



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

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

Report No.: SZCR250100008509

Page: 1 of 16

# TEST REPORT

**Application No.:** SZCR2501000085WM  
**Applicant:** TCL Communication Ltd.  
**Address of Applicant:** 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
**Manufacturer:** TCL Communication Ltd.  
**Address of Manufacturer:** 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
**Factory:** Huizhou TCL Mobile Communication Co., Ltd.  
**Address of Factory:** No.86, Hechang 7th West Road, Zhong Kai Hi-tech Development District, Huizhou, Guangdong China 516006

### Equipment Under Test (EUT):

**EUT Name:** Smartphone

**Model No.:** T519N, T521N

Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

**FCC ID:** 2ACCJH190

**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:** 2025-01-07

**Date of Test:** 2025-01-09 to 2025-02-08

**Date of Issue:** 2025-02-10

**Test Result:**

**Pass\***

\* 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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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025-02-10		Original

Authorized for issue by:				
		Calvin Weng		
		Calvin Weng/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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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



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## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	DC3.91V by li-ion battery(5000mAh) Battery M/N:TLp050C7 Battery Manufacturer: Dongguan Veken Battery Co.,Ltd. Recharge input:DC5V/2A by power adapter for T519N Adapter M/N:UC13US Adapter Input:AC100-240V, 50/60Hz, 0.5A Adapter Manufacturer 1:HUIZHOU JUWEI ELECTRONICS CO.,LTD. Adapter Manufacturer 2:HUIZHOU PUAN ELECTRONICS CO.,LTD. Recharge input:DC5V/3A,9V/2A,12V/1.5A by power adapter for T521N Adapter M/N:QC13US Adapter Input:AC100-240V, 50/60Hz, 0.5A Adapter Manufacturer 1:HUIZHOU JUWEI ELECTRONICS CO.,LTD. Adapter Manufacturer 2:HUIZHOU PUAN ELECTRONICS CO.,LTD.
Sample Type:	Portable
CBSD Class:	End User device
Hardware Version:	06
Software Version:	5JS8
Transmitter Frequency Band:	LTE: Band 48 5G NR: n48/n78
Transmitter Frequency Range:	3550~3700MHz
Antenna Gain:	-1.1dBi (Provided by manufacturer)
Antenna Type:	PIFA Antenna

### 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	$\pm 3\%$





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### 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
5G NR Base station	Baicells	BSC7048A243 (FCC ID: 2AG32BSC7048A243)	1202000577233VB0002



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Shenzhen Branch Technical Services Laboratory

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### 4.4 Test Location

All tests were performed at:

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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.



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## 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	SEM004-24	2024-03-20	2025-03-19
Shield Room	SAEMC	MSR433	SEM001-11	2024-03-13	2027-03-12
Coaxial Cable	SGS	N/A	SEM031-01	2024-07-06	2025-07-05
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	2024-07-27	2025-07-26





## 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: 24deg. C, 55%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 LTE:

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 5dBm/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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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: 2AG32BSC7048A243) 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 5dBm/MHz;
7. Enable CBSD service;
8. Check EUD Tx Frequency and power;
9. Disable CBSD service;
10. Check EUD stops transmission within 10seconds.



