

TEST REPORT

Application No.: SZCR2407002518MO
Applicant: Rolling Wireless S.a r.l.
Address of Applicant: 8-10, rue Mathias Hardt 1717, Luxembourg
Manufacturer: Rolling Wireless S.a r.l.
Address of Manufacturer: 8-10, rue Mathias Hardt 1717, Luxembourg
Equipment Under Test (EUT):
EUT Name: LTE Module
Model No.: RW101R-GL
Trade Mark: Rolling Wireless
FCC ID: 2AX2URW101RGL
Standard(s) : FCC Part 96.47
 FCC KDB 940660 D01 Part 96 CBRS Eqpt v03
 WINNF-TS-0122-V1.0.2 CBRS CBSD Test Specification
 WINNF-18-IN-00178 CBRS End User Device as UUT Test Guidelines
Date of Receipt: 2024-07-01
Date of Test: 2024-07-15 to 2024-07-24
Date of Issue: 2024-07-24

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



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Shenzhen Branch EMC Laboratory

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SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/0 Aug01,2022

Report No.: SZCR240700251804

Page: 2 of 12

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2024-07-24		Original

Authorized for issue by:				
		Donjon Huang		
		Donjon Huang/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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Shenzhen Branch Inspection & Testing Laboratory

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2 Test Summary

Item	Standard	Test Case ID	Result
End User Device additional requirement	96.47	/	Pass

The UUT is an End User Device. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC Part 96.47

FCC KDB 940660 D01 Part 96 CBRS Eqpt v03

WINNF-TS-0122-V1.0.2 CBRS CBSD Test Specification

WINNF-18-IN-00178 CBRS End User Device as UUT Test Guidelines



3 Contents

	Page
1 Cover Page	1
2 Test Summary	3
3 Contents	4
4 General Information	5
4.1 Details of E.U.T.	5
4.2 Measurement Uncertainty	5
4.3 Description of Support Units	5
4.4 Test Location	6
4.5 Test Facility	6
5 Equipment List	7
6 Test Method and Environment	8
6.1 End User Device Conformance and Performance	8
6.2 Test Environment	8
6.3 Test Requirement	8
6.4 Test Procedure	8
6.5 Test Setup	9
6.6 Test Result	10
7 Photographs	12
7.1 EUT Constructional Details (EUT Photos)	12



4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.3V
Sample Type:	Module
CBSD Class:	End User device
Hardware Version:	V1.4
Software Version:	19512.9000.00.11.02.02
Transmitter Frequency Band:	LTE: Band 48
Transmitter Frequency Range:	3550~3700MHz
Antenna Gain:	1.0 dBi (Provided by manufacturer)
Antenna Type:	☒ External, ☐ Integrated

4.2 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 7.25 \times 10^{-8}$
2	RF conducted power	$\pm 0.75\text{dB}$
3	Temperature test	$\pm 1^{\circ}\text{C}$
4	Humidity test	$\pm 3\%$
5	Supply voltages	$\pm 1.5\%$
6	Time	$\pm 3\%$

Remark:

The Ulab (lab Uncertainty) is less than Ucispr/ETSI (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
DP	Lanner Electronics Inc.	LICA-1513A	/
EPC	Lanner Electronics Inc.	LICA-1513A	LR202002004052
Router	TP-LINK	TL-R860+	1175379002425
LTE Base Station	Baicells	mBS31010 (FCC ID: 2AG32MBS31010)	120300010220B6B0002



4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.



5 Equipment List

Test Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Laptop (With SAS Test harness)	Lenovo	T14	/	/	/
Spectrum Analyzer	Keysight	N9020B	SEM004-9	2024-03-27	2025-03-26
Shield Room	SAEMC	MSR433	SEM001-11	2024-03-13	2027-03-12
Coaxial Cable	SGS	N/A	SEM031-01	2024-07-11	2025-07-10
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Splitter	MACOM	2090-6214-00	N/A	N/A	N/A
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2023-07-28	2024-07-27



6 Test Method and Environment

6.1 End User Device Conformance and Performance

Test Requirement: FCC Part 96.47

Test Method: WINNF-18-IN-00178 CBRS End User Device as UUT Test Guidelines

6.2 Test Environment

Environmental Conditions: 25deg. C, 65%RH

6.3 Test Requirement

FCC Part 96.47

- a). End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.
- b). An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

6.4 Test Procedure

For NR:

Following procedure can be done by applying WINNF-TS-0122-V1.0.2 CBRS CBSD Test Specification, use the certified Base station CBSD (FCC ID: 2AG32MBS31010) as companion device to show compliance with Part 96.47 requirement for End User Device (EUD):

1. Setup with frequency 3590-3610MHz and power level 18dBm/MHz;
2. Enable CBSD service ;
3. Check EUD Tx Frequency and power;
4. Disable CBSD service ;
5. Check EUD stops transmission within 10seconds;
6. Setup with frequency 3610-3630MHz and power level 10dBm/MHz;
7. Enable CBSD service;
8. Check EUD Tx Frequency and power;
9. Disable CBSD service;
10. Check EUD stops transmission within 10seconds.



