipment under test (EUT) was a Bluetooth LE Remote Control

1.4.2 Test Modes

The EUT's 2.4 GHz Bluetooth radio supports SISO operation on Core 0.

The EUT supports LE1M / BTCS Mode1, LE 1M & LE2M / BTCS Mode1, LE2M for DTS operation.

After preliminary investigations were performed, the EUT was tested in the following worst-case modes during conducted transmitter tests.

SISO mode (Core 0)

- LE1M / BTCS Mode1, LE 1M
- LE2M / BTCS Mode1, LE2M

With Spurious Radiated Emissions tests limited to the mode shown below, with the device configured to operate at maximum output power. As this was deemed to be worst case.

SISO mode (Core 0)

- LE1M / BTCS Mode1, LE 1M

1.4.3 Test Setup

For conducted tests the EUT antennas were disconnected and replaced with U. FL to SMA test cable to enable conducted testing. The loss of this test cable was known and compensated for in any conducted measurements.

For all tests the EUT was put into a continuous transmit/receive test mode with the chipset manufacturer's test commands to ensure the measured signals were representative.

All testing was performed with the EUT powered via its internal battery.

1.4.4 Antenna Gain Table

Antenna Port	Frequency Range (MHz)	Peak Gain (dBi)	Conducted Cable Loss (dB)
Core 0 (IFA)	2402	-4.95	0.73
	2441	-4.71	0.75
	2480	-6.87	0.75

Table 3

1.5 Deviations from the Standard

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



1.6 Identification of the EUT

The table below details identification of the EUT(s) that have been used to carry out the testing within this report.

Model: A3592		
Serial Number	Hardware Version	Software Version
GK6D9XK16W	REV1.0	v1.141.0-0
G3Y3PG6QYP	REV1.0	v1.141.0-0

Table 4

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
Model: A3592, Serial Number: G3Y3PG6QYP			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3592, Serial Number: GK6D9XK16W			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 5



1.8 Test Location

TÜV SÜD conducted the following tests at our Concorde Park Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 2.4 GHz Bluetooth DTS		
Restricted Band Edges	Ian Hart	UKAS
Emission Bandwidth	Mahmud Chowdhury, Jayvir Makwana	UKAS
Maximum Conducted Output Power	Mahmud Chowdhury, Jayvir Makwana	UKAS
Authorised Band Edges	Ian Hart	UKAS
Spurious Radiated Emissions	Gridi Bilali, Zeeshan Zia, Marius Vasii, Ioan-Alexandru Bogatu and Vineeth Nagaraj to the test	UKAS
Power Spectral Density	Mahmud Chowdhury, Jayvir Makwana	UKAS

Table 6

Office Address:

TÜV SÜD
Concorde Park
Concorde Way
Fareham
Hampshire
PO15 5FG
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, Clause 2.4
ISED RSS-GEN, Clause 8.10

2.1.2 Equipment Under Test and Modification State

A3592, S/N: GK6D9XK16W - Modification State 0

2.1.3 Date of Test

03-July-2026

2.1.4 Test Method

This test was performed conducted, in accordance with ANSI C63.10, clause 11.12.2.2
(General procedure for conducted measurements in restricted bands)

2.1.5 Environmental Conditions

Ambient Temperature	23.5 °C
Relative Humidity	39.6 %

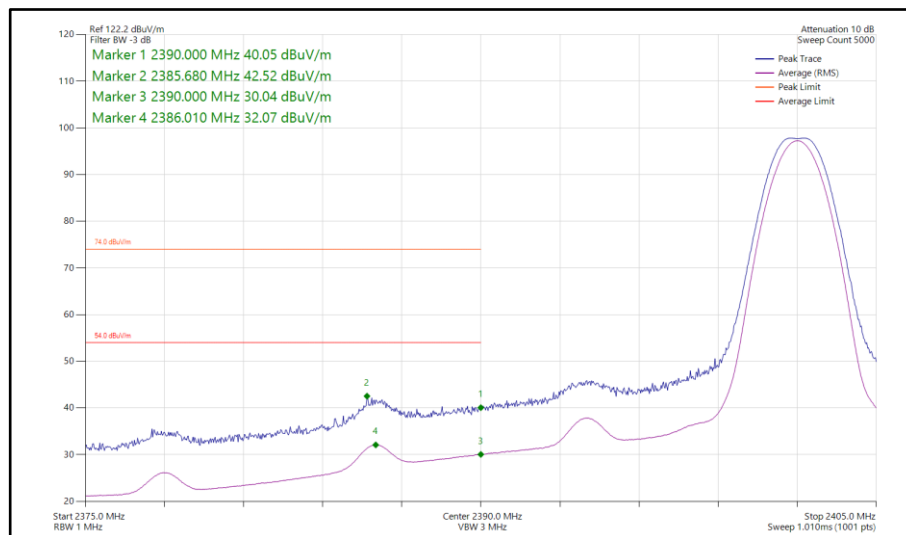
2.1.6 Test Results

2.4 GHz Bluetooth DTS

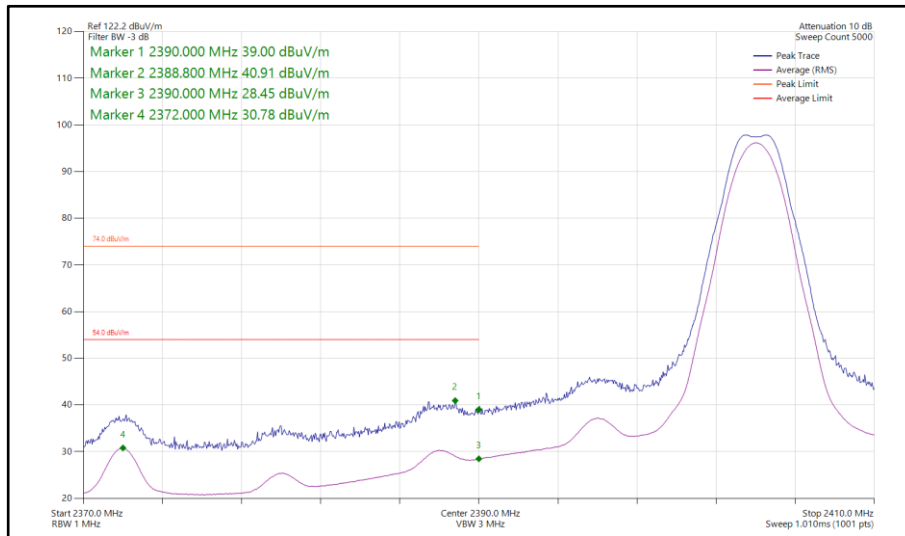
iPA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBuV/m)
Static	LE1M / BTCS Mode1	2402	2390	42.52	32.07
Static	LE2M / BTCS Mode1	2404	2390	40.91	30.78
Static	LE1M / BTCS Mode1	2480	2483.5	46.17	35.40
Static	LE2M / BTCS Mode1	2478	2483.5	44.92	34.99

