# **TEST REPORT**

Product Name: Elara RTU

FCC ID: 2A7MV-100-EIARA

Trademark: Galooli LTD

Model Number: 100-Elara001BB-2022-GLOBAL

Prepared For: Galooli LTD

Address: 52 Menachem begin street, Tel Aviv, Israel

Manufacturer: Galooli LTD

Address: 52 Menachem begin street, Tel Aviv, Israel
Prepared By: Shenzhen CTB Testing Technology Co., Ltd.

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Sample Received Date: May. 18, 2022

Sample tested Date: May. 18, 2022 to Jun. 20, 2022

Issue Date: Jun. 20, 2022

Report No.: CTB220620004RFX
Test Standards FCC Part 22H & 24E

Test Results PASS

**Arron Liu** 

Remark: This is GSM WCDMA radio test report.

Compiled by: Reviewed by: Approved by:

Arron Itu Bin Mei

Bin Mei Rita Xiao / Director

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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(Note: N/A means not applicable) CFB

CIB

# CTB CTB 1. VERSION

Report No.	Issue Date	Description	Approved
CTB220620004RFX	Jun. 20, 2022	Original	Valid

# 2. TEST SUMMARY

The Product has been tested according to the following specifications:

FCC Rules	Description of Test Item	Result
§1.1307,§2.1091	RF Exposure	Compliant
§22.913 (a), §24.232 (c)	RF Output Power	Compliant
§24.51	Peak-to-average Ratio(PAR) of Transmitter	Compliant
§22.917 (b), §24.238 (b)	Emission Bandwidth	Compliant
§22.917 (a), §24.238 (a)	Spurious Emissions at Antenna Terminal	Compliant
§22.917 (a), §24.238 (a)	Spurious Radiation Emissions	Compliant
§22.917 (a), §24.238 (a)	Out of Band Emissions	Compliant
§22.355, §24.235	Frequency Stability	Compliant

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# 3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Item	Uncertainty
Occupancy bandwidth	54.3kHz
Conducted output power Above 1G	0.9dB
Conducted output power below 1G	0.9dB
Power Spectral Density , Conduction	0.9dB
Conduction spurious emissions	2.0dB
Out of band emission	2.0dB
3m camber Radiated spurious emission(30MHz-1GHz)	4.6dB
3m chamber Radiated spurious emission(1GHz-18GHz)	5.1dB
3m chamber Radiated spurious emission(18GHz-40GHz)	3.4dB
Receiver Reference Sensitivity level	1.9dB
humidity uncertainty	5.5%
Temperature uncertainty	0.63°C
frequency	1×10-7

# 4. PRODUCT INFORMATION AND TEST SETUP

## 4.1 Product Information

Model(s): 100-Elara001BB-2022-GLOBAL

Model Description: N/A
Hardware Version: V1.0
Software Version: V1.0

Operation Frequency: GPRS/EDGE 850: 824~849MHz

GPRS/EDGE 1900: 1850~1910MHz WCDMA Band 2: 1850~1910MHz WCDMA Band 4: 1850~1910MHz WCDMA Band 5: 824~849MHz

Type of Modulation: GMSK, BPSK

Antenna installation: Internal antenna
Antenna Gain: GSM850: 2.29dBi,

GSM1900: 1.59dBi

WCDMA Band 2: 1.59 dBi WCDMA Band 4: 2.0 dBi WCDMA Band 5: 2.29 dBi

Ratings: DC 12V from battery

# 4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

## 4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1.	AC adapter	SHENZHEN ENGINE ELECTRONIC CO.,LTD	EE-0501000E	N/A	AE

