FCC and ISED Test Report

Apple Inc
Model: A3389

In accordance with FCC 47 CFR Part 15B and ICES-003 and ISED RSS-GEN

Prepared for: Apple Inc
One Apple Park Way
Cupertino
California
95014
USA

TUV SUD Limited — Digitally signed by TUV SUD Limited Date: 2024.09.17 14:21:57 +01'00'

FCC ID: BCGA3389   IC: 579C-A3389

COMMERCIAL-IN-CONFIDENCE

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SIGNATURE			
NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Andrew Lawson	Chief Engineer, EMC	Authorised Signatory	17 September 2024

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 15B and ICES-003 and ISED RSS-GEN. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Callum Pennells	17 September 2024	

FCC Accreditation
492497/UK2010 Octagon House, Fareham Test Laboratory

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

EXECUTIVE SUMMARY
A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15B, ICES-003 and ISED RSS-GEN: 2023, Issue 7: 2020 and Issue 5 and A2 (2021-02) for the tests detailed in section 1.3.

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Contents

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	17-Sept-2024

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 15B, 2023 ICES-003, Issue 7: 2020 ISED RSS-GEN, Issue 5, A2 (2021-02)
Start of Test	27-August-2024
Finish of Test	29-August-2024
Name of Engineer(s)	Callum Pennells
Related Document(s)	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 15B and ICES-003 and ISED RSS-GEN is shown below.

Section	Specification Clause	Test Description	Result	Comments/Base Standard
Configuration and Mode: AC Powered - Transmitter Idle				
2.1	15.107, 3.1 and 8.8	Conducted Disturbance at Mains Terminals	Pass	ANSI C63.4: 2014
2.2	15.109, 3.2 and 7.1	Radiated Disturbance	Pass	ANSI C63.4: 2014

Table 2

1.4 Product Information

1.4.1 Technical Description

The equipment under test (EUT) was a desktop computer.

1.4.2 EUT Port/Cable Identification

Port	Max Cable Length specified	Usage	Type	Screened
Configuration and Mode: AC Powered - Transmitter Idle				
AC Power Port	2 m	Power	3 Pin Power Cable	No
USB Port 1	1 m	Data	USB Type C	No
USB Port 2	1 m	Data	USB Type C	No
USB Port 3	Unterminated	Data	USB Type C	No
USB Port 4	Unterminated	Data	USB Type C	No
USB Port 5	Unterminated	Data	USB Type C	No
USB Port 6	Unterminated	Data	USB Type C	No
USB Port 7	1 m	Data	USB Type A	No
USB Port 8	Unterminated	Data	USB Type A	No
Ethernet Port	3 m	Data	Cat 6	No
HDMI Port	2 m	Data	HDMI	No
Audio Jack Port	1 m	Data	Audio Jack 3.5mm	No

Table 3

1.4.3 Test Configuration

Configuration	Description
AC Powered	The EUT was powered from a 120 V 60 Hz AC supply. The Audio Jack Port was terminated with a set of headphones. The Ethernet Port was terminated with an ethernet switch. The HDMI Port was terminated using a monitor. USB Port 7 was terminated using a mouse. USB Port 1 was terminated using a keyboard. USB Port 2 was terminated using a network box. Five USB ports were unterminated.

Table 4

1.4.4 Modes of Operation

Mode	Description
Transmitter Idle	The EUT was powered with all internal transmitters disabled.

Table 5

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.

Serial Number	Hardware Version	Software Version	Firmware
Model: A3389			
J2X0Q012KJ	REV1.0	24B31	WLAN: 23.10.888.0.41.51.162 Bluetooth: 22.1.136.1387 Narrowband: 22.1.136.1387 Thread: 22.1.136.1387

Table 6

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: A3389, Serial Number: J2X0Q012KJ			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 7

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: AC Powered - Transmitter Idle		
Conducted Disturbance at Mains Terminals	Callum Pennells	UKAS
Radiated Disturbance	Callum Pennells	UKAS

Table 8

Office Address:

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

2 Test Details

2.1 Conducted Disturbance at Mains Terminals

2.1.1 Specification Reference

FCC 47 CFR Part 15B, ICES-003 and ISED RSS-GEN, Clause 15.107, 3.1 and 8.8

2.1.2 Equipment Under Test and Modification State

A3389, S/N: J2X0Q012KJ - Modification State 0

2.1.3 Date of Test

29-August-2024

2.1.4 Test Method

The EUT was setup according to ANSI C63.4, clause 5.2.

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.