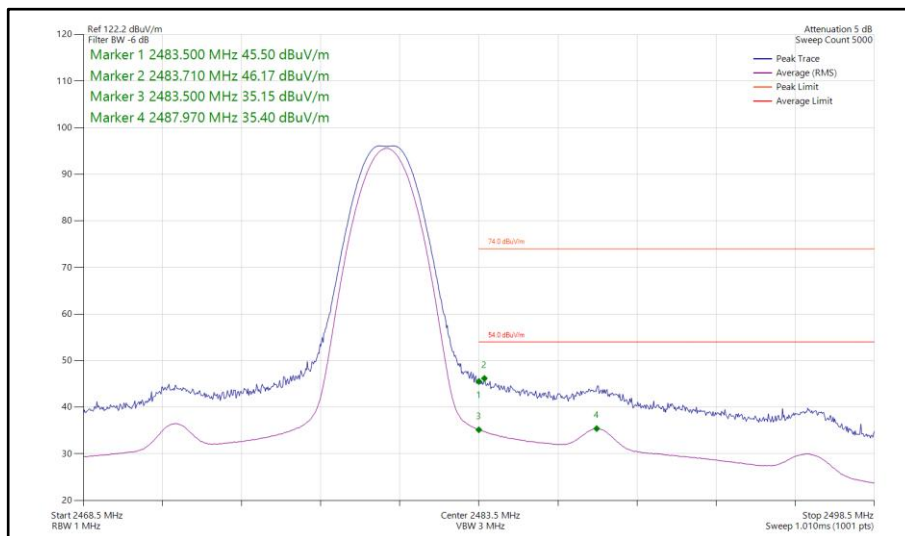
Table 7 - SISO Restricted Band Edge Results



**Figure 1 - Bluetooth LE1M / BTCS Mode1, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2390 MHz**



**Figure 2 - Bluetooth LE2M / BTCS Mode1, SISO, Core 0 - 2404 MHz
Band Edge Frequency 2390 MHz**



**Figure 3 - Bluetooth LE1M / BTCS Mode1, SISO, Core 0 - 2480 MHz
Band Edge Frequency 2483.5 MHz**

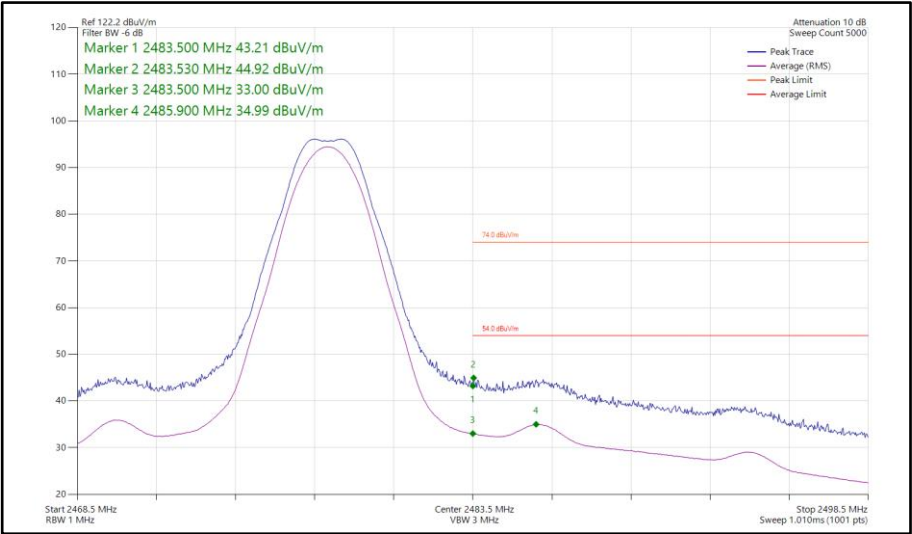


Figure 4 - Bluetooth LE2M / BTCS Mode1, SISO, Core 0 - 2478 MHz
Band Edge Frequency 2483.5 MHz



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 8

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 9

*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.



2.1.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.6.3 V.	5125	-	O/P Mon
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	29-Oct-2026
Humidity & Temperature meter	R.S Components	1364	6149	12	28-Aug-2026
Attenuator 5W 10dB DC-18GHz	Aaren	AT40A-4041-D18-10	6670	12	01-Sep-2026

Table 10

TU - Traceability Unscheduled

O/P Mon - Output Monitored using calibrated equipment

*NOTE: Only used within calibration period.



2.2 Emission Bandwidth

2.2.1 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

2.2.2 Equipment Under Test and Modification State

A3592, S/N: GK6D9XK16W - Modification State 0

2.2.3 Date of Test

13-June-2026 to 15-June-2026

2.2.4 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.

2.2.5 Environmental Conditions

Ambient Temperature	22.6 - 23.4 °C
Relative Humidity	48.6 - 48.7 %



2.2.6 Test Results

2.4 GHz Bluetooth DTS

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 6.3.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	LE1M / BTCS Mode1, LE1M	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	0.728	-	-	-	≥500.0
2440	0.688	-	-	-	≥500.0
2480	0.704	-	-	-	≥500.0

Table 11 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.072	-	-	-	-
2440	1.064	-	-	-	-
2480	1.064	-	-	-	-