#### Notes:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

# 4.4 Channel List

Testing Configur	е		
Support Band	Support Standard	Channel Frequency	Channel Number
in the than	cha cha cha cha c	824.2 MHz	128
GSM 850	GPRS/EDGE	836.6 MHz	190
6 6	cr cr cr cr	848.8 MHz	251
P AP AP	20 20 20 20 A	1850.2 MHz	512
PCS 1900	GPRS/EDGE	1880.0 MHz	661
A CAN CAN	STAN STAN STAN STAN STAN STAN STAN STAN	1909.8 MHz	810
P P P	A A A A	826.4 MHz	4132
WCDMA Band 5	WCDMA/HSDPA/HSUPA	836.6 MHz	4183
Build	A 4 A 6 A 6 A	846.6 MHz	4233
		1712.4MHz	1312
WCDMA Band 4	WCDMA/HSDPA/HSUPA	1732.6MHz	1413
\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	.0 .0 .0 .0	1752.6MHz	1513
C C	cr cr cr cr	1852.4MHz	9262
WCDMA Band 2	WCDMA/HSDPA/HSUPA	1880.0MHz	9400
Dana 2		1907.6MHz	9538

Note: the transmitter has been tested on the communications mode of GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA compliance test and record the worst case.

# 4.5 Test Mode

Test Mo	de List	
Test Mode	Description	Remark
TM1	GSM 850	Low, Middle, High Channels
TM2	GPRS 850	Low, Middle, High Channels
TM3	EDGE 850	Low, Middle, High Channels
TM4	GSM 1900	Low, Middle, High Channels
TM5	GPRS 1900	Low, Middle, High Channels
TM6	EDGE 1900	Low, Middle, High Channels
TM7	WCDMA Band 5	Low, Middle, High Channels
TM8	HSDPA Band 5	Low, Middle, High Channels
TM9	HSUPA Band 5	Low, Middle, High Channels

TM10	WCDMA Band 4	Low, Middle, High Channels
TM11	HSDPA Band 4	Low, Middle, High Channels
TM12	HSUPA Band 4	Low, Middle, High Channels
TM13	WCDMA Band 2	Low, Middle, High Channels
TM14	HSDPA Band 2	Low, Middle, High Channels
TM15	HSUPA Band 2	Low, Middle, High Channels

# CTP CTP Critic Critic CIP C S TO 4.6 Test Environment

H	Humidity(%):							4 55 4 4 4 4				. 4		
At	mosph	eric P	ressur		):	6	3	101.1	3	6	6	6	67	3
0 V		A V	e(DC):	A V	4	- 4	- 5	12.0V 25						- 59
	ormal Temperature(°C)  ow Temperature(°C)					0	0	6	6	0.4	6	6	0	
	- <u>^</u>	<u> </u>	ture(°C		C	CAY	C.	40	C	CAY	C	C	CAY	CFY
P	C. C. D.	150	15.0	17.70	150	150	55	150	150	4	55	15	4	15

# 5. TEST FACILITY AND TEST INSTRUMENT USED

# 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Floor 1&2, Building A, No. 26 of Xinhe Road, Xinqiao Street, Baoan District, Shenzhen China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

# 5.2 Test Instrument Used

No	Equipment	Manufactur er	Model No.	Serial No.	Calibrated date	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY5209007 3	2021.09.27	2022.08.05
2	Power Sensor	Agilent	U2021XA	MY56120032	2021.09.27	2022.08.05
3	Power Sensor	Agilent	U2021XA	MY56120034	2021.09.27	2022.08.05
4	Communicati on test set	R&S	CMW500	108058	2021.09.27	2022.08.05
5	Spectrum Analyzer	R&S	FSP40	100550	2021.09.27	2022.08.05
6	Signal Generator	Agilent	N5181A	MY4906092 0	2021.09.27	2022.08.16
7	Signal Generator	Agilent	N5182A	MY4742019 5	2021.09.27	2022.08.05
8	Communicati on test set	Agilent	E5515C	MY5010256 7	2021.09.27	2022.08.16
9	band rejection filter	Shenxiang	MSF2400-2483.5MS-11 54	2018101500	2021.09.27	2022.08.05
10	band rejection filter	Shenxiang	MSF5150-5850MS-115 5	2018101500	2021.09.27	2022.08.05
11	band rejection filter	Xingbo	XBLBQ-DZA120	190821-1-1	2021.09.27	2022.08.05
12	BT&WI-FI Automatic test software	Micowave	MTS8310	Ver. 2.0.0.0	2021.09.27	2022.08.05
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU SFU	101017	2021.09.27	2022.08.05
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	2021.09.27	2022.08.05
15	234G Automatic test software	Micowave	MTS8200	Ver. 2.0.0.0	2021.09.27	2022.08.05

16	966 chamber	C.R.T.	966 Room	966	2021.09.27	2024.08.11
17	Receiver	R&S	ESPI	100362	2021.09.27	2022.08.05
18	Amplifier	HP	8447E	2945A02747	2021.09.27	2022.08.05
19	Amplifier	Agilent	8449B	3008A01838	2021.09.27	2022.08.05
20	TRILOG Broadband Antenna	Schwarzbe ck	VULB 9163	869	2021.09.27	2022.08.07
21	Horn Antenna	Schwarzbe ck	BBHA9120D	1911	2021.09.27	2022.08.08
22	Software	Fala	EZ-EMC	FA-03A2 RE	2021.09.27	2022.08.05
23	3-Loop Antenna	Daze	ZN30401	17014	2021.09.27	2022.08.05
24	loop antenna	ZHINAN	ZN30900A	or or o	2021.09.27	2022.08.05
25	Horn antenna	A/H/System	SAS-574	588	2021.09.27	2022.08.05
26	Amplifier	AEROFLEX	0 0, 0	S/N/ 097	2021.09.27	2022.08.05

## 6. RF OUTPUT POWER

### 6.1 Standard Applicable

According to §22.913(a)(2), The ERP of mobileand portable stations transmitters and auxiliary test transmitters must not exceed 7 Watts.

According to §24.232 (c), Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

#### 6.2 Test Procedure

Conducted output power test method:



Radiated power test method:

- 1.The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
- 2.The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
- 3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
- 4.Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

## 6.3 Environmental Conditions

Temperature:	24 °C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

## 6.4 Summary of Test Results/Plots

Please refer to FCC-ID: XMR201906EG21G

Test result: Pass

## 7. PEAK-TO-AVERAGE RATIO(PAR) OF TRANSMITTER

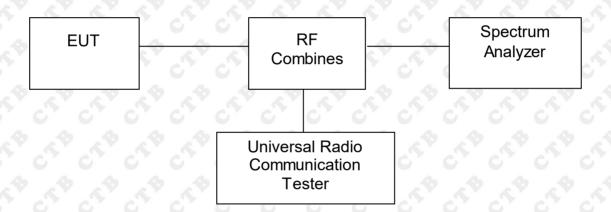
#### 7.1 Standard Applicable

According to §24.232(d), Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

#### 7.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 30kHz and the peak-to-average ratio (PAR) of the transmission was recorded. Record the maximum PAPR level associated with a probability of 0.1%.

Test Configuration for the emission bandwidth testing:



#### 7.3 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

# 7.4 Summary of Test Results

Please refer to FCC-ID: XMR201906EG21G

Test result: Pass

#### 8. EMISSION BANDWIDTH

## 8.1 Standard Applicable

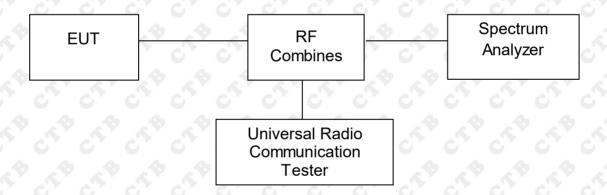
According to §22.917(b), The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

According to §24.238(b), The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

#### 8.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 10kHz for GSM mode and 100kHz for WCDMA mode, VBW shall be at least 3 times the RBW, and the 26dB bandwidth was recorded.

Test Configuration for the emission bandwidth testing:



#### 8.3 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54%
ATM Pressure:	1011 mbar



# 8.4 Summary of Test Results/Plots

Please refer to FCC-ID: XMR201906EG21G

Test result: Pass

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#### 9. OUT OF BAND EMISSIONS AT ANTENNA TERMINAL

## 9.1 Standard Applicable

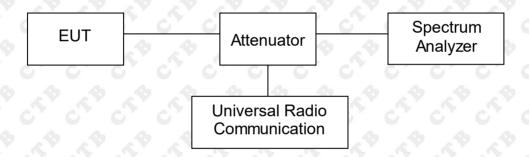
According to §22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

#### 9.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 100kHz and 1MHz for the scan frequency from 30MHz to 1GHz and the scan frequency from 1GHz to up to 10<sup>th</sup> harmonic.

Test Configuration for the out of band emissions testing:



#### 9.3 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

# 9.4 Summary of Test Results/Plots

Please refer to FCC-ID: XMR201906EG21G

Test result: Pass

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#### 10. SPURIOUS RADIATED EMISSIONS

#### 10.1 Standard Applicable

According to  $\S 22.917(a)$ , the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P) \, dB$ .

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

#### 10.2 Test Procedure

- 1.The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
- 2.The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
- 3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
- 4.Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious attenuation limit in dB =43+10 Log<sub>10</sub> (power out in Watts)

#### 10.3 Environmental Conditions

Temperature:	26 °C
Relative Humidity:	54%
ATM Pressure:	101 kPa
Test Voltage	DC6.4V

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## 10.4 Summary of Test Results/Plots

According to the data below, the <u>FCC Part22.917 and 24.238</u> standards, and had the worst margin of:

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

All test modes are performed, but only the worst case is recorded in this report.

For Cellular Band GSM850 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V
1 KY KY	N KY KY	Low Ch	nannel (824.2	2MHz)	NA VA	1 6 M
44.98	-70.52	3.9	-66.62	9 -139	-53.62	C'HC
1641.33	-52.62	4.83	-47.79	-13	-34.79	- 49
2467.14	-57.36	8.08	-49.28	-13	-36.28	C H
43.40	-66.01	4.02	-61.99	-13	-48.99	V
1638.56	-55.84	4.48	-51.36	-13	-38.36	V
2463.09	-52.84	8.2	-44.64	-13	-31.64	0.00
7 P 7	7 79 79	Middle C	Channel (836	.6MHz)	7 4 4	200
37.61	-71.82	3.84	-67.98	C -13	-54.98	C'HC
1670.14	-56.45	4.62	-51.83	-13	-38.83	A H
2504.40	-50.67	8.25	-42.42	<b>-13</b>	-29.42	C H C
39.71	-72.65	4.25	-68.40	-13	-55.40	V
1663.34	-56.31	4.54	-51.77	-13	-38.77	V
2506.74	-56.05	8.35	-47.70	-13	-29.75	V
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 4 4 K	High Cl	hannel (848.	8MHz)	1 KA KA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
43.33	-69.01	4.22	-73.23	9 -139	-60.23	C H C
1690.50	-50.96	4.87	-55.83	-13	-42.83	. #
2544.39	-50.06	8.38	-58.44	-13	-45.44	H C
39.87	-75.22	4.02	-79.24	-13	-66.24	V
1695.67	-49.69	4.56	-54.25	-13	-41.25	V
2544.84	-52.82	8.41	-61.23	-13	-48.23	0 10

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## For PCS Band GSM1900 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V
4. 4	77. 77	Low Ch	annel (1850.	2MHz)	4. 4.	20, 00
44.19	-74.17	4.34	-69.83	-13	-56.83	Н
3697.43	-52.76	10.54	-42.22	-13	-29.22	H
5548.26	-55.69	13.37	-42.32	9 -139	-29.32	O H O
42.93	-65.20	4.34	-60.86	-13	-47.86	V
3692.66	-54.70	10.54	-44.16	-13	-31.16	V
5548.14	-57.33	13.37	-43.96	-13	-30.96	V
4, 4,	4, 4	Middle (	Channel (188	30MHz)	4,4	1
43.00	-67.42	4.02	-63.40	-13	-50.40	HO
3750.83	-51.02	10.71	-40.31	-13	-27.31	H
5633.15	-53.44	13.73	-39.71	-13	-26.71	C H C
38.58	-67.89	4.14	-63.75	-13	-50.75	V
3757.32	-58.49	10.22	-48.27	-13	-35.27	V
5639.68	-57.35	13.16	-44.19	-13	-31.19	V
6 6	67 6	High Ch	annel (1909	.8MHz)	CA CA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
39.85	-69.29	4.02	-65.27	9 -139	-52.27	CHO
3813.83	-57.82	4.9	-52.92	-13	-39.92	H
5726.72	-44.78	8.09	-36.69	-13	-23.69	O'H C
41.55	-57.84	4.25	-53.59	-13	-40.59	V
3812.79	-60.14	4.93	-55.21	-13	-42.21	V
5728.81	-59.41	8.43	-50.98	-13	-37.98	V

