

FCC Measurement/Technical Report on Rational WA112

FCC ID: contains XMR2023EG916QGL
(cellular) and
contains XO2-SPB611 (WLAN/BT)

IC: –

Test Report Reference: MDE_AVNET_2403_FCC_05

Test Laboratory:

7layers GmbH
Borsigstrasse 11
40880 Ratingen
Germany



Deutsche
Akkreditierungsstelle
D-PL-12140-01-00

Note:

The following test results relate only to the devices specified in this document. This report shall not be reproduced in parts without the written approval of the test laboratory.

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1 APPLIED STANDARDS AND TEST SUMMARY

1.1 APPLIED STANDARDS

Type of Authorization

Certification for an Intentional Radiator (Digital Device / Spread Spectrum).

Applicable FCC Rules

Prepared in accordance with the requirements of FCC Rules and Regulations as listed in 47 CFR Ch.1 Parts 2 and 15 (10-1-24 Edition). The following subparts are applicable to the results in this test report.

Part 2, Subpart J - Equipment Authorization Procedures, Certification

Part 15, Subpart C – Intentional Radiators

§ 15.201 Equipment authorization requirement

§ 15.207 Conducted limits

§ 15.209 Radiated emission limits; general requirements

Part 15, Subpart E – Unlicensed National Information Infrastructure Devices

§ 15.403 Definitions

§ 15.407 General technical requirements

ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024 is applied.

1.2 MEASUREMENT SUMMARY

47 CFR CHAPTER I FCC PART 15 Subpart E §15.407

FCC §15.31, §15.407 (a)(1)

Maximum Conducted Output Power

The measurement was performed according to ANSI C63.10, chapter 12.3.3.2

Final Result

OP-Mode Radio Technology, Operating Frequency, Subband	Setup	Date	FCC
WLAN a, high, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN a, high, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN a, mid, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN a, mid, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN ac 20 MHz, high, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN ac 20 MHz, high, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN ac 20 MHz, high, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN ac 20 MHz, low, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN ac 40 MHz, high, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN ac 40 MHz, high, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN ac 40 MHz, low, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN ac 40 MHz, low, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN ac 80 MHz, high, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN ac 80 MHz, low, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN ac 80 MHz, mid, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN ac 80 MHz, mid, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN ax 20 MHz, high, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN ax 20 MHz, low, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN ax 20 MHz, low, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN ax 20 MHz, mid, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN ax 40 MHz, high, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN ax 40 MHz, high, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN ax 40 MHz, high, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN ax 40 MHz, low, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN ax 80 MHz, high, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN ax 80 MHz, low, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN ax 80 MHz, mid, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN ax 80 MHz, mid, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN n 20 MHz, high, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN n 20 MHz, high, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN n 20 MHz, high, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN n 20 MHz, high, U-NII-3	S05_AE02	2025-11-07	Passed
WLAN n 40 MHz, high, U-NII-1	S05_AE02	2025-11-07	Passed
WLAN n 40 MHz, high, U-NII-2A	S05_AE02	2025-11-07	Passed
WLAN n 40 MHz, high, U-NII-2C	S05_AE02	2025-11-07	Passed
WLAN n 40 MHz, low, U-NII-3	S05_AE02	2025-11-07	Passed

N/A: Not applicable

N/P: Not performed

2 REVISION HISTORY / SIGNATURES

Report version control			
Version	Release date	Change Description	Version validity
initial	2025-11-24	--	valid
--	--	--	--

COMMENT:

This test report does not contain all tests which are applicable to the EUT. The EUT includes a pre-certified module, RF output power is re-tested on selected frequencies for a C2PC where the highest values have been reported for the unlicensed module.

Please refer to the test report of the module referenced by: MDE_HDW_2303_FCC_04.



