

FCC and ISED Test Report

Manufacturer: LEGO System A/S
Model: HANDSET NO.6



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

Prepared for: LEGO System A/S
Aastvej 1
7190 Billund
Denmark

FCC ID: NPI116360 IC: 3072A-116360

COMMERCIAL-IN-CONFIDENCE

Document 75966668-11 Issue 03

SIGNATURE

NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Matthew Russell	Chief Engineer, RF	Authorised Signatory	11 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	Pier-Angelo Lorusso	11 August 2026	
	George Williams	11 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, 2024, ISED RSS-247, Issue 4 (2025-07) 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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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



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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	05-June-2026
02	Corrections to RSP-100, Form B Spurious Emission Radiated value and RF power Maximum and Minimums.	14-Jul-2026
03	Updated maximum Antenna Gain values	11-Aug-2026

Table 1

1.2 Introduction

Applicant	LEGO System A/S
Manufacturer	LEGO System A/S
Model Number	HANDSET NO.6
Hardware Version Identification Number (HVIN)	HANDSET NO.6
Serial Number(s)	Not Serialised (FAR-1024092-89) Not Serialised (FAR-1028351-41)
Hardware Version(s)	F
Software Version(s)	V2.0.00.0320
Number of Samples Tested	2
Test Specification/Issue/Date	FCC 47 CFR Part 15C, 2024, ISED RSS-247, Issue 4 (2025-07), RSS-GEN: Issue 5 (2018-04) + A2 (2021-02)
Order Number	7000567817
Date	29-January-2026
Date of Receipt of EUT	30-April-2026 and 20-April-2026
Start of Test	05-May-2026
Finish of Test	07-May-2026
Name of Engineer(s)	Pier-Angelo Lorusso and George Williams
Related Document(s)	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 and 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 Low Energy						
	15.203	-	-	Antenna Requirement	N/T	The EUT uses an Integral Antenna
2.1	15.205	2.4	8.10	Restricted Band Edges	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.2	15.209 and 15.247 (d)	2.4 and 6.6	6.13 and 8.9	Spurious Radiated Emissions	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.3	15.247 (a)(2)	6.3.1	6.7	Emission Bandwidth	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.4	15.247 (b)	6.3.2	6.12	Maximum Conducted Output Power	Pass	ANSI C63.10-2020 +Cor.1-2023+C63.10a-2024
2.5	15.247 (d)	6.6	N/A	Authorised Band Edges	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

Table 2



1.4 RSP-100 Form B information

The following information is required for RSP-100 Form B:

Requirement	Band 1
RSS# and Issue #	ISED RSS-247, Issue 4 (2025-07),
Frequency Minimum (MHz)	2402
Frequency Maximum (MHz)	2480
RF Power Minimum (W) Conducted (Peak)	0.001044W
RF Power Maximum (W) Conducted (Peak)	0.001109W
Field Strength	2402 MHz 90.54 dBuV/m, 2440 MHz 89.44 dBuV/m, 2480 MHz 88.82 dBuV/m (All @ 3m)
Measured Bandwidth (kHz) (99%)	1088 kHz 99% BW
Calculated BW as per TRC-43	N/A
Modulation Type	GFSK
Emissions Classification	N/A
Spurious Emissions Radiated	4960 MHz 45.66 dBuV/m @ 3m.(Restricted band worst Margin)

Table 3



1.5 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 equipment under test (EUT) is a hand-held remote control for use with LEGO units. The remote control communicates with a motor driver (HUB NO.26) via Bluetooth. EUTs consist of a PCB located inside a plastic enclosure. HANDSET NO.6 is powered by 4x1.5V AAA alkaline cells (6Vdc). Battery cells are located inside a battery compartment where access can only be made with a tool (1 screw is used). Equipment is a toy for use by small children and has been evaluated both as handheld and transportable equipment. Designed for indoor use.		
Manufacturer:	LEGO Systems A/S		
Model Number(s)	HANDSET NO.6		
Hardware Version Identification Number (HVIN): <i>The HVIN identifies hardware specification of a product version</i>	HANDSET NO.6		
Hardware Version: <i>May be same as HVIN.</i>	F		
Software Version:	V2.0.00.0320		
For definitions of the above terms refer to RSS-GEN Section 9.			
FCC ID of the product under test – see guidance here	NPI116360		
IC ID of the product under test – see guidance here	3072A-116360		
Device Category	Mobile ☐	Portable ☒	Fixed ☐
Equipment is fitted with an Audio Low Pass Filter	Yes ☐	No ☒	

Table 4

Intentional Radiators

Technology	2.4 GHz Bluetooth Low Energy			
Frequency Range (MHz to MHz)	2400 – 2483.5			
Conducted Declared Output Power (dBm)	-0.5 dBm			
Antenna Gain (dBi)	-1.85			
Supported Bandwidth(s) (MHz) (e.g. 1 MHz, 20 MHz, 40 MHz)	1 MHz			
Modulation Scheme(s) (e.g. GFSK, QPSK etc)	GFSK			
ITU Emission Designator (see guidance here) (not mandatory for Part 15 devices)	N/A			
Bottom Frequency (MHz)	2402			
Middle Frequency (MHz)	2440			
Top Frequency (MHz)	2480			

Table 5

Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	2483.5MHz
Lowest frequency generated or used in the device or on which the device operates or tunes	784Hz
Class A Digital Device (Use in commercial, industrial or business environment) ☐	
Class B Digital Device (Use in residential environment only) ☒	

Table 6

AC Power Source

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

Table 7

DC Power Source

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

Table 8



Battery Power Source

Voltage:	6	V
End-point voltage:	None	V (Point at which the battery will terminate)
Alkaline ☒ Leclanche ☐ Lithium ☐ Nickel Cadmium ☐ Lead Acid* ☐ *(Vehicle regulated)		
Other ☐	Please detail:	

Table 9

Charging

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

Table 10

Temperature

Minimum temperature:	0	°C
Maximum temperature:	60	°C

Table 11

Cable Loss

Adapter Cable Loss (Conducted sample)	Cable + Connector 0.25dB + 0.25dB = 0.5dB	0.5 dB
--	--	--------

Table 12

Antenna Characteristics

Antenna connector ☐			State impedance	NA	Ohm
Temporary antenna connector ☒			State impedance	50	Ohm
Integral antenna ☒	Type:	Ceramic Antenna	Gain	-1.85	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 professionally 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 13

Ancillaries (if applicable)

Manufacturer:		Part Number:	
Model:		Country of Origin:	

Table 14

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



Name: Uffe Rune Gøtterup
Position held: Compliance Manager
Date: 25-March-2026



1.6 Product Information

1.6.1 Technical Description

The equipment under test (EUT) is a hand-held remote control for use with LEGO units.
The remote control communicates with a motor driver (HUB NO.26) via Bluetooth.
EUTs consist of a PCB located inside a plastic enclosure.
HANDSET NO.6 is powered by 4x1.5V AAA alkaline cells (6Vdc).
Battery cells are located inside a battery compartment where access can only be made with a tool (1 screw is used).
Equipment is a toy for use by small children and has been evaluated both as handheld and transportable equipment.
Designed for indoor use

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
Model: HANDSET NO.6, Serial Number: Not Serialised (FAR-1024092-89)			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: HANDSET NO.6, Serial Number: Not Serialised (FAR-1028351-41)			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 15

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: 2.4 GHz Bluetooth Low Energy		
Restricted Band Edges	Pier-Angelo Lorusso	UKAS
Emission Bandwidth	George Williams	UKAS
Maximum Conducted Output Power	George Williams	UKAS
Authorised Band Edges	Pier-Angelo Lorusso	UKAS
Spurious Radiated Emissions	Pier-Angelo Lorusso	UKAS
Power Spectral Density	George Williams	UKAS

Table 16

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, Clause 2.4
ISED RSS-GEN, Clause 8.10

2.1.2 Equipment Under Test and Modification State

HANDSET NO.6, S/N: Not Serialised (FAR-1024092-89) - Modification State 0

2.1.3 Date of Test

05-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.

The DUT was powered with 4x1.5V AAA internal alkaline batteries.

The DUT was configured to transmit via settings 4, 5 & 6 (Customer Approval Test Mode Document) at Maximum Burst power, 1 MHz Bandwidth and 100% Duty cycle.

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:
 $10^{(\text{Field Strength in dB}\mu\text{V/m}/20)}$.

2.1.5 Test Setup Diagram

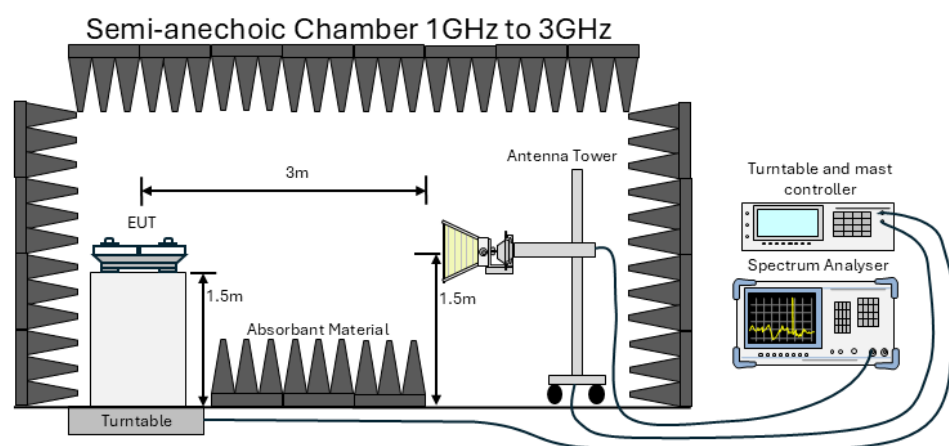


Figure 1

2.1.6 Environmental Conditions

Ambient Temperature 22.5 °C
Relative Humidity 32.9 %

2.1.7 Test Results

2.4 GHz Bluetooth Low Energy

Mode	Modulation	Packet Type	Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBμV/m)
BLE1M	GFSK	Continuous Modulated Stream	2402	2390.0	47.59	35.54
BLE1M	GFSK	Continuous Modulated Stream	2480	2483.5	48.67	36.70

Table 17

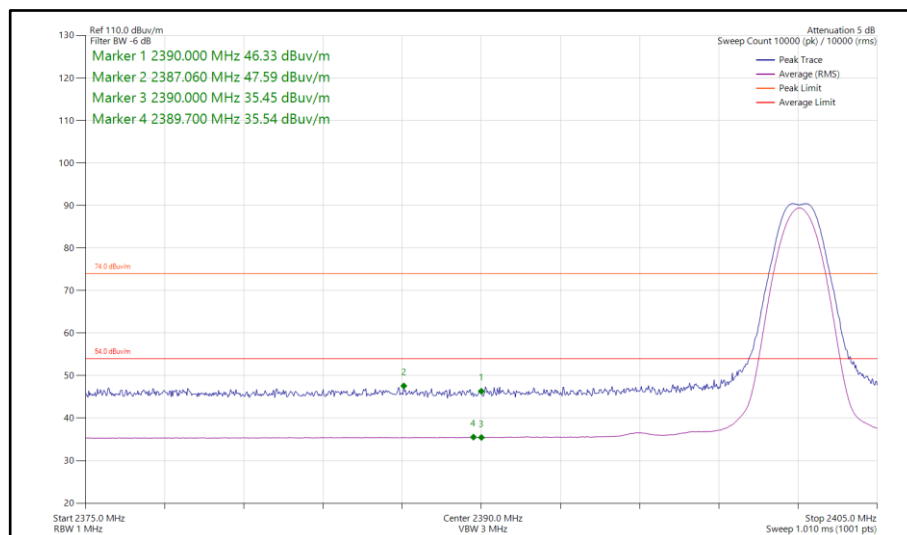


Figure 2 - CH37_LRB_LE1M, 2402 MHz, Band Edge Frequency 2390 MHz

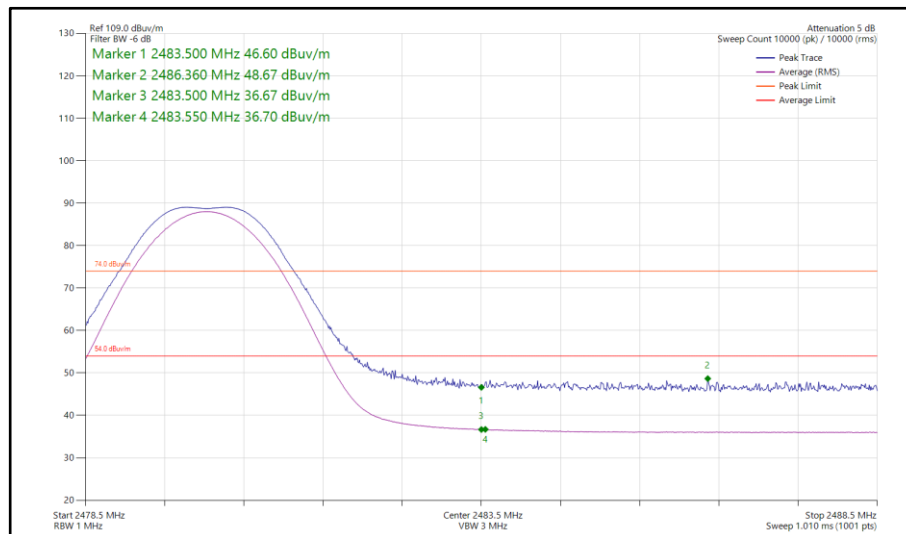


Figure 3 - CH39_URB_LE1M, 2480 MHz, Band Edge Frequency 2483.5 MHz

2.1.8 Specification Limits

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 18

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 19

*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.



2.1.9 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	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
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5476	12	05-Feb-2027
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	14-Aug-2026
2m Coaxial Cable Assy	Junkosha	MWX221-02000AMSAMS/A	6360	12	13-May-2026
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7049	12	01-Jun-2026

Table 20

TU - Traceability Unscheduled



2.2 Spurious Radiated Emissions

2.2.1 Specification Reference

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

2.2.2 Equipment Under Test and Modification State

HANDSET NO.6, S/N: Not Serialised (FAR-1024092-89) - Modification State 0

2.2.3 Date of Test

05-May-2026 to 07-May-2026

2.2.4 Test Method

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

The DUT was powered with 4x1.5V AAA internal alkaline batteries.

The DUT was configured to transmit via settings 4, 5 & 6 (Customer Approval Test Mode Document) at Maximum Burst power, 1 MHz Bandwidth and 100% Duty cycle.