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## For Band 5 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar
(MHz) (dBm	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V
1	10.00	Low Ch	nannel (826.4	4MHz)	4. 4.	25
41.90	-72.04	3.91	-68.13	-13	-55.13	Н
1650.70	-51.75	10.56	-41.19	-13	-28.19	H
2469.37	-52.81	13.5	-39.31	9 -139	-26.31	O'H C
40.52	-74.63	3.93	-70.70	-13	-57.70	V
1646.86	-55.60	10.41	-45.19	-13	-32.19	V
2472.96	-60.85	13.16	-47.69	-13	-34.69	V
4	4	Middle C	Channel (836	.6MHz)	4,4,4	4
44.36	-71.87	4.02	-67.85	-13	-54.85	O He
1665.61	-58.85	4.66	-54.19	-13	-41.19	H
2499.53	-40.73	8.34	-32.39	-13	-19.39	C H C
42.67	-56.56	4.17	-52.39	-13	-39.39	V
1666.08	-54.82	4.94	-49.88	-13	-36.88	V
2506.86	-63.45	8.19	-55.26	-13	-42.26	V
1 K 1 K	1 6 8 C	High C	hannel (846.	6MHz)	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	C.A.
42.67	-67.91	3.87	-64.04	9 -13	-51.04	O H C
1684.21	-55.62	4.89	-50.73	-13	-37.73	) AH
2531.18	-45.96	8.42	-37.54	-13	-24.54	CHC
39.25	-60.33	3.95	-56.38	-13	-43.38	V
1687.30	-59.85	4.99	-54.86	-13	-41.86	V
2533.28	-64.51	8.12	-56.39	-13	-43.39	V

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#### For Band 4 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V
4. 4	4.4	Low Ch	annel (1712.	4MHz)	4. 4.	22.
39.75	-71.75	3.91	-67.84	-13	-54.84	Н
1643.75	-50.43	10.56	-39.87	-13	-26.87	H A
2471.90	-60.94	13.5	-47.44	9 -139	-34.44	CHC
37.37	-69.41	3.93	-65.48	-13	-52.48	V
1644.33	-53.49	10.41	-43.08	-13	-30.08	V
2471.53	-62.07	13.16	-48.91	-13	-35.91	V
4 4	4 4	Middle C	hannel (1732	2.6MHz)	4	1
38.37	-74.55	4.02	-70.53	-13	-57.53	HO
1667.71	-57.68	4.66	-53.02	-13	-40.02	H
2507.98	-42.23	8.34	-33.89	C -13C	-20.89	CHC
42.11	-54.18	4.17	-50.01	-13	-37.01	V
1665.74	-55.44	4.94	-50.50	-13	-37.50	V
2502.50	-65.65	8.19	-57.46	-13	-44.46	V
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 6 6 V	High Ch	annel (1752	.6MHz)	7 KY KY	1 C 1
36.57	-72.47	3.87	-68.60	9 -139	-55.60	C H C
1688.54	-58.67	4.89	-53.78	-13	-40.78	AH H
2530.73	-44.17	8.42	-35.75	-13	-22.75	с Н с
45.84	-60.73	3.95	-56.78	-13	-43.78	V
1685.44	-56.52	4.99	-51.53	-13	-38.53	V
2532.61	-59.08	8.12	-50.96	-13	-37.96	V

