

FCC Test Report

Manufacturer: Airspan Communications Ltd
Airspan
Model: 4G/5G GBSS Call Box



In accordance with FCC 47 CFR Part 15C

Prepared for: Airspan Communications Ltd
Bath Road
Slough
SL1 3UF
United Kingdom

FCC ID: O2J-CBATG

COMMERCIAL-IN-CONFIDENCE

Document 75967202-03 Issue 02

SIGNATURE			
NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Simon Bennett	Technical Director	Authorised Signatory	18 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	Ahmad Javid	18 August 2026	
	Thomas Biddlecombe	18 August 2026	
	Abarajitha Karunakaran	18 August 2026	

FCC Accreditation: 492497/UK2010 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 for the tests detailed in section 1.3. The sample tested was found to comply with the requirements defined in the applied rules.

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

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

TÜV SÜD Ltd is a
TÜV SÜD Group Company

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

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



Contents

1	Report Summary	2
1.1	Report Modification Record.....	2
1.2	Introduction.....	2
1.3	Brief Summary of Results	3
1.4	Customer Supplied Form	4
1.5	Product Information	7
1.6	Deviations from the Standard.....	7
1.7	EUT Modification Record	7
1.8	Test Location	7
2	Test Details	8
2.1	Restricted Band Edges.....	8
2.2	Authorised Band Edges	15
2.3	Spurious Radiated Emissions	21
2.4	Maximum Conducted Output Power	27
2.5	Power Spectral Density	30
2.6	Emission Bandwidth	33
2.7	AC Power Line Conducted Emissions	38
3	Photographs	43
3.1	Test Setup Photographs	43
4	Measurement Uncertainty	46



1 Report Summary

1.1 Report Modification Record

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

Issue	Description of Change	Date of Issue
01	First version	24-Jun-2026
02	Update of FCC ID	18-Aug-2026

Table 1

1.2 Introduction

Applicant	Airspan Communications Ltd
Manufacturer	Airspan Communications Ltd
Product Marketing Name (PMN) or Host Marketing Name (HMN)	4G/5G GBSS Call Box
Hardware Version Identification Number (HVIN)	908-90-490
Serial Number(s)	F76AA38054B7
Firmware Version Identification Number (FVIN)	Callbox_V1.6
Number of Samples Tested	1
Test Specification/Issue/Date	FCC 47 CFR Part 15C: 2024
Order Number	PO251467
Date	24-February-2026
Date of Receipt of EUT	16-March-2026
Start of Test	18-March-2026
Finish of Test	02-April-2026
Name of Engineer(s)	Ahmad Javid, Thomas Biddlecombe, Abarajitha Karunakaran
Related Document(s)	ANSI C63.10 (2020) ANSI C63.4 (2014)



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15C is shown below.

Section	Specification Clause	Test Description	Result	Comments/Base Standard
Configuration and Mode: Transmit				
	15.203	Antenna Requirement	N/T	The device complies with the provisions of this section as it uses an external antenna which is professionally installed
2.1	15.205	Restricted Band Edges	Pass	ANSI C63.10 (2020) +Cor.1 (2023)+C63.10a (2024)
2.2	15.247 (d)	Authorised Band Edges	Pass	ANSI C63.10 (2020) +Cor.1 (2023)+C63.10a (2024)
2.3	15.209 and 15.247 (d)	Spurious Radiated Emissions	Pass	ANSI C63.10 (2020) +Cor.1 (2023)+C63.10a (2024)
2.4	15.247 (b)	Maximum Conducted Output Power	Pass	ANSI C63.10 (2020) +Cor.1 (2023)+C63.10a (2024)
2.5	15.247 (e)	Power Spectral Density	Pass	ANSI C63.10 (2020) +Cor.1 (2023)+C63.10a (2024)
2.6	15.247 (a)(2)	Emission Bandwidth	Pass	ANSI C63.10 (2020) +Cor.1 (2023)+C63.10a (2024)
2.7	15.207	AC Power Line Conducted Emissions	Pass	ANSI C63.10 (2020) +Cor.1 (2023)+C63.10a (2024)

Table 2



1.4 Customer Supplied Form

Equipment Description

Technical Description: (Please provide a brief description of the intended use of the equipment including the technologies the product supports)		4G/5G Small Cell Transportable Base Station.	
Manufacturer:		Airspan	
Product Marketing Name (PMN) or Host Marketing Name (HMN): (If Applicable; HMN is applicable for devices integrating pre-approved modules, otherwise use PMN)		4G/5G GBSS Call Box	
Hardware Version Identification Number (HVIN): (Formally Model Number)		908-90-490	
Firmware Version Identification Number (FVIN)		Callbox_V1.6	
For definitions of the above terms refer to RSS-GEN Section 9.			
FCC ID of the product under test – see guidance here		O2J-2700ATG	
IC ID of the product under test – see guidance here		N/A	
Device Category	Mobile ☒	Portable ☐	Fixed ☐
Equipment is fitted with an Audio Low Pass Filter		Yes ☐	No ☒

Table 3

Intentional Radiators

Technology	OFDMA	CP-OFDM
Frequency Range (MHz to MHz)	849MHz - 851MHz	2430 – 2483.5 MHz
Conducted Declared Output Power (dBm)	20dBm	20dBm
Antenna Gain (dBi)	2.16dBi	2.8dBi
Supported Bandwidth(s) (MHz) (e.g. 1 MHz, 20 MHz, 40 MHz)	1.615MHz	50MHz
Modulation Scheme(s) (e.g. GFSK, QPSK etc)	QPSK / 16 QAM / 64 QAM	QPSK / 16 QAM / 64 QAM
ITU Emission Designator (see guidance here) (not mandatory for Part 15 devices)	1M61W7D	50M0W7W
Bottom Frequency (MHz)	N/A	N/A
Middle Frequency (MHz)	850	2455
Top Frequency (MHz)	N/A	N/A

Table 4

Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	5.5GHz
Lowest frequency generated or used in the device or on which the device operates or tunes	38.4MHz
Class A Digital Device (Use in commercial, industrial or business environment) ☒	
Class B Digital Device (Use in residential environment only) ☐	

Table 5

AC Power Source

AC supply frequency:	47- 63	Hz
Voltage	100 - 240	V
Max current:	10 @ 100V, 5 @ 240V	A
Single Phase ☒ Three Phase ☐		

Table 6

DC Power Source

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

Table 7

Battery Power Source

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

Table 8

Charging

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

Table 9

Temperature

Minimum temperature:	-5	°C
Maximum temperature:	40	°C

Table 10



Cable Loss

Adapter Cable Loss (Conducted sample)	N/A	dB
--	-----	----

Table 11

Antenna Characteristics

Antenna connector ☒		State impedance	50	Ohm
Temporary antenna connector ☐		State impedance		Ohm
Integral antenna ☐	Type:		Gain	dBi
External antenna ☒	Type:		Gain	Up to 2.8 dBi
For external antenna only: Standard Antenna Jack ☒ If yes, describe how user is prohibited from changing antenna (if not professional installed): Equipment is only ever professionally installed ☒ Non-standard Antenna Jack ☐ All part 15 applications will need to show how the antenna gain was derived either from a manufacturer data sheet or a measurement. Where the gain of the antenna is inherently accounted for as a result of the measurement, such as field strength measurements on a part 15.249 or 15.231 device, so the gain does not necessarily need to be verified. However, enough information regarding the construction of the antenna shall be provided. Such information maybe photographs, length of wire antenna etc.				

Table 12

Ancillaries (if applicable)

Manufacturer:		Part Number:	
Model:		Country of Origin:	

Table 13

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

Name: Robert Butler
Position held: Principal Hardware Design Engineer
Date: 04/03/2026

1.5 Product Information

1.5.1 Technical Description

4G/5G Small Cell Transportable Base Station.

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
4G/5G GBSS Call Box - Radiated, Model: , Serial Number: F76AA38054B7			
0	As supplied by the customer	Not Applicable	Not Applicable
1	Adjustment of internal attenuators.	Customer	18-March-2026

Table 14

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: Transmit		
Restricted Band Edges	Ahmad Javid	UKAS
Authorised Band Edges	Ahmad Javid	UKAS
Spurious Radiated Emissions	Ahmad Javid	UKAS
Maximum Conducted Output Power	Thomas Biddlecombe	UKAS
Power Spectral Density	Thomas Biddlecombe	UKAS
Emission Bandwidth	Thomas Biddlecombe	UKAS
AC Power Line Conducted Emissions	Abarajitha Karunakaran	UKAS

Table 15

Laboratory Address:

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



2 Test Details

2.1 Restricted Band Edges

2.1.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.205

2.1.2 Equipment Under Test and Modification State

4G/5G GBSS Call Box, S/N: F76AA38054B7- Modification State 1

2.1.3 Date of Test

18-March-2026

2.1.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.10.

Plots for average measurements were taken in accordance with ANSI C63.10 clause 4.1.5.2.3.
Final average measurements were taken in accordance with ANSI C63.10 clause 4.1.5.2.2.

EUT was powered by 120 VAC.

2.1.5 Environmental Conditions

Ambient Temperature	20.9 °C
Relative Humidity	41.8 %



2.1.6 Test Results

Transmit

Data Rate/MCS	Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBμV/m)
QPSK	2455	2483.500	64.32	51.98
QPSK	2455	2390.000	54.77	41.16
16QAM	2455	2483.500	66.87	52.81
16QAM	2455	2390.000	53.40	41.42
64QAM	2455	2483.500	66.33	52.35
64QAM	2455	2390.000	55.34	42.44