Table 12 - 99% Bandwidth Results

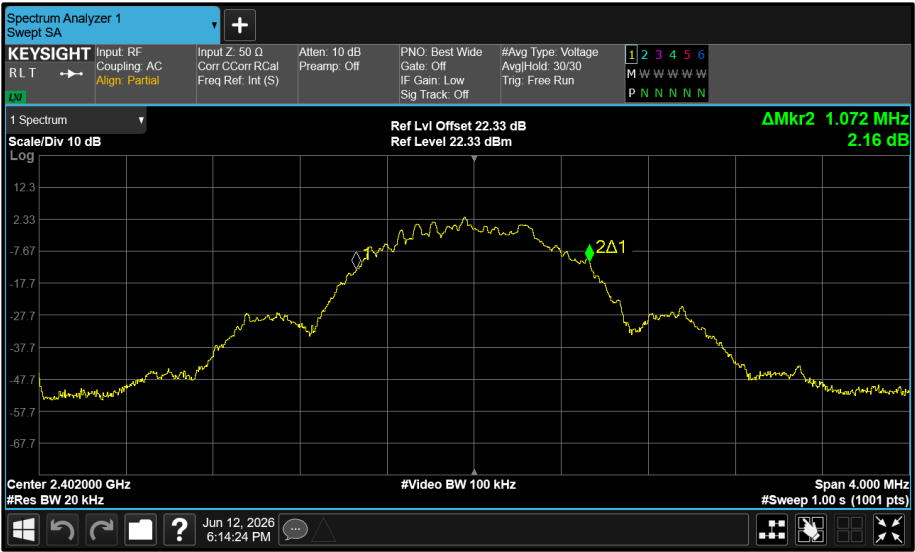


Figure 5 - Core 0 (A) 2402 MHz (CH37) 99% Bandwidth

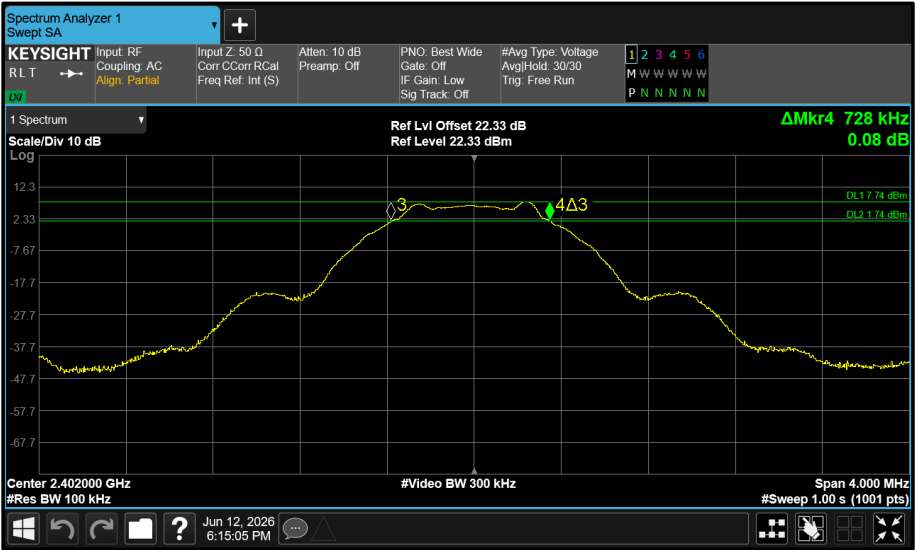


Figure 6 - Core 0 (A) 2402 MHz (CH37) 6 dB Bandwidth

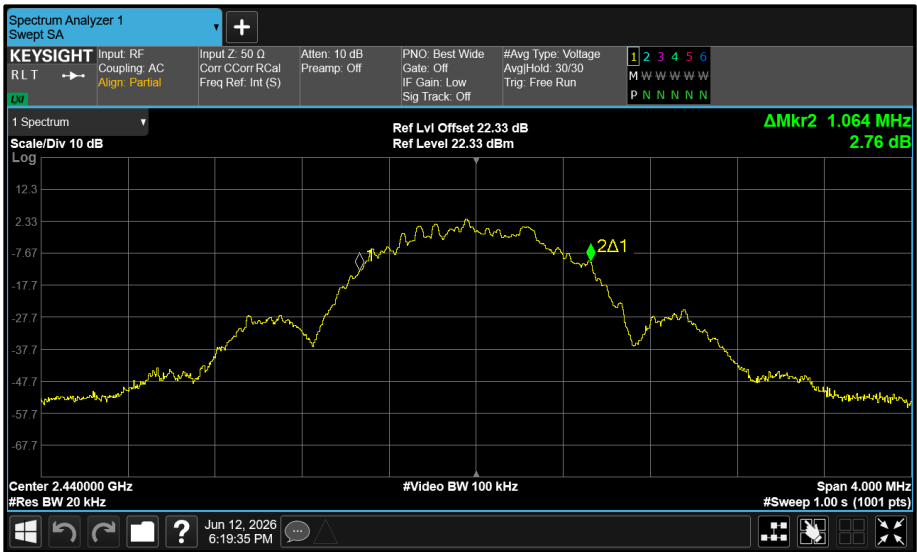


Figure 7 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

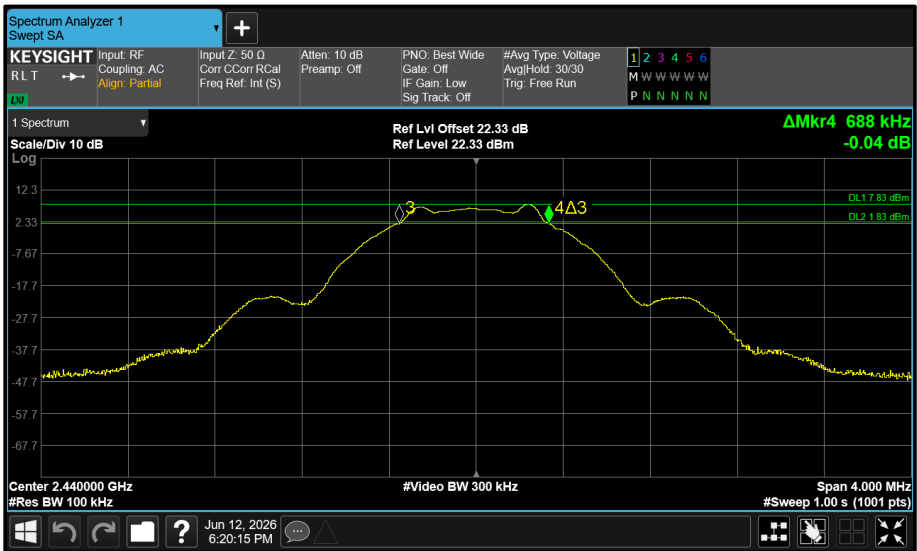


Figure 8 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth



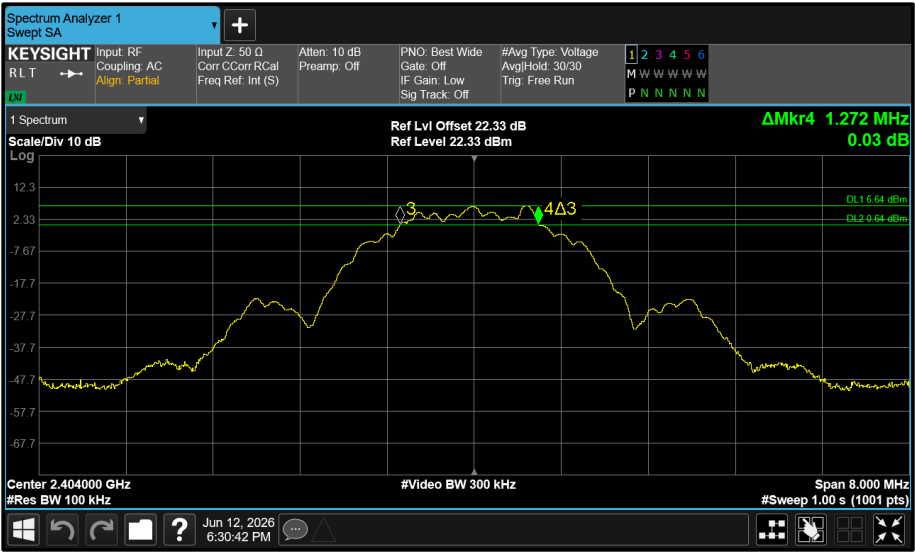


Figure 12 - Core 0 (A) 2404 MHz (CH0) 6 dB Bandwidth

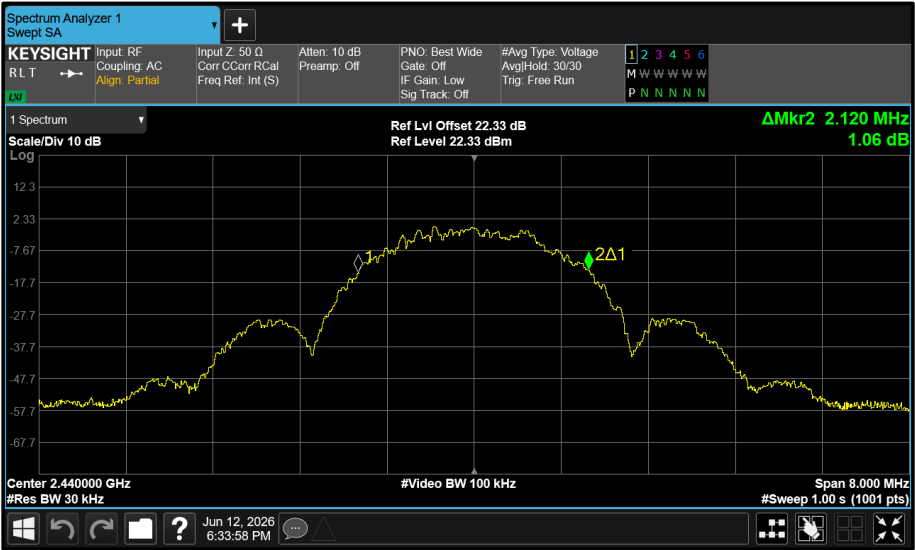


Figure 13 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

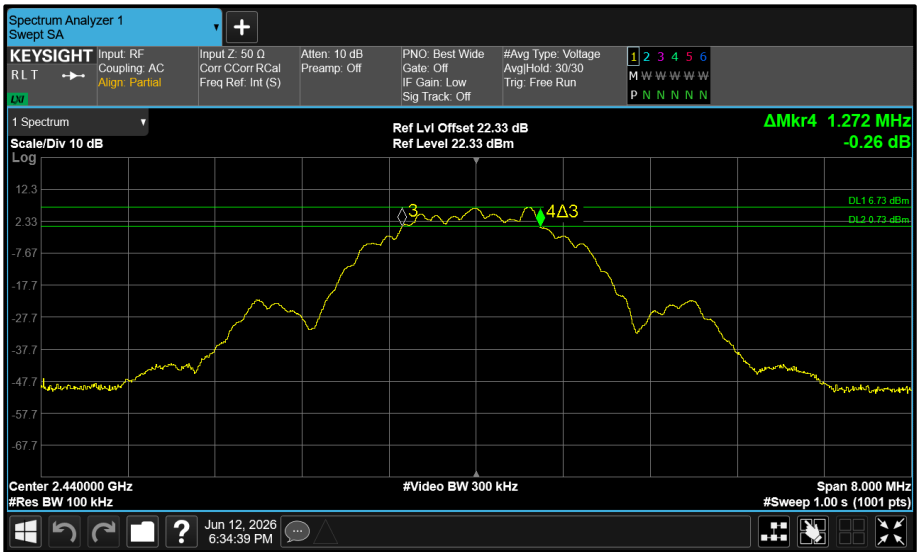


Figure 14 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth

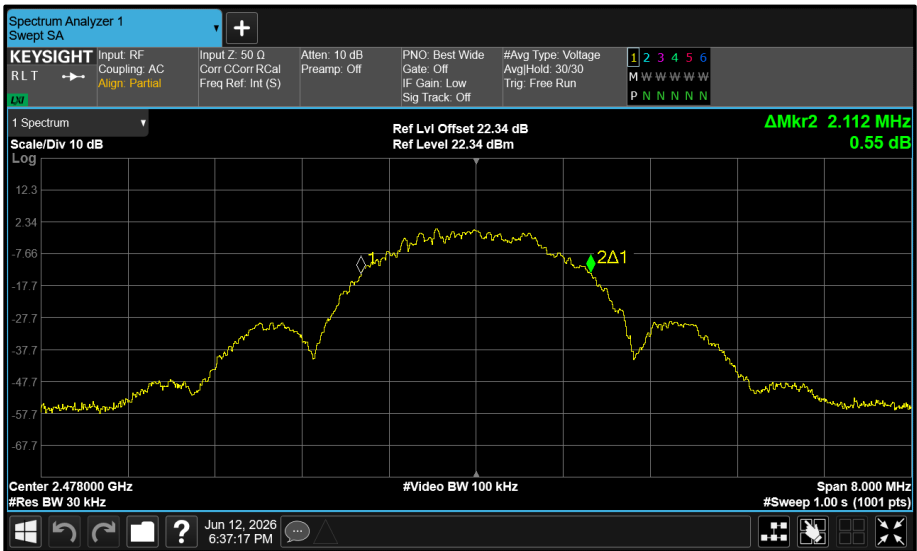


Figure 15 - Core 0 (A) 2478 MHz (CH36) 99% Bandwidth

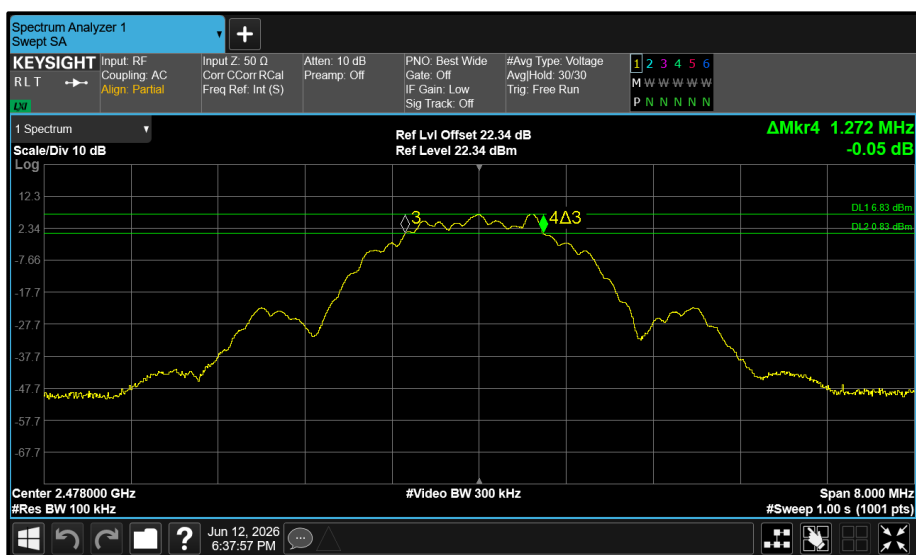


Figure 16 - Core 0 (A) 2478 MHz (CH36) 6 dB Bandwidth

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

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



2.2.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
1500VA AC Power Supply	iTech	IT7324	5907	-	O/P Mon
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5921	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5922	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5923	12	29-Nov-2026
Modular Power System Mainframe	Keysight Technologies	N6701C	5969	-	O/P Mon
DC Power Module 60V 20A 300W	Keysight Technologies	N6754A	5970	-	O/P Mon
Humidity & Temperature meter	R.S Components	1364	6148	12	28-Aug-2026
MXA Signal Analyser	Keysight Technologies	N9020B	6417	24	14-Oct-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6519	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6520	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6521	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6522	12	29-Nov-2026
Digital Thermometer	R.S Components	RS 5511	6739	12	02-Mar-2027
Multimeter	Fluke	115	7115	12	13-Aug-2026