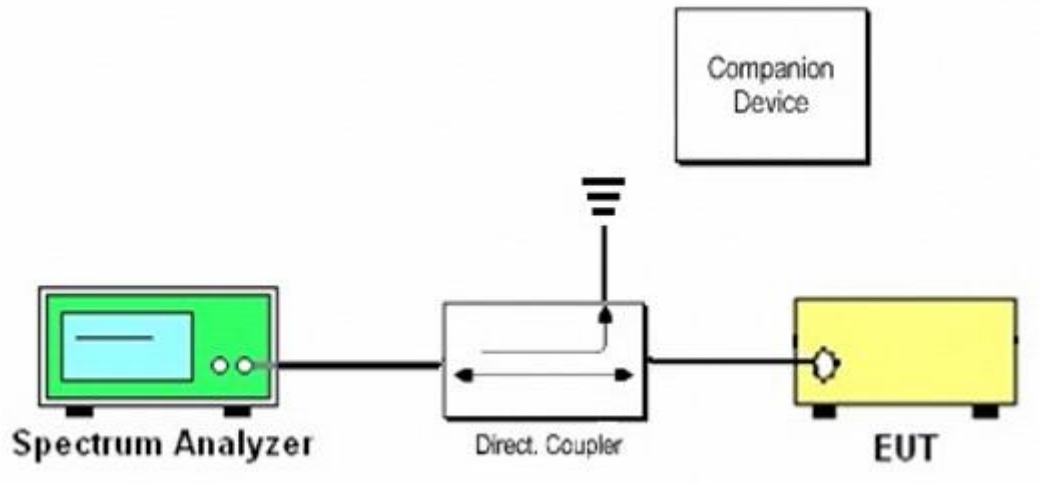
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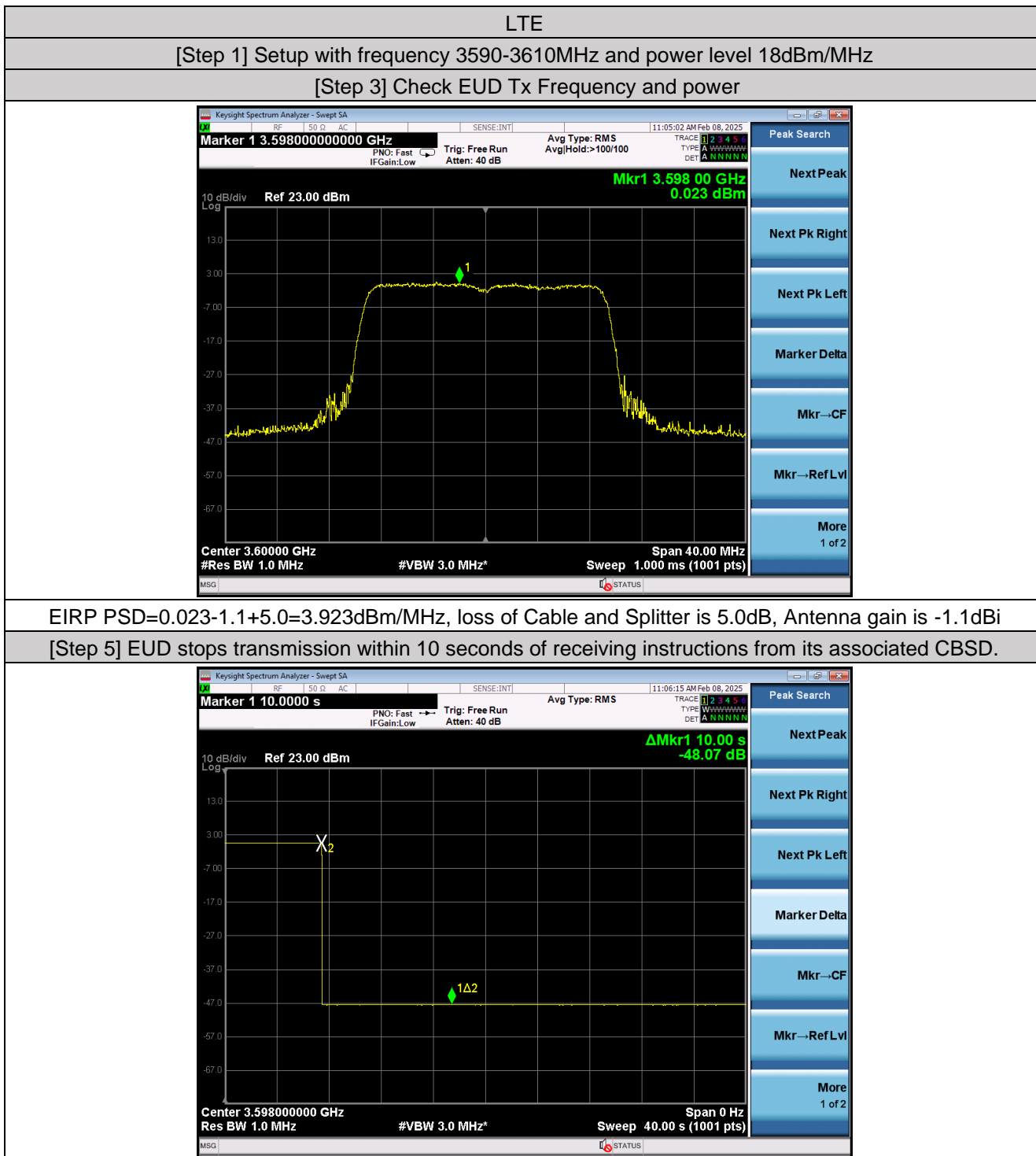
### 6.5 Test Setup