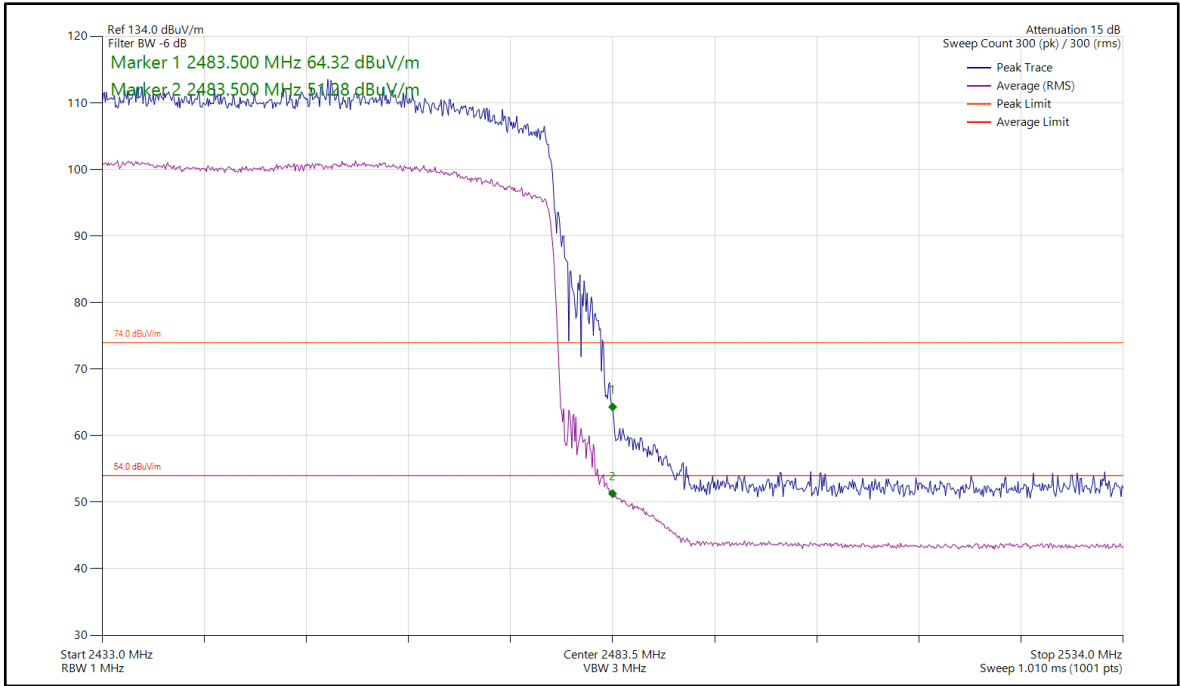


Figure 1 - Mid Channel_QPSK, 2455 MHz, Band Edge Frequency 2483.5 MHz

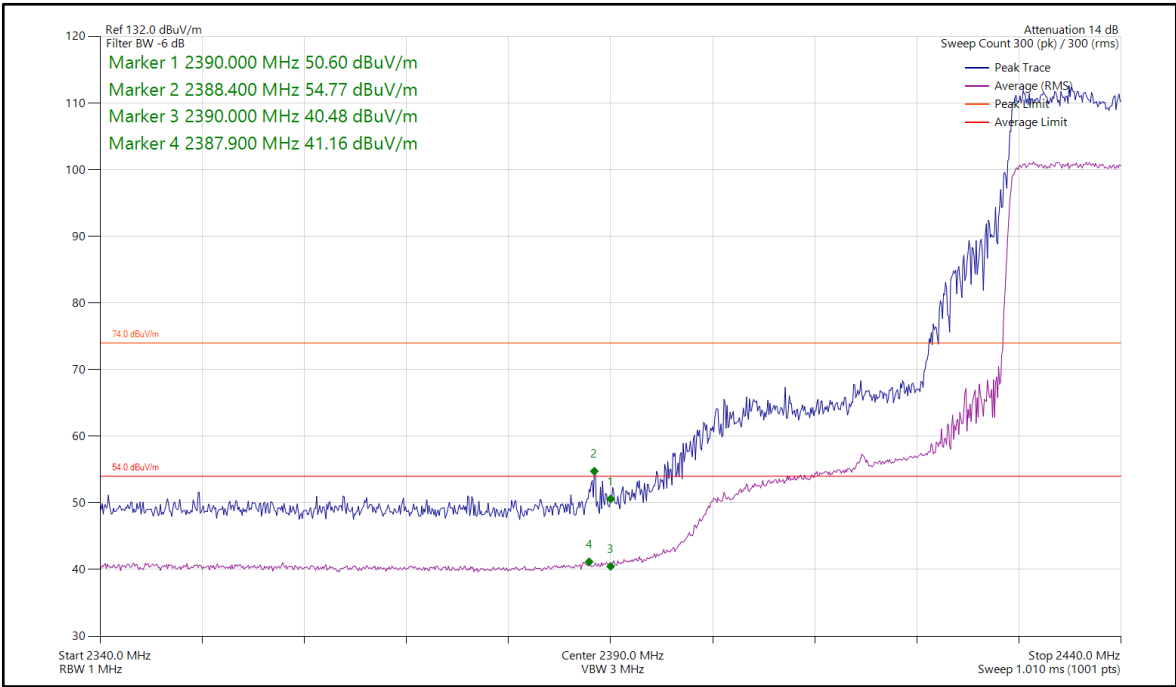


Figure 2 - Mid Channel_QPSK, 2455 MHz, Band Edge Frequency 2390 MHz

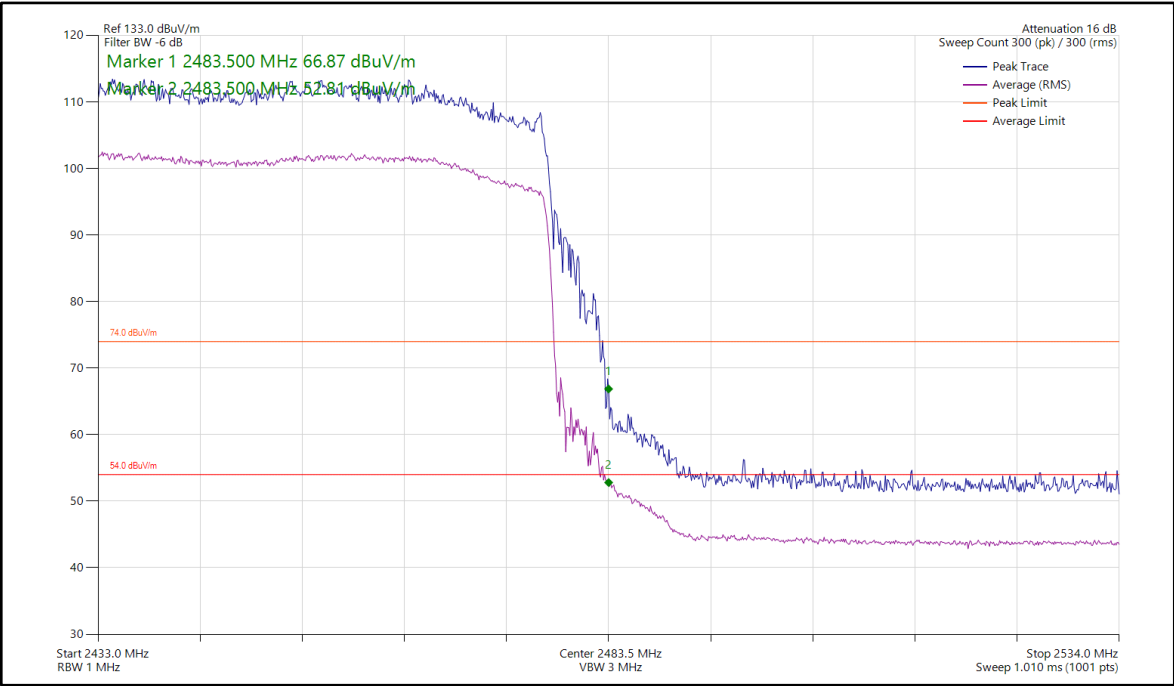


Figure 3 - Mid Channel_16 QAM, 2455 MHz, Band Edge Frequency 2483.5 MHz

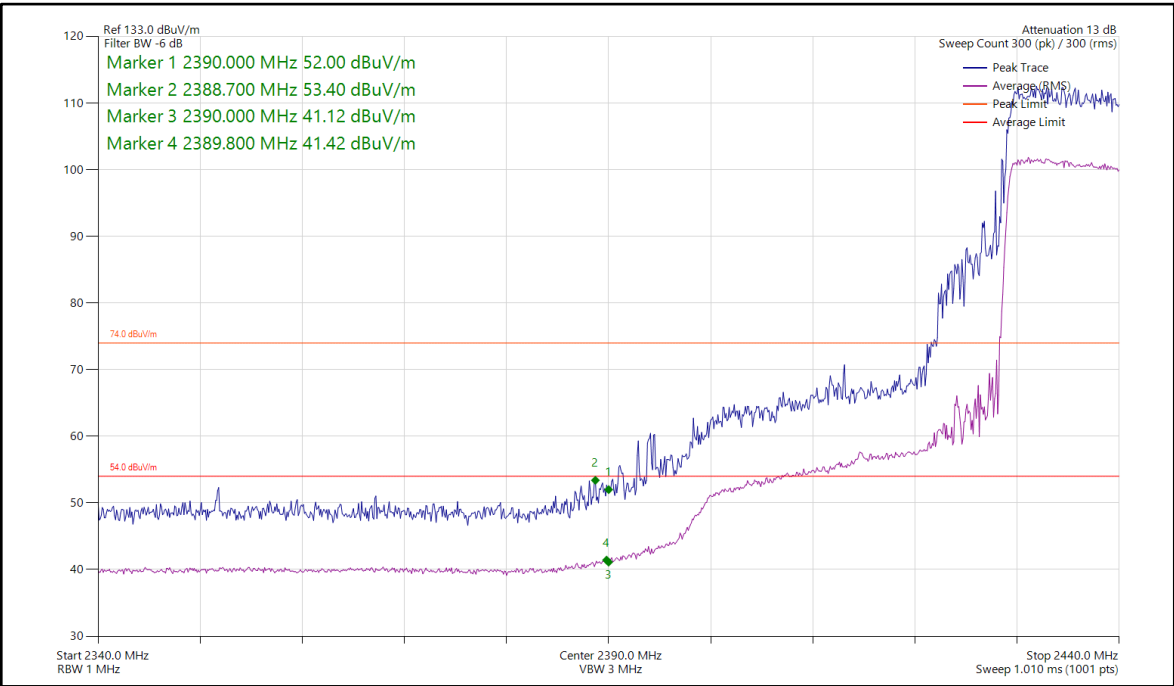


Figure 4 - Mid Channel_16 QAM, 2455 MHz, Band Edge Frequency 2390 MHz

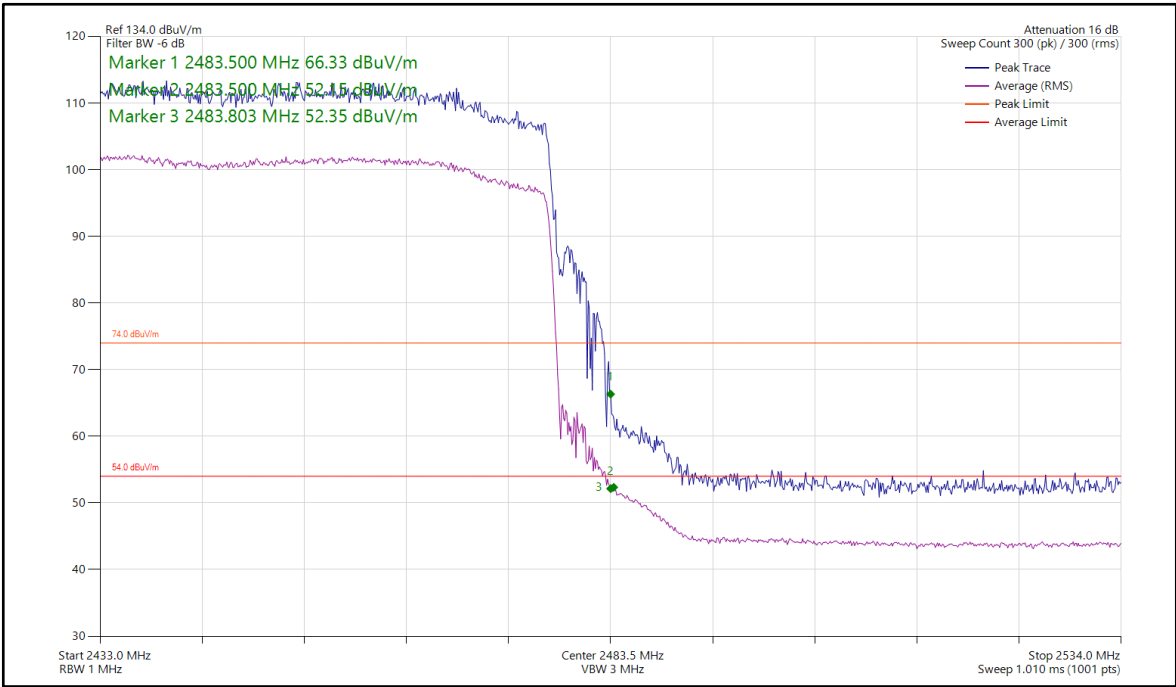


Figure 5 - Mid Channel _64 QAM, 2455 MHz, Band Edge Frequency 2483.5 MHz

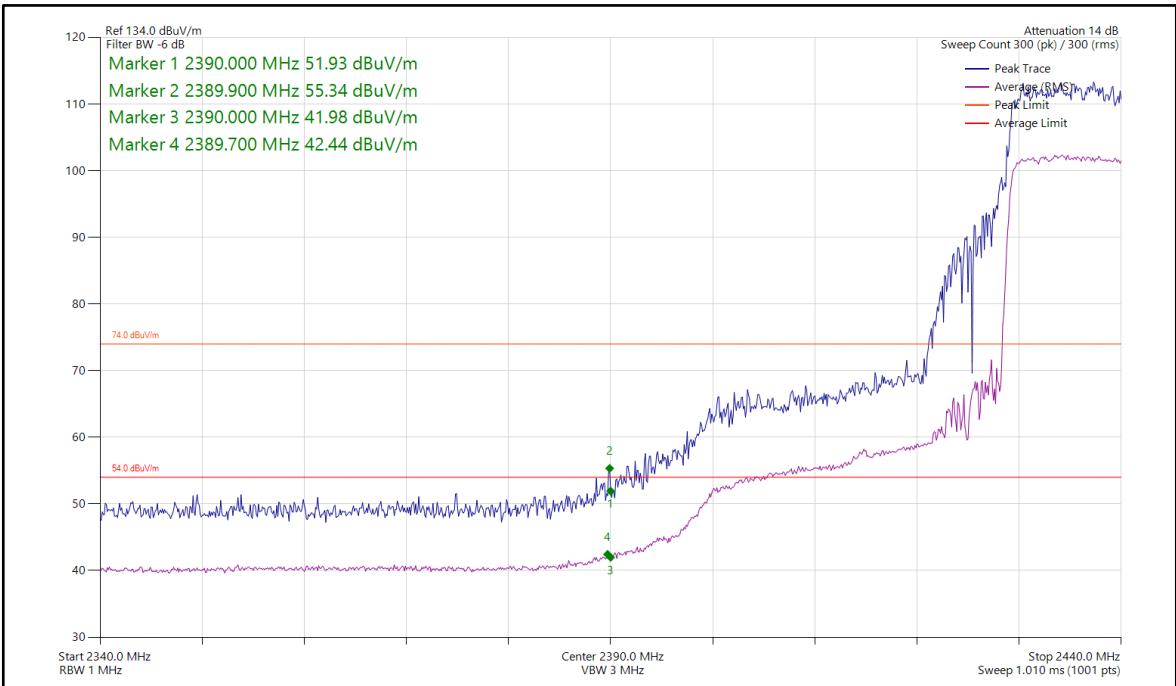


Figure 6 - Mid Channel _64 QAM, 2455 MHz, Band Edge Frequency 2390 MHz



FCC 47 CFR Part 15, Limit Clause 15.209

Frequency (MHz)	Field Strength (µV/m at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 16



2.1.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
3m Semi-Anechoic Chamber	Rainford	RF Chamber 5	1545	36	23-Apr-2027
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Mast Controller	Maturo GmbH	NCD	4810	-	TU
Tilt Antenna Mast	Maturo GmbH	TAM 4.0-P	4811	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	4848	12	05-Jul-2026
Test Receiver	Rohde & Schwarz	ESW44	5084	12	08-Jan-2027
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5481	12	14-May-2026
Cable (SMA to SMA, 2 m)	Junkosha	MWX221-02000AMSAMS/A	5517	12	06-Jun-2026
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7050	12	03-Oct-2026

Table 17

TU - Traceability Unscheduled



2.2 Authorised Band Edges

2.2.1 Specification Reference

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

2.2.2 Equipment Under Test and Modification State

4G/5G GBSS Call Box,, S/N: F76AA38054B7- Modification State 1

2.2.3 Date of Test

18-March-2026

2.2.4 Test Method

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

EUT was powered by 120 VAC.

2.2.5 Environmental Conditions

Ambient Temperature	20.9 °C
Relative Humidity	41.8 %



2.2.6 Test Results

Transmit

Data Rate/MCS	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
QPSK	2455	2483.5	-46.65
QPSK	2455	2400	-50.28
16QAM	2455	2483.5	-44.93
16QAM	2455	2400	-49.01
64QAM	2455	2483.5	-46.78
64QAM	2455	2400	-47.42