(responsible for accreditation scope)
Dipl.-Ing. Daniel Gall



(responsible for testing and report)
Dipl.-Ing. Andreas Petz



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3 ADMINISTRATIVE DATA

3.1 TESTING LABORATORY

Company Name: 7layers GmbH
Address: Borsigstr. 11
40880 Ratingen
Germany

The test facility is accredited by the following accreditation organisation:

Laboratory accreditation no: DAkkS D-PL-12140-01-00
FCC Designation Number: DE0015
FCC Test Firm Registration: 929146
ISED CAB Identifier DE0007; ISED#: 3699A

Responsible for accreditation scope: Dipl.-Ing. Daniel Gall
Report Template Version: 2025-10-17

3.2 PROJECT DATA

Responsible for testing and report: Name of the responsible for testing and report
Employees who performed the tests: documented internally at 7Layers
Date of Report: 2025-11-24
Testing Period: 2025-11-07

3.3 APPLICANT DATA

Company Name: Tria Technologies GmbH
Address: Industriestr. 16
76297 Stutensee
Germany
Contact Person: Martin Schneider

3.4 MANUFACTURER DATA

Company Name: please see Applicant Data

4 TEST OBJECT DATA

4.1 GENERAL EUT DESCRIPTION

Kind of Device product description	Device with WLAN / Bluetooth and cellular transceivers for controlling professional kitchen devices.																							
Product name	Rational WA112																							
Type	–																							
Declared EUT data by the supplier																								
Voltage Type	DC																							
Voltage Level	12.0 V (nom.)																							
Tested Modulation Type	OFDM																							
General product description	The device is designed for use in professional kitchen devices. Exchange of data is possible by using a cellular network link or WLAN / Bluetooth (BT) / Bluetooth Low Energy (BLE) / LAN / RS485 connections to other devices.																							
Specific product description	The EUT is a Bluetooth and WLAN device. It supports the following sub-bands and modes in the 5 GHz band: - WLAN a-mode 20 MHz - WLAN n 20 MHz and n 40 MHz (SISO) - WLAN ac 20 MHz, 40 MHz, and 80 MHz (SISO) - WLAN ax 20 MHz, 40 MHz, and 80 MHz (SISO) - U-NII sub-bands 1, 2A, 2C and 3.																							
Ports of the device	<table><tr><td>Name:</td><td>Cable:</td><td>Length:</td></tr><tr><td>DC input</td><td>AWG 22, 2-wire, unshielded</td><td>1.2 m</td></tr><tr><td>LAN 1</td><td>8-wire, CAT5e, shielded</td><td>2.0 m</td></tr><tr><td>USB 1</td><td>4-wire, USB 3.0</td><td>not connected</td></tr><tr><td>Audio</td><td>2-wire, AWG 24, unshielded</td><td>not connected</td></tr><tr><td>RS485</td><td>9-wire, DB9, shielded</td><td>not connected</td></tr><tr><td>External Antenna</td><td>Coaxial 50 Ω, shielded</td><td>0.0 m</td></tr></table> Notes: Above, the length of the connected cable under test is given, not the specified (max.) length (defined by the applicant).			Name:	Cable:	Length:	DC input	AWG 22, 2-wire, unshielded	1.2 m	LAN 1	8-wire, CAT5e, shielded	2.0 m	USB 1	4-wire, USB 3.0	not connected	Audio	2-wire, AWG 24, unshielded	not connected	RS485	9-wire, DB9, shielded	not connected	External Antenna	Coaxial 50 Ω, shielded	0.0 m
Name:	Cable:	Length:																						
DC input	AWG 22, 2-wire, unshielded	1.2 m																						
LAN 1	8-wire, CAT5e, shielded	2.0 m																						
USB 1	4-wire, USB 3.0	not connected																						
Audio	2-wire, AWG 24, unshielded	not connected																						
RS485	9-wire, DB9, shielded	not connected																						
External Antenna	Coaxial 50 Ω, shielded	0.0 m																						
Antenna / Gain	External / 7.8 dBi																							
Tested data rates	<table><tr><td>WLAN a:</td><td>54 Mbps</td></tr><tr><td>WLAN n 20, 40:</td><td>MCS7</td></tr><tr><td>WLAN ac 20:</td><td>MCS8</td></tr><tr><td>WLAN ac 40, 80:</td><td>MCS9</td></tr><tr><td>WLAN ax 20, 40, 80:</td><td>MCS9</td></tr></table>			WLAN a:	54 Mbps	WLAN n 20, 40:	MCS7	WLAN ac 20:	MCS8	WLAN ac 40, 80:	MCS9	WLAN ax 20, 40, 80:	MCS9											
WLAN a:	54 Mbps																							
WLAN n 20, 40:	MCS7																							
WLAN ac 20:	MCS8																							
WLAN ac 40, 80:	MCS9																							
WLAN ax 20, 40, 80:	MCS9																							