For frequencies > 1 GHz, plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2.

The EUT was placed on the non-conducting platform in a manner typical of a normal installation. As the EUT was considered mobile/portable and therefore reasonable to be used in multiple planes, pre-scans were performed with the EUT orientated in X, Y and Z planes with reference to the ground plane.

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:
 $10^{(\text{Field Strength in dB}\mu\text{V/m}/20)}$

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.

At a measurement distance of 1 meter 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.

2.2.5 Test Setup Diagram

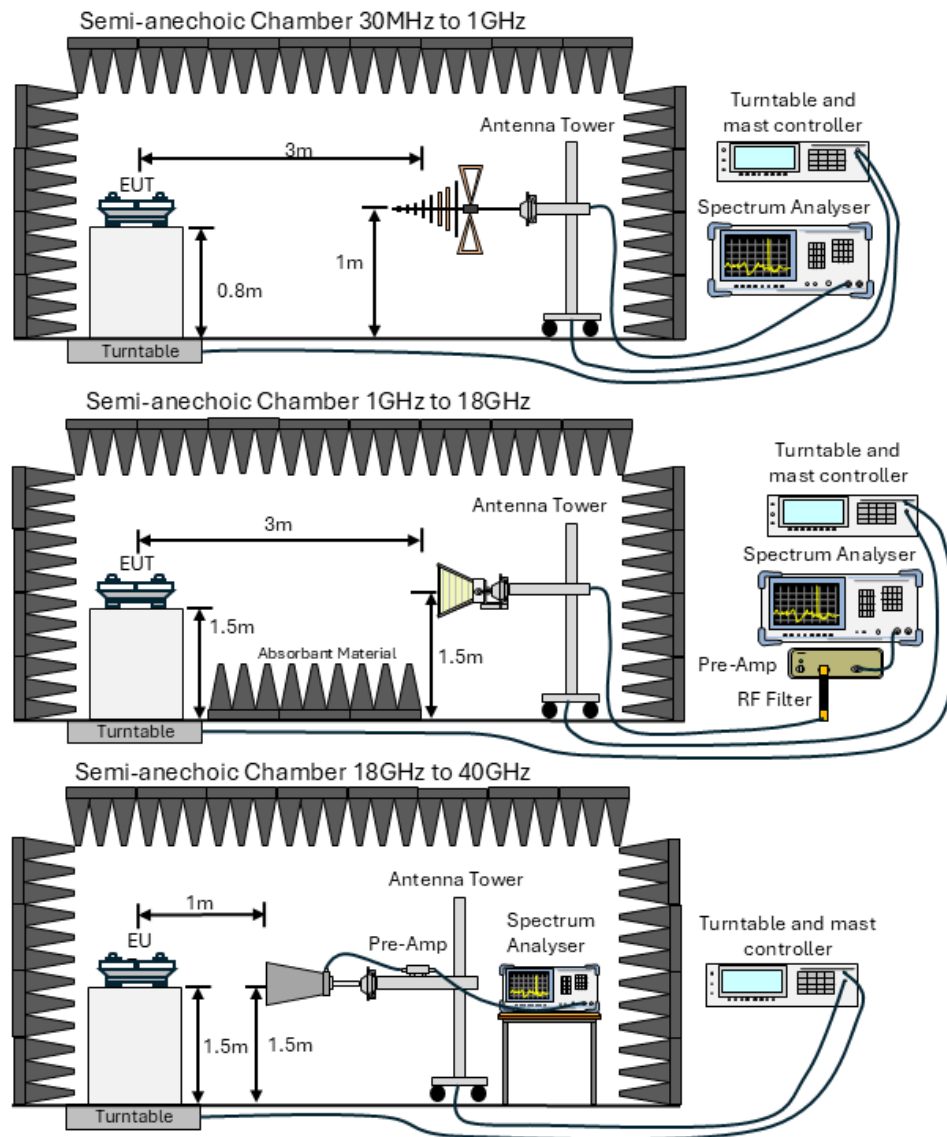


Figure 4

2.2.6 Environmental Conditions

Ambient Temperature	22.6 - 23.6 °C
Relative Humidity	34.0 - 44.8 %

2.2.7 Test Results

2.4 GHz Bluetooth Low Energy

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 21 - CH37_LE1M_X Plane, 2402 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

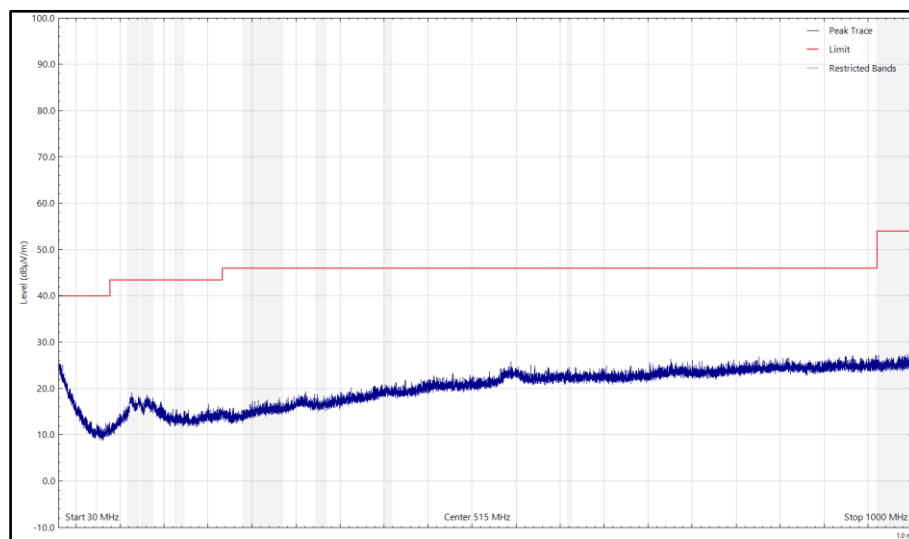


Figure 5 - CH37_LE1M_X Plane, 2402 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

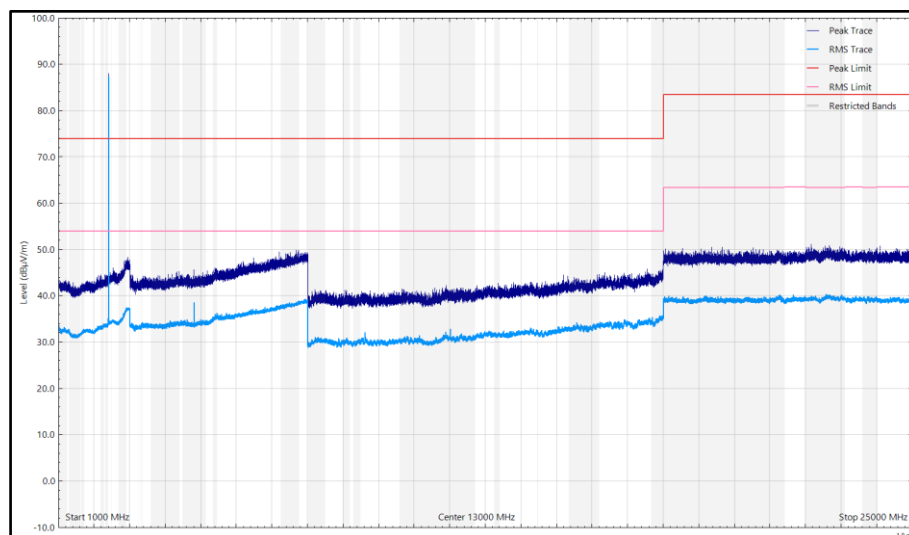


Figure 6 - CH37_LE1M_X Plane, 2402 MHz, 1 GHz to 25 GHz, Horizontal

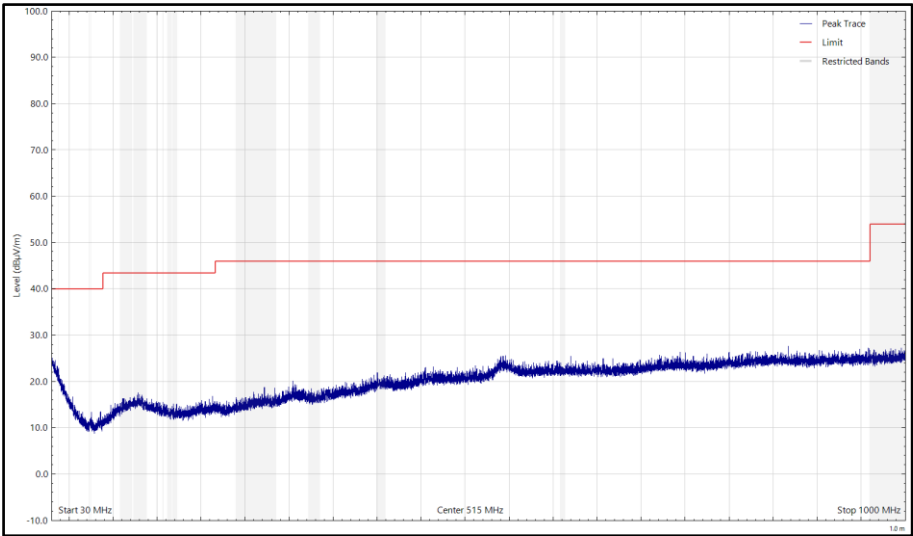


Figure 7 - CH37_LE1M_X Plane, 2402 MHz, 30 MHz to 1 GHz, Vertical (Peak)

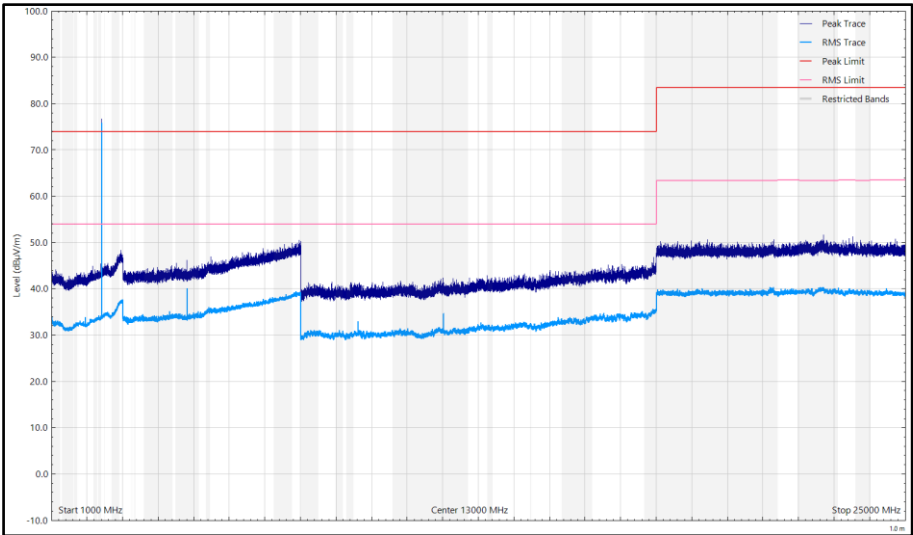


Figure 8 - CH37_LE1M_X Plane, 2402 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 22 - CH37_LE1M_Y Plane, 2402 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

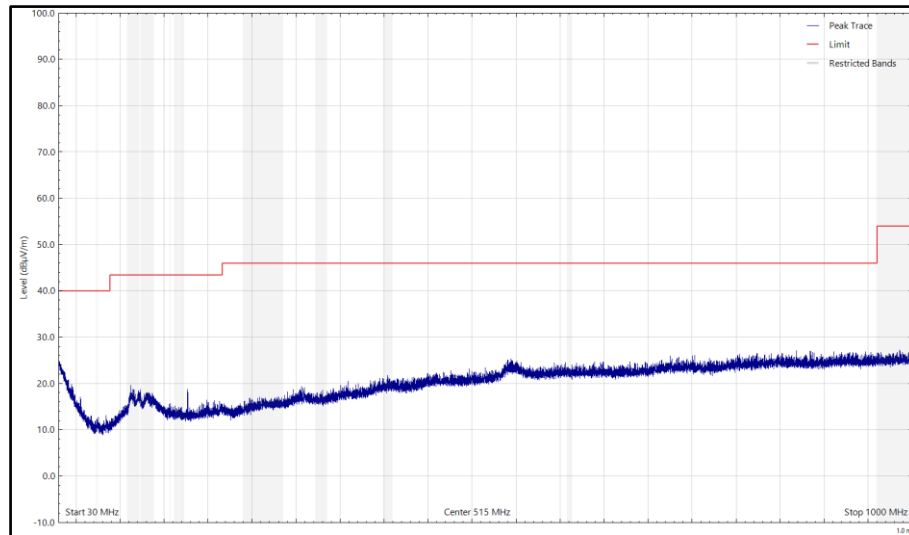


Figure 9 - CH37_LE1M_Y Plane, 2402 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