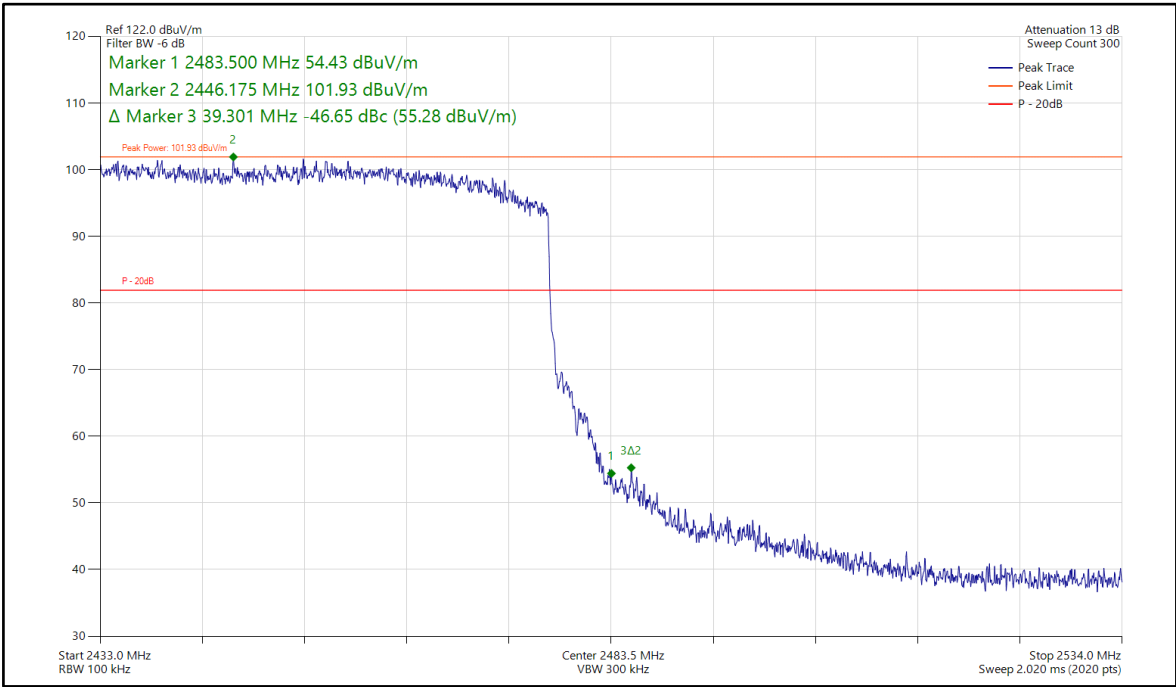


Figure 7 - Mid Channel_QPSK, 2455 MHz, Band Edge Frequency 2483.5 MHz

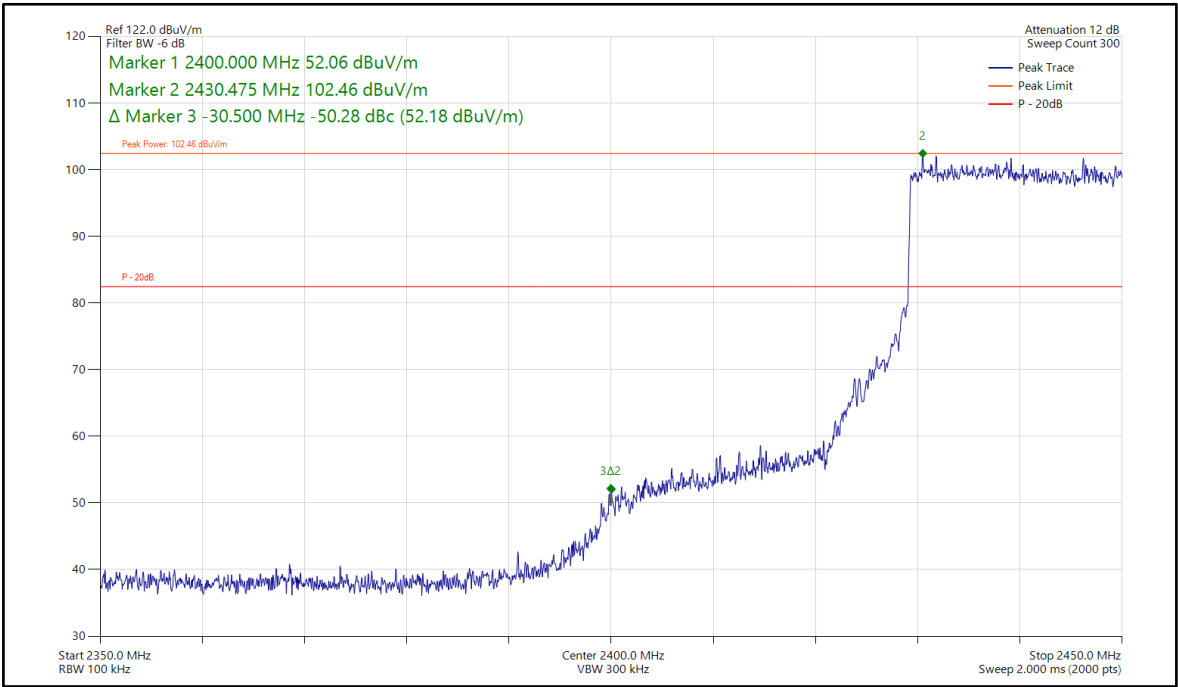


Figure 8 - Mid Channel_QPSK, 2455 MHz, Band Edge Frequency 2400 MHz

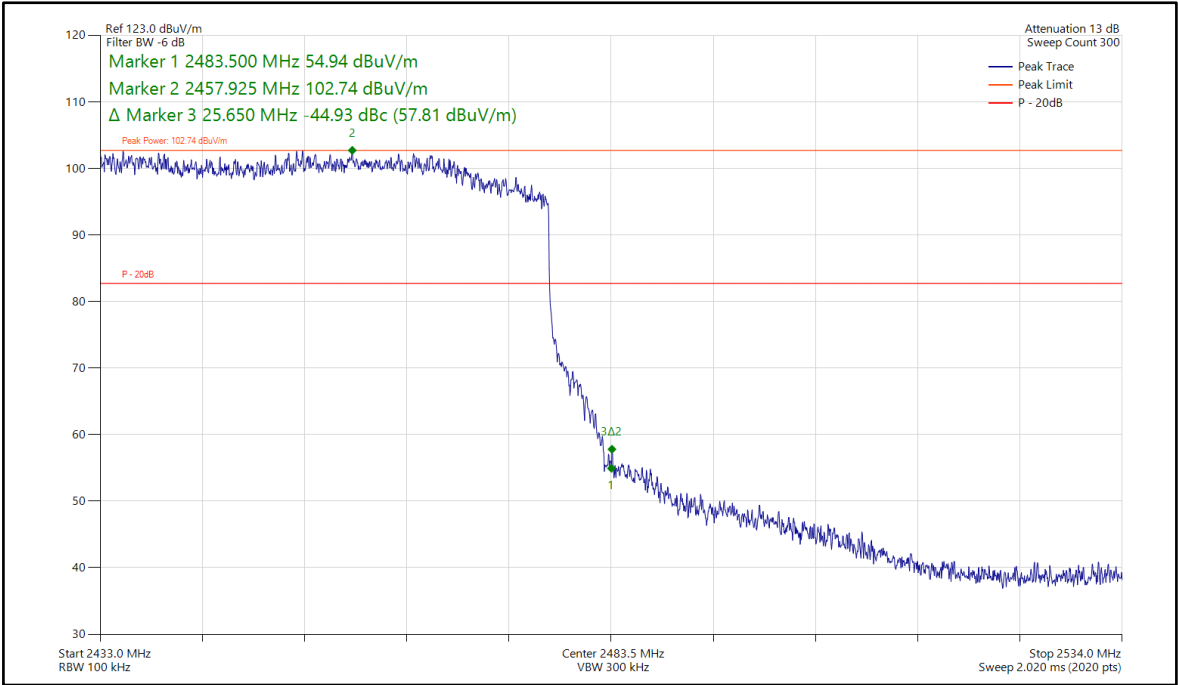


Figure 9 - Mid Channel_16 QAM, 2455 MHz, Band Edge Frequency 2483.5 MHz

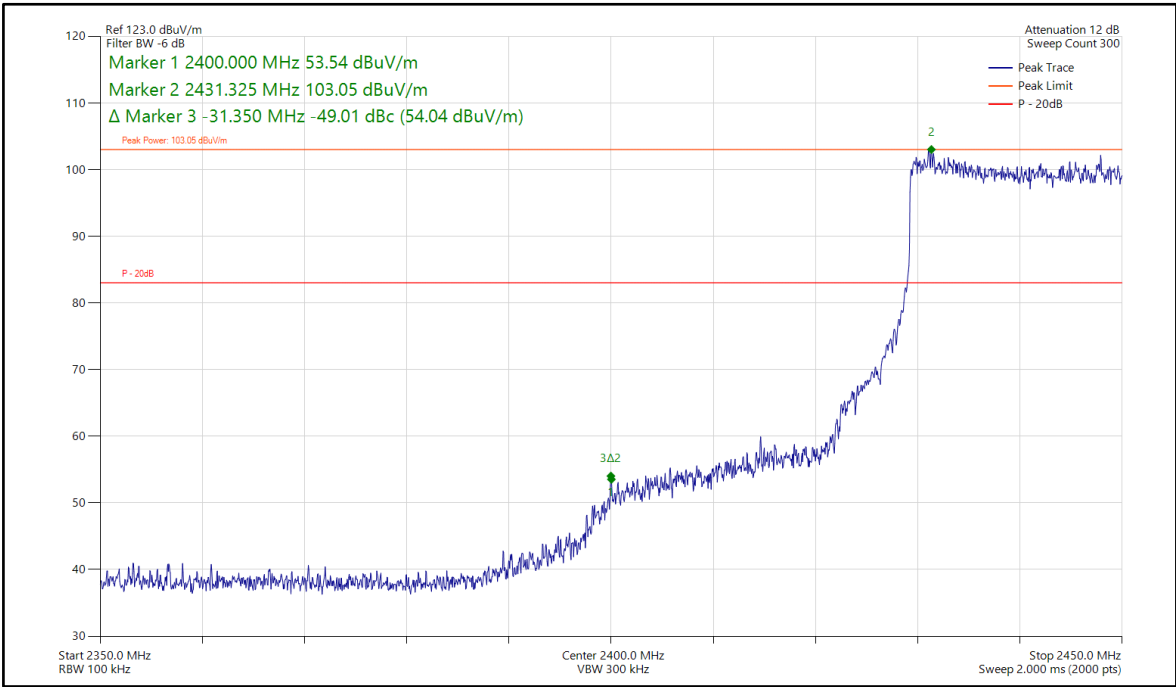


Figure 10 - Mid Channel_16 QAM, 2455 MHz, Band Edge Frequency 2400 MHz

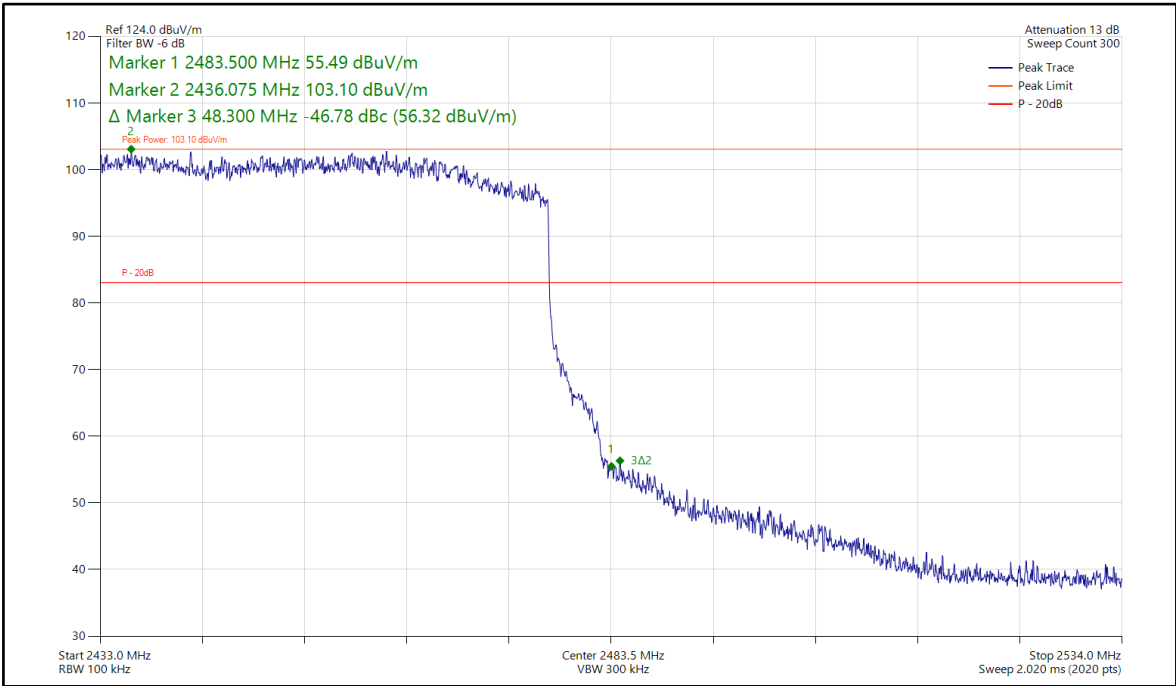


Figure 11 - Mid Channel_64 QAM, 2455 MHz, Band Edge Frequency 2483.5 MHz

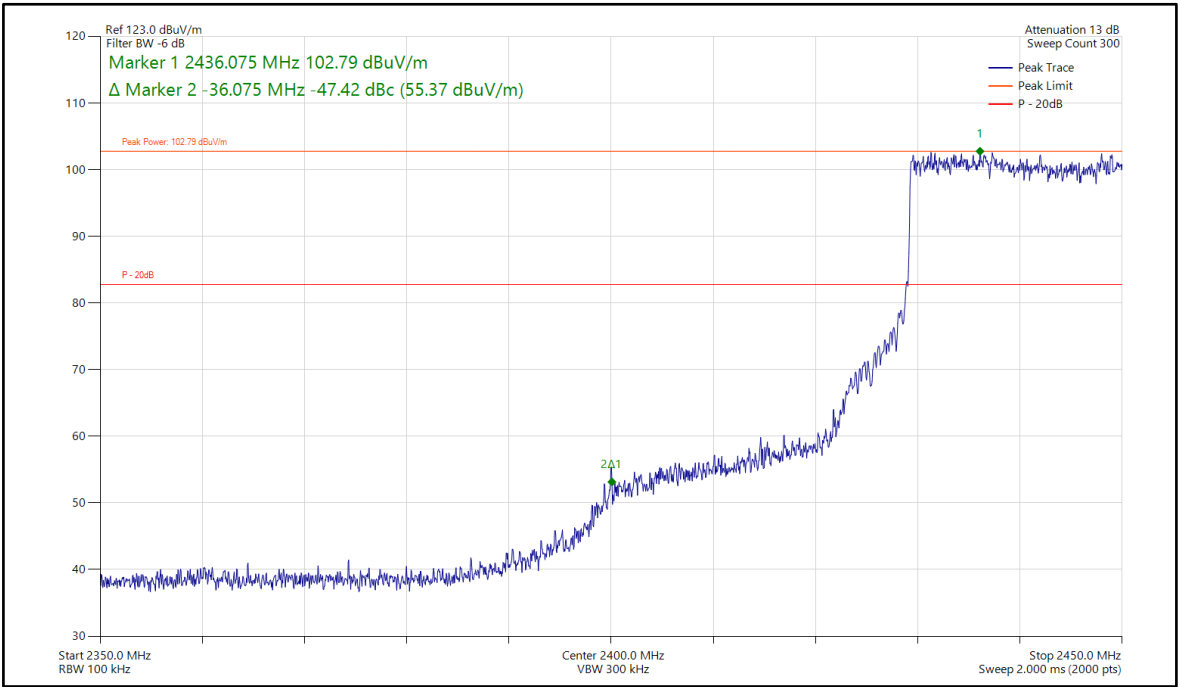


Figure 12 - Mid Channel _64 QAM, 2455 MHz, Band Edge Frequency 2400 MHz

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

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

2.2.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
3m Semi-Anechoic Chamber	Rainford	RF Chamber 5	1545	36	23-Apr-2027
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Mast Controller	Maturo GmbH	NCD	4810	-	TU
Tilt Antenna Mast	Maturo GmbH	TAM 4.0-P	4811	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	4848	12	05-Jul-2026
Test Receiver	Rohde & Schwarz	ESW44	5084	12	08-Jan-2027
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5481	12	14-May-2026
Cable (SMA to SMA, 2 m)	Junkosha	MWX221-02000AMSAMS/A	5517	12	06-Jun-2026
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7050	12	03-Oct-2026

Table 18

TU - Traceability Unscheduled



2.3 Spurious Radiated Emissions

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.209 and 15.247 (d)

2.3.2 Equipment Under Test and Modification State

4G/5G GBSS Call Box,, S/N: F76AA38054B7- Modification State 1

2.3.3 Date of Test

19-March-2026 to 20-March-2026

2.3.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.3, 6.5 and 6.6.
For frequencies > 1 GHz, plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2.

Ports on the EUT were terminated with loads as described in ANSI C63.4 clause 6.2.4. For EUT's with multiple connectors of the same type, additional interconnecting cables were connected, and pre-scans performed to determine whether the level of the emissions were increased by >2 dB. The plots shown are the characterisation of the EUT. The limits on the plots represent the most stringent case for restricted bands, (74/54 dBuV/m) when compared to 20 dBc outside restricted bands. The limits shown have been used as a threshold to determine where further measurements are necessary. Where results are within 10 dB of the limits shown on the plots, further investigation was carried out and reported in results tables.

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

To determine the emission characteristic of the EUT above 18 GHz, the test antenna was swept over all faces of the EUT whilst observing a spectral display. The frequency of any emissions of interest was noted for formal measurement at the correct measurement distance of 1m.

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.

EUT was powered by 120 VAC.