Tested at power settings	<u>Mode:</u> WLAN a: 12 WLAN n20: 12 WLAN n40: 9 WLAN ac20: 11 WLAN ac40: 9 WLAN ac80: 7 WLAN ax20: 9 WLAN ax40: 8 WLAN ax80: 7	<u>Power setting:</u>
Special software used for testing	labtool-611 (to generate synthetic test modes)	

4.2 EUT MAIN COMPONENTS

Sample Name	Sample Code	Description
ae02	DE1183057ae02	Sample for conducted tests
Sample Parameter	Value	
Serial No.	F251901559	
HW Version	DV3	
SW Version	please refer to the annex	
Comment	The sample is tested as "stand-alone" PCB without housing and auxiliaries.	

NOTE: The short description is used to simplify the identification of the EUT in this test report.

4.3 ANCILLARY EQUIPMENT

For the purposes of this test report, ancillary equipment is defined as equipment which is used in conjunction with the EUT to provide operational and control features to the EUT. It is necessary to configure the system in a typical fashion, as a customer would normally use it. But nevertheless Ancillary Equipment can influence the test results.

Device	Details (Manufacturer, Type Model, OUT Code)	Description
–	–	–

4.4 AUXILIARY EQUIPMENT

For the purposes of this test report, auxiliary equipment is defined as equipment which is used temporarily to enable operational and control features especially used for the tests of the EUT which is not used during normal operation or equipment that is used during the tests in combination with the EUT but is not subject of this test report. It is necessary to configure the system in a typical fashion, as a customer would normally use it. But nevertheless Auxiliary Equipment can influence the test results.

Device	Details (Manufacturer, Type Model, HW, SW, S/N)	Description
–	–	–

4.5 EUT SETUPS

This chapter describes the combination of EUTs and equipment used for testing. The rationale for selecting the EUTs, ancillary and auxiliary equipment and interconnecting cables, is to test a representative configuration meeting the requirements of the referenced standards.

Setup	Combination of EUTs	Description and Rationale
S05_AE02	ae02	setup for conducted tests

4.6 OPERATING MODES / TEST CHANNELS

This chapter describes the operating modes of the EUTs used for testing (grey shading = not used).

U-NII-Subband 1 5150 - 5250 MHz			U-NII-Subband 2A 5250 - 5350 MHz			U-NII-Subband 2C 5470 - 5725 MHz			U-NII 2 / 3	U-NII-Subband 3 5725 - 5850 MHz			U-NII 3 / 4
20 MHz BW													
low	mid	high	low	mid	high	low	mid	high	straddle	low	mid	high	straddle
36	40	48	52	60	64	100	116	140	144	149	157	165	169
5180	5200	5240	5260	5300	5320	5500	5580	5700	5720	5745	5785	5825	5845
40 MHz BW													
low	mid	high	low	mid	high	low	mid	high	straddle	low	mid	high	straddle
38	-	46	54	-	62	102	110	134	142	151	-	159	167
5190	-	5230	5270	-	5310	5510	5550	5670	5710	5755	-	5795	5835
80 MHz BW													
low	mid	high	low	mid	high	low	mid	high	straddle	low	mid	high	straddle
-	42	-	-	58	-	106	122	-	138	155	-	-	171
-	5210	-	-	5290	-	5530	5610	-	5690	5775	-	-	5855

4.7 PRODUCT LABELLING

Please refer to the documentation of the applicant.

5 TEST RESULTS

5.1 MAXIMUM CONDUCTED OUTPUT POWER

Standard **FCC Part 15 Subpart E**

The test was performed according to:

ANSI C63.10, chapter 12.3.3.2

5.1.1 TEST DESCRIPTION

The Equipment Under Test (EUT) was set up to perform the output power measurements. The results recorded were measured with the modulation which produces the worst-case (highest) output power