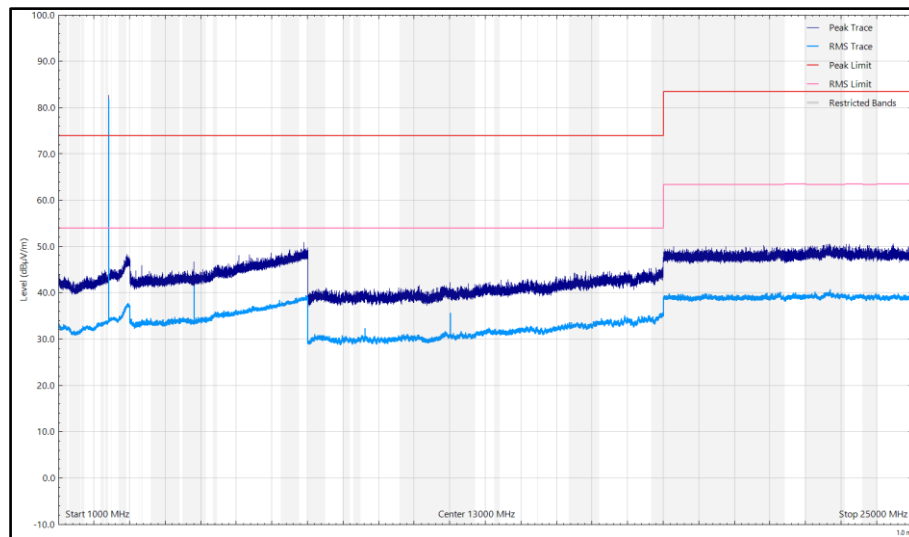


Figure 10 - CH37_LE1M_Y Plane, 2402 MHz, 1 GHz to 25 GHz, Horizontal

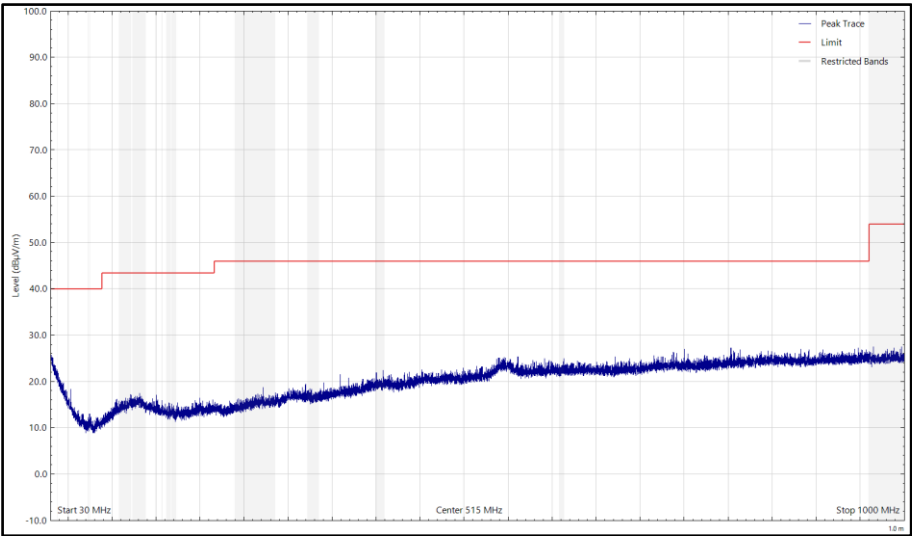


Figure 11 - CH37_LE1M_Y Plane, 2402 MHz, 30 MHz to 1 GHz, Vertical (Peak)

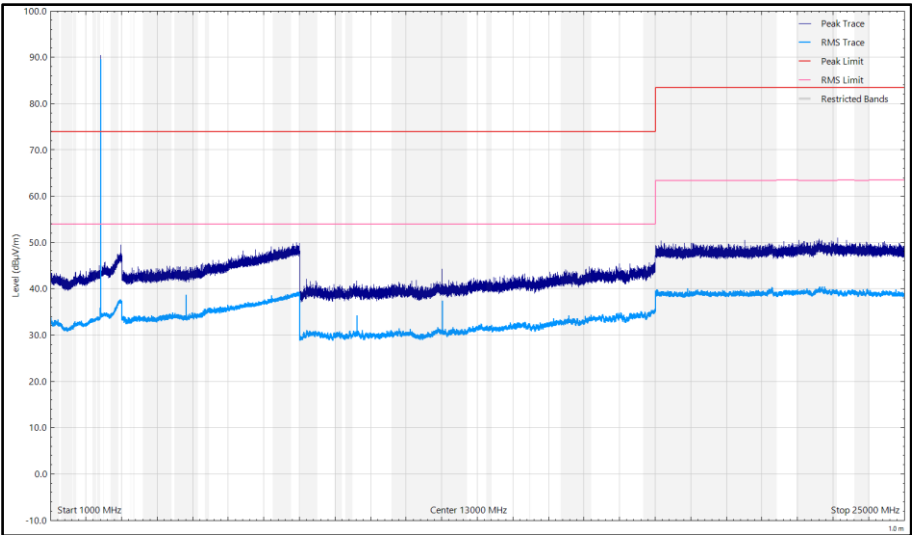


Figure 12 - CH37_LE1M_Y Plane, 2402 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 23 - CH37_LE1M_Z Plane, 2402 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

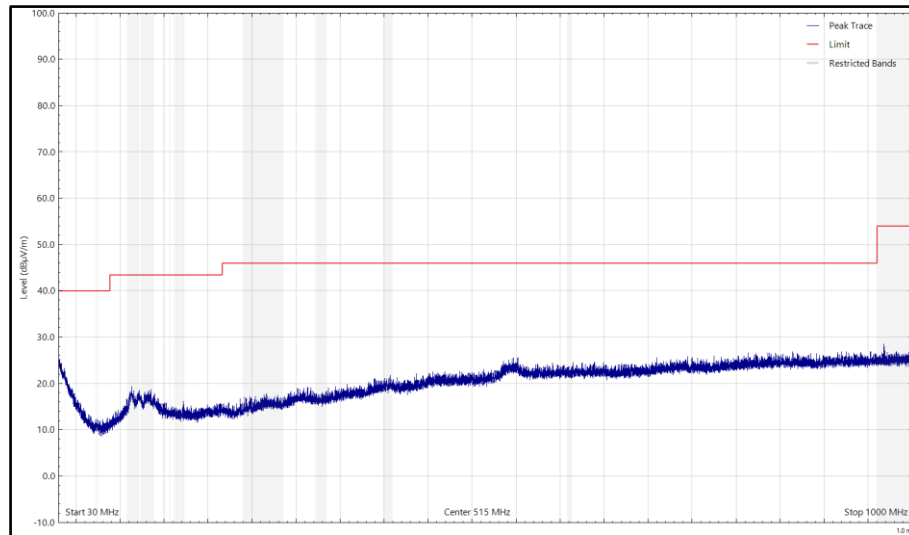


Figure 13 - CH37_LE1M_Z Plane, 2402 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

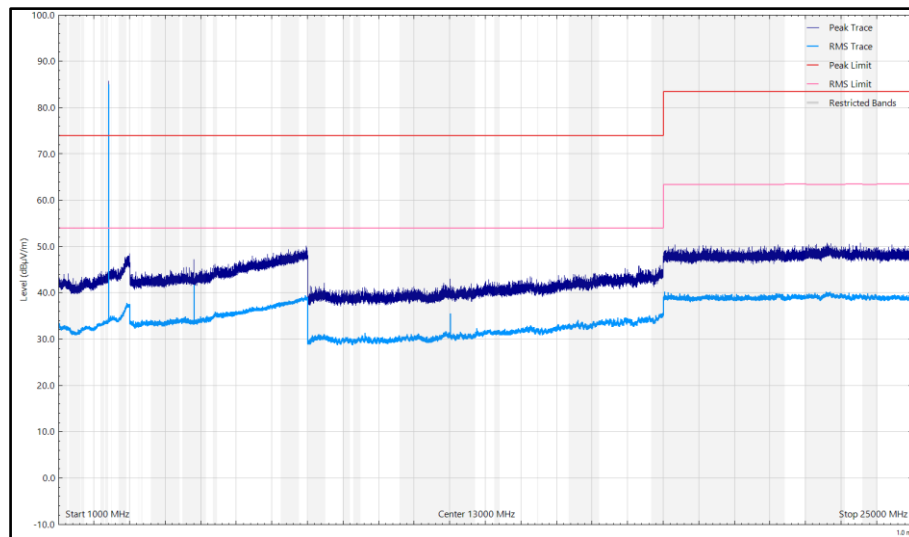


Figure 14 - CH37_LE1M_Z Plane, 2402 MHz, 1 GHz to 25 GHz, Horizontal

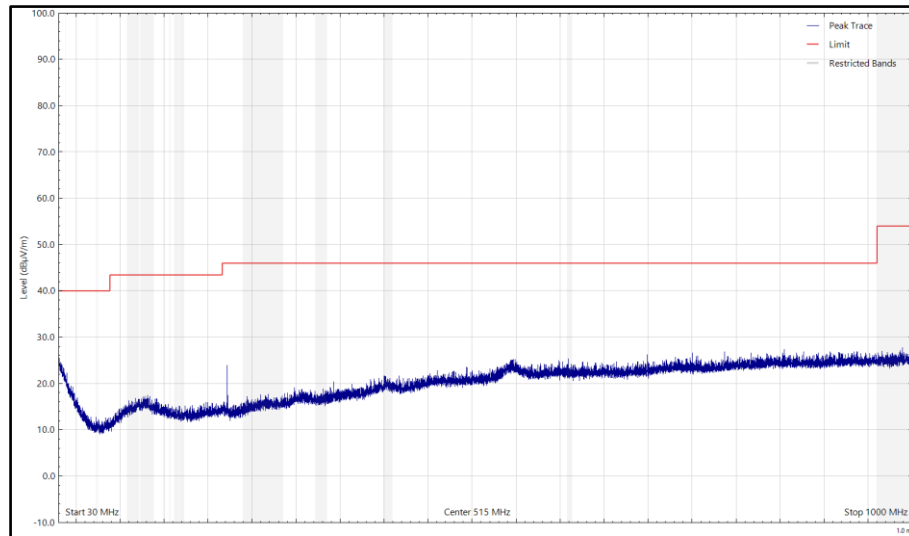


Figure 15 - CH37_LE1M_Z Plane, 2402 MHz, 30 MHz to 1 GHz, Vertical (Peak)

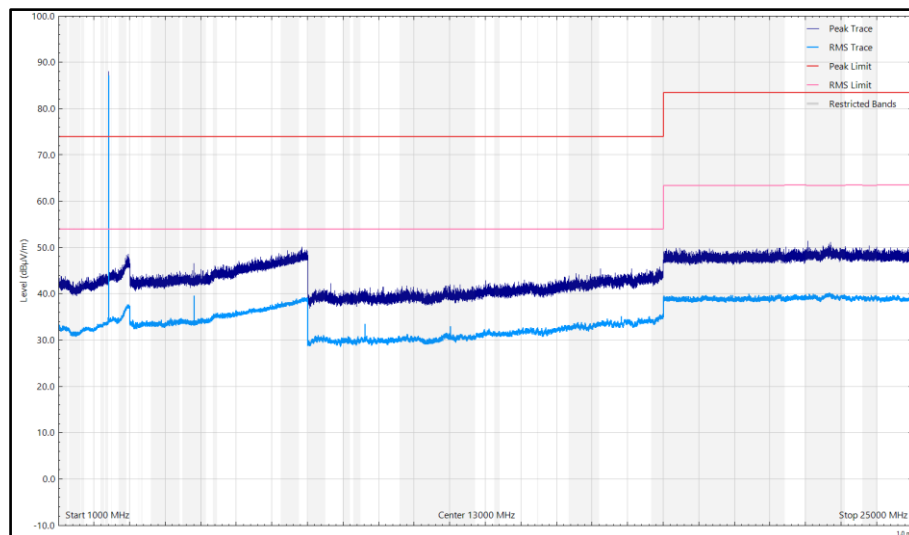


Figure 16 - CH37_LE1M_Z Plane, 2402 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 24 - CH17_LE1M_X Plane, 2440 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

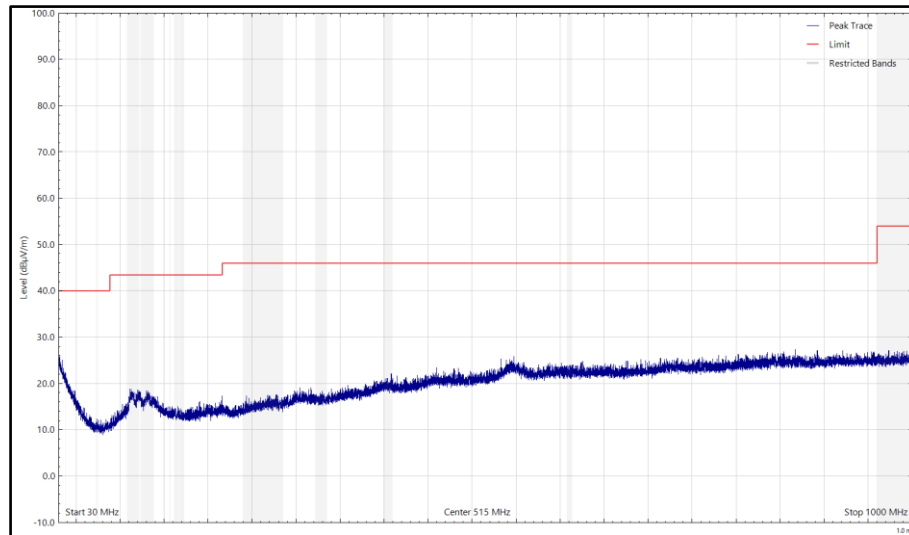


Figure 17 - CH17_LE1M_X Plane, 2440 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

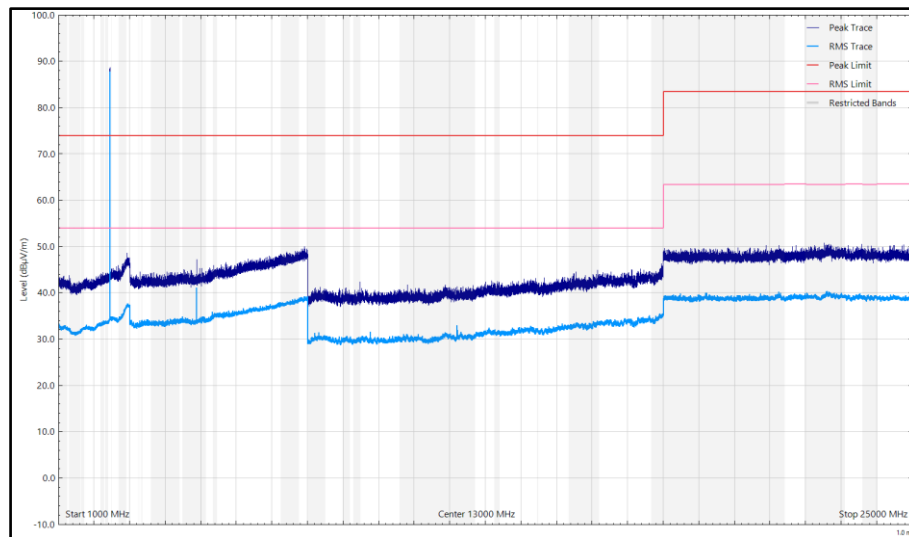


Figure 18 - CH17_LE1M_X Plane, 2440 MHz, 1 GHz to 25 GHz, Horizontal

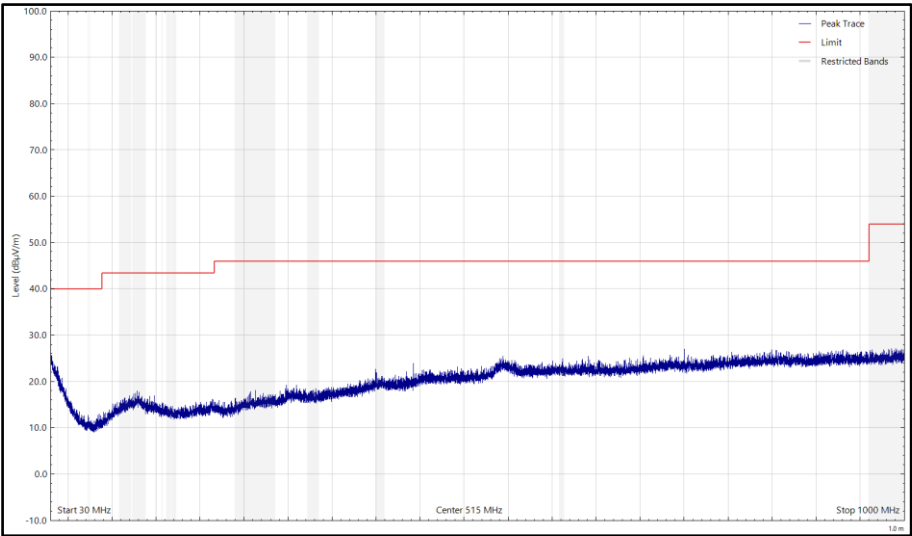


Figure 19 - CH17_LE1M_X Plane, 2440 MHz, 30 MHz to 1 GHz, Vertical (Peak)