2.3.5 Example Test Setup Diagram

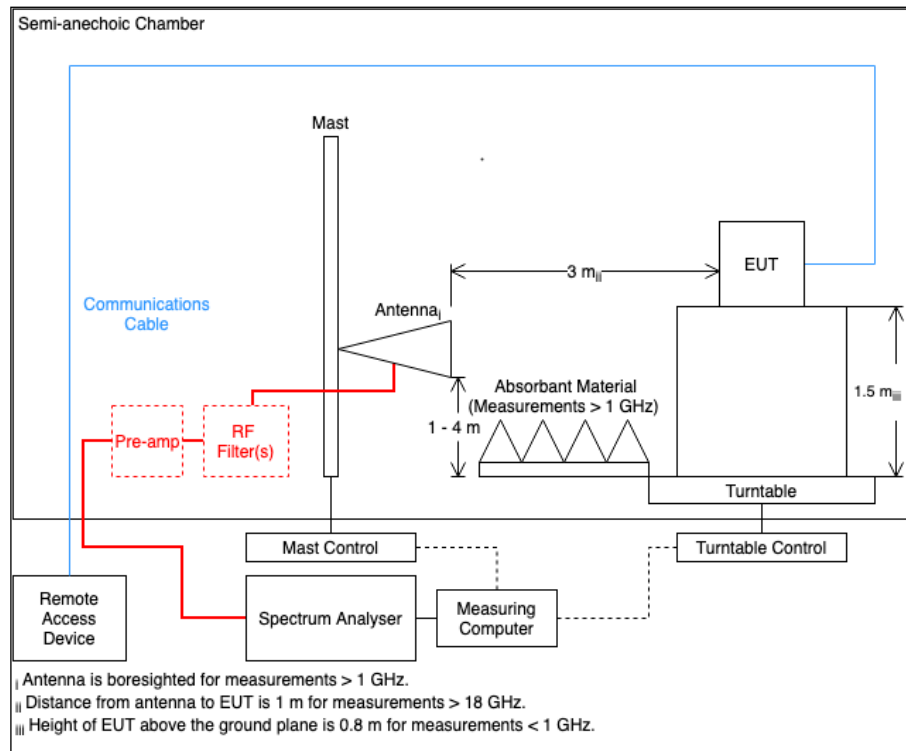


Figure 13

2.3.6 Environmental Conditions

Ambient Temperature	20.8 - 21.9 °C
Relative Humidity	40.8 - 41.7 %



2.3.7 Test Results

Transmit

Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation	Orientation
4899.465	44.78	46.00	-9.22	CISPR Avg	dBuV/m	8	110	Vertical	Z

Table 19 - Mid Channel_QPSK, 2455 MHz, 30 MHz to 26 GHz

No other emissions found within 10 dB of the limit.

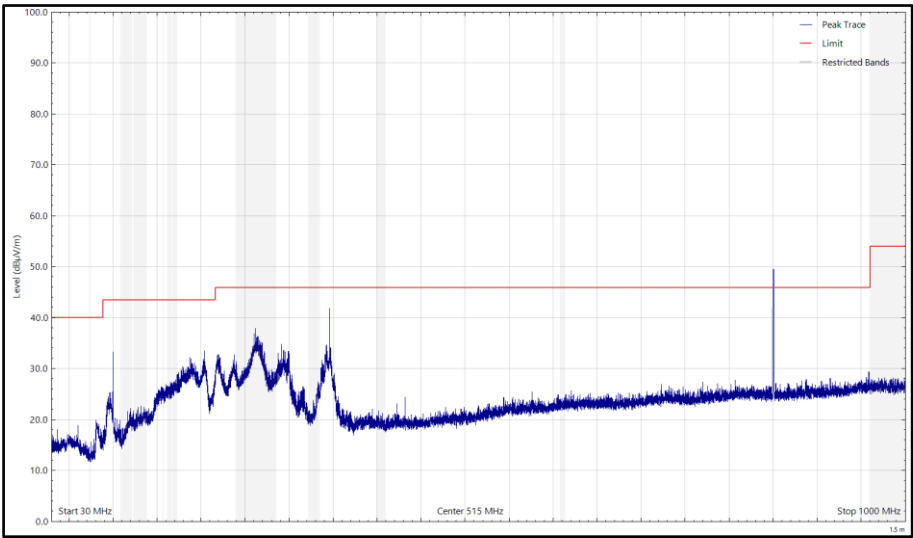


Figure 14 - Mid Channel_QPSK, 2455 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

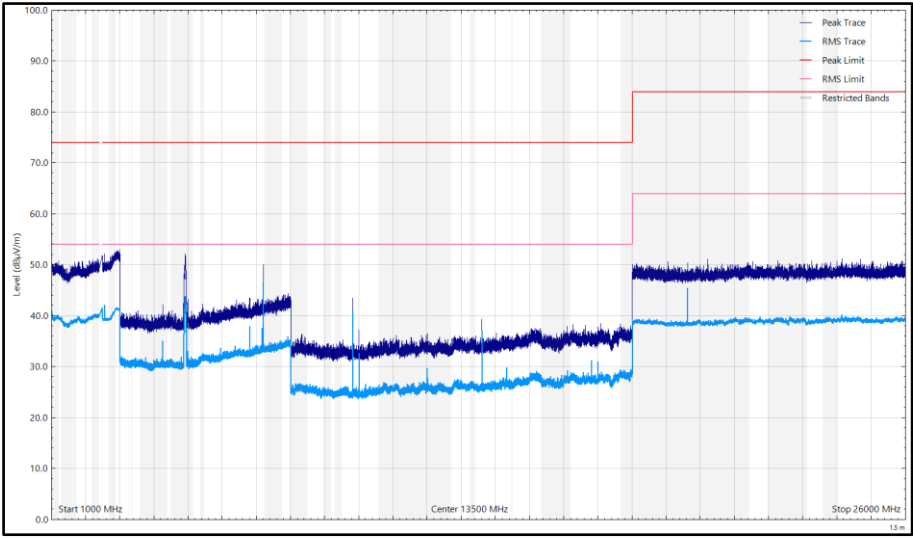


Figure 15 - Mid Channel_QPSK, 2455 MHz, 1 GHz to 26 GHz, Horizontal

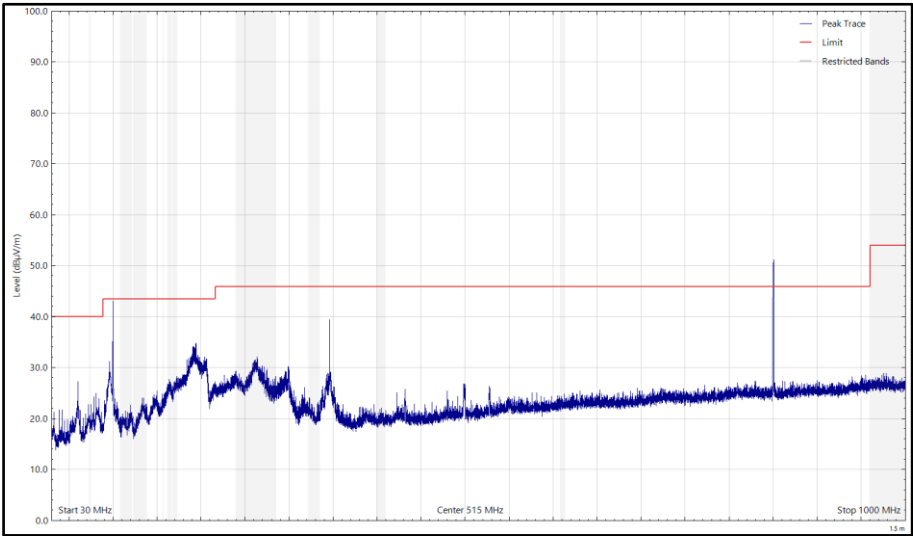


Figure 16 - Mid Channel_QPSK, 2455 MHz, 30 MHz to 1 GHz, Vertical (Peak)

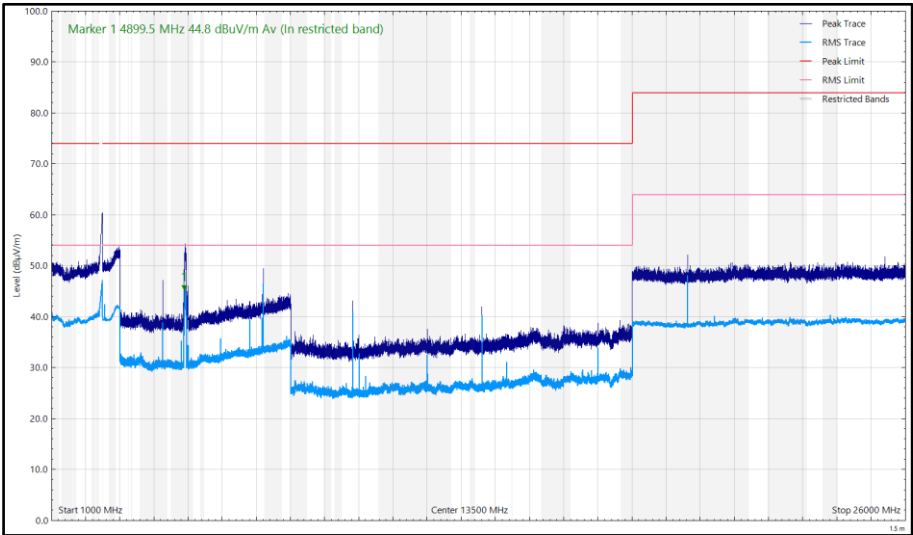


Figure 17 - Mid Channel_QPSK, 2455 MHz, 1 GHz to 26 GHz, Vertical



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)



2.3.8 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

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
3m Semi-Anechoic Chamber	Rainford	RF Chamber 5	1545	36	23-Apr-2027
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
True RMS Multimeter	Fluke	179	4007	12	12-Jan-2027
Mast Controller	Maturo GmbH	NCD	4810	-	TU
Tilt Antenna Mast	Maturo GmbH	TAM 4.0-P	4811	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	4848	12	05-Jul-2026
Test Receiver	Rohde & Schwarz	ESW44	5084	12	08-Jan-2027
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
Pre-Amplifier (1 GHz to 26.5 GHz)	Agilent Technologies	8449B	5445	12	10-Jul-2026
Cable (K-Type to K-Type, 1 m)	Junkosha	MWX241-01000KMSKMS/A	5511	12	06-Jun-2026
Cable (SMA to SMA, 2 m)	Junkosha	MWX221-02000AMSAMS/A	5517	12	06-Jun-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	5549	12	31-Aug-2026
Power Supply	TTI	EX355R	5573	-	TU
Pre-Amplifier (8 GHz to 18 GHz)	Wright Technologies	APS06-0061	5596	12	28-Oct-2026
Antenna (DRG, 7.5 GHz to 18 GHz)	Schwarzbeck	HWRD750	5610	12	29-Nov-2026
Cable (K-Type to K-Type, 2 m)	Junkosha	MWX241-02000KMSKMS/B	5934	12	12-Jun-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	7050	12	03-Oct-2026

Table 20

TU - Traceability Unscheduled

2.4 Maximum Conducted Output Power

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (b)

2.4.2 Equipment Under Test and Modification State

4G/5G GBSS Call Box,, S/N: F76AA38054B7- Modification State 1

2.4.3 Date of Test

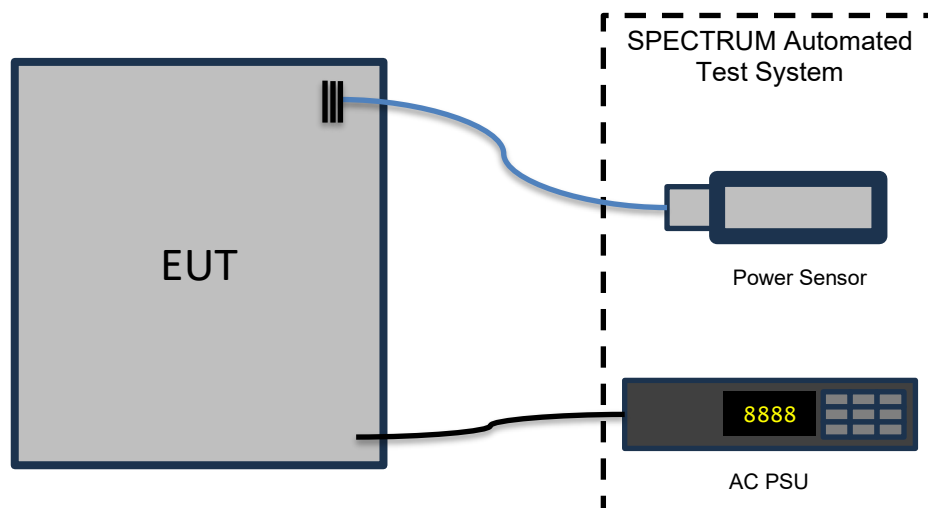
18-March-2026

2.4.4 Test Method

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

Device was powered by 120 VAC.