Table 15

O/P Mon - Output Monitored using calibrated equipment



2.3 Maximum Conducted Output Power

2.3.1 Specification Reference

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

2.3.2 Equipment Under Test and Modification State

A3592, S/N: GK6D9XK16W - Modification State 0

2.3.3 Date of Test

13-June-2026 to 15-June-2026

2.3.4 Test Method

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

2.3.5 Environmental Conditions

Ambient Temperature	22.6 - 23.4 °C
Relative Humidity	48.6 - 48.7 %



2.3.6 Test Results

2.4 GHz Bluetooth DTS

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 6.3.2	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	LE1M / BTCS Mode1, LE1M	Duty Cycle (%):	100.0
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	-4.71

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	8.18	-	-	-	8.18	30.00	-21.82
2440	8.35	-	-	-	8.35	30.00	-21.65
2480	8.48	-	-	-	8.48	30.00	-21.52

Table 16 - FCC Maximum Conducted (peak) 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					
2402	8.18	-	-	-	8.18	30.00	-21.82	3.47	36.00	-32.53
2440	8.35	-	-	-	8.35	30.00	-21.65	3.64	36.00	-32.36
2480	8.48	-	-	-	8.48	30.00	-21.52	3.77	36.00	-32.23

Table 17 - ISED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 6.3.2	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	LE2M / BTCS Mode1, LE2M	Duty Cycle (%):	100.0
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	-4.71

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2404	8.18	-	-	-	8.18	30.00	-21.82
2440	8.32	-	-	-	8.32	30.00	-21.68
2478	8.51	-	-	-	8.51	30.00	-21.49

Table 18 - FCC Maximum Conducted (peak) 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					
2404	8.18	-	-	-	8.18	30.00	-21.82	3.47	36.00	-32.53
2440	8.32	-	-	-	8.32	30.00	-21.68	3.61	36.00	-32.39
2478	8.51	-	-	-	8.51	30.00	-21.49	3.80	36.00	-32.20

Table 19 - ISED Maximum Conducted (peak) 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 6.3.2

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).