2.1.5 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)

2.1.6 Example Test Setup Diagram

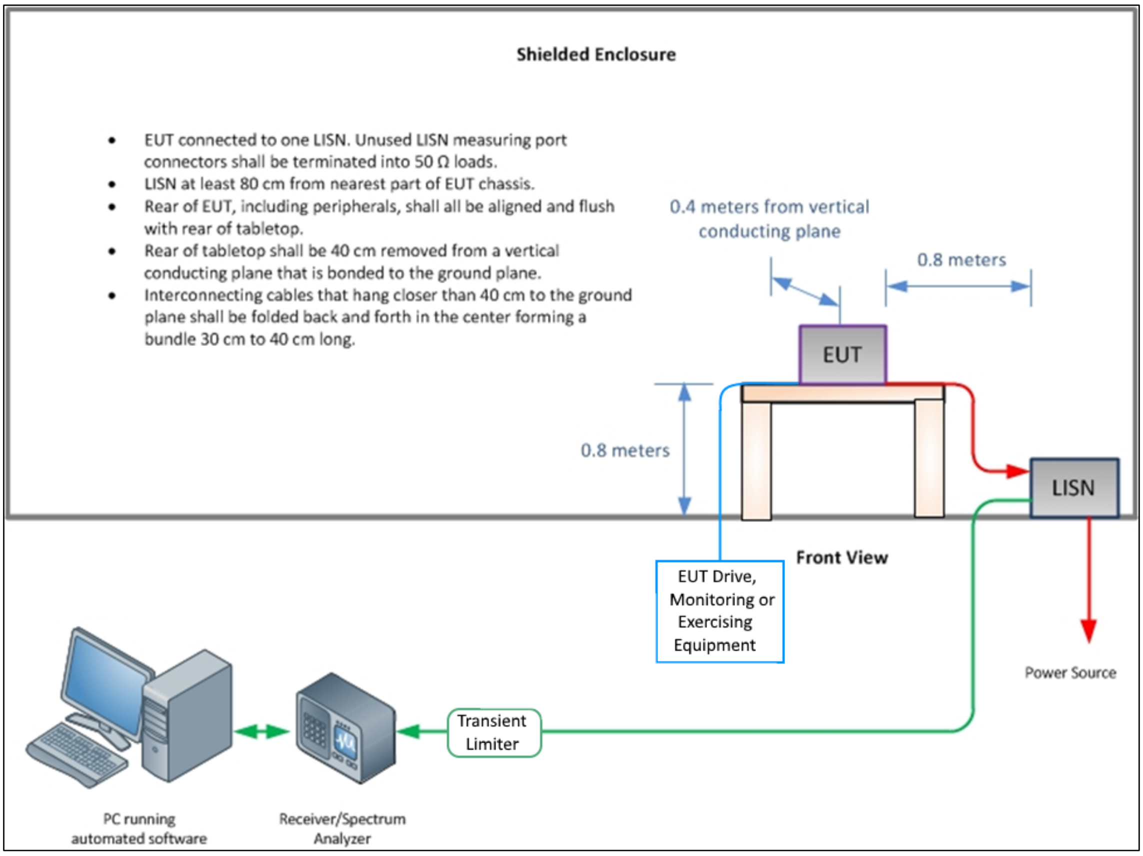

Figure 1 - Conducted Disturbance

2.1.7 Environmental Conditions

Ambient Temperature	24.5 °C
Relative Humidity	48.5 %
Atmospheric Pressure	1013.0 mbar

2.1.8 Specification Limits

Required Specification Limits - Class B			
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 9

2.1.9 Test Results

Results for Configuration and Mode: AC Powered - Transmitter Idle.

This test was performed to the requirements of the Class B limits.

Performance assessment of the EUT made during this test: Pass.
Detailed results are shown below.