2.4.5 Test Setup Diagram



2.4.6 Environmental Conditions

Ambient Temperature	20.0 °C
Relative Humidity	40.4 %

2.4.7 Test Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	1.1	Duty Cycle (%):	74.2
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.80
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2455	-	20.59	-	-	20.59	30.00	-9.41

Table 21 - 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)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	3.1	Duty Cycle (%):	74.2
Modulation:	64-QAM	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.80
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2455	-	20.37	-	-	20.37	30.00	-9.63

Table 22 - 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)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	3.3b	Duty Cycle (%):	74.2
Modulation:	16-QAM	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.80
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2455	-	20.26	-	-	20.26	30.00	-9.74

Table 23 - 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.

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
Multimeter	Iso-tech	IDM101	2421	12	11-Nov-2026
Hygrometer	Rotronic	I-1000	2891	12	23-Dec-2026
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
USB Power Sensor	Boonton	RTP5008	5834	12	29-Aug-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Sep-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6639	12	29-Aug-2026

Table 24

O/P Mon – Output Monitored using calibrated equipment

2.5 Power Spectral Density

2.5.1 Specification Reference

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

2.5.2 Equipment Under Test and Modification State

4G/5G GBSS Call Box,, S/N: F76AA38054B7- Modification State 1

2.5.3 Date of Test

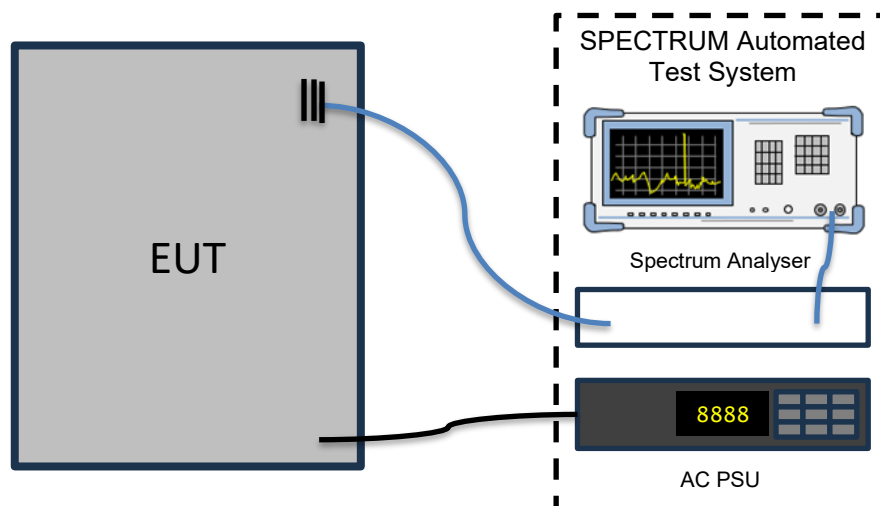
18-March-2026

2.5.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.10.5.

EUT was powered by 120 VAC.

2.5.5 Test Setup Diagram



2.5.6 Environmental Conditions

Ambient Temperature	20.0 °C
Relative Humidity	40.4 %

2.5.7 Test Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	1.1	Duty Cycle (%):	74.2
Modulation:	QPSK	DCCF (dB):	1.29
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.80
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2455	100.0	-	-3.69	-	-	-3.69	8.00	-11.69

Table 25 - Maximum Power Spectral Density Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	3.1	Duty Cycle (%):	74.2
Modulation:	64-QAM	DCCF (dB):	1.30
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.80
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2455	100.0	-	-4.35	-	-	-4.35	8.00	-12.35

Table 26 - Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	3.3b	Duty Cycle (%):	74.2
Modulation:	16-QAM	DCCF (dB):	1.30
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	2.80
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2455	100.0	-	-4.44	-	-	-4.44	8.00	-12.44

Table 27 - 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.

2.5.8 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Multimeter	Iso-tech	IDM101	2421	12	11-Nov-2026
Hygrometer	Rotronic	I-1000	2891	12	23-Dec-2026
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
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	6639	12	29-Aug-2026

Table 28

O/P Mon – Output Monitored using calibrated equipment

2.6 Emission Bandwidth

2.6.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (a)(2)

2.6.2 Equipment Under Test and Modification State

4G/5G GBSS Call Box,, S/N: F76AA38054B7- Modification State 1

2.6.3 Date of Test

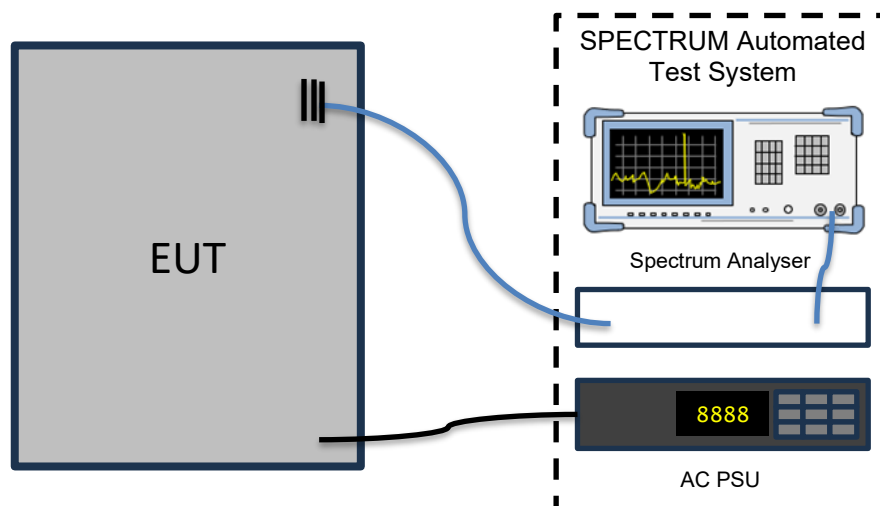
18-March-2026

2.6.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.9.2.

EUT was powered by 120 VAC.

2.6.5 Test Setup Diagram



2.6.6 Environmental Conditions

Ambient Temperature	20.0 °C
Relative Humidity	40.4 %



2.6.7 Test Results

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

DUT Configuration			
Mode:	1.1	Duty Cycle (%):	-
Modulation:	QPSK	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2455	-	47.740	-	-	≥500.0

Table 29 - 6 dB Bandwidth Results

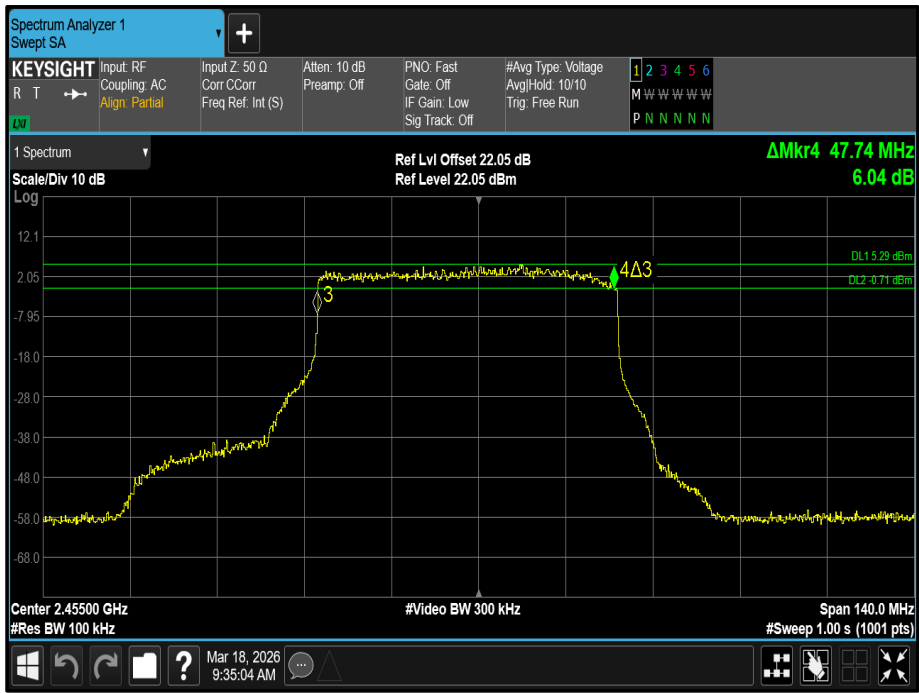


Figure 18 - SMA on EUT (B) 2455 MHz (CH1) 6 dB Bandwidth



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

DUT Configuration					
Mode:		3.1		Duty Cycle (%):	-
Modulation:		64-QAM		DCCF (dB):	-
Antenna Configuration:		SISO		Peak Antenna Gain (dBi):	-
Active Port(s):		B (SMA on EUT)		Active Chain(s):	0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2455	-	47.740	-	-	≥500.0

Table 30 - 6 dB Bandwidth Results

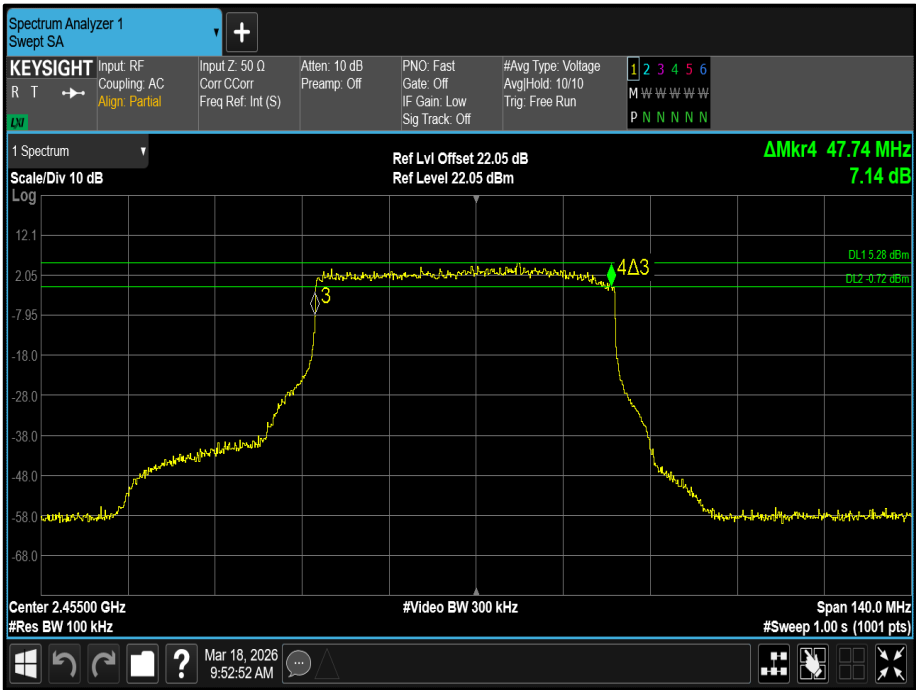


Figure 19 - SMA on EUT (B) 2455 MHz (CH1) 6 dB Bandwidth

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

DUT Configuration			
Mode:	3.3b	Duty Cycle (%):	-
Modulation:	16-QAM	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	B (SMA on EUT)	Active Chain(s):	0

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2455	-	47.320	-	-	≥500.0

Table 31 - 6 dB Bandwidth Results



Figure 20 - SMA on EUT (B) 2455 MHz (CH1) 6 dB Bandwidth

FCC 47 CFR Part 15, Limit Clause 15.247(a)(2)

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



2.6.8 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Multimeter	Iso-tech	IDM101	2421	12	11-Nov-2026
Hygrometer	Rotronic	I-1000	2891	12	23-Dec-2026
AC Programmable Power Supply	iTech	IT7324	5226	-	O/P Mon
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	6639	12	29-Aug-2026

Table 32

O/P Mon – Output Monitored using calibrated equipment



2.7 AC Power Line Conducted Emissions

2.7.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.207

2.7.2 Equipment Under Test and Modification State

4G/5G GBSS Call Box,, S/N: F76AA38054B7- Modification State 1

2.7.3 Date of Test

02-April-2026

2.7.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.2.