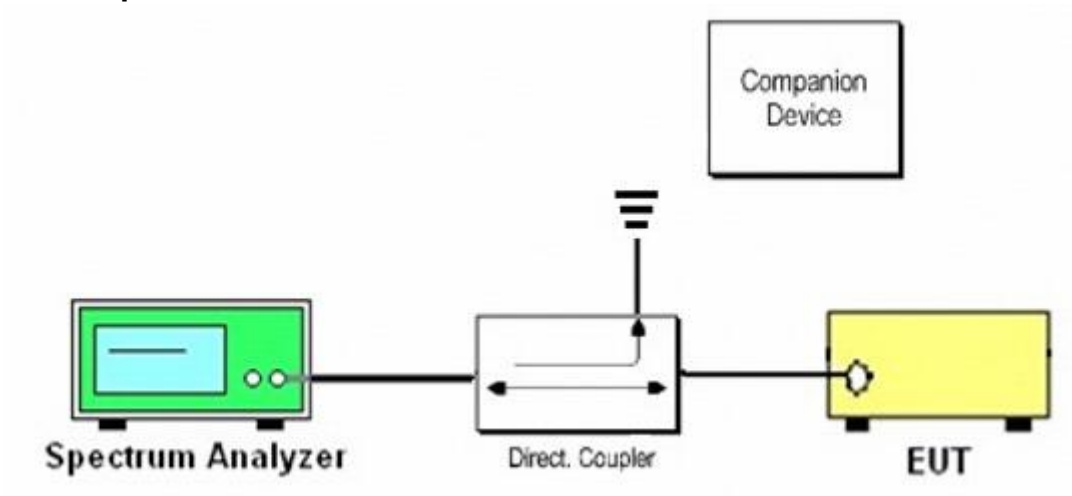
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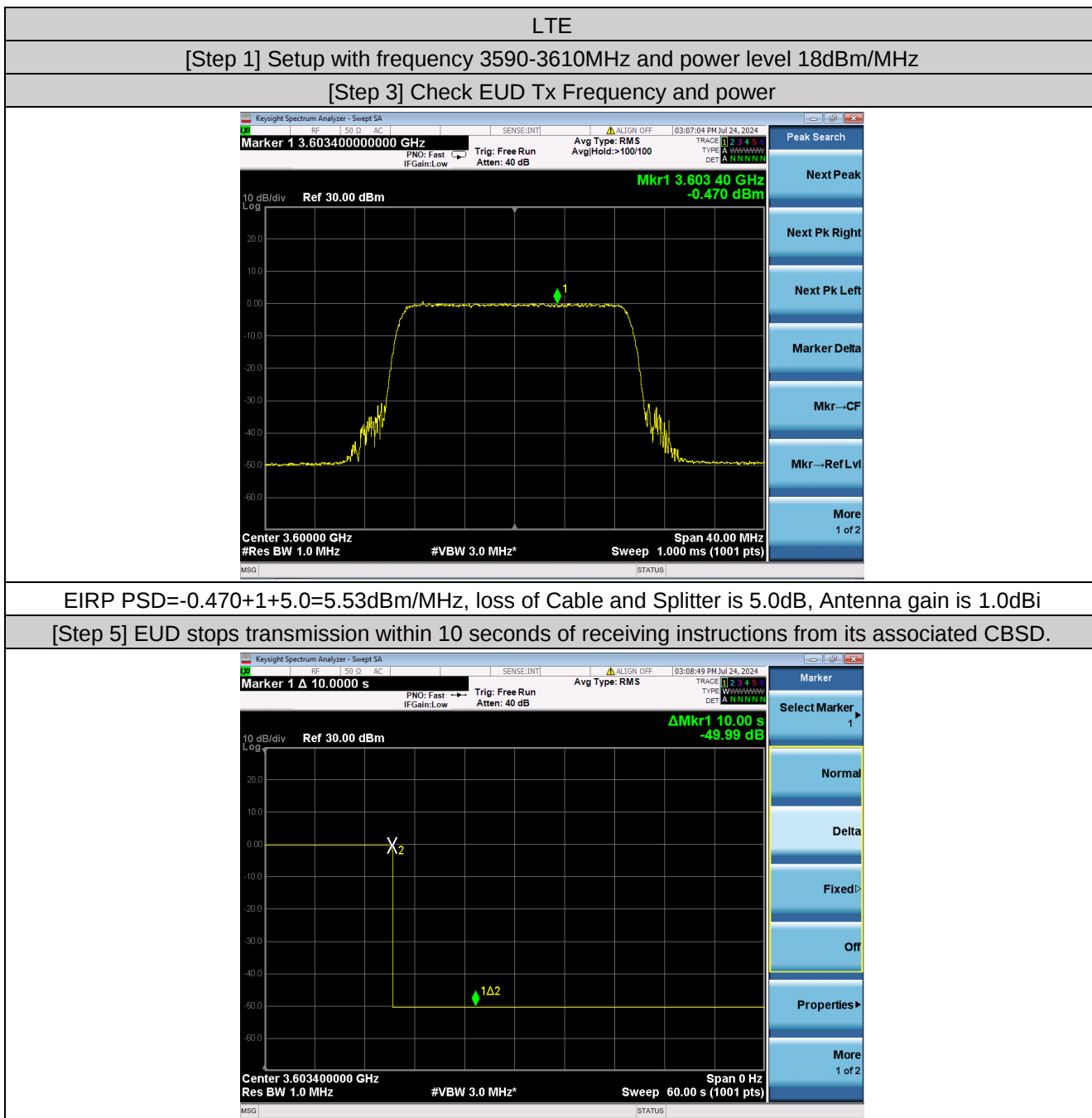
6.5 Test Setup



