

TEST REPORT

Test Report No. : UL-RPT-RP15749869-1616A

Customer* : Multitone Electronics Plc

Model No.* : EKOCPLVR-M

FCC ID* : E86EKOCPLVRM

Test Standard(s) : FCC Part 15.207(a)

Test Laboratory : UL International (UK) Ltd, Basingstoke, Hampshire, RG24 8AH,
United Kingdom

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2. The results in this report apply only to the sample(s) tested.
3. This sample tested is in compliance with the above standard(s).
4. The test results in this report are traceable to the national or international standards.
5. All information marked with (*) was provided by the Customer, Applicant or Authorised representative
6. Version 1.0.

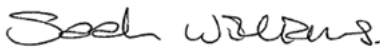
Date of Issue: 16 February 2026

Checked by:



Ben Mercer
Lead Test Engineer, Radio Laboratory

Company Signatory:



Sarah Williams
Staff Engineer, Radio Laboratory



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Customer Information

Company Name*:	Multitone Electronics Plc
Address*:	Shortwood Copse Lane, Beggarwood, Basingstoke, Hampshire, RG23 7NL, United Kingdom

Report Revision History

Version Number	Issue Date	Revision Details	Revised By
1.0	16/02/2026	Initial Version	Ben Mercer

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1 Attestation of Test Results

1.1 Description of EUT

The equipment under test (EUT) was an emergency call point repeater incorporating a proprietary 2.4 GHz radio.*

1.2 General Information

Specification Reference:	47CFR15.207
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Section 15.207
Site Registration:	685609
FCC Lab. Designation No.:	UK2011
Location of Testing:	Units 3 & 4 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
Test Dates:	3 February 2026

1.3 Summary of Test Results

FCC Clause (47CFR)	Transmitter Measurement	Result
Part 15.207(a)	Transmitter AC Conducted Emissions	Complied

1.4 Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

2 Summary of Testing

2.1 Facilities and Accreditation

The test site and measurement facilities used to collect data are located at Units 3 & 4 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom.

UL International (UK) Ltd is accredited by the United Kingdom Accreditation Service (UKAS). UKAS is one of the signatories to the International Laboratory Accreditation Co-operation (ILAC) Arrangement for the mutual recognition of test reports. The tests reported herein have been performed in accordance with its terms of accreditation.

2.2 Methods and Procedures

Reference:	ANSI C63.10-2020+Cor.1-2023
Title:	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Reference:	KDB 174176 D01 Line Conducted FAQ v01r01 June 3, 2015
Title:	AC Power-Line Conducted Emissions Frequently Asked Questions

2.3 Calibration and Uncertainty

Measuring Instrument Calibration

In accordance with UKAS requirements all the measurement equipment is on a calibration schedule. All equipment was within the calibration period on the date of testing.

Measurement Uncertainty & Decision Rule

Overview

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

Decision Rule

Measurement system instrumentation shall be used with an accuracy specification meeting the accuracy specification limits according to IEC/IECEE OD-5014.

As applicable, unless specified otherwise in this quotation, the compliance "Decision Rule" is based on Simple Acceptance. If the measured value is on the limit, the result is defined as a pass. For further information regarding risk assessment refer to ILAC G8:09/2019.

Measurement Uncertainty

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±3.15 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

2.4 Test and Measurement Equipment

Test Equipment Used for AC Conducted Emissions

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2037	Thermohygrometer	Testo	608-H1	45124925	18 Dec 2026	12
M1124	Test Receiver	Rohde & Schwarz	ESIB 26	100275	29 Oct 2026	12
A649	Single Phase LISN	Rohde & Schwarz	ESH3-Z5	825562/008	21 Aug 2026	12
A1830	Pulse Limiter	Rohde & Schwarz	100668	ESH3-Z2 Pulse Limiter	18 Aug 2026	12

Test Measurement Software/Firmware Used:

Name	Version	Release Date
Rohde & Schwarz EMC32	6.30.0	2008

3 Equipment Under Test (EUT)

3.1 Identification of Equipment Under Test (EUT)

Brand Name*:	Multitone
Model Name or Number*:	EKOCPLVR-M
Test Sample Serial Number*:	040 001245
Hardware Version*:	IK10
Software Version*:	249_R181AP.bin
FCC ID*:	E86EKOCPLVRM
Date of Receipt:	30 Jan 2026

3.2 Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.3 Additional Information Related to Testing

Tested Technology:	Short Range Device (SRD) / 802.15.4	
Type of Unit:	Transceiver	
Channel Spacing:	5 MHz	
Modulation:	O-QPSK	
Data Rate (Mbit/s):	250 kbps	
Power Supply Requirement*:	12.0 VDC	
Transmit Frequency Range:	2402 MHz to 2480 MHz	
Transmit Channels Tested:	Channel Number	Channel Frequency (MHz)
	All (Hopping)	2405-2480

3.4 Description of Available Antennas

The radio utilizes integrated antennas, with the following maximum gains:

Frequency Range (MHz)	Antenna Gain (dBi)*
2.4 GHz	3.3

3.5 Description of Test Setup

Support Equipment

The following support equipment was used to exercise the EUT during testing:

Customer Supplied*:

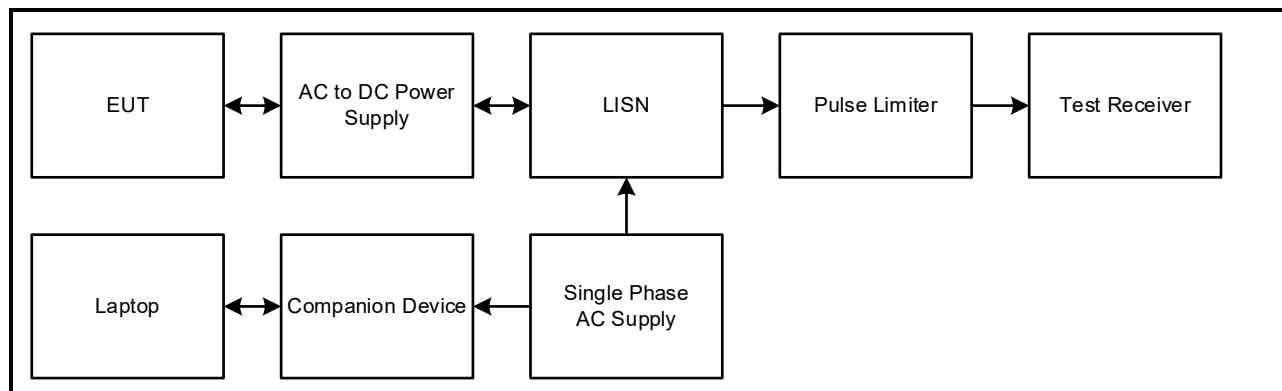
Description	Brand Name	Model Name or Number	Serial Number
AC to DC Power Adaptor	CUI Inc	SW15-12-B	Not marked or stated
PoE Switch	TP Link	TL-SG100SP	2232281004875
EkoTek Hub	MultiTone	EKTHub	005501328800
Test Laptop	Dell	Vostro 3360	7K32DT1

Operating Modes, Configuration and Peripherals

- The EUT was continuously transmitting with a modulated carrier at maximum power on all channels in hopping mode.
- The EUT was configured in normal operating mode via a wireless link with a companion device. The companion device was connected to a laptop computer. A software application on the laptop computer was used to enable a continuous transmission.
- The EUT was connected to a 120 VAC mains supply via a LISN and an AC to DC power adapter.
- There were no ports on the EUT to terminate.

Test Setup Diagrams

Test Setup for AC Conducted Emissions



4 AC Power Line Conducted Emissions Test Results

4.1 AC Conducted Spurious Emissions

Test Summary:

Test Engineer:	Alison Johnston	Test Date:	3 January 2026
Test Sample Serial Number:	040 001245		

FCC Clause:	Part 15.207(a)
Test Method Used:	ANSI C63.10 Section 6.2 / FCC KDB 174176 and notes below

Environmental Conditions:

Temperature (°C):	38
Relative Humidity (%):	22

Note(s):

1. The EUT was connected to a 120 VAC 60 Hz single phase supply via a LISN.
2. In accordance with FCC KDB 174176 Q4, tests were performed with a 240 VAC 60 Hz single phase supply as this was within the voltage range marked on the SW15-12-B power supply.
3. A pulse limiter was fitted between the LISN and the test receiver.
4. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies and the results entered into the tables below.

AC Conducted Spurious Emissions (continued)**Results: Live / Quasi Peak / 120 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.253500	Live	18.4	61.6	43.2
0.415500	Live	28.6	57.5	28.9
0.685500	Live	19.8	56.0	36.2
0.991500	Live	18.7	56.0	37.3
1.279500	Live	18.4	56.0	37.6
12.003000	Live	12.9	60.0	47.1

Results: Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.415500	Live	13.3	47.5	34.2
0.532500	Live	11.2	46.0	34.8
0.978000	Live	7.3	46.0	38.7
1.032000	Live	7.3	46.0	38.7
12.003000	Live	6.6	50.0	43.4
18.190500	Live	7.0	50.0	43.0

Results: Neutral / Quasi Peak / 120 VAC 60 Hz

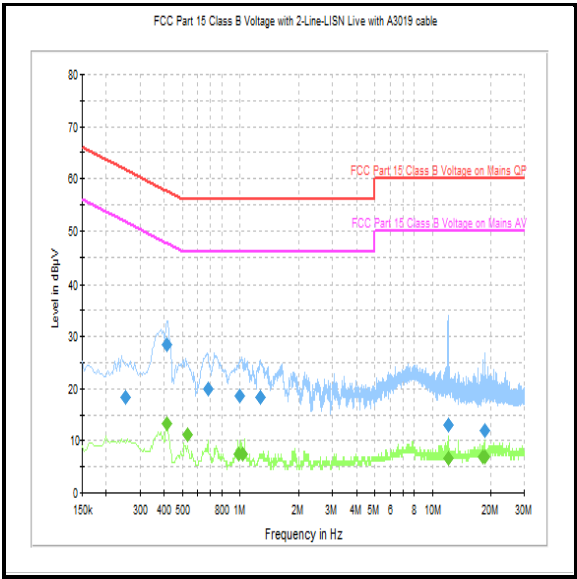
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.415500	Neutral	23.6	57.5	33.9
0.658500	Neutral	14.8	56.0	41.2
1.288500	Neutral	12.7	56.0	43.3
7.840500	Neutral	13.3	60.0	46.7
11.989500	Neutral	11.3	60.0	48.7
18.730500	Neutral	11.2	60.0	48.8

Results: Neutral / Average / 120 VAC 60 Hz

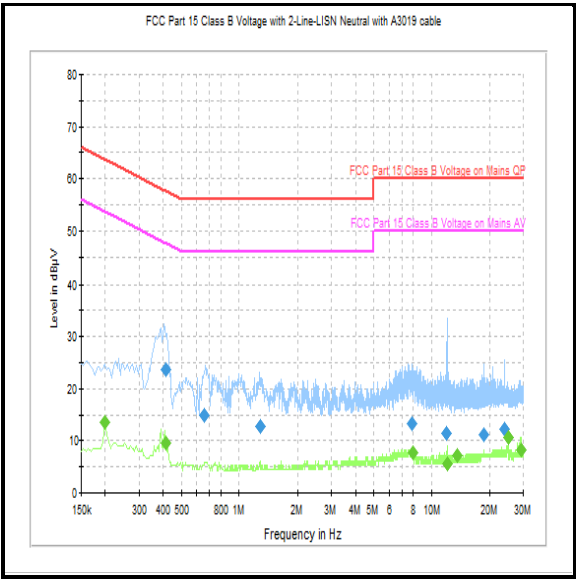
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.199500	Neutral	13.6	53.6	40.0
0.415500	Neutral	9.5	47.5	38.0
8.020500	Neutral	7.6	50.0	42.4
12.021000	Neutral	5.7	50.0	44.3
13.560000	Neutral	7.2	50.0	42.8
25.057500	Neutral	10.5	50.0	39.5