2.3.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
1500VA AC Power Supply	iTech	IT7324	5907	-	O/P Mon
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5921	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5922	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5923	12	29-Nov-2026
Modular Power System Mainframe	Keysight Technologies	N6701C	5969	-	O/P Mon
DC Power Module 60V 20A 300W	Keysight Technologies	N6754A	5970	-	O/P Mon
Humidity & Temperature meter	R.S Components	1364	6148	12	28-Aug-2026
MXA Signal Analyser	Keysight Technologies	N9020B	6417	24	14-Oct-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6519	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6520	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6521	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6522	12	29-Nov-2026
Digital Thermometer	R.S Components	RS 5511	6739	12	02-Mar-2027
Multimeter	Fluke	115	7115	12	13-Aug-2026

Table 20

O/P Mon - Output Monitored using calibrated equipment



2.4 Authorised Band Edges

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d)
ISED RSS-247, Clause 6.6

2.4.2 Equipment Under Test and Modification State

A3592, S/N: GK6D9XK16W - Modification State 0

2.4.3 Date of Test

03-July-2026

2.4.4 Test Method

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

2.4.5 Environmental Conditions

Ambient Temperature	23.5 °C
Relative Humidity	39.6 %

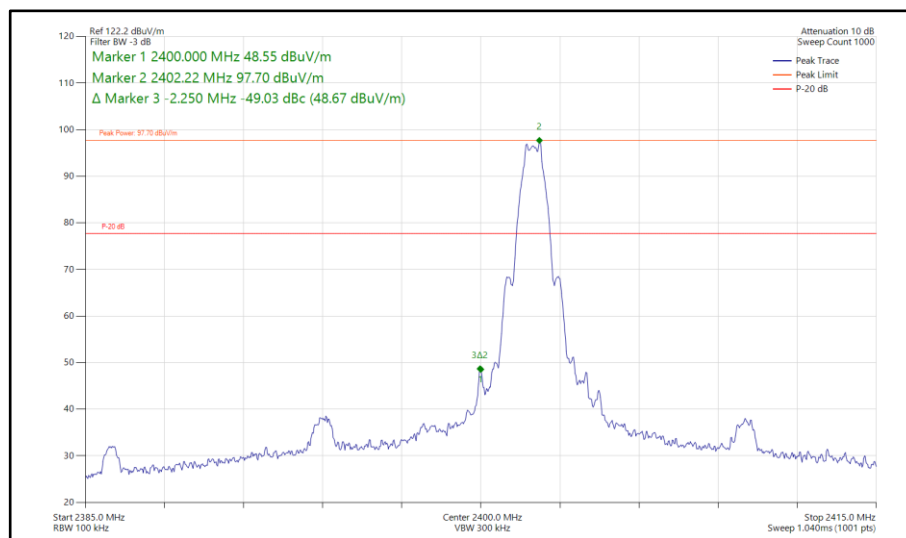
2.4.6 Test Results

2.4 GHz Bluetooth DTS - DTS

iPA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	LE1M / BTCS Mode1	2402	2400	-49.03
Static	LE2M / BTCS Mode1	2404	2400	-54.36

Table 21 - SISO Authorised Band Edge Results



**Figure 17 - Bluetooth LE1M / BTCS Mode1, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz**



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.

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.



2.4.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.6.3 V.	5125	-	O/P Mon
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	29-Oct-2026
Humidity & Temperature meter	R.S Components	1364	6149	12	28-Aug-2026
Attenuator 5W 10dB DC-18GHz	Aaren	AT40A-4041-D18-10	6670	12	01-Sep-2026

Table 22

TU - Traceability Unscheduled

O/P Mon - Output Monitored using calibrated equipment

*NOTE: Only used within calibration period.



2.5 Spurious Radiated Emissions

2.5.1 Specification Reference

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

2.5.2 Equipment Under Test and Modification State

A3592, S/N: G3Y3PG6QYP - Modification State 0

2.5.3 Date of Test

08-June-2026 to 17-June-2026

2.5.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.3, 6.5 and 6.6.

The EUT was placed on the non-conducting platform in a manner typical of a normal installation.

Pre-scans in the 30 MHz to 1 GHz & 18 GHz to 26GHz range were limited to mid channel (2440 MHz).

The plots shown are the characterisation of the EUT. The limits on the plots represent the most stringent case for restricted bands, (74/54 dB μ V/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.

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

Above 18 GHz, the measurement distance was reduced to 1 m. The limit line was increased by $20 \cdot \text{LOG}(3/1) = 9.54$ dB.

Where formal measurements have been necessary, the results have been presented in the emissions table.

2.5.5 Example Test Setup Diagram

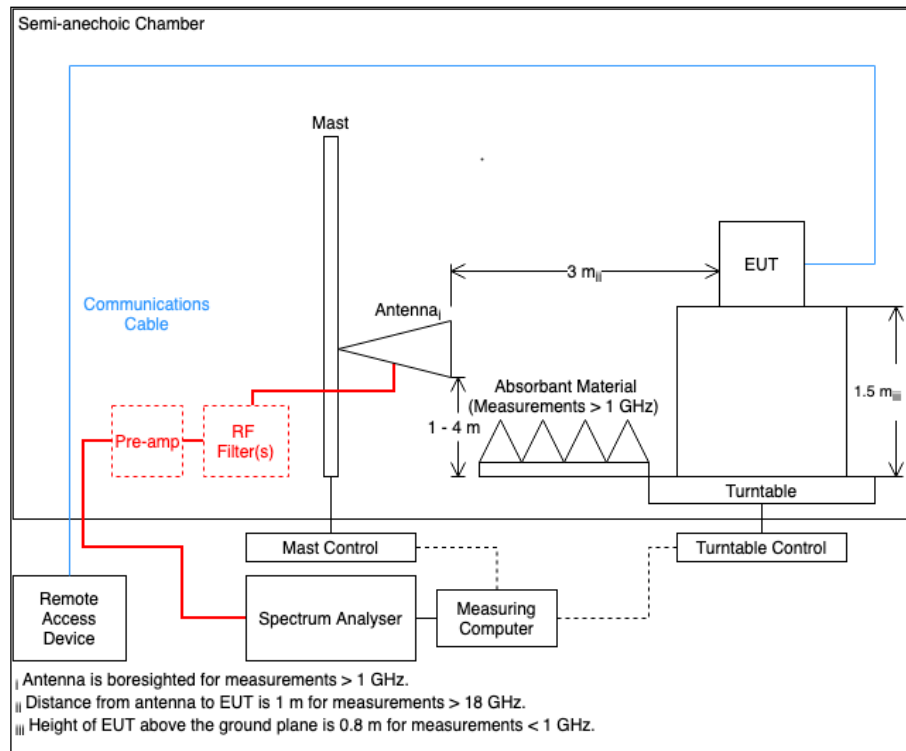


Figure 19

2.5.6 Environmental Conditions

Ambient Temperature	19.1 - 23.7 °C
Relative Humidity	24.6 - 39.8 %

2.5.7 Test Results

2.4 GHz Bluetooth DTS

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
1200.286	30.35	54.00	-23.65	RMS	115	140	Vertical
1440.060	29.91	54.00	-24.09	RMS	108	387	Vertical
4804.081	46.69	54.00	-7.31	RMS	194	329	Vertical
4804.140	42.18	54.00	-11.82	RMS	205	100	Horizontal
12011.048	36.02	54.00	-17.98	RMS	165	256	Vertical