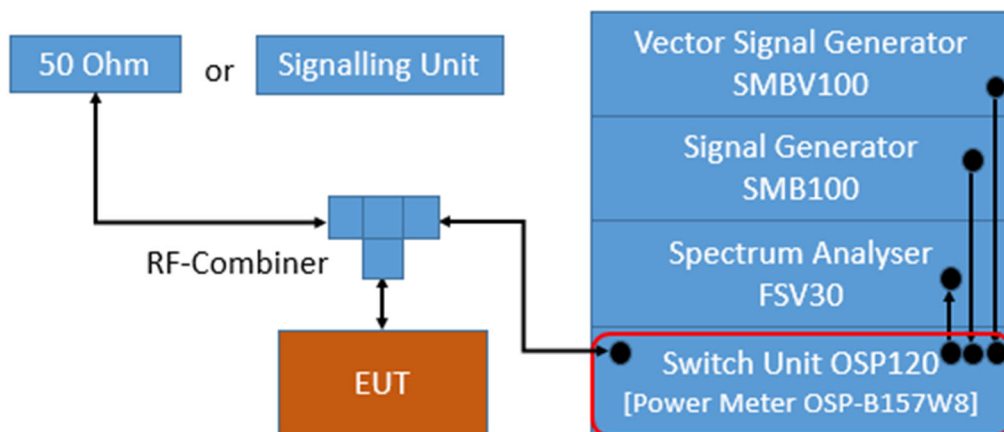
For U-NII bands 1, 2A, 2C, 3:

The EUT was connected to the test system as described in the block diagram below. The complete attenuation of the measurement path is known and considered.

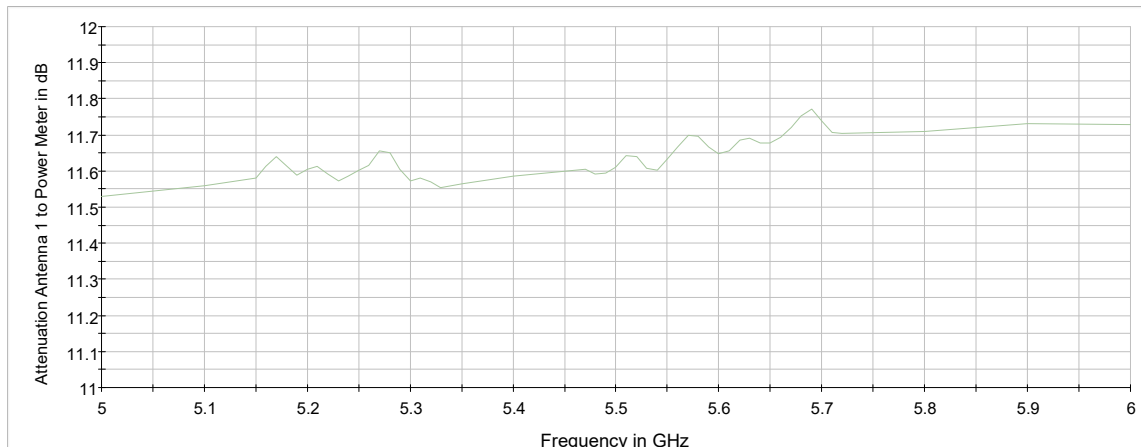
The OSP-B157W is a gated RF average power meter with a signal bandwidth > 300 MHz.

Note:

The measurement was performed according FCC Public Note "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E, 789033 D02", method **PM-G**.



TS8997; Maximum Conducted Output Power



Attenuation of measurement path

5.1.2 TEST REQUIREMENTS / LIMITS

FCC Part 15, Subpart E, §15.407 (a) (1) (i): Outdoor access point:

For systems using digital modulation techniques in the 5.15 – 5.25 GHz bands:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 6 dBi.

The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

§15.407 (a) (1) (ii): Indoor access point:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 6 dBi.

§15.407 (a) (1) (iii): Fixed point-to-point access points:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 23 dBi.

§15.407 (a) (1) (iv): Client devices:

Limit: 250 mW (24 dBm) provided the maximum antenna gain does not exceed 6 dBi.

FCC Part 15, Subpart E, §15.407 (a) (2)

For systems using digital modulation techniques in the 5.25 – 5.35 GHz and 5.47 – 5.725 GHz bands:

Limit: 250 mW (24 dBm) or $11 \text{ dBm} + 10 \log (26 \text{ dB bandwidth/MHz})$ whatever is the lesser.

FCC Part 15, Subpart E, §15.407 (a) (3):

For systems using digital modulation techniques in the 5.725 – 5.850 GHz bands:

Limit: 1 W (30 dBm) provided the maximum antenna gain does not exceed 6 dBi. The antenna gain limitation is not applicable for fixed point-to-point devices.

FCC Part 15, Subpart E, §15.407 (a) (4):

For a standard power access point and fixed client devices in the 5.925 – 6.425 GHz and 6.525 – 6.875 GHz bands:

Limit: 4 W (36 dBm) e.i.r.p.

For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

FCC Part 15, Subpart E, §15.407 (a) (5):

For an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 1 W (30 dBm) e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (6):

For a subordinate device operating under an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 1 W (30 dBm)e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (7):

For a client device, except for fixed client devices, operating under standard power access point in the 5.925-6.425 GHz and 6.525-6.875 GHz bands:

Limit: 1 W (30 dBm)e.i.r.p.

The client device must limit it's power to no more than 6 dB below its associated standard power access point's authorized transmit power.

FCC Part 15, Subpart E, §15.407 (a) (8):

For client devices operating under the control of an indoor access point in the 5.925 – 7.125 GHz bands:

Limit: 250 mW (24 dBm)e.i.r.p.

FCC Part 15, Subpart E, §15.407 (a) (11):

The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

5.1.3 TEST PROTOCOL

Ambient temperature:

23 °C

Air Pressure:

1002 hPa

Humidity:

46 %

WLAN a-Mode; 20 MHz; 6 Mbit/s

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	48	5240	11.9	19.7	22.2	10.3	30.0	10.3
2A	60	5300	11.7	19.5	22.1	10.4	27.0	7.5
2C	116	5580	13.5	21.3	22.1	8.6	27.0	5.7
3	165	5825	12.3	20.1	28.2	15.9	36.0	15.9

WLAN n-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	48	5240	11.9	19.7	22.2	10.3	30.0	10.3
2A	64	5320	11.6	19.4	22.2	10.6	27.0	7.6
2C	140	5700	12.6	20.4	22.2	9.6	27.0	6.6
3	165	5825	12.3	20.1	28.2	15.9	36.0	15.9

WLAN n-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	46	5230	9.3	17.1	22.2	12.9	30.0	12.9
2A	62	5310	8.5	16.3	22.2	13.7	27.0	10.7
2C	134	5670	9.6	17.4	22.2	12.6	27.0	9.6
3	151	5755	9.7	17.5	28.2	18.5	36.0	18.5

WLAN ac-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	48	5240	10.9	18.7	22.2	11.3	30.0	11.3
2A	52	5260	10.8	18.6	22.2	11.4	27.0	8.4
2C	140	5700	11.4	19.2	22.2	10.8	27.0	7.8
3	165	5825	11.2	19.0	28.2	17.0	36.0	17.0

WLAN ac-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	46	5230	9.3	17.1	22.2	12.9	30.0	12.9
2A	54	5270	9.0	16.8	22.2	13.2	27.0	10.2
2C	134	5670	9.5	17.3	22.2	12.7	27.0	9.7
3	151	5755	9.6	17.4	28.2	18.6	36.0	18.6

WLAN ac-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	42	5210	7.4	15.2	22.2	14.8	30.0	14.8
2A	58	5290	7.1	14.9	22.2	15.1	27.0	12.1
2C	122	5610	8.4	16.2	22.2	13.8	27.0	10.8
3	155	5775	7.6	15.4	28.2	20.6	36.0	20.6

WLAN ax-Mode; 20 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	48	5240	9.6	17.4	22.2	12.6	30.0	12.6
2A	52	5260	9.3	17.1	22.2	12.9	27.0	9.9
2C	100	5500	9.0	16.8	22.2	13.2	27.0	10.2
3	157	5785	9.8	17.6	28.2	18.4	36.0	18.4

WLAN ax-Mode; 40 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	46	5230	8.6	16.4	22.2	13.6	30.0	13.6
2A	62	5310	8.3	16.1	22.2	13.9	27.0	10.9
2C	134	5670	8.7	16.5	22.2	13.5	27.0	10.5
3	151	5755	8.9	16.7	28.2	19.3	36.0	19.3

WLAN ax-Mode; 80 MHz; MCS 0; SISO

U-NII-Subband	Ch. No.	TX Freq. [MHz]	Cond. Power [dBm]	EIRP [dBm]	FCC Cond. Limit [dBm]	Margin [dB]	FCC EIRP Limit [dBm]	Margin [dB]
1	42	5210	7.6	15.4	22.2	14.6	30.0	14.6
2A	58	5290	7.4	15.2	22.2	14.8	27.0	11.8
2C	122	5610	8.7	16.5	22.2	13.5	27.0	10.5
3	155	5775	7.6	15.4	28.2	20.6	36.0	20.6

Remark: The measurements are performed using a power meter, no plots are generated.

5.1.4 TEST EQUIPMENT USED

- R&S TS8997

6 TEST EQUIPMENT

6.1 TEST EQUIPMENT HARDWARE

- 1 R&S TS8997
2.4 and 5 GHz Bands Conducted Test Lab

Ref.No.	Device Name	Description	Manufacturer	Serial Number	Last Calibration	Calibration Due
1.1	Opus10 TPR (8253.00)	T/P Logger 13	Lufft Mess- und Regeltechnik GmbH	13936	2023-12	2025-12
1.2	EX520	Digital Multimeter 12	Extech Instruments Corp	05157876	2024-12	2026-12
1.3	Opus10 THI (8152.00N)	T/H Logger 01	Lufft Mess- und Regeltechnik GmbH	5809	2023-12	2025-12
1.4	Opus10 THI (8152.00)	T/H Logger 14	Lufft Mess- und Regeltechnik GmbH	13993	2023-12	2025-12
1.5	HMP2020	Programmable Power Supply	Rohde & Schwarz GmbH & Co. KG	101992	N/A	N/A
1.6	FSW26	Signal- & Spectrum-Analyzer	Rohde & Schwarz GmbH & Co. KG	104459	2025-06	2027-06
1.7	OSP120	Contains Power Meter and Switching Unit OSP-B157W8 PLUS	Rohde & Schwarz	101158	2024-08	2027-08
1.8	CS-RUB6	Rubidium Frequency Standard	Rohde & Schwarz GmbH & Co. KG	100451	2025-07	2027-07

The calibration interval is the time interval between "Last Calibration" and "Calibration Due"

6.2 TEST EQUIPMENT SOFTWARE

TS 8997
WMS32 Measurement Software Version 11.70.00 + Hotfix 01

7 MEASUREMENT UNCERTAINTIES

Test Case	Parameter	Uncertainty
Conducted Output Power	Power	± 2.2 dB

The measurement uncertainties for all parameters are calculated with an expansion factor (coverage factor) $k = 1.96$. This means, that the true value is in the corresponding interval with a probability of 95 %.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	on pass mark	within pass mark	Passed
4	above pass mark	within pass mark	Failed
5	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

8 PHOTO REPORT

Please see separate photo report.

9 ANNEX: SOFTWARE VERSION SAMPLE AE02

MSC-LDK LOL99_20240805_V1_14_0-7-gf066e6a built on Wed May 14 01:16:17 PM UTC 2025 by @docker
NXP i.MX Release Distro 6.6-scarthgap \n \l

LAYER meta-arm=mickledore-6.1.36-2.1.0-LOL99_20240731_V1_13_0-367-g58268ddc
LAYER meta-freescale-distro=mickledore-6.1.36-2.1.0-LOL99_20240731_V1_13_0-10-gb9d6a5d
LAYER meta-freescale=mickledore-6.1.36-2.1.0-LOL99_20240731_V1_13_0-383-gc4ef717d
LAYER meta-imx=e06f8574e9
LAYER meta-marvell-labtool=ed9c966-dirty
LAYER meta-msc-arm-extensions=LOL99_20240731_V1_13_0-20-g285d820
LAYER meta-msc-ldk-core=LOL99_20240805_V1_14_0-19-gd141a04
LAYER meta-msc-ldk-core-recipes=LOL99_20240805_V1_14_0-33-gc0a49ba
LAYER meta-msc-ldk-distro=68801c2
LAYER meta-msc-ldk-hwtests=LOL99_20240805_V1_14_0-8-gff226e5
LAYER meta-msc-ldk-hwtests-recipes=LOL99_20240805_V1_14_0-41-ge5d31f9
LAYER meta-msc-ldk-mscio=LOL99_20240805_V1_14_0-8-gaec2227
LAYER meta-openembedded=initial-29996-g4a7bb77f7
LAYER meta-qt5=mickledore-LOL99_20240731_V1_13_0-46-geb82841
LAYER meta-rat-wall2=4c81972
LAYER meta-secure-core-windriver=adbcd9
LAYER meta-spb611-sdio-uart=c09a44a
LAYER msc-ldk-bsp-recipes=2038944-dirty
LAYER yocto=4.3_M1-3727-g59c3a90cf4

*****END OF TEST REPORT*****