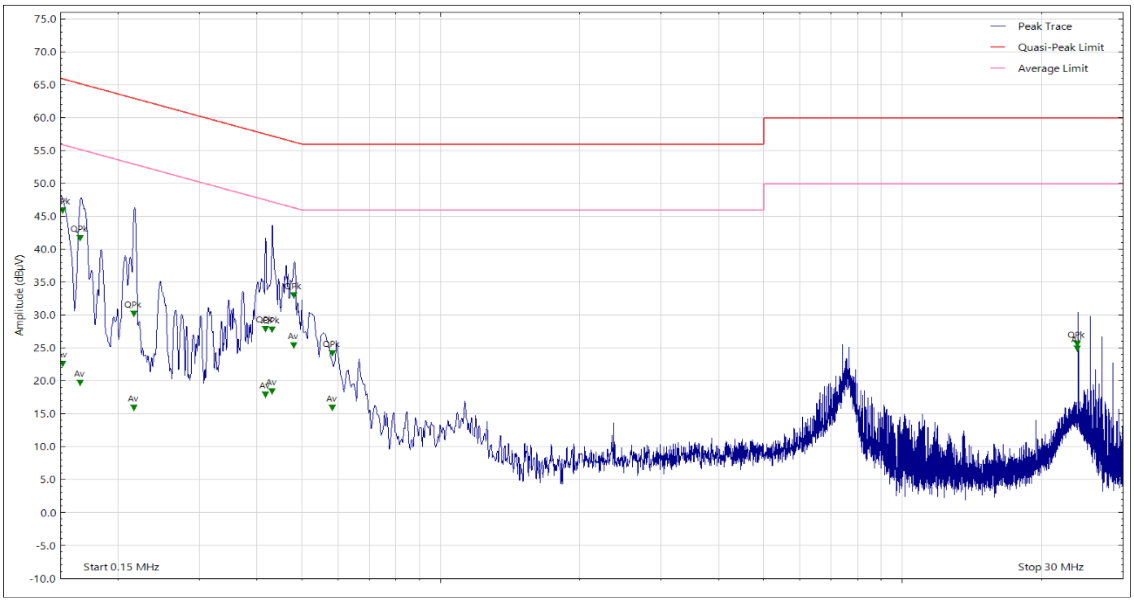

Figure 2 - Graphical Results - Live Line

Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Margin (dB)	Detector
0.152	45.18	65.90	-20.72	Q-Peak
0.152	21.87	55.90	-34.03	CISPR Avg
0.166	19.03	55.20	-36.17	CISPR Avg
0.166	40.96	65.20	-24.24	Q-Peak
0.217	29.53	62.90	-33.37	Q-Peak
0.217	15.26	52.90	-37.64	CISPR Avg
0.417	27.21	57.50	-30.29	Q-Peak
0.417	17.23	47.50	-30.27	CISPR Avg
0.431	27.08	57.20	-30.12	Q-Peak
0.431	17.69	47.20	-29.51	CISPR Avg
0.481	24.66	46.30	-21.64	CISPR Avg
0.481	32.26	56.30	-24.04	Q-Peak
0.583	23.48	56.00	-32.52	Q-Peak
0.583	15.23	46.00	-30.77	CISPR Avg
23.934	24.21	50.00	-25.79	CISPR Avg
23.934	24.93	60.00	-35.07	Q-Peak

Table 10

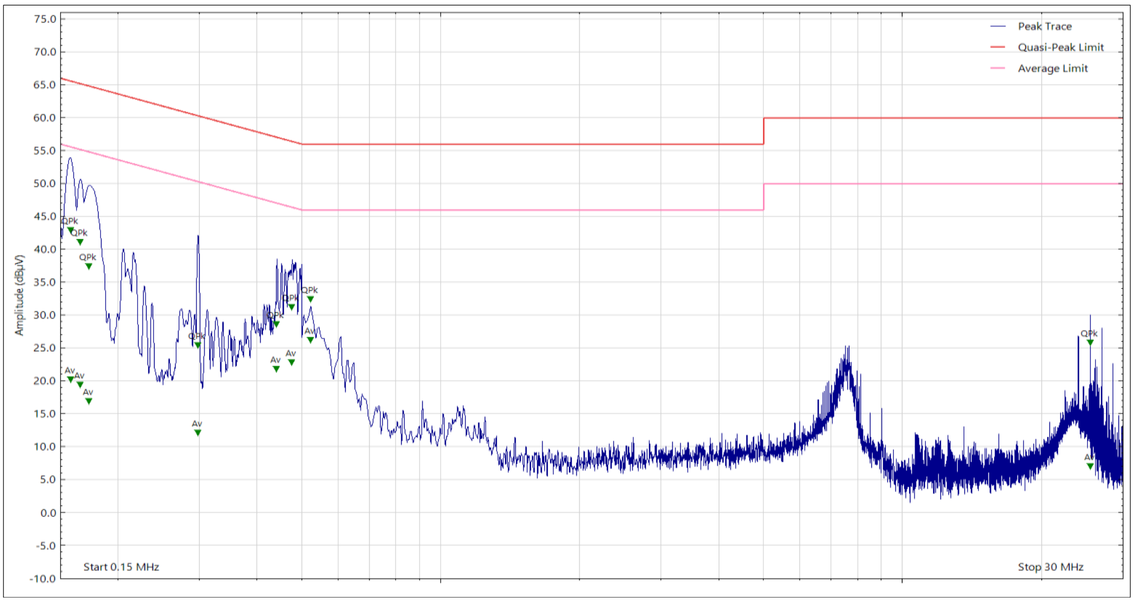

Figure 3 - Graphical Results - Neutral Line

Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Margin (dB)	Detector
0.158	19.56	55.60	-36.04	CISPR Avg
0.158	42.17	65.60	-23.43	Q-Peak
0.166	40.37	65.20	-24.83	Q-Peak
0.166	18.69	55.20	-36.51	CISPR Avg
0.173	16.23	54.80	-38.57	CISPR Avg
0.173	36.74	64.80	-28.06	Q-Peak
0.298	11.43	50.30	-38.87	CISPR Avg
0.298	24.72	60.30	-35.58	Q-Peak
0.441	21.16	47.00	-25.84	CISPR Avg
0.441	27.91	57.00	-29.09	Q-Peak
0.476	22.13	46.40	-24.27	CISPR Avg
0.476	30.50	56.40	-25.90	Q-Peak
0.522	25.47	46.00	-20.53	CISPR Avg
0.522	31.73	56.00	-24.27	Q-Peak
25.509	25.06	60.00	-34.94	Q-Peak
25.509	6.34	50.00	-43.66	CISPR Avg