Table 23 - 2402 MHz, LE1M / BTCS Mode1, iPA, Core 0, 1 to 18 GHz

No other emissions found within 20 dB of the limit.

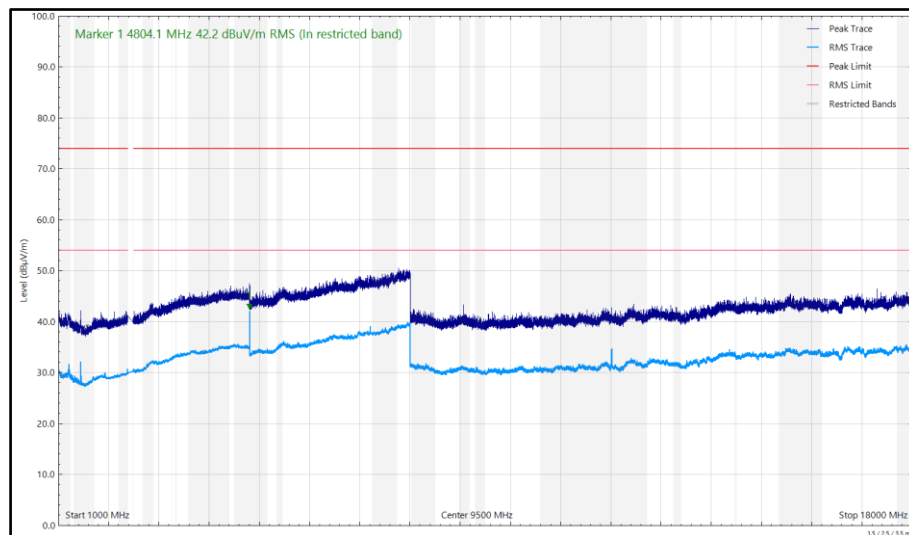


Figure 20 - 2402 MHz, LE1M / BTCS Mode1, iPA, Core 0, 1 GHz to 18 GHz, Horizontal

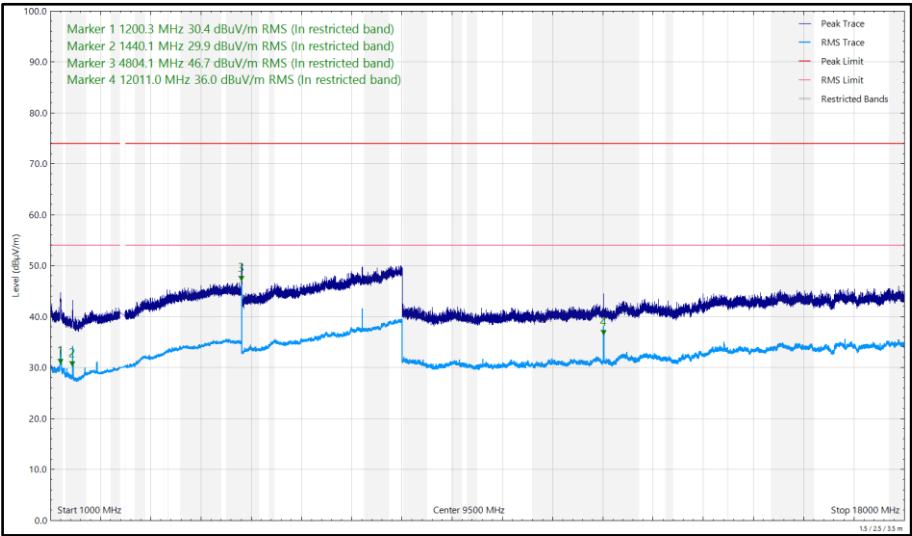


Figure 21 - 2402 MHz, LE1M / BTCS Mode1, iPA, Core 0, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
37.806	21.61	40.00	-18.39	Q-Peak	9	340	Horizontal
38.229	21.62	40.00	-18.38	Q-Peak	303	269	Vertical
113.711	19.50	43.50	-24.00	Q-Peak	14	387	Vertical
168.025	28.47	43.50	-15.03	Q-Peak	235	103	Vertical
169.027	22.21	43.50	-21.29	Q-Peak	280	209	Horizontal
404.211	26.51	46.00	-19.49	Q-Peak	64	169	Horizontal
1439.909	27.98	54.00	-26.02	RMS	114	307	Vertical
4879.808	34.42	54.00	-19.58	RMS	307	102	Horizontal
4880.011	38.32	54.00	-15.68	RMS	191	308	Vertical
7320.436	38.21	54.00	-15.79	RMS	83	307	Horizontal
7320.596	43.68	54.00	-10.32	RMS	47	369	Vertical
12198.750	35.96	54.00	-18.04	RMS	183	282	Vertical

Table 24 - 2440 MHz, LE1M / BTCS Mode1, iPA, Core 0, 30 MHz to 26 GHz

No other emissions found within 20 dB of the limit.

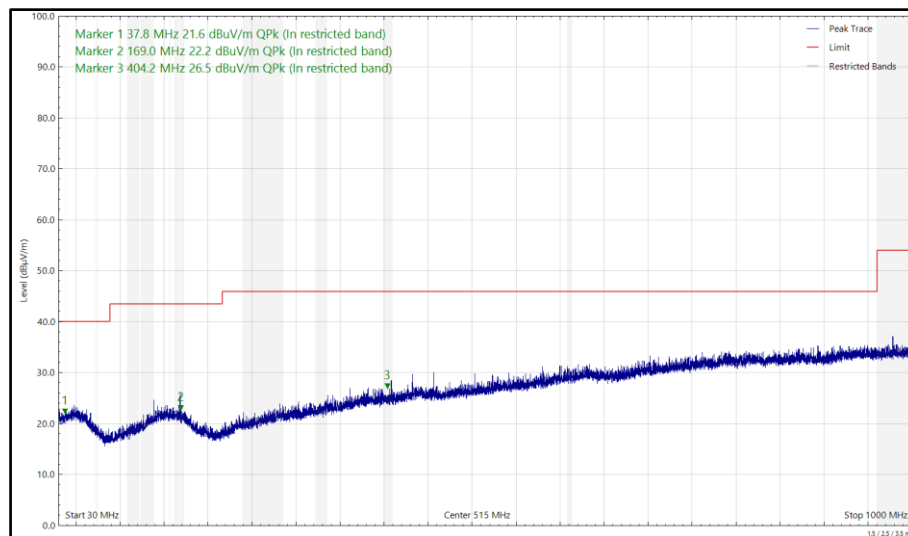


Figure 22 - 2440 MHz, LE1M / BTCS Mode1, iPA, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)