The EUT was placed on a non-conductive table 0.8 m above a reference ground plane. A vertical coupling plane was placed 0.4 m from the EUT boundary.

A Line Impedance Stabilisation Network (LISN) was directly bonded to the ground-plane. The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN was 0.8 m.

Interconnecting cables that hanged closer than 0.4 m to the ground plane were folded back and forth in the centre forming a bundle 0.3 m to 0.4 m long.

Input and output cables were terminated with equipment or loads representative of real usage conditions.

The EUT was configured to give the highest level of emissions within reason of a typical installation as described by the manufacturer.

A Peak detector pre-scan of the EUT emissions profile was measured across the appropriate frequency range.

Where all pre-scan peak emissions measured were greater than 20 dB below the CISPR Average test limit, no final measurements were made in accordance with ANSI C63.4.

Where any pre-scan peak emissions were within 20 dB of the CISPR Average test limit, the six highest pre-scan emissions seen across the frequency range were measured for at least 15 seconds using a Peak, Quasi-Peak or CISPR Average detector as appropriate to the test limit being measured against.

2.7.5 Example Calculation

Quasi-Peak level (dBμV) = Receiver level (dBμV) + Correction Factor (dB)
Margin (dB) = Quasi-Peak level (dBμV) - Limit (dBμV)

CISPR Average level (dBμV) = Receiver level (dBμV) + Correction Factor (dB)
Margin (dB) = CISPR Average level (dBμV) - Limit (dBμV)

2.7.6 Example Test Setup Diagram

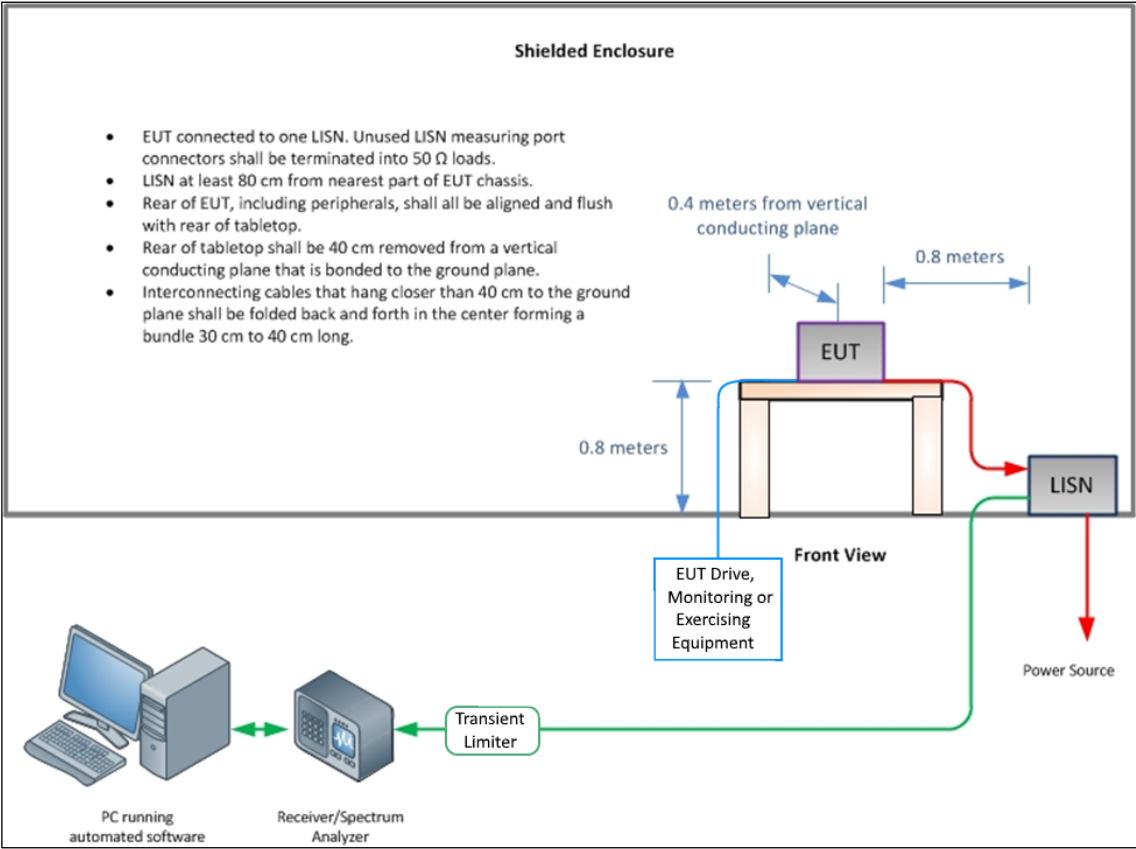


Figure 21 - Conducted Emissions Example Test Setup

2.7.7 Environmental Conditions

Ambient Temperature 21.0 °C
Relative Humidity 44.0 %

2.7.8 Specification Limits

Required Specification Limits			
Line Under Test	Frequency Range (MHz)	Quasi-Peak Test Limit (dBμV)	CISPR Average Test Limit (dBμV)
AC Power Port	0.15 to 0.5	66 to 56 ⁽¹⁾	56 to 46 ⁽¹⁾
	0.5 to 5	56	46
	5 to 30	60	50
Supplementary information: Note 1. Decreases with the logarithm of the frequency.			

Table 33

2.7.9 Test Results

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

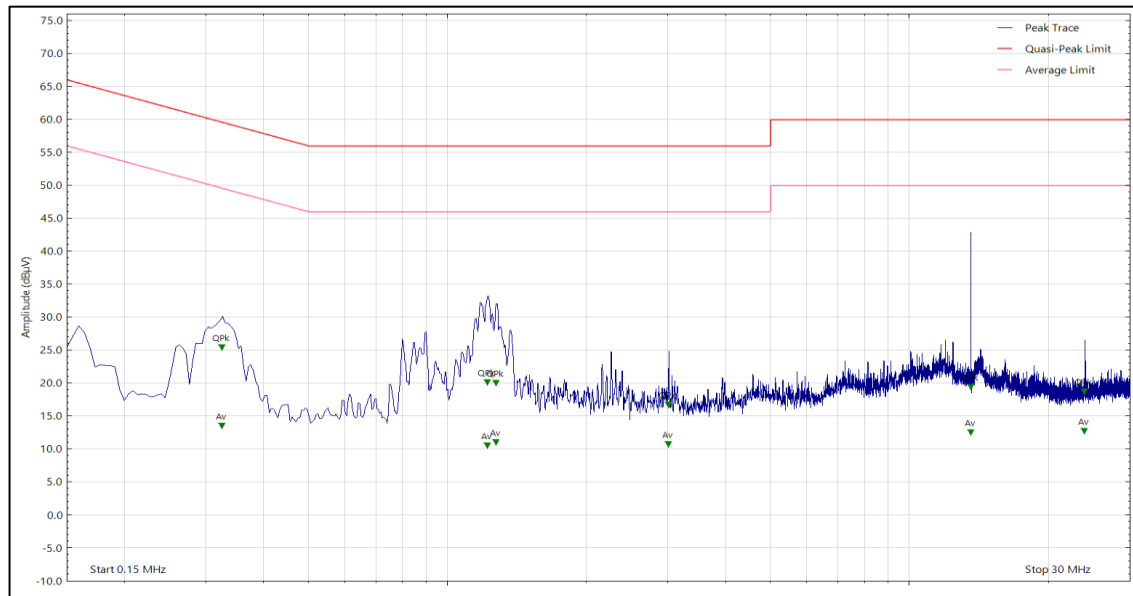


Figure 22 - Graphical Results - Live Line

Frequency (MHz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
0.325	24.71	59.60	-34.89	Q-Peak
0.325	12.86	49.60	-36.74	CISPR Avg
1.221	19.39	56.00	-36.61	Q-Peak
1.221	9.80	46.00	-36.20	CISPR Avg
1.275	19.31	56.00	-36.69	Q-Peak
1.275	10.28	46.00	-35.72	CISPR Avg
3.013	16.01	56.00	-39.99	Q-Peak
3.013	10.01	46.00	-35.99	CISPR Avg
23.944	18.05	60.00	-41.95	Q-Peak
23.944	12.07	50.00	-37.93	CISPR Avg

Table 34

Note – The emission seen at 13.56 MHz is a known ambient of the chamber and is therefore not subject to the test limit.

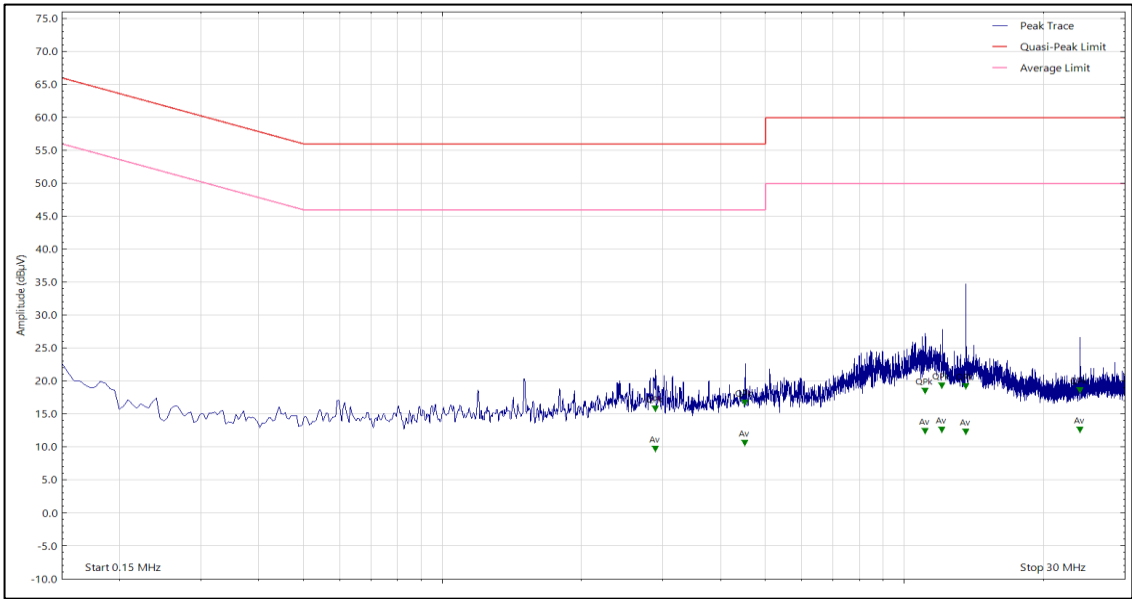


Figure 23 - Graphical Results - Neutral Line

Frequency (MHz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
2.891	15.15	56.00	-40.85	Q-Peak
2.891	9.03	46.00	-36.97	CISPR Avg
4.523	15.99	56.00	-40.01	Q-Peak
4.523	9.90	46.00	-36.10	CISPR Avg
11.099	17.86	60.00	-42.14	Q-Peak
11.099	11.76	50.00	-38.24	CISPR Avg
12.079	18.59	60.00	-41.41	Q-Peak
12.079	11.88	50.00	-38.12	CISPR Avg
23.965	17.94	60.00	-42.06	Q-Peak
23.965	11.90	50.00	-38.10	CISPR Avg

Table 35

Note – The emission seen at 13.56 MHz is a known ambient of the chamber and is therefore not subject to the test limit.