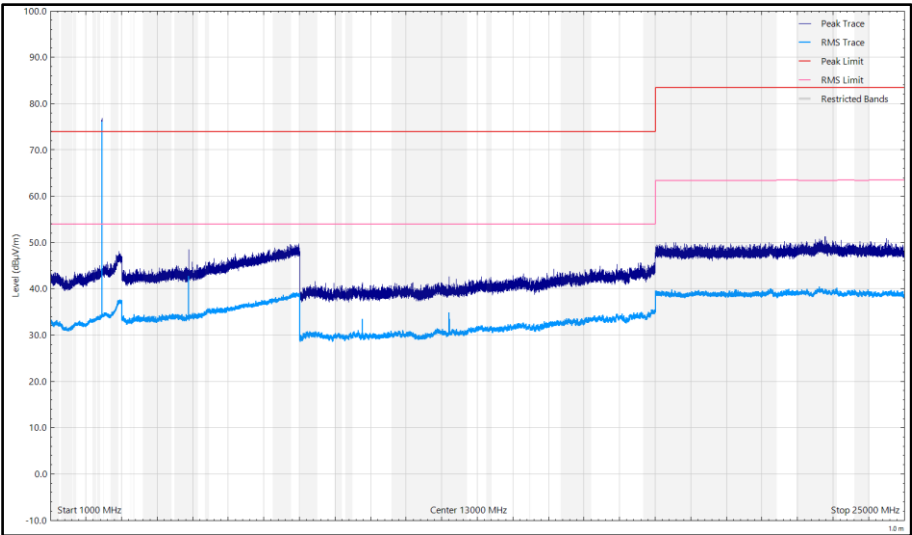


Figure 20 - CH17_LE1M_X Plane, 2440 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4880.110	44.20	54.00	-9.80	RMS	302	200	Horizontal

Table 25 - CH17_LE1M_Y Plane, 2440 MHz, 30 MHz to 25 GHz

No other emissions found within 10 dB of the limit.

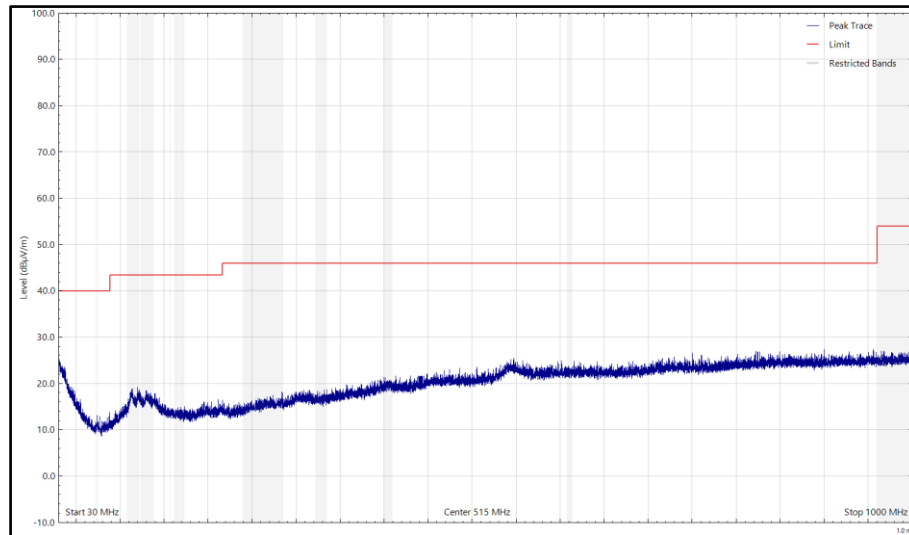


Figure 21 - CH17_LE1M_Y Plane, 2440 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

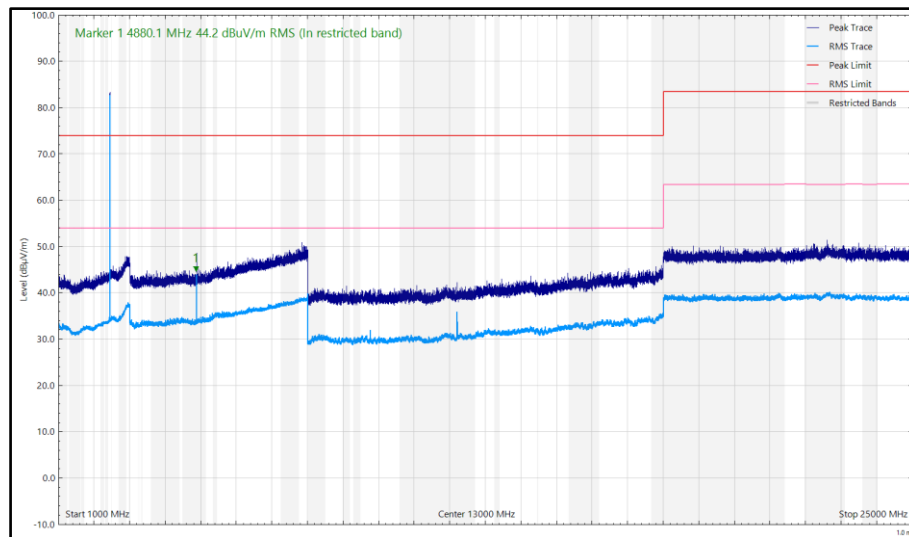


Figure 22 - CH17_LE1M_Y Plane, 2440 MHz, 1 GHz to 25 GHz, Horizontal

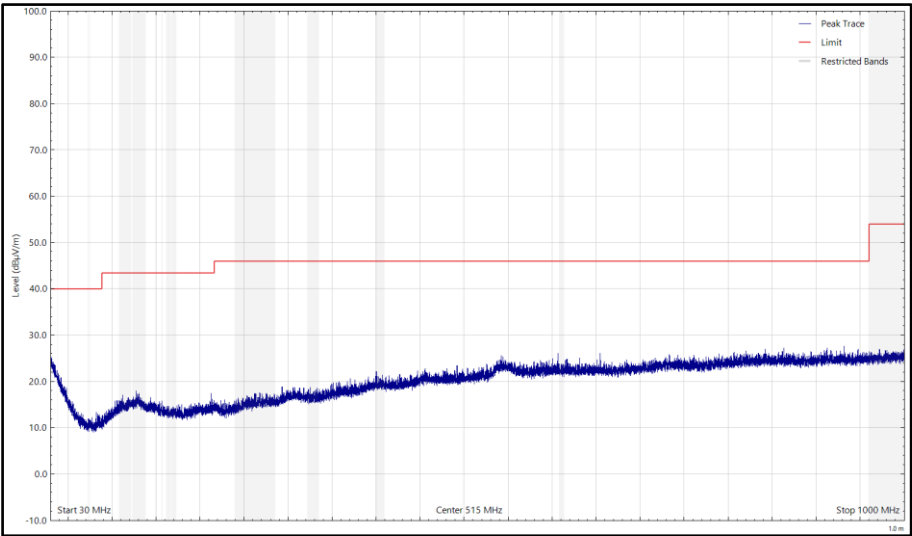


Figure 23 - CH17_LE1M_Y Plane, 2440 MHz, 30 MHz to 1 GHz, Vertical (Peak)

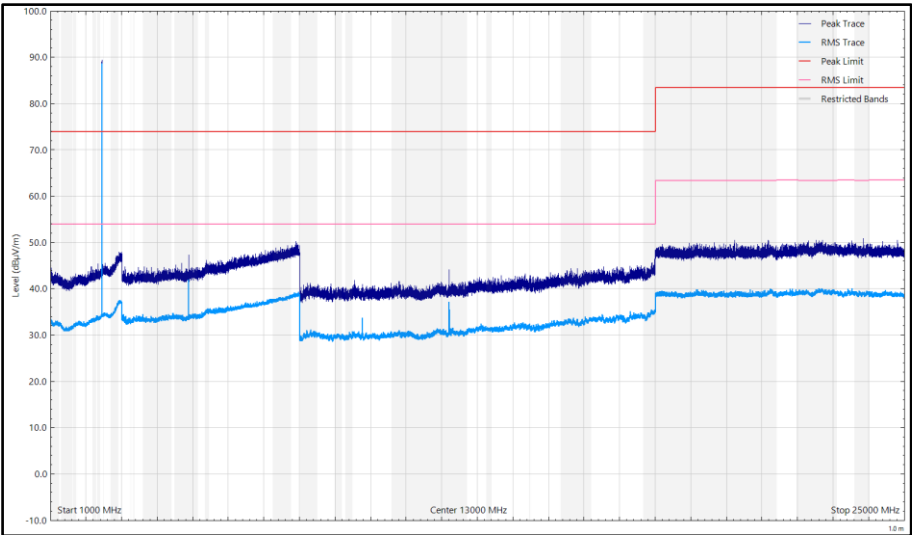


Figure 24 - CH17_LE1M_Y Plane, 2440 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 26 - CH17_LE1M_Z Plane, 2440 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

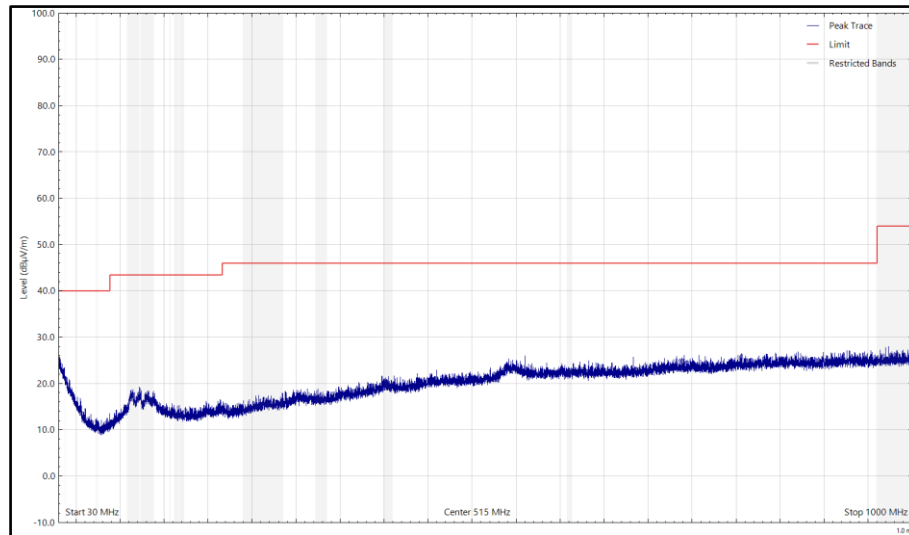


Figure 25 - CH17_LE1M_Z Plane, 2440 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

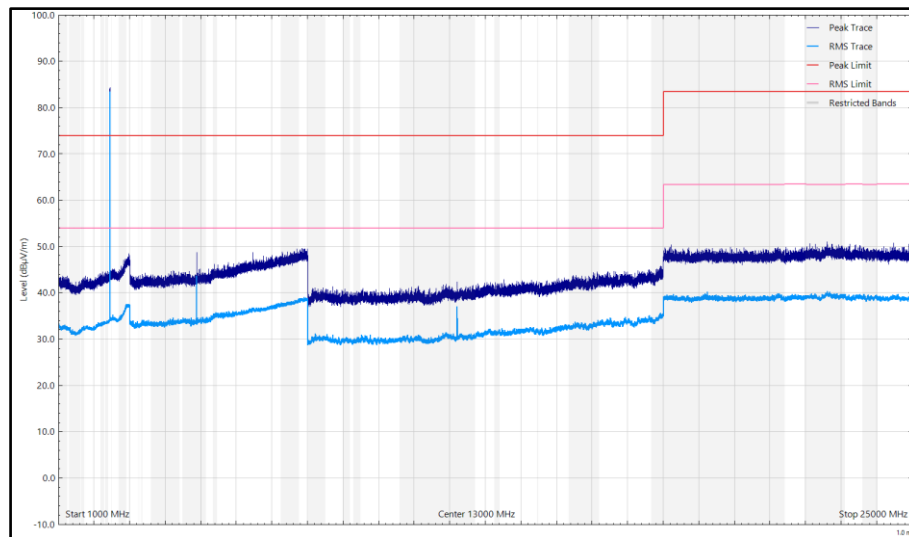


Figure 26 - CH17_LE1M_Z Plane, 2440 MHz, 1 GHz to 25 GHz, Horizontal

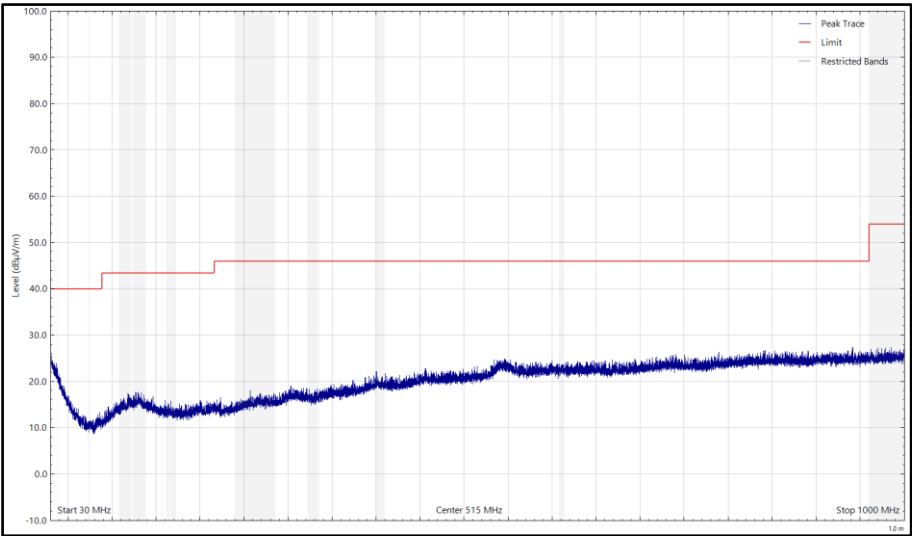


Figure 27 - CH17_LE1M_Z Plane, 2440 MHz, 30 MHz to 1 GHz, Vertical (Peak)