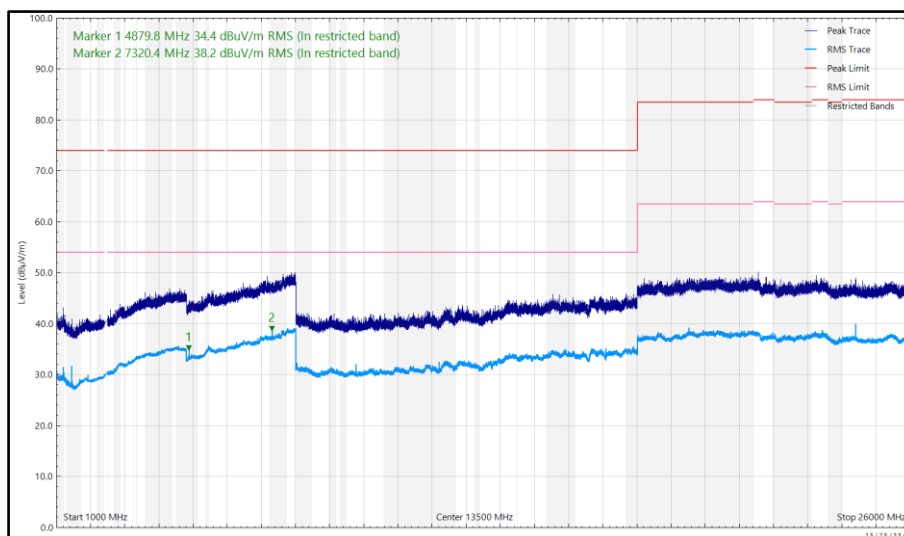


Figure 23 - 2440 MHz, LE1M / BTCS Mode1, iPA, Core 0, 1 GHz to 26 GHz, Horizontal

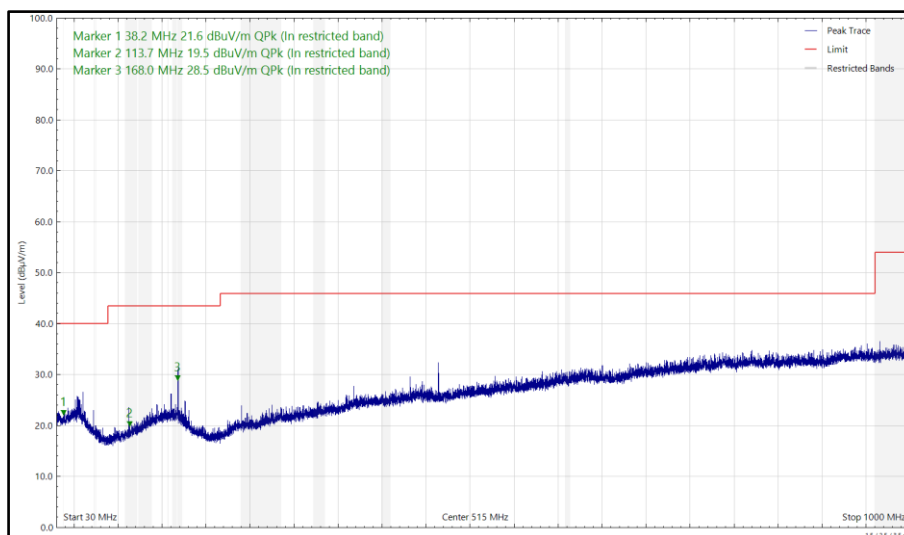


Figure 24 - 2440 MHz, LE1M / BTCS Mode1, iPA, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

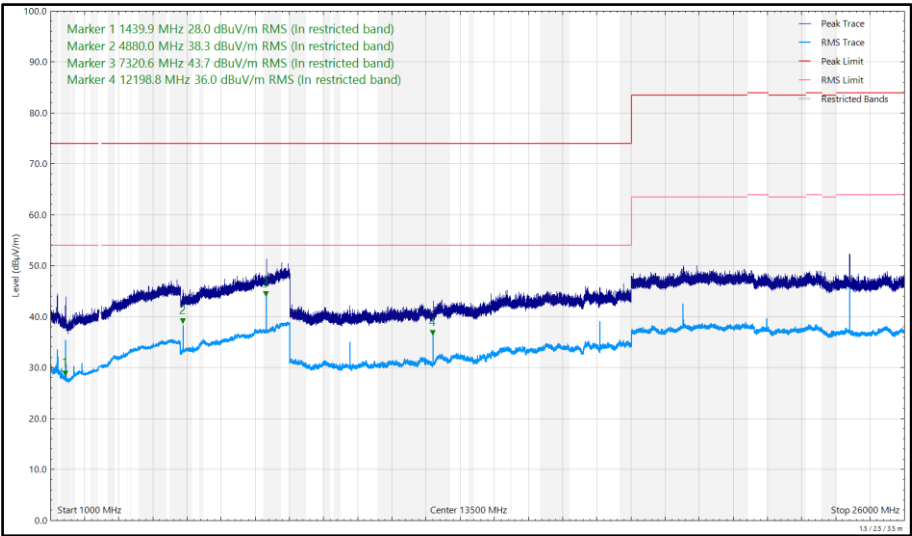


Figure 25 - 2440 MHz, LE1M / BTCS Mode1, iPA, Core 0, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
1201.678	29.77	54.00	-24.23	RMS	123	190	Vertical
1440.221	33.92	54.00	-20.08	RMS	180	195	Vertical
4959.756	32.70	54.00	-21.30	RMS	211	269	Horizontal
4959.788	35.70	54.00	-18.30	RMS	67	392	Vertical
7439.372	45.26	54.00	-8.74	RMS	53	400	Vertical
7440.619	37.94	54.00	-16.06	RMS	235	318	Horizontal

Table 25 - 2480 MHz LE1M / BTCS Mode1, iPA, Core 0, 1 to 18 GHz

No other emissions found within 20 dB of the limit.