AC Conducted Spurious Emissions (continued)

Results: 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

AC Conducted Spurious Emissions (continued)**Results: Live / Quasi Peak / 240 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.406500	Live	28.0	57.7	29.7
0.415500	Live	31.4	57.5	26.1
0.739500	Live	23.4	56.0	32.6
0.820500	Live	22.0	56.0	34.0
1.378500	Live	20.9	56.0	35.1
11.998500	Live	14.5	60.0	45.5

Results: Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.348000	Live	12.0	49.0	37.0
0.415500	Live	14.7	47.5	32.8
0.834000	Live	12.7	46.0	33.3
1.401000	Live	7.3	46.0	38.7
1.846500	Live	6.7	46.0	39.3
13.560000	Live	9.7	50.0	40.3

Results: Neutral / Quasi Peak / 240 VAC 60 Hz

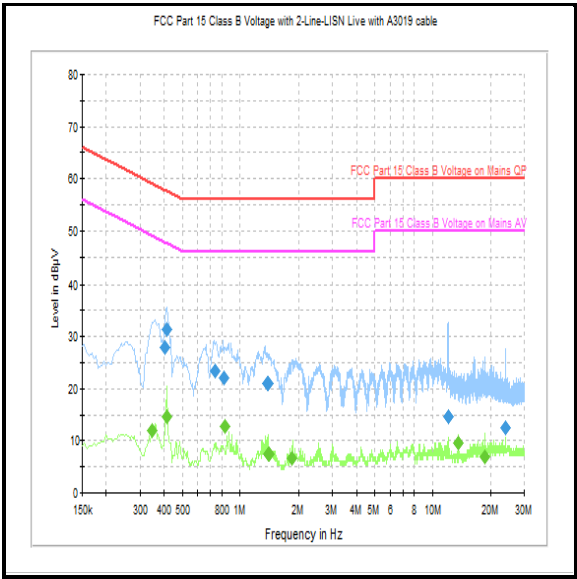
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.411000	Neutral	24.3	57.6	33.3
0.415500	Neutral	25.1	57.5	32.4
0.744000	Neutral	16.4	56.0	39.6
3.588000	Neutral	12.5	56.0	43.5
11.985000	Neutral	11.3	60.0	48.7
23.991000	Neutral	11.8	60.0	48.2

Results: Neutral / Average / 240 VAC 60 Hz

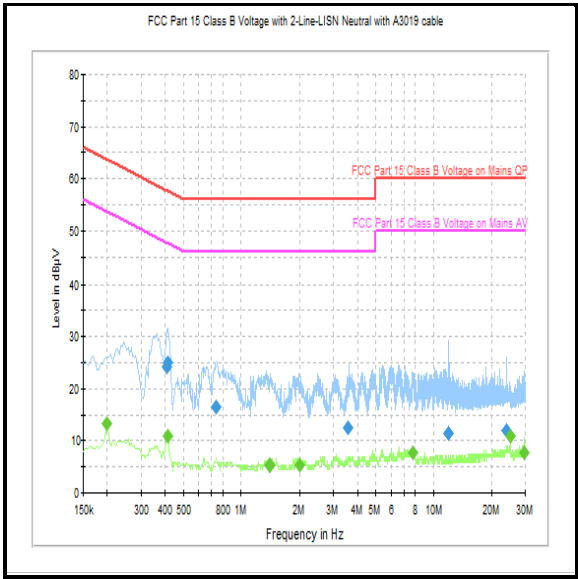
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)
0.199500	Neutral	13.3	53.6	40.3
0.415500	Neutral	10.8	47.5	36.7
1.396500	Neutral	5.2	46.0	40.8
1.990500	Neutral	5.3	46.0	40.7
7.831500	Neutral	7.6	50.0	42.4
25.057500	Neutral	11.0	50.0	39.0

AC Conducted Spurious Emissions (continued)

Results: 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

--- END OF REPORT ---