Table 11

2.1.10 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 V3.2.0	5125	-	Software
Test Receiver	Rohde & Schwarz	ESU40	3506	12	17-Apr-2025
Transient Limiter	Hewlett Packard	11947A	15	12	24-Oct-2024
Termination (50ohm)	JFW	50T-054	3952	12	20-Mar-2025
Cable (N-Type to N-Type, 2 m)	Junkosha	MWX221-02000AMSAMS/B	5729	12	02-Feb-2025
Cable (N-Type to N-Type, 8 m)	Junkosha	MWX221-08000NMSNMS/B	6321	12	04-Feb-2025
LISN (CISPR 16, Three Phase)	Rohde & Schwarz	ESH2-Z5	16	12	05-Sep-2024
LISN (CISPR 16, Single Phase)	Rohde & Schwarz	ESH3-Z5	1390	12	01-Feb-2025
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB 40	5604	12	22-Nov-2024

Table 12

2.2 Radiated Disturbance

2.2.1 Specification Reference

FCC 47 CFR Part 15B, ICES-003 and ISED RSS-GEN, Clause 15.109, 3.2 and 7.1

2.2.2 Equipment Under Test and Modification State

A3389, S/N: J2X0Q012KJ - Modification State 0

2.2.3 Date of Test

27-August-2024 to 29-August-2024

2.2.4 Test Method

The EUT was set up in a semi-anechoic chamber in the centre of a remotely controlled turntable and placed on a non-conductive table 0.8 m above a reference ground plane.

A Peak detector pre-scan of the EUT emissions profile was measured across the appropriate frequency range while varying the antenna-to-EUT azimuth and polarisation. Measurements were made using a 3 m distance between the declared antenna measurement point and the EUT.

Where all pre-scan peak emissions measured were greater than 20 dB below the 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 test limit, the six highest pre-scan peak emissions seen across the frequency range were maximised by adjusting antenna height, polarisation and angle and then measured for at least 15 seconds using a Peak, Quasi-Peak or CISPR Average detector as appropriate to the test limit being measured against.

2.2.5 Example Calculation

Below 1 GHz:

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

Above 1 GHz:

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

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

2.2.6 Example Test Setup Diagram

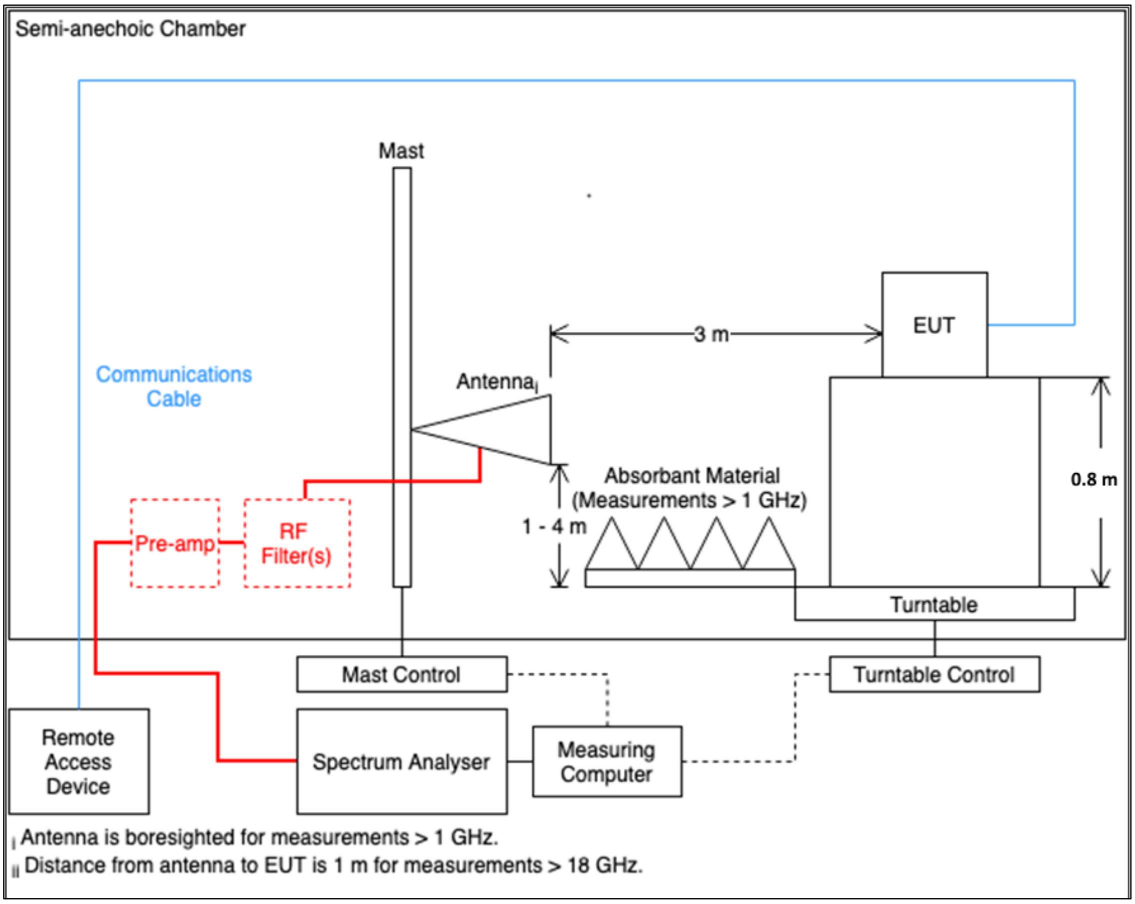

Figure 4 - Radiated Disturbance Example Test Setup

2.2.7 Environmental Conditions

Ambient Temperature	23.1 °C
Relative Humidity	49.5 %
Atmospheric Pressure	1013.0 mbar