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



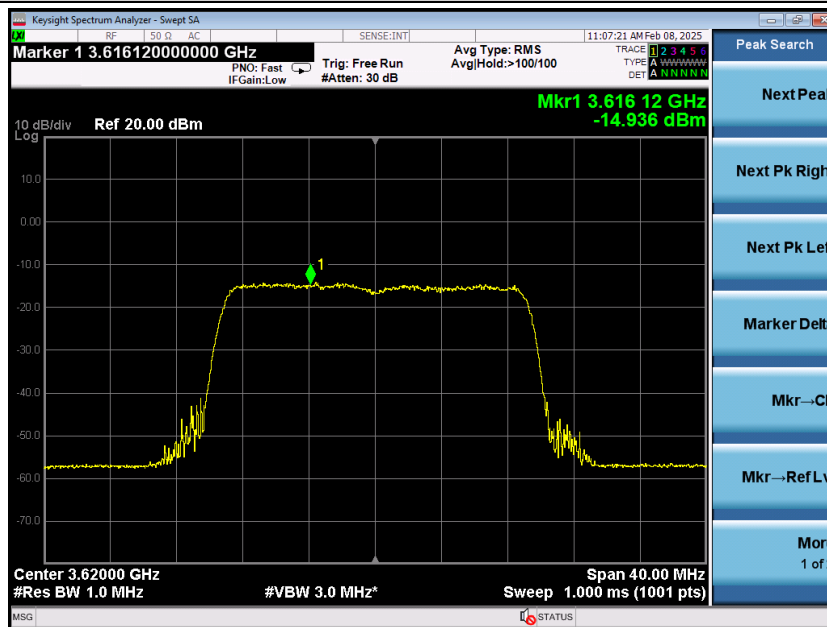
### 6.6 Test Result





[Step 6] Setup with frequency 3610-3630MHz and power level 5dBm/MHz

[Step 8] Check EUD Tx Frequency and power



EIRP PSD=-14.936-1.1+5.0=-11.036dBm/MHz, loss of Cable and Splitter is 5.0dB, Antenna gain is -1.1dBi

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

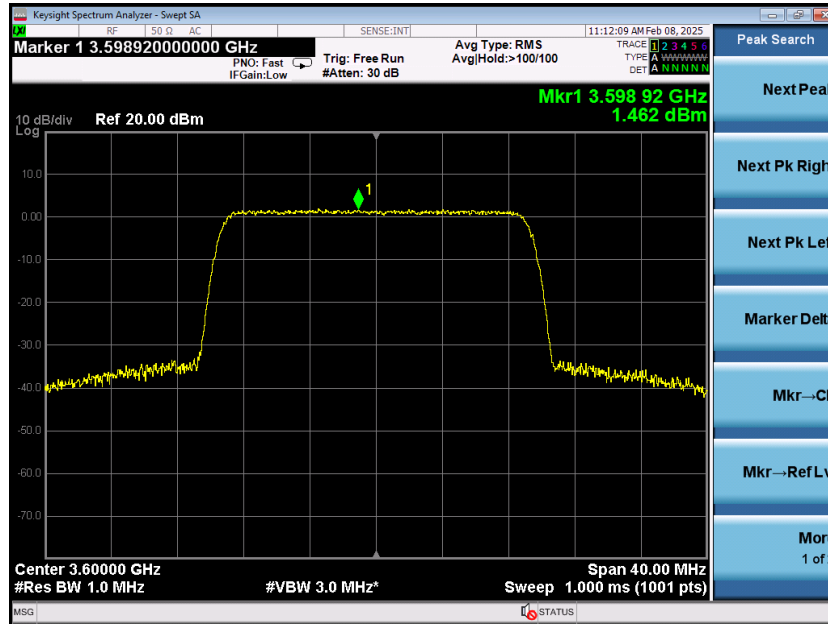




NR

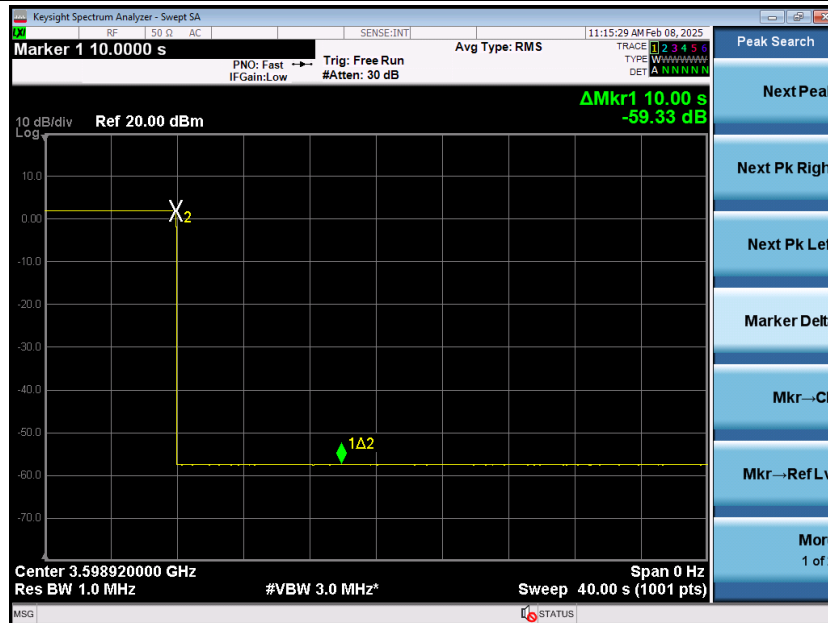
[Step 1] Setup with frequency 3590-3610MHz and power level 18dBm/MHz

