



MEASUREMENT REPORT

FCC PART 2 & 22 & 24 & 27

FCC ID: ZMOFM101GL12

Applicant: Fibocom Wireless Inc.

Application Type: Certification

Product: LTE Module

Model No.: FM101-GL

Brand Name: Fibocom

FCC Rule Part(s): Part 2, 22 (H), 24 (E), 27

Test Procedure(s): ANSI C63.26: 2015

Test Date: March 29, 2022

Reviewed By: _____

Approved By: _____



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2202RSU033-U3	Rev. 01	Initial Report	03-29-2022	Invalid
2202RSU033-U3	Rev. 02	Added worst data of original report	03-30-2022	Valid

Note: This application for certification is leveraging the data reuse procedures from KDB 484596 based on reference FCC ID: ZMOFM101GL to cover variant FCC ID: ZMOFM101GL12.

CONTENTS

Description	Page
1. GENERAL INFORMATION.....	4
1.1. Applicant.....	4
1.2. Manufacturer.....	4
1.3. Testing Facility	4
2. PRODUCT INFORMATION	5
2.1. Product Information	5
2.2. Radio Specification under Test	6
2.3. Description of Available Antennas.....	7
2.4. Test Methodology.....	7
2.5. Device Capabilities	8
2.6. EMI Suppression Device(s)/Modifications	8
2.7. Configuration of Tested System	9
2.8. Test Environment Condition.....	9
3. TEST EQUIPMENT CALIBRATION DATE.....	10
4. MEASUREMENT UNCERTAINTY.....	11
5. TEST RESULT	12
5.1. Summary	12
5.2. Equivalent Isotropically Radiated Power Measurement	12
5.2.1. Test Limit.....	13
5.2.2. Test Procedure.....	13
5.2.3. Test Setting	13
5.2.4. Test Setup	14
5.2.5. Test Result	15
6. CONCLUSION	35
Appendix A - Test Setup Photograph	36
Appendix B - EUT Photograph	37

1. GENERAL INFORMATION

1.1. Applicant

Fibocom Wireless Inc.

1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

1.2. Manufacturer

Fibocom Wireless Inc.

1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

1.3. Testing Facility

☒	Test Site – MRT Suzhou Laboratory Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China Laboratory Accreditations A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
☐	Test Site – MRT Shenzhen Laboratory Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China Laboratory Accreditations A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	Test Site – MRT Taiwan Laboratory Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Laboratory Accreditations TAF: L3261-190725 FCC: 291082, TW3261 ISED: TW3261

2. PRODUCT INFORMATION

2.1. Product Information

Product Name	LTE Module
Model No.	FM101-GL
Brand Name	Fibocom
IMEI	Conducted Measurement: 861023050031798 Radiated Measurement: 861023050029685
Operating Temperature	-10 ~ 55 °C
Power Type	3.135 ~ 4.4Vdc, typical 3.3Vdc
Antenna Information	Refer to Section 2.3
UMTS Specification	
Single Band	Band 2, 4, 5
Modulation	Uplink up to 16QAM, Downlink up to 64QAM
E-UTRA Specification	
Single Band	Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 48, 66, 71
HPUE Band	Band 41
Intra-Band	CA_5B, CA_7C, CA_38C, CA_41C
Modulation	Uplink up to 16QAM, Downlink up to 64QAM

Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.

2.2. Radio Specification under Test

FDD T _x Frequency Range:	Band 2: 1850 ~ 1910 MHz; Band 4: 1710 ~ 1755 MHz Band 5: 824 ~ 849 MHz; Band 7: 2500 ~ 2570 MHz Band 12: 699 ~ 716 MHz; Band 13: 777 ~ 787 MHz Band 17: 704 ~ 716 MHz; Band 25: 1850 ~ 1915 MHz Band 26: 824 ~ 849 MHz; Band 66: 1710 ~ 1780 MHz Band 71: 663 ~ 698 MHz
FDD R _x Frequency Range:	Band 2: 1930 ~ 1990 MHz; Band 4: 2110 ~ 2155 MHz Band 5: 869 ~ 894 MHz; Band 7: 2620 ~ 2690 MHz Band 12: 729 ~ 746 MHz; Band 13: 746 ~ 756 MHz Band 17: 734 ~ 746 MHz; Band 25: 1930 ~ 1995 MHz Band 26: 869 ~ 894 MHz; Band 66: 2110 ~ 2200 MHz Band 71: 617 ~ 652 MHz
TDD T _x & R _x Frequency Range:	Band 38: 2570 ~ 2620 MHz; Band 41: 2496 ~ 2690 MHz

Note 1: For other features of this EUT, test reports will be issued separately.

Note 2: LTE band 26 transmit frequency for part 90 rule is 814 ~ 824MHz and part 22 rule is 824 ~ 849MHz. ERP over 15MHz bandwidth complies the ERP limit line of part 22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies.

2.3. Description of Available Antennas

Technology	Frequency Range (MHz)	Antenna Type	Max Peak Gain (dBi)
LTE Band 2	1850 ~ 1910	PIFA	4.00
LTE Band 4	1710 ~ 1755		3.00
LTE Band 5	824 ~ 849		3.00
LTE Band 7	2500 ~ 2570		4.00
LTE Band 12	699 ~ 716		3.00
LTE Band 13	777 ~ 787		3.00
LTE Band 14	788 ~ 798		3.00
LTE Band 17	704 ~ 716		3.00
LTE Band 25	1850 ~ 1915		4.00
LTE Band 26	814 ~ 849		3.00
LTE Band 30	2305 ~ 2315		1.00
LTE Band 38	2570 ~ 2620		4.00
LTE Band 41	2500 ~ 2690		4.00
LTE Band 48	3550 ~ 3700		1.00
LTE Band 66	1710 ~ 1780		3.00
LTE Band 71	663 ~ 698		3.00

2.4. Test Methodology

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26:2015
- FCC CFR 47 Part 2, Part 22, Part 24, Part 27
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r01: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP

2.5. Device Capabilities

This device contains the following capabilities:

Working on LTE Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 48, 66, 71.

LTE Band 66 (1710 ~ 1780 MHz) overlaps the entire frequency range of LTE Band 4 (1710 ~ 1755 MHz). Therefore, test data provided in this report covers Band 4 as well as Band 66.

LTE Band 25 (1850 ~ 1915 MHz) overlaps the entire frequency range of LTE Band 2 (1850 ~ 1910 MHz). Therefore, test data provided in this report covers Band 2 as well as Band 25.

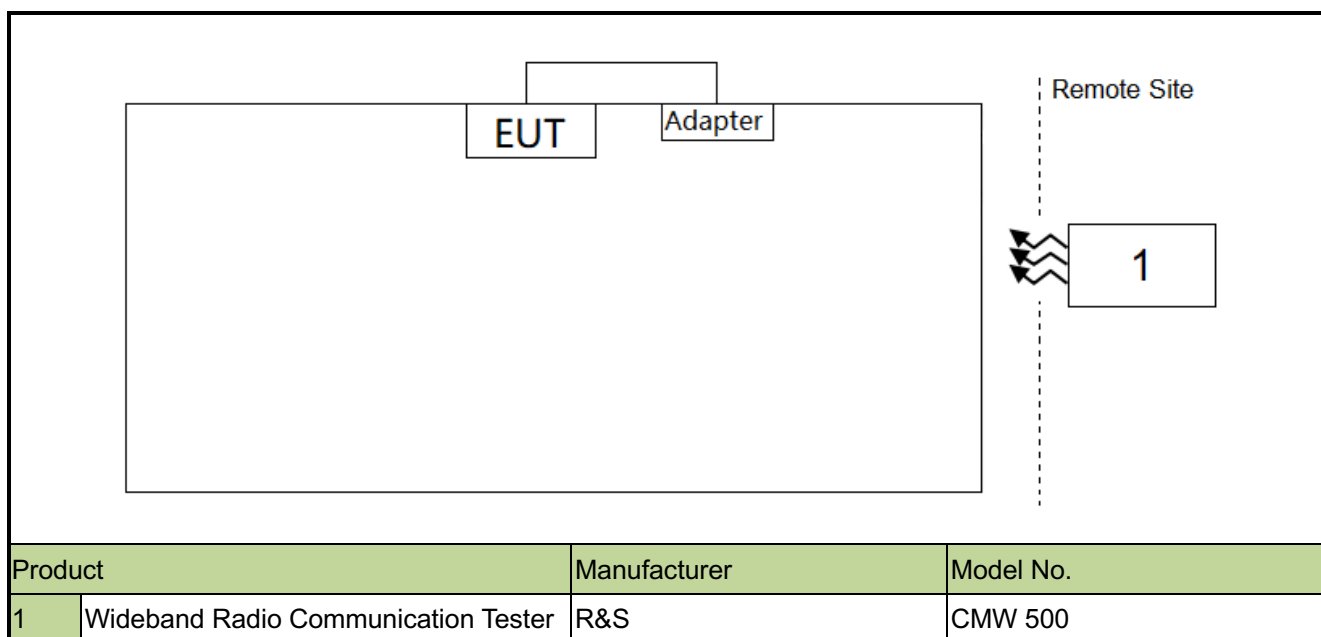
LTE Band 26 (814 ~ 849 MHz) overlaps the entire frequency range of LTE Band 5 (824 ~ 849 MHz). Therefore, test data provided in this report covers Band 5 as well as Band 26.

LTE Band 41 (2496 ~ 2690 MHz) overlaps the entire frequency range of LTE Band 38 (2570 ~ 2620 MHz). Therefore, test data provided in this report covers Band 38 as well as Band 41.

2.6. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.7. Configuration of Tested System



2.8. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

3. TEST EQUIPMENT CALIBRATION DATE

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
Communication Tester	R&S	CMW500	MRTSUE06243	1 year	2022/10/10	SIP-SR1
Thermohygrometer	testo	622	MRTSUE06629	1 year	2022/11/2	SIP-SR1
Shielding Room	MIX-BEP	SIP-SR1	MRTSUE06948	/	/	SIP-SR1

Software	Version	Function
EMI Software	V3	EMI Test Software

4. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT 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 $k = 2$.

Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.13dB

5. TEST RESULT

5.1. Summary

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
22.913(a)(5)	Equivalent Radiated Power (Band 5/26)	< 7 Watts Max ERP	Conducted	Pass	Section 5.2
27.50(b)(9) 27.50(c)(9)	Equivalent Radiated Power (Band 12, 13, 17)	< 30 Watts Max ERP			
27.50(c)(10)	Equivalent Radiated Power (Band 71)	< 3 Watts Max ERP			
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2/25, 7, 38/41)	< 2 Watts Max EIRP			
27.50(d)(4) 27.50(j)(3)	Equivalent Isotropic Radiated Power (Band 4/66)	< 1 Watts Max EIRP			

Notes:

- 1) The analyzer plots shown in this report were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 2) Based on the original report, this change is only enable the UL CA configurations (5B/7C/38C/41C) via software.

5.2. Equivalent Isotropically Radiated Power Measurement

5.2.1. Test Limit

Band 5/26:

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

Band 12, 13, 17

Control stations and mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 30 watts ERP.

Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP.

Band 71

Fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

Band 2/25, 7, 38/41:

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.

Band 4/66:

Fixed, mobile stations operating in the 1710-1755 MHz band and mobile in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

5.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.2

5.2.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T$$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

ERP = EIRP -2.15

5.2.4.Test Setup



5.2.5.Test Result

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 2/25		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
26047	1850.70	1.4	1	0	22.38	26.38	< 33.01
26365	1882.50				22.24	26.24	< 33.01
26683	1914.30				22.27	26.27	< 33.01
26047	1850.70	1.4	1	2	22.34	26.34	< 33.01
26365	1882.50				22.37	26.37	< 33.01
26683	1914.30				22.29	26.29	< 33.01
26047	1850.70	1.4	1	6	22.34	26.34	< 33.01
26365	1882.50				22.30	26.30	< 33.01
26683	1914.30				22.24	26.24	< 33.01
26047	1850.70	1.4	6	0	21.46	25.46	< 33.01
26365	1882.50				21.33	25.33	< 33.01
26683	1914.30				21.28	25.28	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
26047	1850.70	1.4	1	0	22.27	26.27	< 33.01
26365	1882.50				21.82	25.82	< 33.01
26683	1914.30				22.00	26.00	< 33.01
26047	1850.70	1.4	1	2	22.35	26.35	< 33.01
26365	1882.50				22.30	26.30	< 33.01
26683	1914.30				22.12	26.12	< 33.01
26047	1850.70	1.4	1	6	22.31	26.31	< 33.01
26365	1882.50				22.25	26.25	< 33.01
26683	1914.30				22.15	26.15	< 33.01
26047	1850.70	1.4	6	0	21.32	25.32	< 33.01
26365	1882.50				21.02	25.02	< 33.01
26683	1914.30				21.20	25.20	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 4/66		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
131979	1710.70	1.4	1	0	22.19	25.19	< 30.00
132322	1745.00				22.44	25.44	< 30.00
132665	1779.30				22.21	25.21	< 30.00
131979	1710.70	1.4	1	2	22.30	25.30	< 30.00
132322	1745.00				22.36	25.36	< 30.00
132665	1779.30				22.32	25.32	< 30.00
131979	1710.70	1.4	1	6	22.22	25.22	< 30.00
132322	1745.00				22.26	25.26	< 30.00
132665	1779.30				22.25	25.25	< 30.00
131979	1710.70	1.4	6	0	21.33	24.33	< 30.00
132322	1745.00				21.47	24.47	< 30.00
132665	1779.30				21.40	24.40	< 30.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
131979	1710.70	1.4	1	0	22.02	25.02	< 30.00
132322	1745.00				22.50	25.50	< 30.00
132665	1779.30				22.09	25.09	< 30.00
131979	1710.70	1.4	1	2	22.09	25.09	< 30.00
132322	1745.00				22.53	25.53	< 30.00
132665	1779.30				22.17	25.17	< 30.00
131979	1710.70	1.4	1	6	22.06	25.06	< 30.00
132322	1745.00				22.43	25.43	< 30.00
132665	1779.30				22.10	25.10	< 30.00
131979	1710.70	1.4	6	0	21.15	24.15	< 30.00
132322	1745.00				21.54	24.54	< 30.00
132665	1779.30				21.13	24.13	< 30.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 5/26		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
26797	824.70	1.4	1	0	23.16	24.01	< 38.45
26915	836.50				23.14	23.99	< 38.45
27033	848.30				23.12	23.97	< 38.45
26797	824.70	1.4	1	2	23.21	24.06	< 38.45
26915	836.50				23.17	24.02	< 38.45
27033	848.30				23.22	24.07	< 38.45
26797	824.70	1.4	1	6	23.15	24.00	< 38.45
26915	836.50				23.17	24.02	< 38.45
27033	848.30				23.16	24.01	< 38.45
26797	824.70	1.4	6	0	22.22	23.07	< 38.45
26915	836.50				22.23	23.08	< 38.45
27033	848.30				22.20	23.05	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
26797	824.70	1.4	1	0	23.56	24.41	< 38.45
26915	836.50				23.51	24.36	< 38.45
27033	848.30				23.40	24.25	< 38.45
26797	824.70	1.4	1	2	23.45	24.30	< 38.45
26915	836.50				23.45	24.30	< 38.45
27033	848.30				23.33	24.18	< 38.45
26797	824.70	1.4	1	6	23.51	24.36	< 38.45
26915	836.50				23.46	24.31	< 38.45
27033	848.30				23.40	24.25	< 38.45
26797	824.70	1.4	6	0	22.58	23.43	< 38.45
26915	836.50				22.54	23.39	< 38.45
27033	848.30				22.47	23.32	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 7		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
20775	2502.50	5	1	0	22.39	26.39	< 33.01
21100	2535.00				22.37	26.37	< 33.01
21425	2567.50				22.44	26.44	< 33.01
20775	2502.50	5	1	12	22.45	26.45	< 33.01
21100	2535.00				22.29	26.29	< 33.01
21425	2567.50				22.33	26.33	< 33.01
20775	2502.50	5	1	24	22.34	26.34	< 33.01
21100	2535.00				22.36	26.36	< 33.01
21425	2567.50				22.23	26.23	< 33.01
20775	2502.50	5	25	0	21.35	25.35	< 33.01
21100	2535.00				21.30	25.30	< 33.01
21425	2567.50				21.48	25.48	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
20775	2502.50	5	1	0	23.15	27.15	< 33.01
21100	2535.00				23.10	27.10	< 33.01
21425	2567.50				23.05	27.05	< 33.01
20775	2502.50	5	1	12	23.24	27.24	< 33.01
21100	2535.00				22.89	26.89	< 33.01
21425	2567.50				22.51	26.51	< 33.01
20775	2502.50	5	1	24	23.11	27.11	< 33.01
21100	2535.00				22.79	26.79	< 33.01
21425	2567.50				22.31	26.31	< 33.01
20775	2502.50	5	25	0	22.28	26.28	< 33.01
21100	2535.00				21.76	25.76	< 33.01
21425	2567.50				21.48	25.48	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 12		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
23017	699.7	1.4	1	0	23.35	24.20	< 44.77
23095	707.5				23.34	24.19	< 44.77
23173	715.3				23.29	24.14	< 44.77
23017	699.7	1.4	1	2	23.33	24.18	< 44.77
23095	707.5				23.42	24.27	< 44.77
23173	715.3				23.43	24.28	< 44.77
23017	699.7	1.4	1	6	23.32	24.17	< 44.77
23095	707.5				23.23	24.08	< 44.77
23173	715.3				23.36	24.21	< 44.77
23017	699.7	1.4	6	0	22.39	23.24	< 44.77