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#### For Band 2 Mode

Frequency	Reading	Correct	Result	Limit	Margin	Polar
(MHz)	(dBm)	dB	(dBm)	(dBm)	(dB)	H/V
7. 7.	22. 22.	Low Ch	annel (1852.	4MHz)	22. 22.	25
44.33	-71.15	3.91	-67.24	-13	-54.24	Н
1649.97	-52.16	10.56	-41.60	-13	-28.60	C H
2478.18	-60.02	13.5	-46.52	9 -139	-33.52	CHC
37.70	-65.88	3.93	-61.95	-13	-48.95	V
1649.23	-52.37	10.41	-41.96	-13	-28.96	V
2473.39	-56.04	13.16	-42.88	-13	-29.88	V
4	4	Middle C	hannel (1880	0.0MHz)	4 4	S. V
43.11	-71.00	4.02	-66.98	-13	-53.98	O H C
1664.62	-61.78	4.66	-57.12	-13	-44.12	H
2504.96	-48.51	8.34	-40.17	-13	-27.17	CHC
42.81	-56.16	4.17	-51.99	-13	-38.99	V
1672.34	-58.71	4.94	-53.77	-13	-40.77	V
2503.38	-61.49	8.19	-53.30	-13	-40.30	V
K K	K K K	High Ch	nannel (1907)	.6MHz)	1 4 4 4 A	C.A.
38.33	-66.10	3.87	-62.23	9 -139	-49.23	C H C
1687.54	-60.01	4.89	-55.12	-13	-42.12	<b>H</b>
2532.99	-43.47	8.42	-35.05	-13	-22.05	CHC
44.85	-61.22	3.95	-57.27	-13	-44.27	V
1686.95	-56.17	4.99	-51.18	-13	-38.18	V
2533.29	-57.50	8.12	-49.38	-13	-36.38	V

Note: Result=Reading+ Correct, Margin= Result-Limit

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listedin the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

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#### 11. FREQUENCY STABILITY

#### 11.1 Standard Applicable

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Cellular Band

Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile ≤3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	N/A	N/A
929 to 960	0 1.5	N/A	O N/A
2110 to 2220	10.0	N/A	N/A

According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

According to §27.54 The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

#### 11.2 Test Procedure

According to §2.1055, the following test procedure was performed.

The Frequency Stability is measured directly with a Frequency Domain Analyzer. Frequency Deviation in ppm is calculated from the measured peak to peak value.

The Carrier Frequency Stability over Power Supply Voltage and over Temperature is measured with a Frequency Domain Analyzer in histogram mode

#### 11.3 Environmental Conditions

Temperature:	26°C
Relative Humidity:	54%
ATM Pressure:	101kPa

## 11.4 Summary of Test Results/Plots

Please refer to FCC-ID: XMR201906EG21G

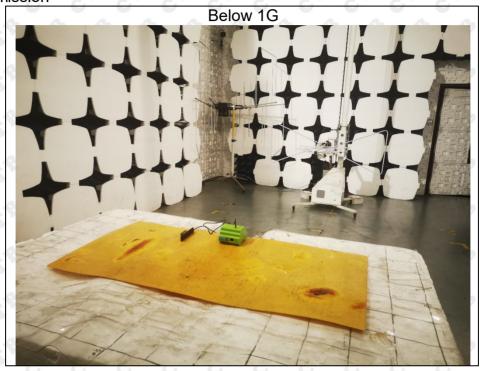
Test result: Pass

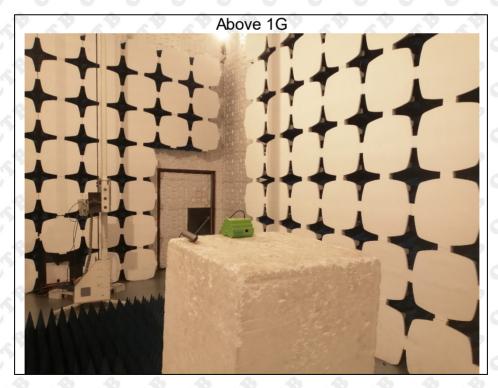
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# 12. EUT TEST PHOTO

#### Radiated Emission





\*\*\*\* END OF REPORT \*\*\*\*

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