2.2.8 Specification Limits

Required Specification Limits, Field Strength - Class B Test Limit at a 3 m Measurement Distance		
Frequency Range (MHz)	Test Limit (µV/m)	Test Limit (dBµV/m)
30 to 88	100	40.0
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

Supplementary information:
Note 1. A Quasi-peak detector is to be used for measurements below 1 GHz.
Note 2. A CISPR Average detector is to be used for measurements above 1 GHz.
Note 3. The Peak test limit above 1 GHz is 20 dB higher than the CISPR Average test limit.

Table 13

2.2.9 Test Results

Results for Configuration and Mode: AC Powered - Transmitter Idle.

This test was performed to the requirements of the Class B limits.

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

Detailed results are shown below.

Highest frequency generated or used within the EUT: 6 GHz
Which necessitates an upper frequency test limit of: 30 GHz (Tested to 40 GHz)

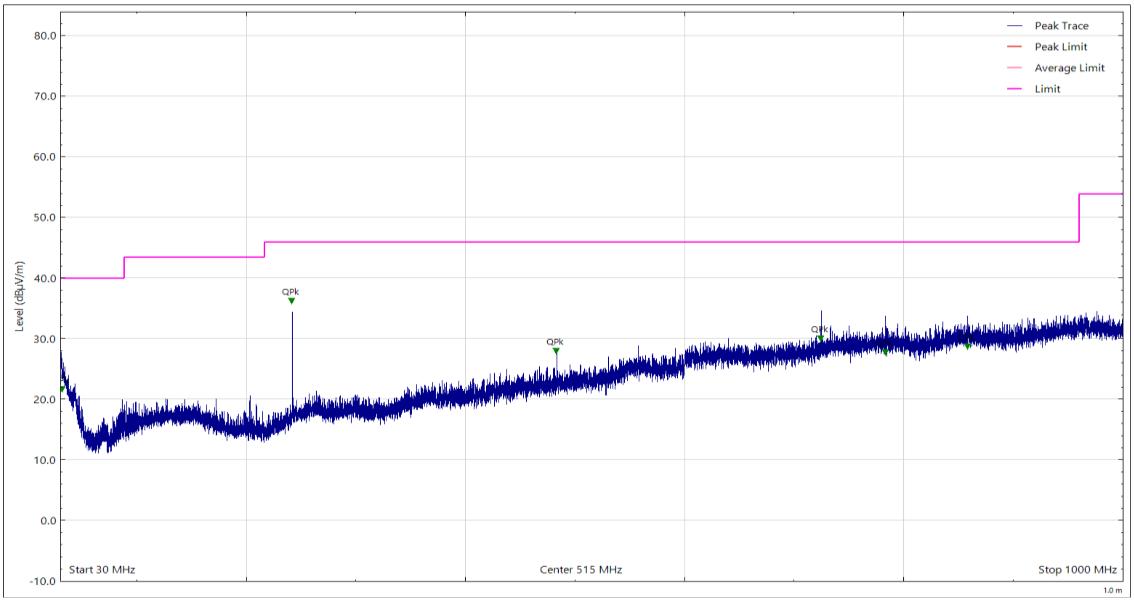

Figure 5 - 30 MHz to 1 GHz, Quasi-Peak, Horizontal

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
31.623	20.91	40.00	-19.09	Q-Peak	286	240	Horizontal
241.506	35.47	46.00	-10.53	Q-Peak	89	173	Horizontal
483.026	27.26	46.00	-18.74	Q-Peak	28	100	Horizontal
724.568	29.31	46.00	-16.69	Q-Peak	310	103	Horizontal
783.067	27.03	46.00	-18.97	Q-Peak	59	100	Horizontal
858.511	27.97	46.00	-18.03	Q-Peak	96	102	Horizontal