End User Device as UUT, the companion device is certified CBSD

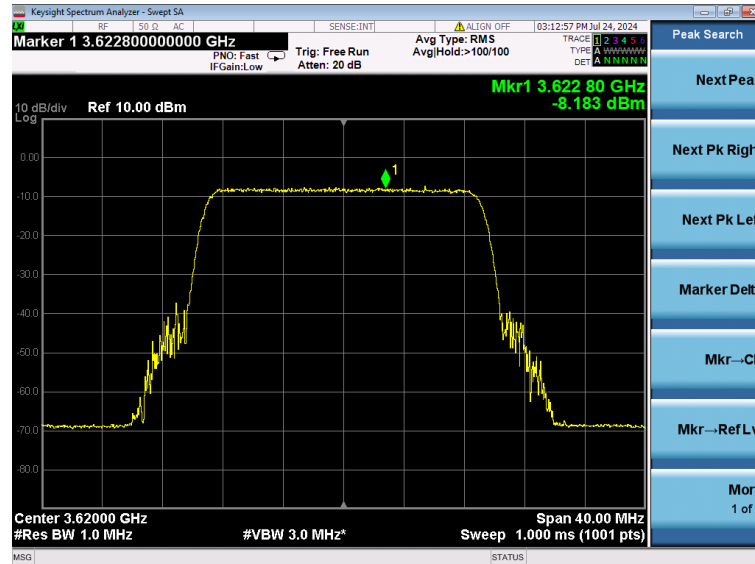


6.6 Test Result



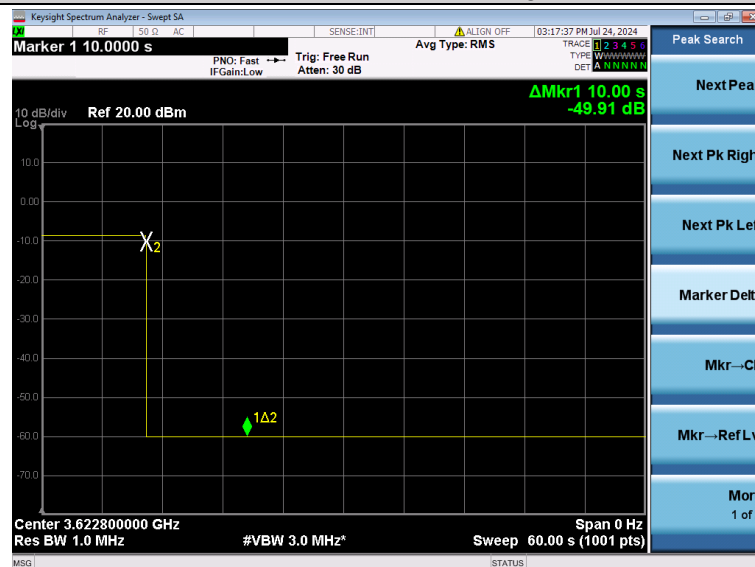
[Step 6] Setup with frequency 3610-3630MHz and power level 10dBm/MHz

[Step 8] Check EUD Tx Frequency and power



EIRP PSD=-8.183+1+5.0=-2.183dBm/MHz, loss of Cable and Splitter is 5.0dB, Antenna gain is 1.0dBi

[Step 10] EUD stops transmission within 10 seconds of receiving instructions from its associated CBSD.



7 Photographs

7.1 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -