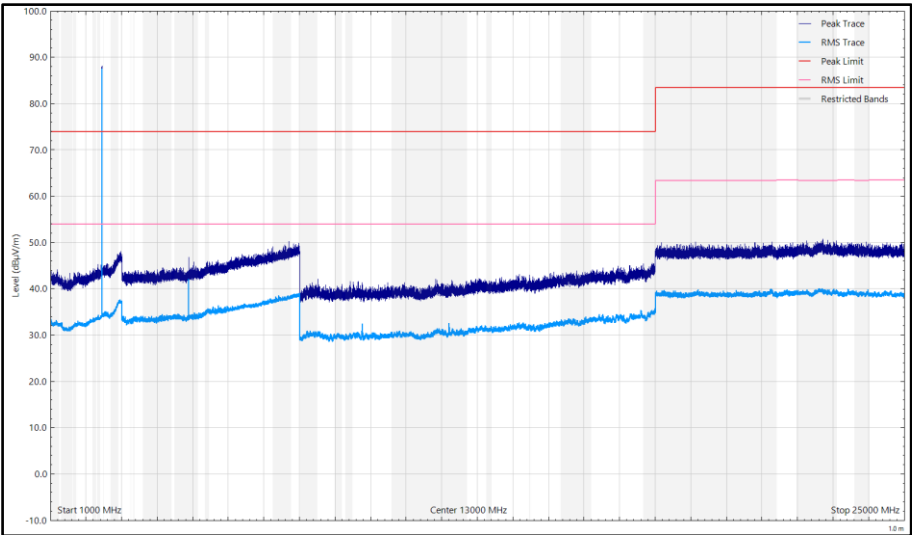


Figure 28 - CH17_LE1M_Z Plane, 2440 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4960.020	44.85	54.00	-9.15	RMS	55	293	Vertical

Table 27 - CH39_LE1M_X Plane, 2480 MHz, 30 MHz to 25 GHz

No other emissions found within 10 dB of the limit.

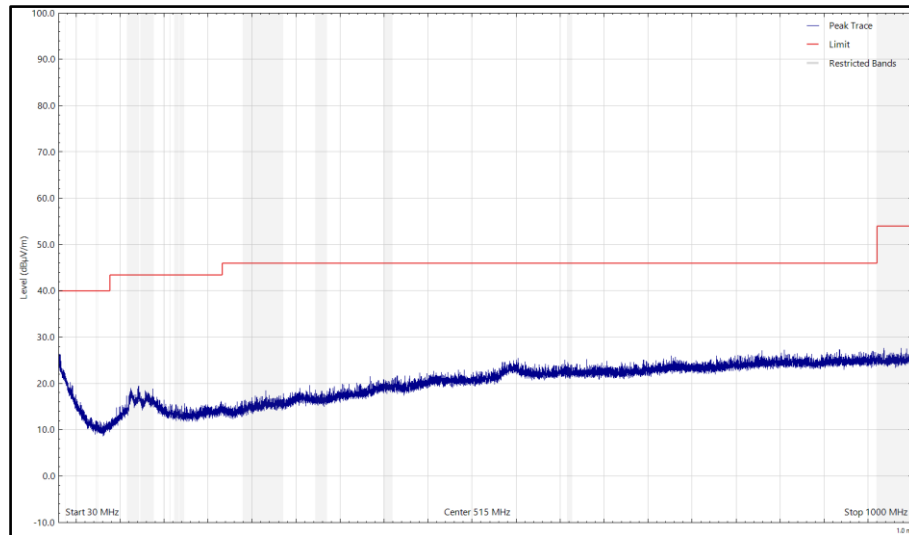


Figure 29 - CH39_LE1M_X Plane, 2480 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

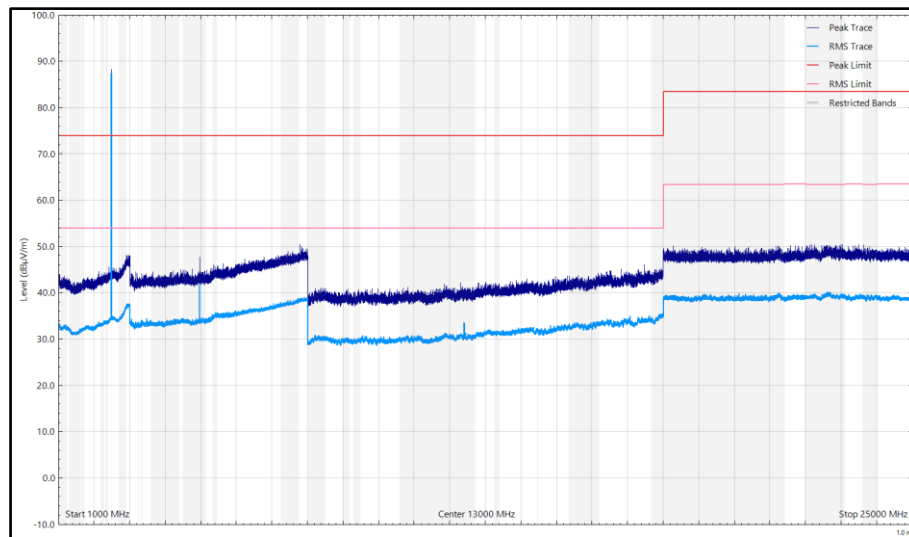


Figure 30 - CH39_LE1M_X Plane, 2480 MHz, 1 GHz to 25 GHz, Horizontal

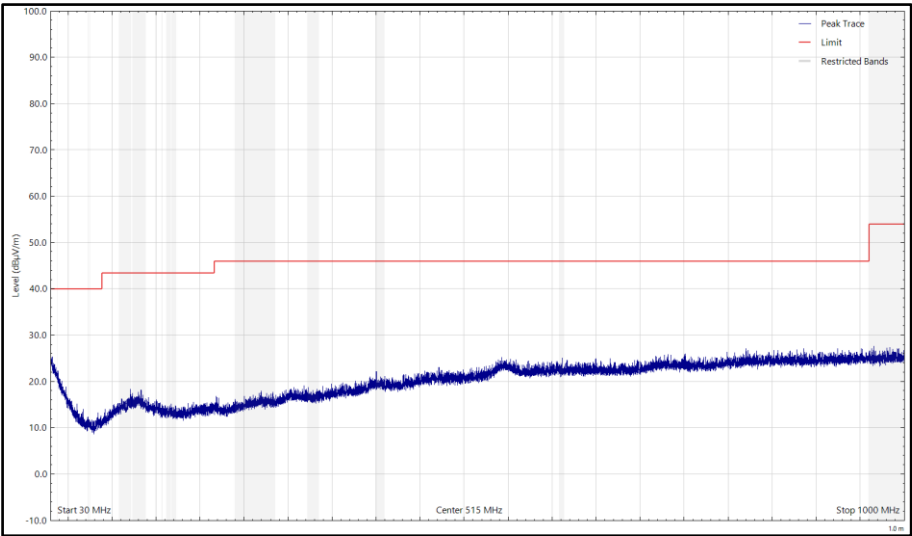


Figure 31 - CH39_LE1M_X Plane, 2480 MHz, 30 MHz to 1 GHz, Vertical (Peak)

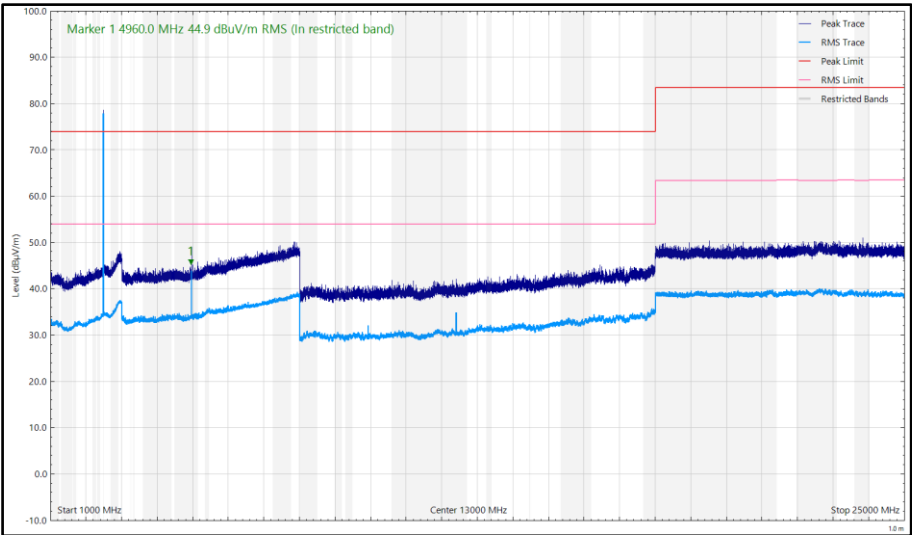


Figure 32 - CH39_LE1M_X Plane, 2480 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4960.050	45.66	54.00	-8.34	RMS	291	180	Horizontal

Table 28 - CH39_LE1M_Y Plane, 2480 MHz, 30 MHz to 25 GHz

No other emissions found within 10 dB of the limit.

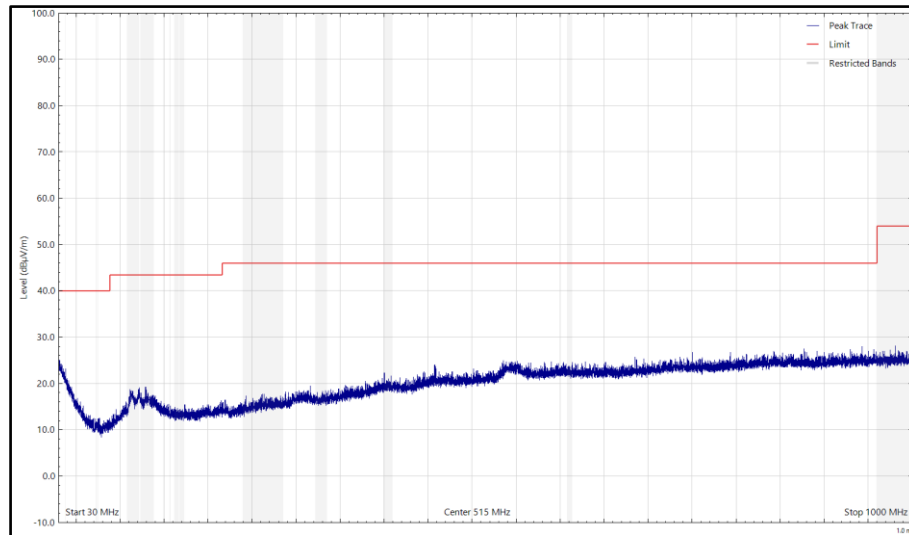


Figure 33 - CH39_LE1M_Y Plane, 2480 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

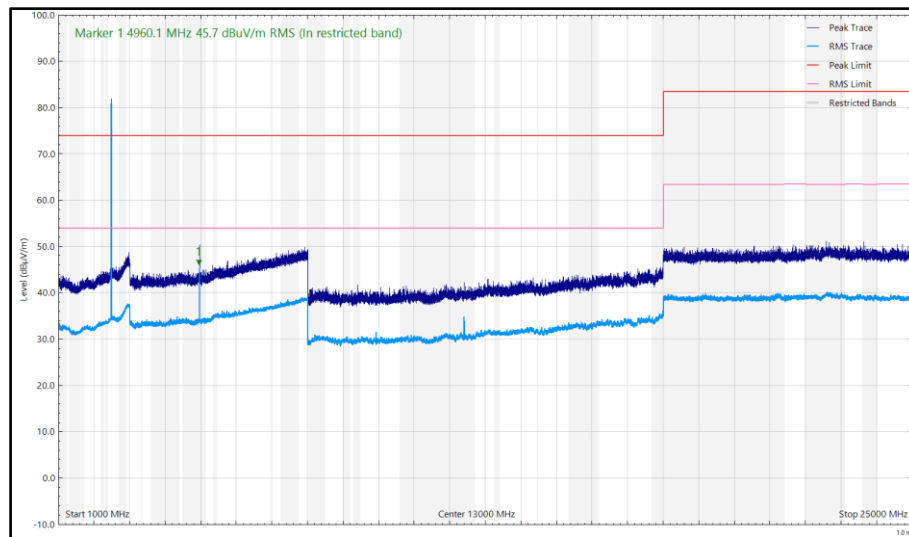


Figure 34 - CH39_LE1M_Y Plane, 2480 MHz, 1 GHz to 25 GHz, Horizontal

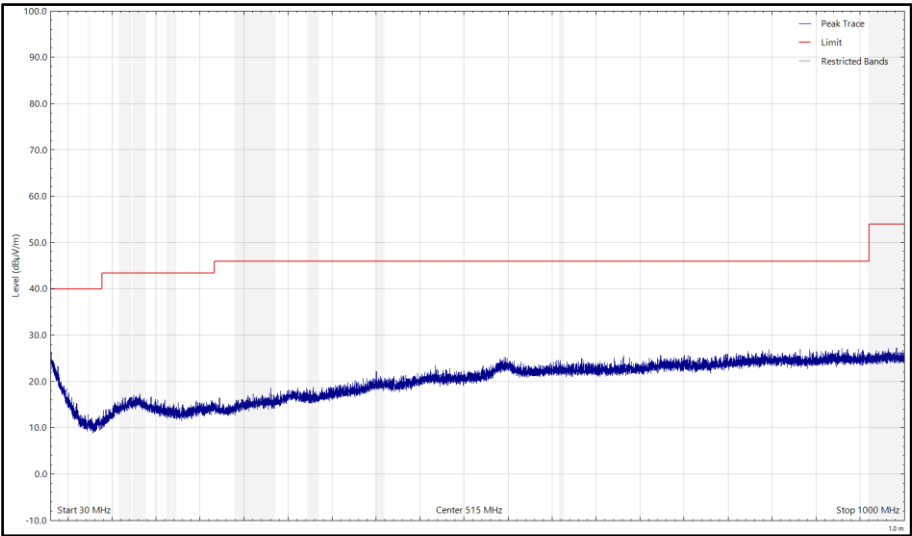


Figure 35 - CH39_LE1M_Y Plane, 2480 MHz, 30 MHz to 1 GHz, Vertical (Peak)