23095	707.5				22.51	23.36	< 44.77
23173	715.3				22.42	23.27	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
23017	699.7	1.4	1	0	23.62	24.47	< 44.77
23095	707.5				23.63	24.48	< 44.77
23173	715.3				23.46	24.31	< 44.77
23017	699.7	1.4	1	2	23.70	24.55	< 44.77
23095	707.5				23.71	24.56	< 44.77
23173	715.3				23.54	24.39	< 44.77
23017	699.7	1.4	1	6	23.61	24.46	< 44.77
23095	707.5				23.65	24.50	< 44.77
23173	715.3				23.49	24.34	< 44.77
23017	699.7	1.4	6	0	22.70	23.55	< 44.77
23095	707.5				22.75	23.60	< 44.77
23173	715.3				22.55	23.40	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 13		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
23205	779.5	5	1	0	23.19	24.04	< 44.77
23230	782.0				23.41	24.26	< 44.77
23255	784.5				23.56	24.41	< 44.77
23205	779.5	5	1	12	23.45	24.30	< 44.77
23230	782.0				23.38	24.23	< 44.77
23255	784.5				23.37	24.22	< 44.77
23205	779.5	5	1	24	23.33	24.18	< 44.77
23230	782.0				23.34	24.19	< 44.77
23255	784.5				23.45	24.30	< 44.77
23205	779.5	5	25	0	22.41	23.26	< 44.77
23230	782.0				22.50	23.35	< 44.77
23255	784.5				22.48	23.33	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
23205	779.5	5	1	0	22.70	23.55	< 44.77
23230	782.0				23.68	24.53	< 44.77
23255	784.5				23.61	24.46	< 44.77
23205	779.5	5	1	12	23.75	24.60	< 44.77
23230	782.0				23.72	24.57	< 44.77
23255	784.5				23.72	24.57	< 44.77
23205	779.5	5	1	24	23.63	24.48	< 44.77
23230	782.0				23.67	24.52	< 44.77
23255	784.5				23.68	24.53	< 44.77
23205	779.5	5	25	0	22.71	23.56	< 44.77
23230	782.0				22.64	23.49	< 44.77
23255	784.5				22.60	23.45	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 17		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
23755	706.5	5	1	0	23.40	24.25	< 44.77
23790	710.0				23.44	24.29	< 44.77
23825	713.5				23.40	24.25	< 44.77
23755	706.5	5	1	12	23.47	24.32	< 44.77
23790	710.0				23.48	24.33	< 44.77
23825	713.5				23.45	24.30	< 44.77
23755	706.5	5	1	24	23.43	24.28	< 44.77
23790	710.0				23.41	24.26	< 44.77
23825	713.5				23.45	24.30	< 44.77
23755	706.5	5	25	0	22.50	23.35	< 44.77
23790	710.0				22.51	23.36	< 44.77
23825	713.5				22.43	23.28	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
23755	706.5	5	1	0	23.84	24.69	< 44.77
23790	710.0				23.70	24.55	< 44.77
23825	713.5				23.71	24.56	< 44.77
23755	706.5	5	1	12	23.71	24.56	< 44.77
23790	710.0				23.77	24.62	< 44.77
23825	713.5				23.78	24.63	< 44.77
23755	706.5	5	1	24	23.66	24.51	< 44.77
23790	710.0				23.76	24.61	< 44.77
23825	713.5				23.64	24.49	< 44.77
23755	706.5	5	25	0	22.74	23.59	< 44.77
23790	710.0				22.72	23.57	< 44.77
23825	713.5				22.68	23.53	< 44.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 38/41		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
39675	2498.50	5	1	0	23.41	27.41	< 33.01
40620	2593.00				23.27	27.27	< 33.01
40565	2687.50				23.61	27.61	< 33.01
39675	2498.50	5	1	12	23.33	27.33	< 33.01
40620	2593.00				23.33	27.33	< 33.01
40565	2687.50				23.90	27.90	< 33.01
39675	2498.50	5	1	24	23.56	27.56	< 33.01
40620	2593.00				23.30	27.30	< 33.01
40565	2687.50				23.71	27.71	< 33.01
39675	2498.50	5	25	0	23.45	27.45	< 33.01
40620	2593.00				23.50	27.50	< 33.01
40565	2687.50				23.82	27.82	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
39675	2498.50	5	1	0	23.39	27.39	< 33.01
40620	2593.00				23.16	27.16	< 33.01
40565	2687.50				23.10	27.10	< 33.01
39675	2498.50	5	1	12	23.54	27.54	< 33.01
40620	2593.00				23.31	27.31	< 33.01
40565	2687.50				23.20	27.20	< 33.01
39675	2498.50	5	1	24	23.55	27.55	< 33.01
40620	2593.00				23.34	27.34	< 33.01
40565	2687.50				23.24	27.24	< 33.01
39675	2498.50	5	25	0	23.44	27.44	< 33.01
40620	2593.00				23.28	27.28	< 33.01
40565	2687.50				23.42	27.42	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 41_HPUE		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
39675	2498.50	5	1	0	25.55	29.55	< 33.01
40620	2593.00				25.84	29.84	< 33.01
40565	2687.50				26.17	30.17	< 33.01
39675	2498.50	5	1	12	25.62	29.62	< 33.01
40620	2593.00				25.86	29.86	< 33.01
40565	2687.50				26.21	30.21	< 33.01
39675	2498.50	5	1	24	25.50	29.50	< 33.01
40620	2593.00				25.90	29.90	< 33.01
40565	2687.50				26.19	30.19	< 33.01
39675	2498.50	5	25	0	24.89	28.89	< 33.01
40620	2593.00				25.26	29.26	< 33.01
40565	2687.50				25.25	29.25	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK							
39675	2498.50	5	1	0	26.25	30.25	< 33.01
40620	2593.00				26.28	30.28	< 33.01
40565	2687.50				26.45	30.45	< 33.01
39675	2498.50	5	1	12	26.34	30.34	< 33.01
40620	2593.00				26.22	30.22	< 33.01
40565	2687.50				26.49	30.49	< 33.01
39675	2498.50	5	1	24	26.26	30.26	< 33.01
40620	2593.00				26.19	30.19	< 33.01
40565	2687.50				26.47	30.47	< 33.01
39675	2498.50	5	25	0	25.21	29.21	< 33.01
40620	2593.00				25.19	29.19	< 33.01
40565	2687.50				25.39	29.39	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/03/29
Test Band	LTE Band 71		