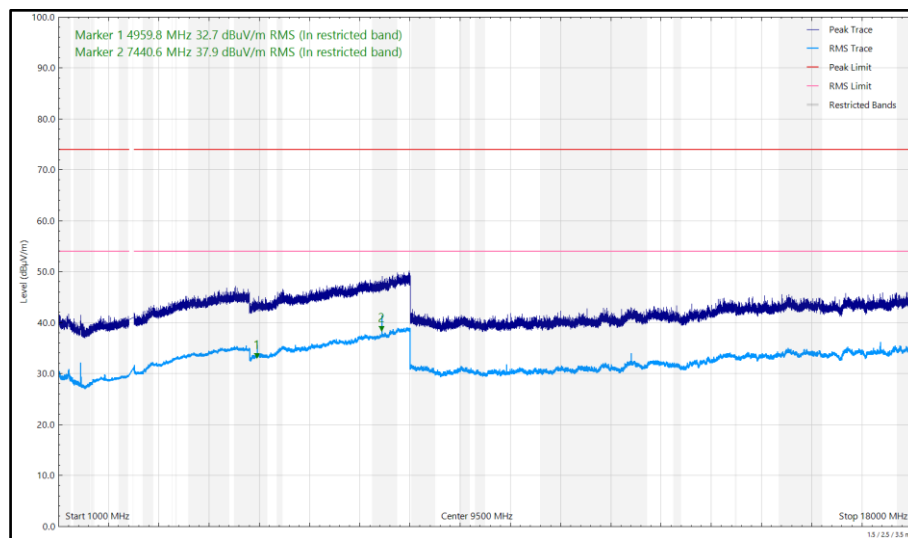


Figure 26 - 2480 MHz LE1M / BTCS Mode1, iPA, Core 0, 1 GHz to 18 GHz, Horizontal

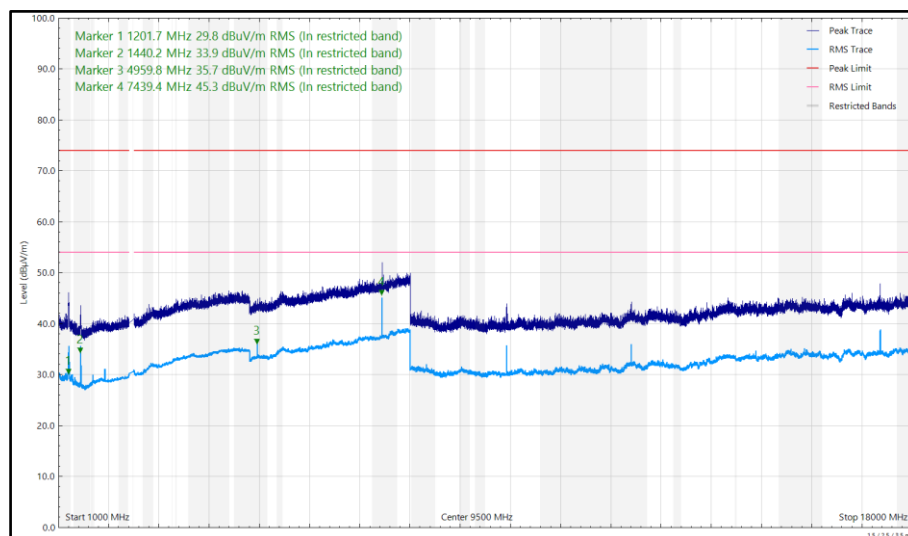


Figure 27 - 2480 MHz LE1M / BTCS Mode1, iPA, Core 0, 1 GHz to 18 GHz, Vertical



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 5.4(4), 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.



2.5.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 15.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.6.3	5125	-	TU
Test Receiver	Rohde & Schwarz	ESW44	5914	12	17-Jun-2026
2m Cable	Junkosha	MWX241-02000KMSKMS/B	5933	12	12-Jun-2026
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5939	12	23-May-2027
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5943	24	05-Sep-2027
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	TU
5m Semi-Anechoic Chamber (Dual-Axis), Chamber 15	Albatross Projects	RF Chamber 15	5963	36	23-Apr-2028
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5964	-	TU
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5966	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5967	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5968	-	TU
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6141	12	14-Sep-2026
SAC Switch Unit	TUV SUD	TUV_SSU_001	6144	12	05-Dec-2026
Digital Multimeter	Fluke	115	6146	12	03-Jun-2027
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6189	24	26-Sep-2026
8GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6194	12	23-Apr-2027
Pre Amp 8 - 18 GHz	Wright Technologies	APS06 0061	6200	12	23-Apr-2027
Attenuator 4dB	Pasternack	PE7074-4	6201	24	05-Sep-2027
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6215	12	23-Apr-2027
EMC Test Receiver	Rohde & Schwarz	ESW44	6333	12	08-May-2027
1M SMA Cable	Junkosha	MWX221-01000AMSAMS/B	6831	12	18-Aug-2026
8M SMA Cable	Junkosha	MWX221-08000AMSAMS/B	6833	12	18-Aug-2026
8M SMA Cable	Junkosha	MWX221-08000AMSAMS/B	6834	12	18-Aug-2026
1m SMA-Type Cable	Junkosha	MWX221-01000AMSAMS/B	6840	12	23-Sep-2026



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
1m SMA-Type Cable	Junkosha	MWX221-01000AMSAMS/B	6845	12	06-Sep-2026
8m SMA-Type Cable	Junkosha	MWX221-08000AMSAMS/B	6846	12	23-Oct-2026
Humidity & Temperature meter	Fluke	971	7103	12	05-Aug-2026

Table 26

TU - Traceability Unscheduled



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

A3592, S/N: GK6D9XK16W - Modification State 0

2.6.3 Date of Test

13-June-2026 to 15-June-2026

2.6.4 Test Method

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

Where the EUT duty cycle was < 98 % and repeatable within 2 %, the spectrum analyser was set to trace (power) averaging and a duty cycle correction was added as calculated in the result tables below (Method AVGPS-2).

2.6.5 Environmental Conditions

Ambient Temperature	22.6 - 23.4 °C
Relative Humidity	48.6 - 48.7 %



2.6.6 Test Results

2.4 GHz Bluetooth DTS

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 6.3.1	Test Method(s):	C63.10 11.10.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	LE1M / BTCS Mode1, LE1M	Duty Cycle (%):	100.0
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	-4.71

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2402	3.0	-7.65	-	-	-	-	8.00	-15.65
2440	3.0	-7.59	-	-	-	-	8.00	-15.59
2480	3.0	-7.31	-	-	-	-	8.00	-15.31

Table 27 - Maximum Power Spectral Density Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e) RSS-247 6.3.1	Test Method(s):	C63.10 11.10.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	LE2M / BTCS Mode1, LE2M	Duty Cycle (%):	100.0
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	-4.71

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2404	3.0	-10.26	-	-	-	-	8.00	-18.26
2440	3.0	-10.43	-	-	-	-	8.00	-18.43
2478	3.0	-10.28	-	-	-	-	8.00	-18.28

Table 28 - Maximum Power Spectral Density Results



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.

2.6.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
1500VA AC Power Supply	iTech	IT7324	5907	-	O/P Mon
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5921	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5922	12	29-Nov-2026
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5923	12	29-Nov-2026
Modular Power System Mainframe	Keysight Technologies	N6701C	5969	-	O/P Mon
DC Power Module 60V 20A 300W	Keysight Technologies	N6754A	5970	-	O/P Mon
Humidity & Temperature meter	R.S Components	1364	6148	12	28-Aug-2026
MXA Signal Analyser	Keysight Technologies	N9020B	6417	24	14-Oct-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6519	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6520	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6521	12	29-Nov-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6522	12	29-Nov-2026
Digital Thermometer	R.S Components	RS 5511	6739	12	02-Mar-2027
Multimeter	Fluke	115	7115	12	13-Aug-2026

Table 29

O/P Mon - Output Monitored using calibrated equipment



3 Measurement Uncertainty

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

Test Name	Measurement Uncertainty
Restricted Band Edges (Conducted)	± 1.9 dB
Emission Bandwidth	± 61.56 KHz
Maximum Conducted Output Power	Method PM: ± 0.65 dB Method SA: ± 1.05 dB
Authorised Band Edges (Conducted)	± 1.9 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Power Spectral Density	± 1.00 dB

Table 30

Measurement Uncertainty Decision Rule – Accuracy Method

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2021, Clause 4.4.3 (Procedure 2). 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.