Table 14

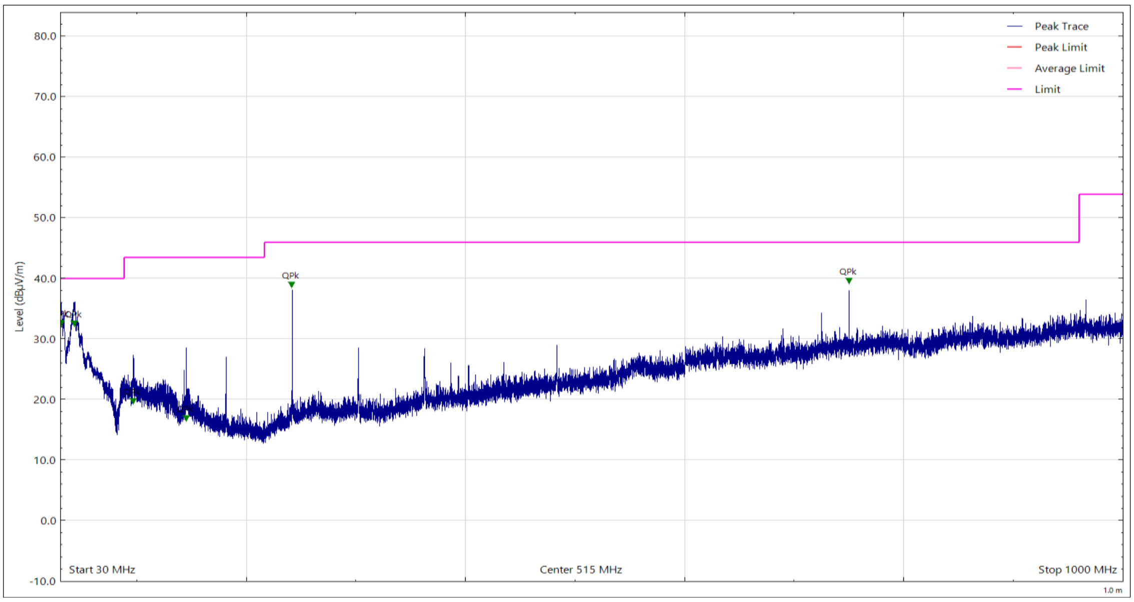

Figure 6 - 30 MHz to 1 GHz, Quasi-Peak, Vertical

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
30.837	31.93	40.00	-8.07	Q-Peak	320	100	Vertical
42.993	31.79	40.00	-8.21	Q-Peak	274	100	Vertical
96.583	18.95	43.50	-24.55	Q-Peak	40	152	Vertical
144.903	16.09	43.50	-27.41	Q-Peak	156	100	Vertical
241.484	38.16	46.00	-7.84	Q-Peak	174	123	Vertical
750.015	38.86	46.00	-7.14	Q-Peak	317	100	Vertical