2.7.10 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 12.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Emissions Software	TUV SUD	EmX V3.6.1	5125	-	Software
Test Receiver	Rohde & Schwarz	ESW44	5382	12	09-Oct-2026
Transient Limiter	Hewlett Packard	11947A	15	12	06-Nov-2026
Cable Assembly - 18GHz 2m	Junkosha	MWX221-02000AMSAMS/B	5730	6	28-Apr-2026
Cable (N-Type to N-Type, 8 m)	Junkosha	MWX221-08000NMSNMS/B	7054	12	01-Jun-2026
LISN (CISPR 16, Single Phase)	Rohde & Schwarz	ESH3-Z5	1390	12	05-Feb-2027

Table 36

3 Photographs

3.1 Test Setup Photographs

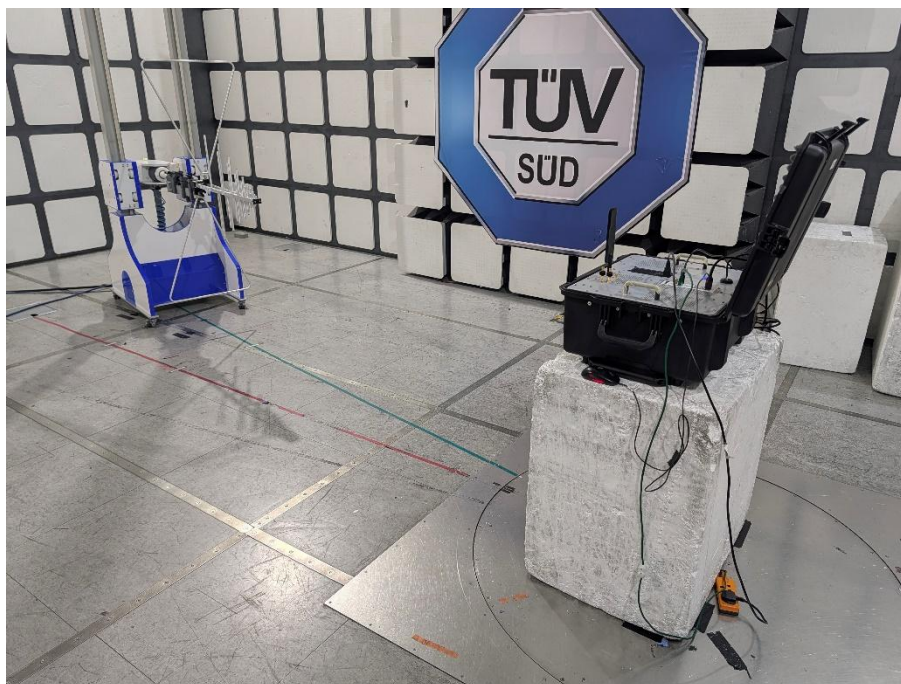


Figure 24 – Radiated Emissions 30 MHz to 1GHz Setup

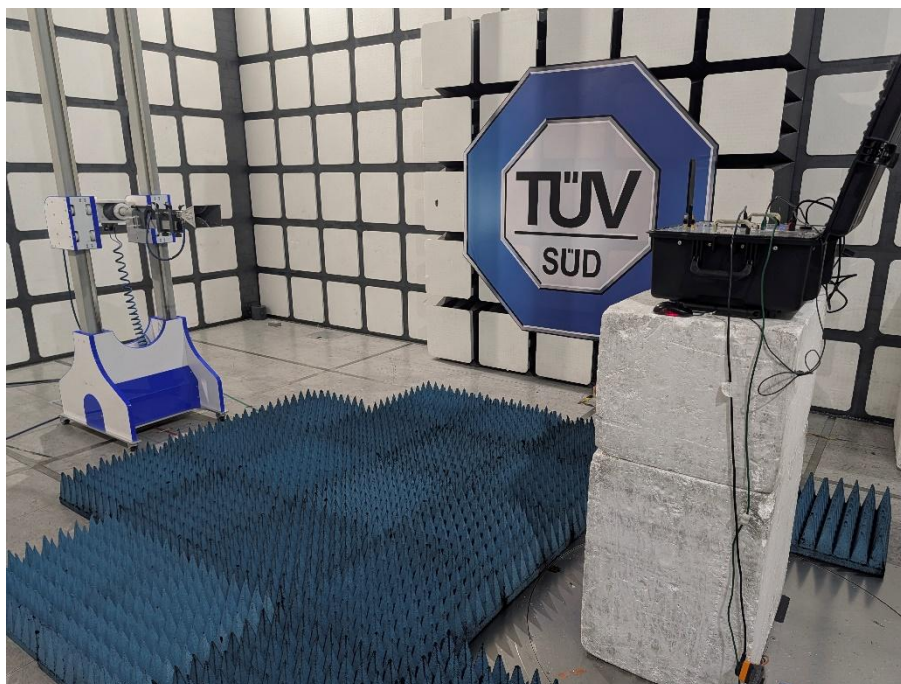


Figure 25 – Radiated Emissions 1 GHz to 9 GHz Setup

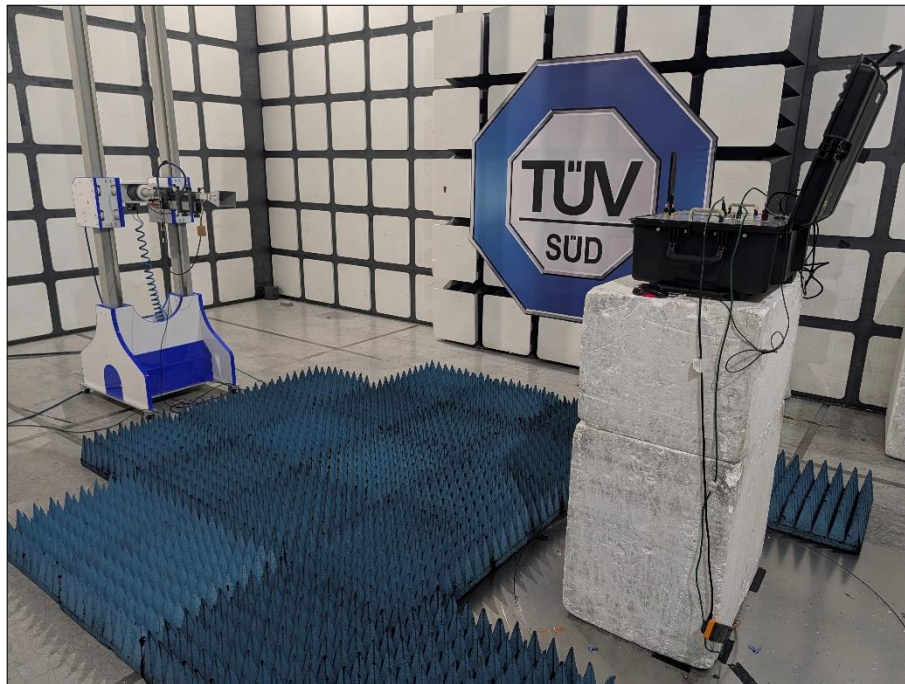


Figure 26 - Radiated Emissions Test Setup - 8 GHz to 18 GHz

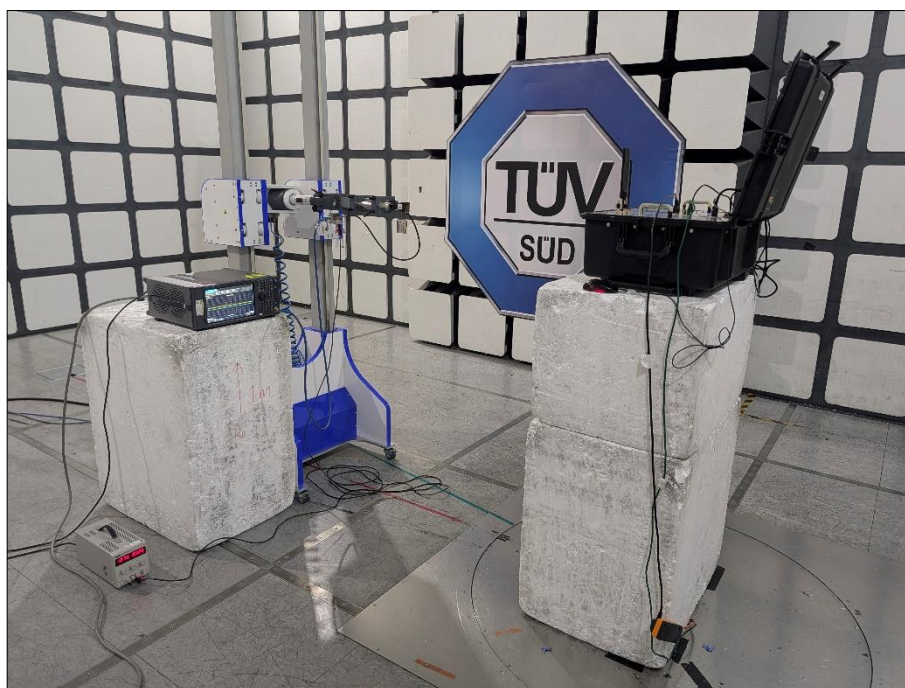


Figure 27 - Radiated Emissions Test Setup - 18 GHz to 26 GHz

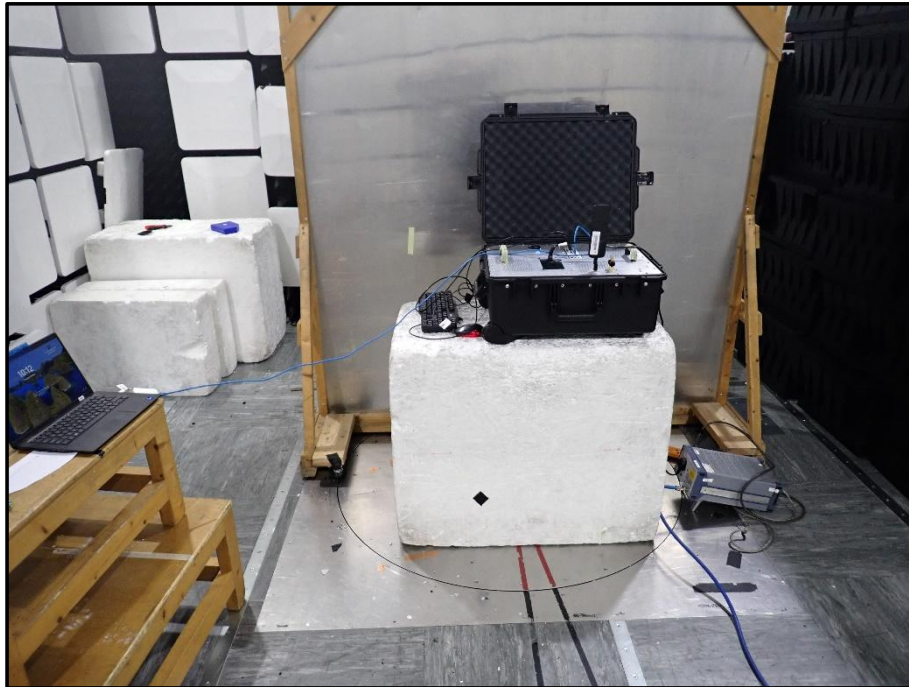


Figure 28 – AC Power Line Conducted Emissions Test Setup

4 Measurement Uncertainty

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

Test Name	Measurement Uncertainty
Restricted Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Maximum Conducted Output Power	± 1.38 dB
Power Spectral Density	± 1.49 dB
Emission Bandwidth	± 1.216 MHz
AC Power Line Conducted Emissions	150 kHz to 30 MHz, LISN ± 3.3 dB

Table 37

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.