[Step 3] Check EUD Tx Frequency and power



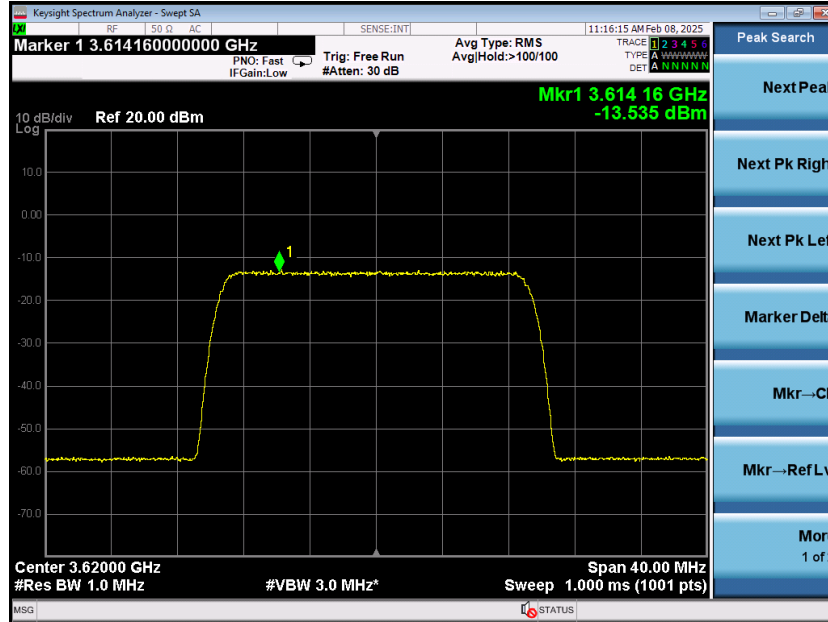
EIRP PSD=1.462-1.1+5.0=5.362dBm/MHz, loss of Cable and Splitter is 5.0dB, Antenna gain is -1.1dBi

[Step 5] EUD stops transmission within 10 seconds of receiving instructions from its associated CBSD.



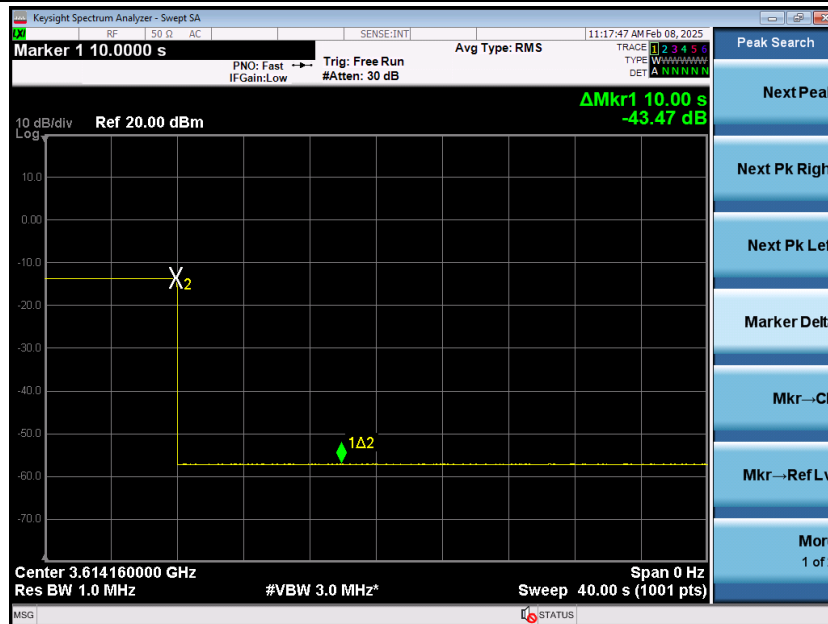
[Step 6] Setup with frequency 3610-3630MHz and power level 5dBm/MHz

[Step 8] Check EUD Tx Frequency and power



EIRP PSD=-13.535-1.1+5.0=-9.635dBm/MHz, loss of Cable and Splitter is 5.0dB, Antenna gain is -1.1dBi

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



## 7 Photographs

### 7.1 Test Setup Photo

Refer to Appendix – WWAN Test Setup Photo for SZCR2501000085WM

### 7.2 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -