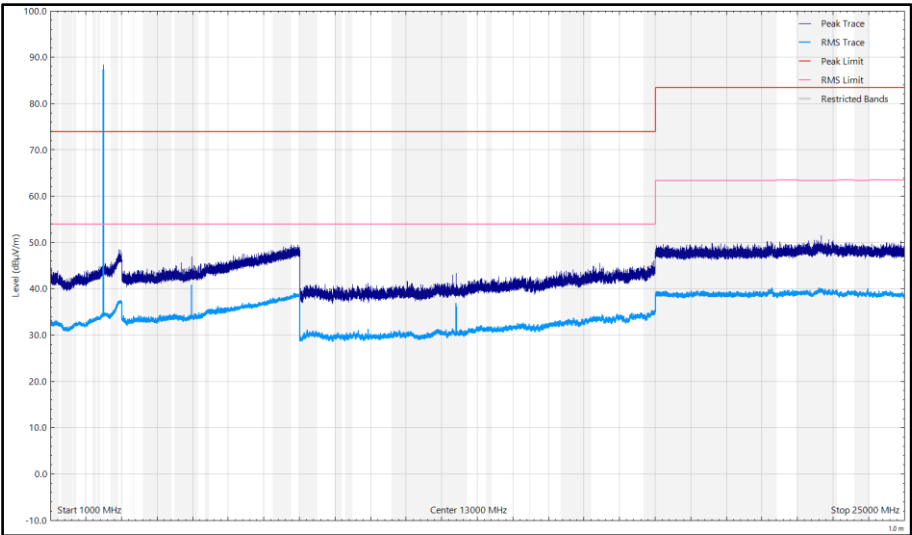


Figure 36 - CH39_LE1M_Y Plane, 2480 MHz, 1 GHz to 25 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 29 - CH39_LE1M_Z Plane, 2480 MHz, 30 MHz to 25 GHz

*No emissions found within 10 dB of the limit.

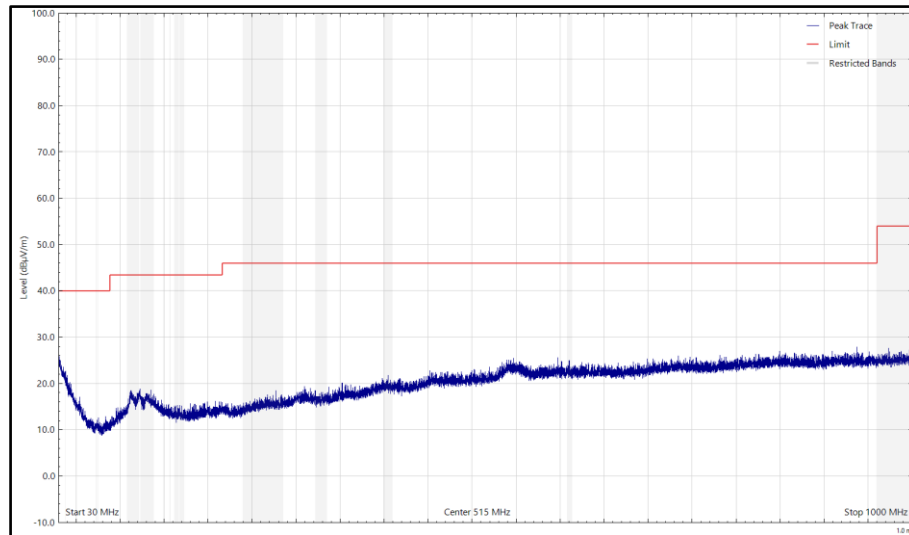


Figure 37 - CH39_LE1M_Z Plane, 2480 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

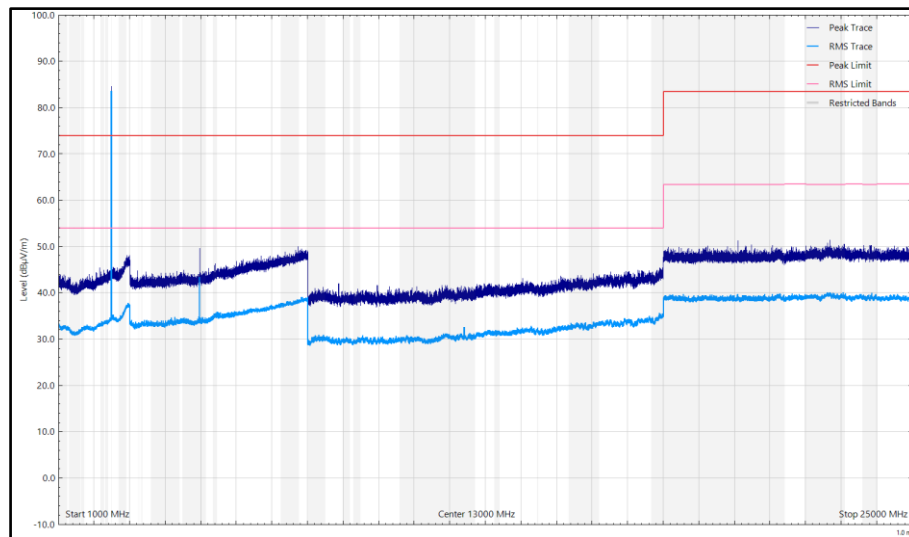


Figure 38 - CH39_LE1M_Z Plane, 2480 MHz, 1 GHz to 25 GHz, Horizontal

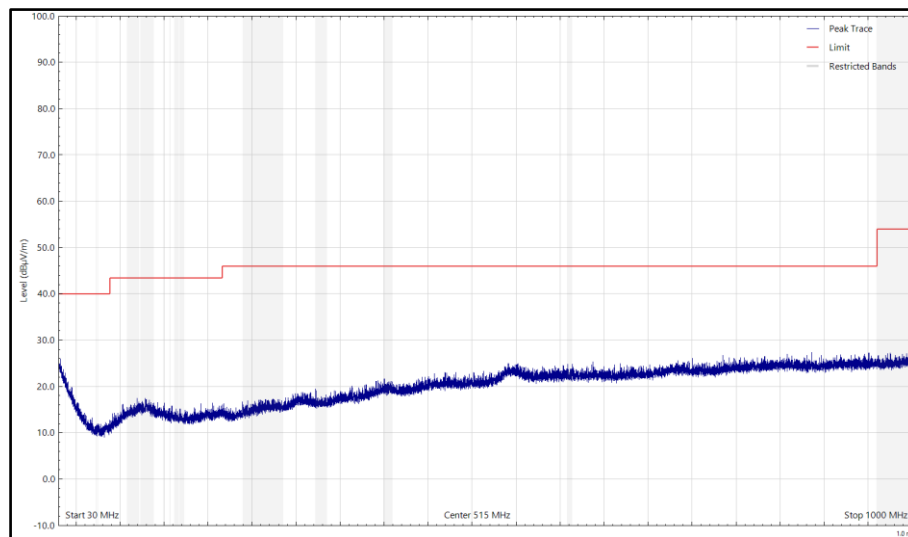


Figure 39 - CH39_LE1M_Z Plane, 2480 MHz, 30 MHz to 1 GHz, Vertical (Peak)

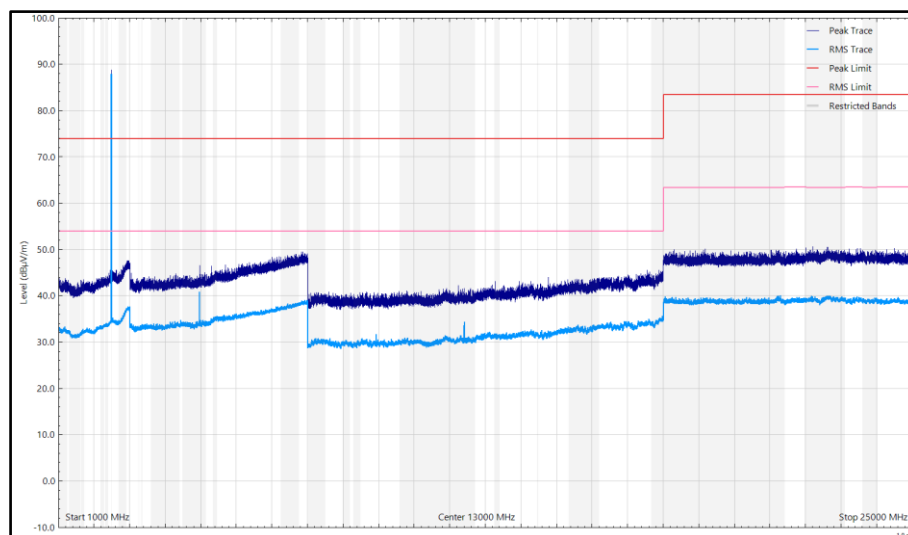


Figure 40 - CH39_LE1M_Z Plane, 2480 MHz, 1 GHz to 25 GHz, Vertical

2.2.1 Specification Limits

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.



2.2.2 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
Pre-Amplifier (18 GHz to 40 GHz)	Phase One	PSO4-0087	1534	12	20-Oct-2026
Programmable Power Supply	Iso-tech	IPS 2010	2437	-	O/P Mon
True RMS Multimeter	Fluke	179	4007	12	12-Jan-2027
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
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
Pre-Amplifier (1 GHz to 26.5 GHz)	Agilent Technologies	8449B	5445	12	10-Jul-2026
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5476	12	05-Feb-2027
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	5547	12	30-May-2026
7 GHz High pass Filter	Wainwright	WHKX12-5850-6800-18000-80SS	5550	12	30-May-2026
Pre-Amplifier (8 GHz to 18 GHz)	Wright Technologies	APS06-0061	5595	12	28-Oct-2026
1m K-Type Cable	Junkosha	MWX221/B	5908	12	04-Nov-2026
Cable (K-Type to K-Type, 2 m)	Junkosha	MWX241-02000KMSKMS/B	5934	12	12-Jun-2026
2m Coaxial Cable Assy	Junkosha	MWX221-02000AMSAMS/A	6360	12	13-May-2026
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	6635	24	25-Jul-2027
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7049	12	01-Jun-2026

Table 30

TU - Traceability Unscheduled

O/P Mon – Output Monitored using calibrated equipment

2.3 Emission Bandwidth

2.3.1 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

2.3.2 Equipment Under Test and Modification State

HANDSET NO.6, S/N: Not Serialised (FAR-1028351-41) - Modification State 0

2.3.3 Date of Test

05-May-2026

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 set to transmit a continuous modulated stream via settings 4, 5 & 6 (Customer Approval Test Mode Document).
The EUT was powered by 4x1.5V AAA internal alkaline batteries which were fully charged prior to the commencement of the test.

2.3.5 Test Setup Diagram

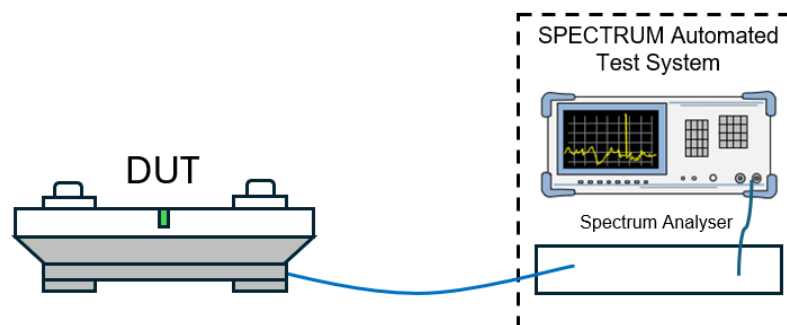


Figure 41 – Test Setup Diagram for Emission Bandwidth

2.3.6 Environmental Conditions

Ambient Temperature	21.3 °C
Relative Humidity	44.1 %



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 6.3.1(a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	BLE GFSK (LE 1M)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (SMA Pigtail)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	0.716	-	-	-	≥500.0
2440	0.712	-	-	-	≥500.0
2480	0.708	-	-	-	≥500.0

Table 31 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.088	-	-	-	-
2440	1.088	-	-	-	-
2480	1.080	-	-	-	-