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
133147	665.5	5	1	0	23.48	24.33	< 34.77
133297	680.5				23.40	24.25	< 34.77
133447	695.5				23.34	24.19	< 34.77
133147	665.5	5	1	12	23.52	24.37	< 34.77
133297	680.5				23.43	24.28	< 34.77
133447	695.5				23.34	24.19	< 34.77
133147	665.5	5	1	24	23.51	24.36	< 34.77
133297	680.5				23.43	24.28	< 34.77
133447	695.5				23.34	24.19	< 34.77
133147	665.5	5	25	0	22.73	23.58	< 34.77
133297	680.5				22.42	23.27	< 34.77
133447	695.5				22.35	23.20	< 34.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

The worst-case results reported in the original FCC ID: ZMOFM101GL.

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	ERP (dBm)	Limit (dBm)
QPSK							
133147	665.5	5	1	0	22.73	23.58	< 34.77
133297	680.5				22.78	23.63	< 34.77
133447	695.5				22.80	23.65	< 34.77
133147	665.5	5	1	12	22.72	23.57	< 34.77
133297	680.5				22.82	23.67	< 34.77
133447	695.5				22.91	23.76	< 34.77
133147	665.5	5	1	24	22.68	23.53	< 34.77
133297	680.5				22.61	23.46	< 34.77
133447	695.5				22.78	23.63	< 34.77
133147	665.5	5	25	0	21.75	22.60	< 34.77
133297	680.5				21.79	22.64	< 34.77
133447	695.5				21.79	22.64	< 34.77
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

6. CONCLUSION

Based on the spot check test result, the test data from the original model is representative for the variant model. The power level spot check are shown within expected level compliant to limit line. We are using power and ERP/EIRP measurements from the the original parent model reports to list on the grant.

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.

Appendix A - Test Setup Photograph

Refer to “2202RSU033-UT” file.

Appendix B - EUT Photograph

Refer to “2202RSU033-UE” file.