Table 15

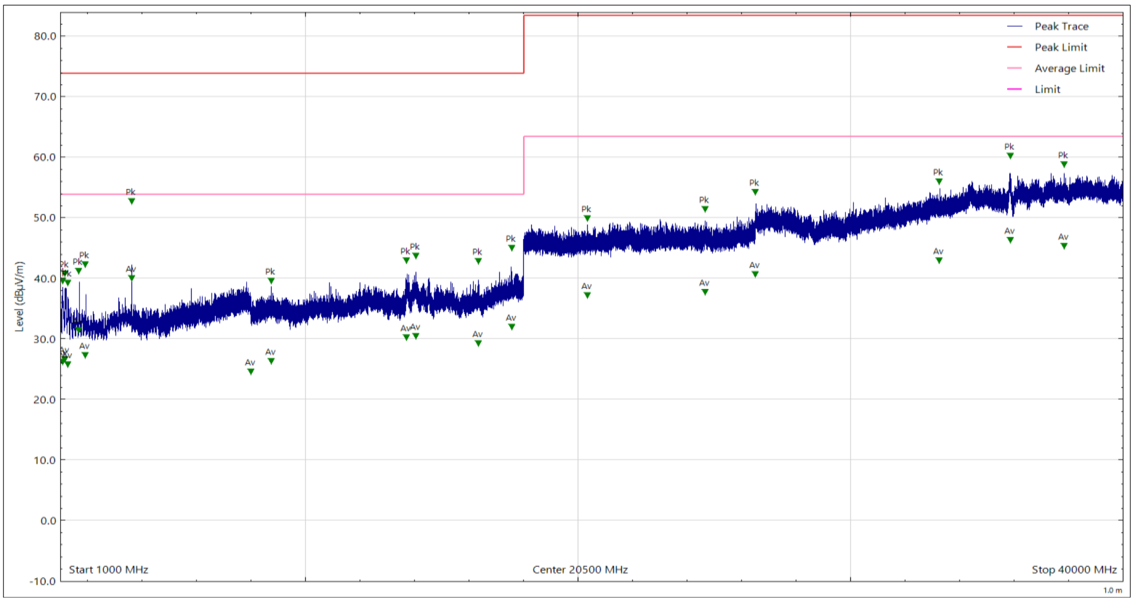

Figure 7 - 1 GHz to 40 GHz, Peak and CISPR Average, Horizontal

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
1084.000	25.52	54.00	-28.48	CISPR Avg	84	101	Horizontal
1084.000	38.87	74.00	-35.13	Peak	84	101	Horizontal
1174.500	25.91	54.00	-28.09	CISPR Avg	309	100	Horizontal
1174.500	40.03	74.00	-33.97	Peak	309	100	Horizontal
1277.500	25.10	54.00	-28.90	CISPR Avg	1	103	Horizontal
1277.500	38.53	74.00	-35.47	Peak	1	103	Horizontal
1690.000	30.72	54.00	-23.28	CISPR Avg	292	111	Horizontal
1690.000	40.51	74.00	-33.49	Peak	292	111	Horizontal
1932.000	26.59	54.00	-27.41	CISPR Avg	330	135	Horizontal
1932.000	41.54	74.00	-32.46	Peak	330	135	Horizontal
3622.500	52.05	74.00	-21.95	Peak	61	162	Horizontal
3622.500	39.27	54.00	-14.73	CISPR Avg	61	162	Horizontal
8000.000	41.99	74	-32.01	Peak	220	103	Horizontal
8000.000	23.87	54.00	-30.13	CISPR Avg	220	103	Horizontal
8748.500	25.61	54.00	-28.39	CISPR Avg	282	184	Horizontal
8748.500	38.82	74.00	-35.18	Peak	282	184	Horizontal
13720.000	42.24	74.00	-31.76	Peak	200	383	Horizontal
13720.000	29.48	54.00	-24.52	CISPR Avg	200	383	Horizontal
14054.000	29.72	54.00	-24.28	CISPR Avg	306	201	Horizontal
14054.000	42.97	74.00	-31.03	Peak	306	201	Horizontal
16341.000	42.15	74.00	-31.85	Peak	145	172	Horizontal
16341.000	28.56	54.00	-25.44	CISPR Avg	145	172	Horizontal
17569.000	44.28	74.00	-29.72	Peak	103	209	Horizontal
17569.000	31.22	54.00	-22.78	CISPR Avg	103	209	Horizontal
20351.500	49.21	83.50	-34.29	Peak	270	100	Horizontal
20351.500	36.41	63.50	-27.09	CISPR Avg	270	100	Horizontal
24670.000	50.74	83.50	-32.76	Peak	127	100	Horizontal
24670.000	36.95	63.50	-26.55	CISPR Avg	127	100	Horizontal
26522.000	53.53	83.50	-29.97	Peak	34	100	Horizontal
26522.000	39.88	63.50	-23.62	CISPR Avg	34	100	Horizontal
33276.500	55.29	83.50	-28.21	Peak	296	100	Horizontal
33276.500	42.27	63.50	-21.23	CISPR Avg	296	100	Horizontal
35870.500	59.47	83.50	-24.03	Peak	143	100	Horizontal
35870.500	45.57	63.50	-17.93	CISPR Avg	143	100	Horizontal
37841.000	58.10	83.50	-25.40	Peak	51	100	Horizontal
37841.000	44.61	63.50	-18.89	CISPR Avg	51	100	Horizontal