Table 32 - 99% Bandwidth Results

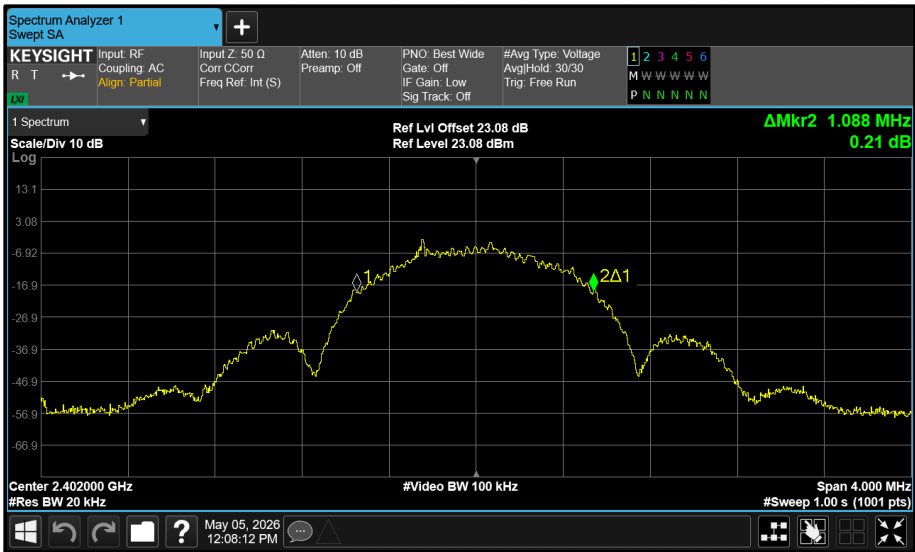


Figure 42 - SMA Pigtail (A) 2402 MHz (CH37) 99% Bandwidth

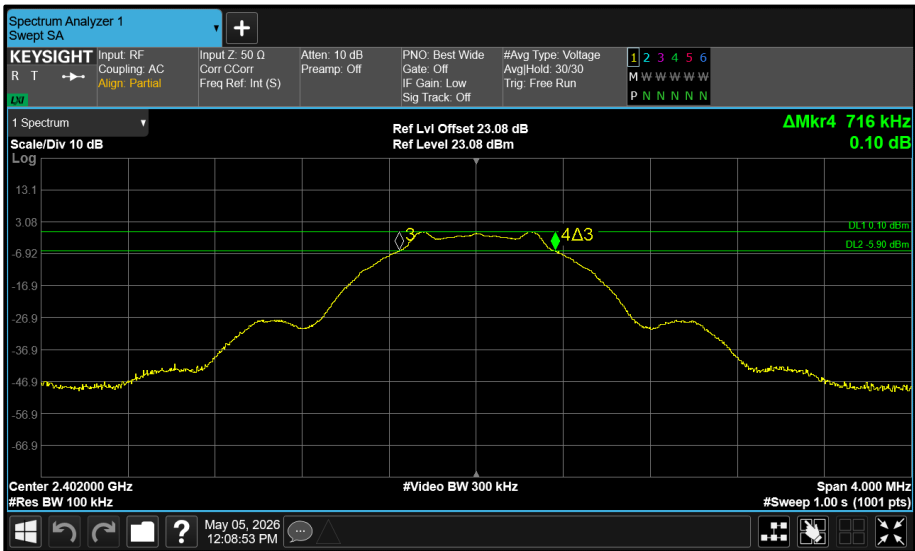


Figure 43 - SMA Pigtail (A) 2402 MHz (CH37) 6 dB Bandwidth

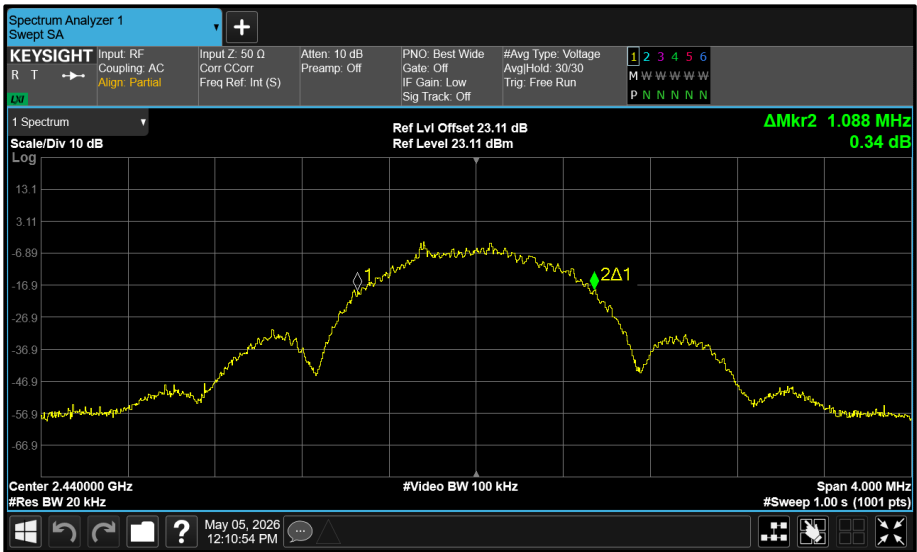


Figure 44 - SMA Pigtail (A) 2440 MHz (CH17) 99% Bandwidth

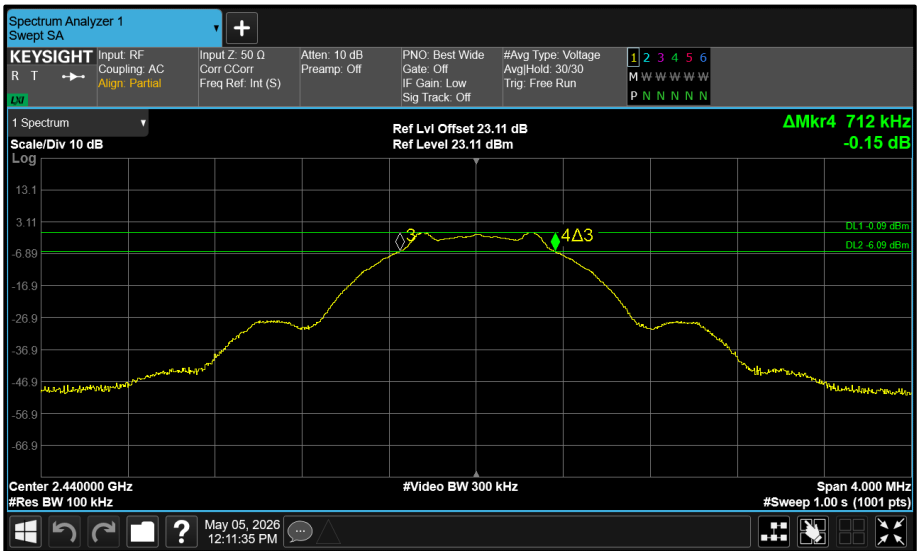


Figure 45 - SMA Pigtail (A) 2440 MHz (CH17) 6 dB Bandwidth

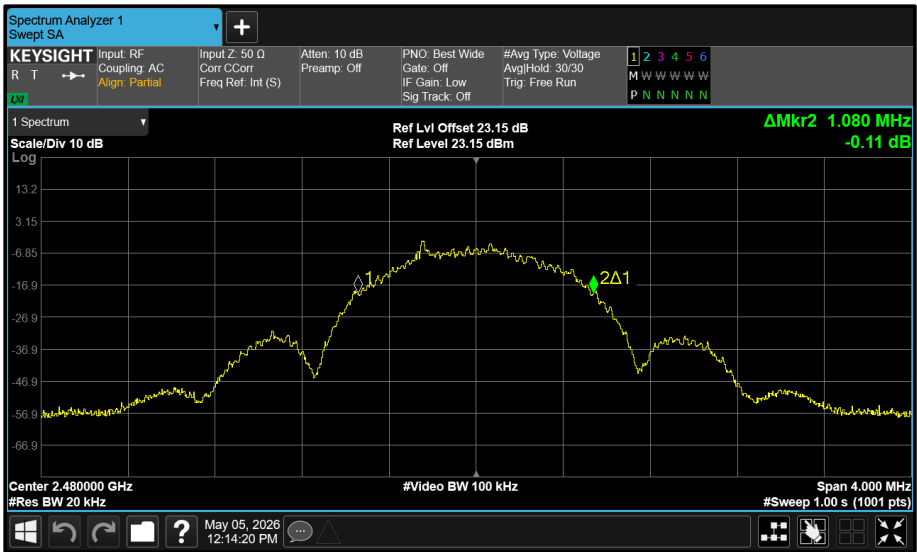


Figure 46 - SMA Pigtail (A) 2480 MHz (CH39) 99% Bandwidth

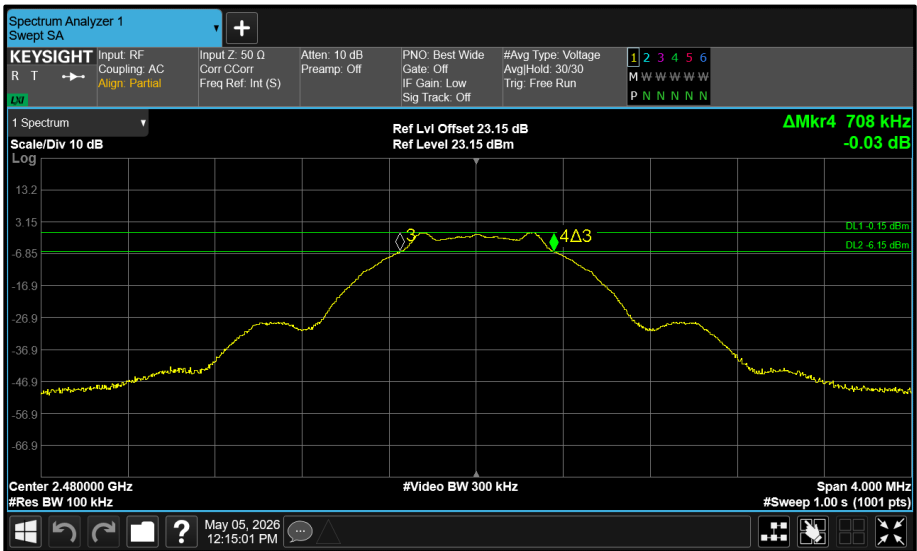


Figure 47 - SMA Pigtail (A) 2480 MHz (CH39) 6 dB Bandwidth



2.3.8 Specification Limits

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.

2.3.9 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
MXA Signal Analyser	Keysight Technologies	N9020B	5528	24	10-Sep-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Sep-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6638	12	29-Aug-2026

Table 33

2.4 Maximum Conducted Output Power

2.4.1 Specification Reference

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

2.4.2 Equipment Under Test and Modification State

HANDSET NO.6, S/N: Not Serialised (FAR-1028351-41)- Modification State 0

2.4.3 Date of Test

05-May-2026

2.4.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 11.9.1.2 Method PKPM1. The EUT was set to transmit a continuous modulated stream via settings 4, 5 & 6 (Customer Approval Test Mode Document). The EUT was powered by 4x1.5V AAA internal alkaline batteries which were fully charged prior to the commencement of the test.

2.4.5 Test Setup Diagram

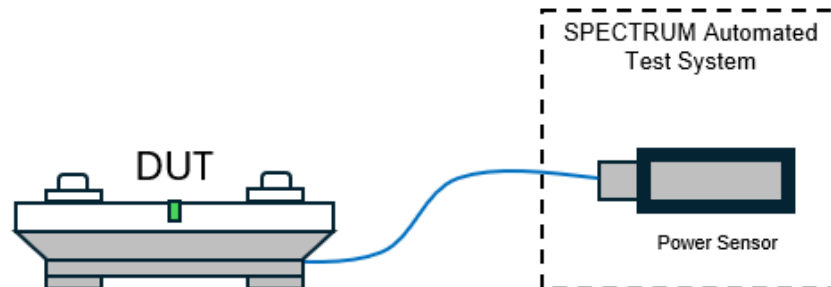


Figure 48 – Test Setup for Maximum Conducted Output Power

2.4.6 Environmental Conditions

Ambient Temperature	21.3 °C
Relative Humidity	44.1 %



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 6.3.2	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	BLE GFSK (LE 1M)	Duty Cycle (%):	100.0
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (SMA Pigtail)	Peak Antenna Gain (dBi):	-1.85

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	0.45	-	-	-		30.00	-29.55
2440	0.20	-	-	-		30.00	-29.80
2480	0.19	-	-	-		30.00	-29.81

Table 34 - 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	0.45	-	-	-		30.00	-29.55	-1.40	36.00	-37.40
2440	0.20	-	-	-		30.00	-29.80	-1.65	36.00	-37.65
2480	0.19	-	-	-		30.00	-29.81	-1.66	36.00	-37.66

Table 35 - ISSED Maximum Conducted (peak) Output Power Results

2.4.1 Specification Limits

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.

2.4.2 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
USB Power Sensor	Boonton	RTP5008	5833	12	29-Aug-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Sep-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6638	12	29-Aug-2026

Table 36

2.5 Authorised Band Edges

2.5.1 Specification Reference

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

2.5.2 Equipment Under Test and Modification State

HANDSET NO.6, S/N: Not Serialised (FAR-1024092-89) - Modification State 0

2.5.3 Date of Test

05-May-2026

2.5.4 Test Method

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

The DUT was powered with 4x1.5V AAA internal alkaline batteries.

The DUT was configured to transmit via settings 4, 5 & 6 (Customer Approval Test Mode Document) at Maximum Burst power, 1 MHz Bandwidth and 100% Duty cycle.

2.5.5 Test Setup Diagram

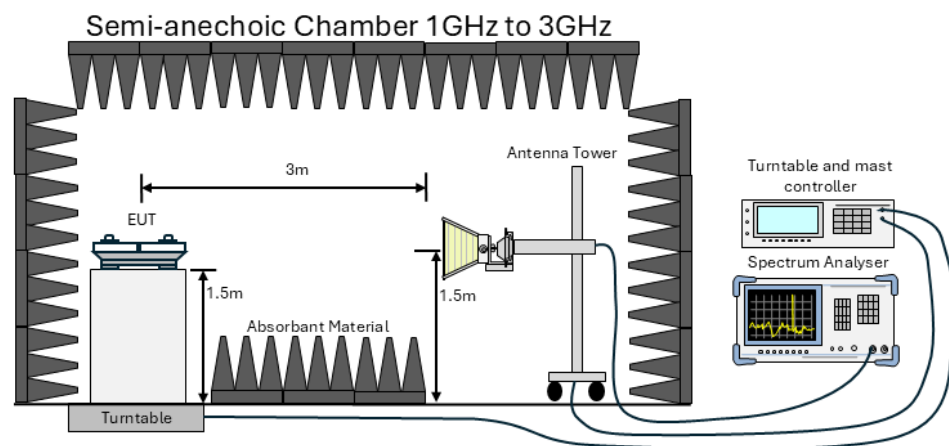


Figure 49

2.5.6 Environmental Conditions

Ambient Temperature	22.5 °C
Relative Humidity	32.9 %

2.5.7 Test Results

2.4 GHz Bluetooth Low Energy

Mode	Modulation	Packet Type	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
BLE1M	GFSK	Continuous Modulated Stream	2402	2400.0	47.99
BLE1M	GFSK	Continuous Modulated Stream	2480	2483.5	50.47

Table 37

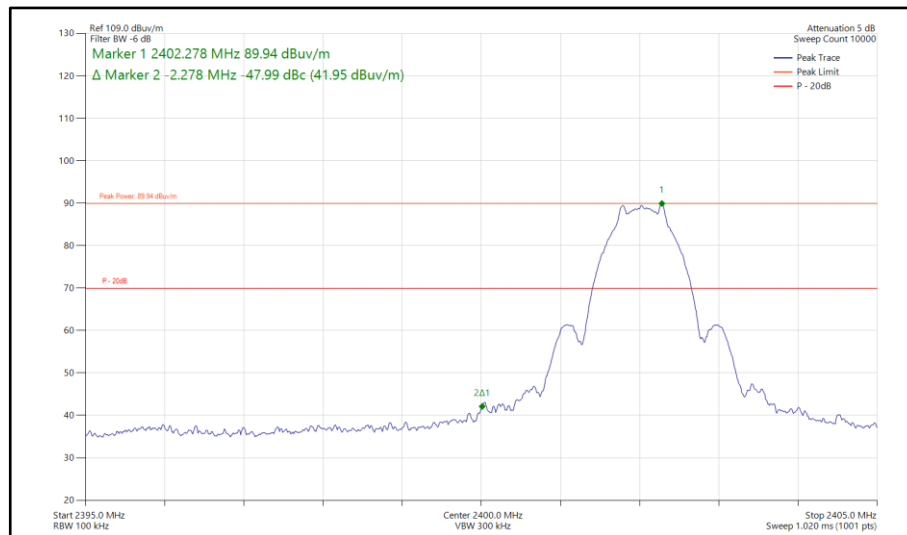


Figure 50 - CH37_LBE_LE1M, 2402 MHz, Band Edge Frequency 2400 MHz

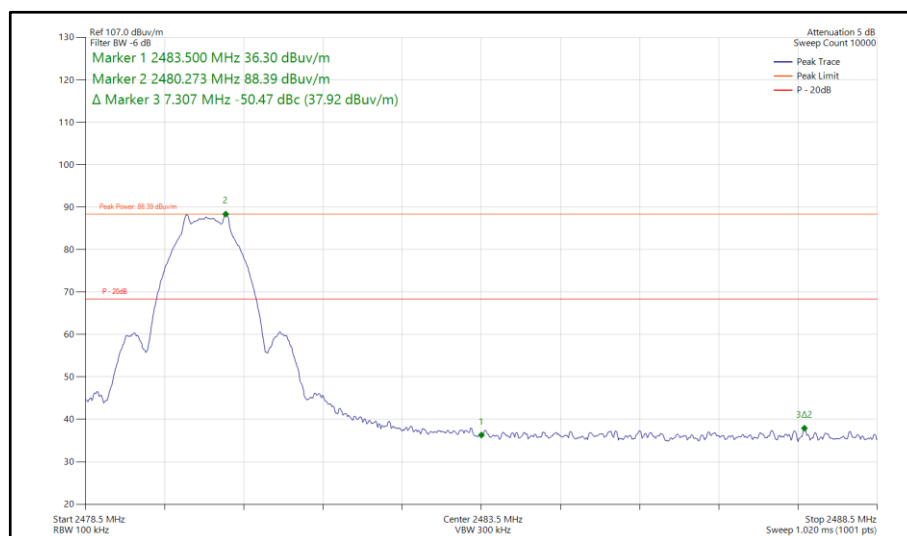


Figure 51 - CH39_UBE_LE1M, 2480 MHz, Band Edge Frequency 2483.5 MHz

2.5.8 Specification Limits

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 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.

2.5.9 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	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
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5476	12	05-Feb-2027
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	14-Aug-2026
2m Coaxial Cable Assy	Junkosha	MWX221-02000AMSAMS/A	6360	12	13-May-2026
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7049	12	01-Jun-2026

Table 38

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

HANDSET NO.6, S/N: Not Serialised (FAR-1028351-41) - Modification State 0

2.6.3 Date of Test

05-May-2026

2.6.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.10.2.
The EUT was set to transmit a continuous modulated stream via settings 4, 5 & 6 (Customer Approval Test Mode Document).
The EUT was powered by 4x1.5V AAA internal alkaline batteries which were fully charged prior to the commencement of the test.

2.6.5 Test Setup Diagram

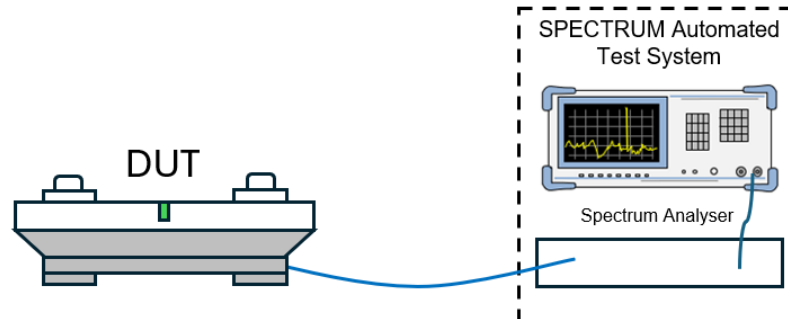


Figure 52 – Test Setup for Power Spectral Density

2.6.6 Environmental Conditions

Ambient Temperature	21.3 °C
Relative Humidity	44.1 %



2.6.7 Test Results

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

DUT Configuration			
Mode:	BLE GFSK (LE 1M)	Duty Cycle (%):	100.0
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (SMA Pigtail)	Peak Antenna Gain (dBi):	-1.85

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2402	100.0	0.04	-	-	-	-	8.00	-7.96
2440	100.0	0.07	-	-	-	-	8.00	-7.93
2480	100.0	0.04	-	-	-	-	8.00	-7.96

Table 39 - Maximum Power Spectral Density Results

2.6.8 Specification Limits

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.



2.6.9 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
MXA Signal Analyser	Keysight Technologies	N9020B	5528	24	10-Sep-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Sep-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6638	12	29-Aug-2026

Table 40

O/P Mon – Output Monitored using calibrated equipment

3 Photographs

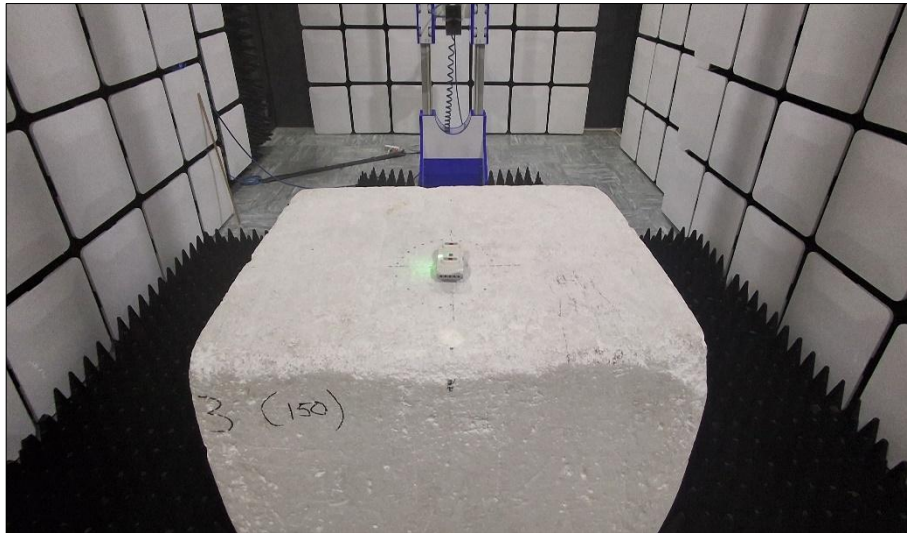


Figure 53 - Test Setup - X-Plane setup

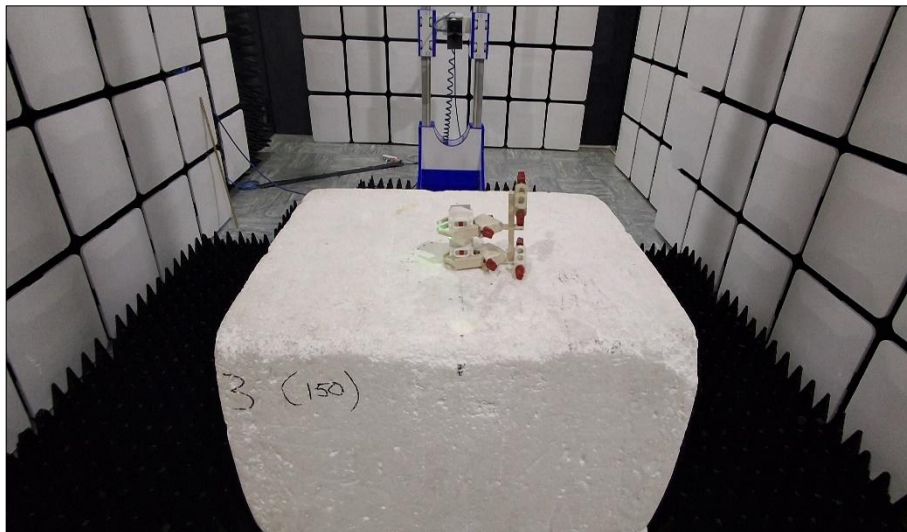


Figure 54 - Test Setup - Y-Plane setup

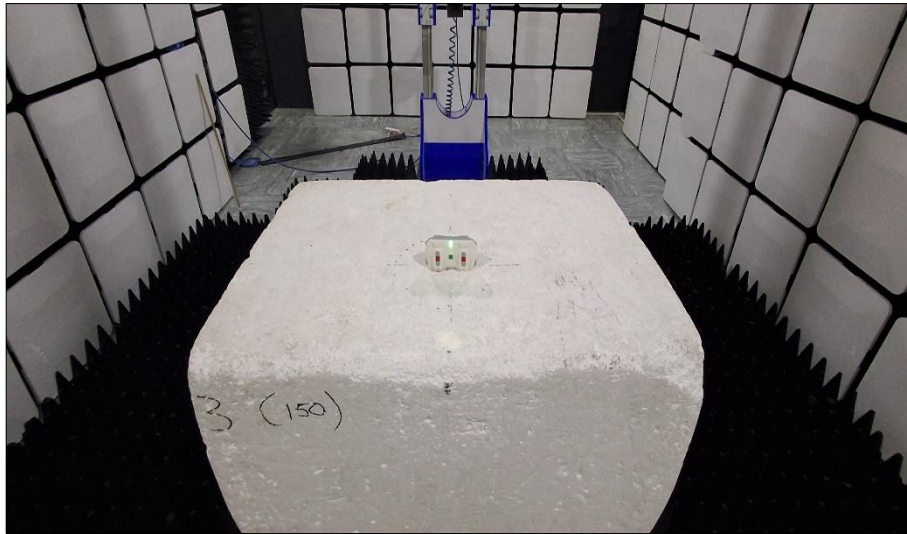


Figure 55 - Test Setup - Z-Plane setup



Figure 56 - Test Setup - 30 MHz to 1 GHz

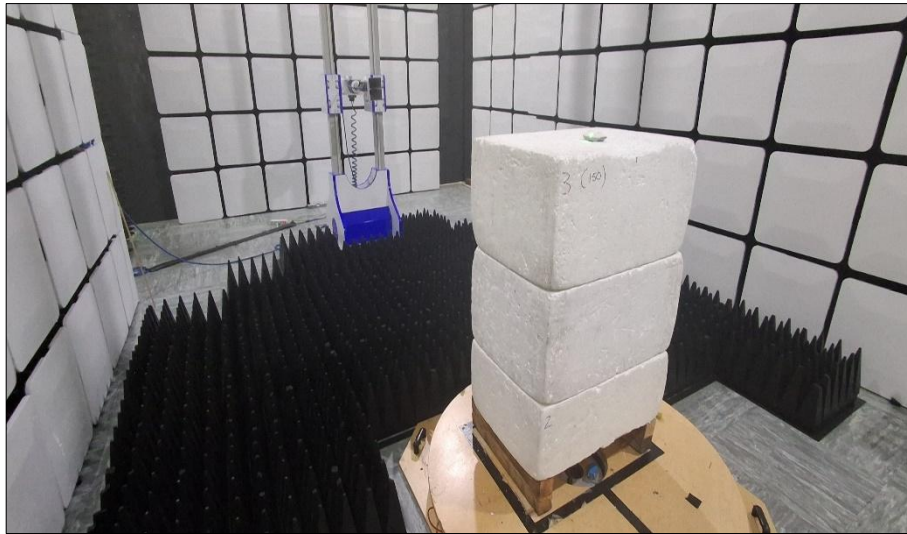


Figure 57 - Test Setup - 1 GHz to 8 GHz



Figure 58 - Test Setup - 8 GHz to 18 GHz



Figure 59 - Test Setup - 18 GHz to 25 GHz

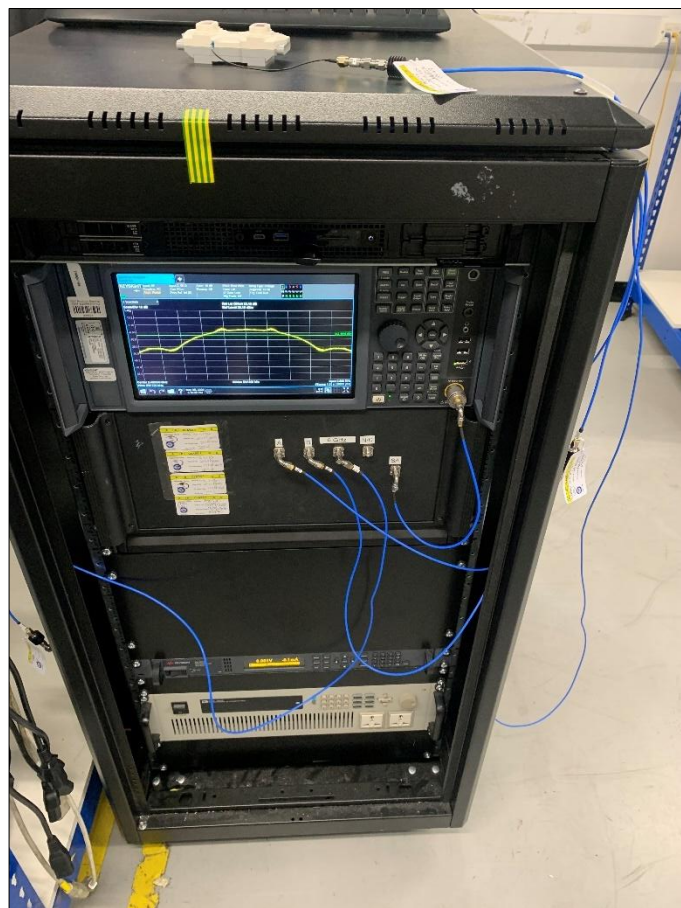


Figure 60 - Test Setup – Conducted Measurements

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
Emission Bandwidth	± 30.426 kHz
Maximum Conducted Output Power	± 0.65 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
Power Spectral Density	± 1.00 dB

Table 41

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.