Table 16

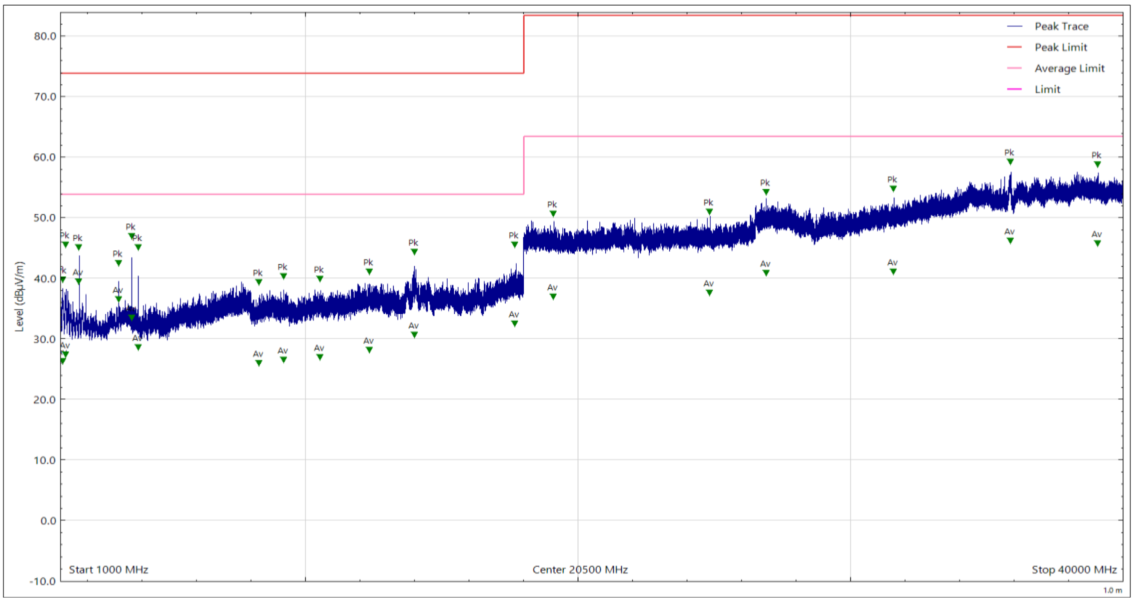

Figure 8 - 1 GHz to 40 GHz, Peak and CISPR Average, Vertical

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
1080.500	39.02	74.00	-34.98	Peak	2	271	Vertical
1080.500	25.61	54.00	-28.39	CISPR Avg	2	271	Vertical
1207.500	26.73	54.00	-27.27	CISPR Avg	3	118	Vertical
1207.500	44.84	74.00	-29.16	Peak	3	118	Vertical
1690.570	38.77	54.00	-15.23	CISPR Avg	49	100	Vertical
1690.570	44.43	74.00	-29.57	Peak	49	100	Vertical
3139.500	41.78	74.00	-32.22	Peak	25	100	Vertical
3139.500	35.80	54.00	-18.20	CISPR Avg	25	100	Vertical
3622.000	32.78	54.00	-21.22	CISPR Avg	15	100	Vertical
3622.000	46.29	74.00	-27.71	Peak	15	100	Vertical
3864.000	44.36	74.00	-29.64	Peak	204	100	Vertical
3864.000	27.89	54.00	-26.11	CISPR Avg	204	100	Vertical
8304.000	38.65	74.00	-35.35	Peak	226	278	Vertical
8304.000	25.21	54.00	-28.79	CISPR Avg	226	278	Vertical
9202.000	39.60	74.00	-34.40	Peak	138	167	Vertical
9202.000	25.76	54.00	-28.24	CISPR Avg	138	167	Vertical
10543.500	26.21	54.00	-27.79	CISPR Avg	34	100	Vertical
10543.500	39.15	74.00	-34.85	Peak	34	100	Vertical
12346.000	27.49	54.00	-26.51	CISPR Avg	82	176	Vertical
12346.000	40.38	74.00	-33.62	Peak	82	176	Vertical
14002.500	29.99	54.00	-24.01	CISPR Avg	329	100	Vertical
14002.500	43.59	74.00	-30.41	Peak	329	100	Vertical
17695.500	31.74	54.00	-22.26	CISPR Avg	334	251	Vertical
17695.500	44.85	74.00	-29.15	Peak	334	251	Vertical
19110.000	49.89	83.50	-33.61	Peak	303	100	Vertical
19110.000	36.27	63.50	-27.23	CISPR Avg	303	100	Vertical
24837.000	50.22	83.50	-33.28	Peak	235	100	Vertical
24837.000	36.85	63.50	-26.65	CISPR Avg	235	100	Vertical
26906.000	53.54	83.50	-29.96	Peak	31	100	Vertical
26906.000	40.11	63.50	-23.39	CISPR Avg	31	100	Vertical
31580.500	54.03	83.50	-29.47	Peak	52	100	Vertical
31580.500	40.41	63.50	-23.09	CISPR Avg	52	100	Vertical
35871.000	58.51	83.50	-24.99	Peak	327	100	Vertical
35871.000	45.51	63.50	-17.99	CISPR Avg	327	100	Vertical
39079.500	58.06	83.50	-25.44	Peak	281	100	Vertical
39079.500	44.99	63.50	-18.51	CISPR Avg	281	100	Vertical

Table 17

2.2.10 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
3m Semi-Anechoic Chamber	MVG	EMC Chamber 12	5621	36	07-Aug-2026
Emissions Software	TUV SUD	EmX V3.2.0	5125	-	Software
Test Receiver	Rohde & Schwarz	ESU40	3506	12	17-Apr-2025
Turntable & Mast Controller	Maturo Gmbh	NCD/498/2799.01	5612	-	TU
Tilt Antenna Mast	Maturo Gmbh	TAM 4.0-P	5613	-	TU
Cable (N-Type to N-Type, 2 m)	Junkosha	MWX221-02000AMSAMS/B	5729	12	02-Feb-2025
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5996	12	20-May-2025
Cable (N-Type to N-Type, 8 m)	Junkosha	MWX221-08000NMSNMS/B	6321	12	04-Feb-2025
Cable (K-Type to K-Type, 2 m)	Junkosha	MWX241-02000KMSKMS/A	5524	12	29-Oct-2024
Pre-Amplifier (1 GHz to 18 GHz)	Schwarzbeck	BBV 9718 C	5350	12	01-Dec-2024
Pre-Amplifier (8 GHz to 18 GHz)	Phase One	PS04-0086	1533	12	26-Feb-2025
Pre-Amplifier (18 GHz to 40 GHz)	Narda	NARDA DB02-0447	237	12	04-Dec-2024
Antenna with Attenuator (Bi-Log, 30 MHz to 1 GHz)	Teseq	CBL6111D	5615	24	15-Mar-2025
Antenna (DRG 1-10.5GHz)	Schwarzbeck	BBHA9120B	4848	12	14-Jul-2025
Antenna (DRG, 7.5 GHz to 18 GHz)	Schwarzbeck	HWRD750	5348	12	15-Oct-2024
Antenna (DRG, 18 GHz to 40 GHz)	Link Microtek Ltd	AM180HA-K-TU2	230	24	23-Sep-2024
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB 40	5604	12	22-Nov-2024

Table 18

TU - Traceability Unscheduled

3 Incident Reports

No incidents reports were raised.

4 Measurement Uncertainty

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

Test Name	Measurement Uncertainty
Conducted Disturbance at Mains Terminals	150 kHz to 30 MHz, LISN, ±3.7 dB
Radiated Disturbance	30 MHz to 1 GHz, Bilog Antenna, SAC, ± 5.2 dB 1 GHz to 6 GHz, Horn Antenna, SAC, ± 5.1 dB 6 GHz to 18 GHz, Horn Antenna, SAC, ± 4.9 dB 18 GHz to 40 GHz, Horn Antenna, SAC, ± 6.3 dB

Table 19

Worst case error for both Time and Frequency measurement 12 parts in 10^6.

Measurement Uncertainty Decision Rule

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.