



Spot Check Evaluation

APPLICANT : Quectel Wireless Solutions Co., Ltd.
EQUIPMENT : LTE Module
BRAND NAME : Quectel
MODEL NAME : EG912U-GL
FCC ID : XMR2023EG912UGL2
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L),
27(M), 27(H), 27(F), 90(S)

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
2D1204	Rev. 01	Initial issue of report	Mar. 01, 2023



1 General Description

1.1 Applicant

Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, 200233, China

1.2 Manufacturer

Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, 200233, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	LTE Module
Brand Name	Quectel
Model Name	EG912U-GL
FCC ID	XMR2023EG912UGL2
HW Version	R1.1
SW Version	EG912UGLAAR03A04M08
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Modification of EUT

No modifications are made to the EUT during all test items.

1.5 Testing Site

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309



1.6 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24al



2 Re-use of Measured Data

2.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: EG912U-GL, FCC ID: XMR2023EG912UGL2) is electrically identical to the reference device (Model: EG912U-GL, FCC ID: XMR2023EG912UGL) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, the FCC Part 22, 24, 27, 90 (equipment class: PCB) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: XMR2023EG912UGL2 .

2.2 Model Difference Information

The **main** difference between FCC ID: XMR2023EG912UGL and FCC ID: XMR2023EG912UGL2 is as below:

- Remove GNSS, Bluetooth and Wi-Fi scan components.

Other differences and all the details of similarity and difference can be found in the confidential documents (EG912U-GL_Operational Description of Product Equality Declaration).

2.3 Reference detail Section:

Rule Part	Equipment Class	Frequency Band (MHz)	Reference FCC ID (Parent)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)	Report Title/Section
22, 24, 27, 90,	PCB (GSM)	GSM 850/1900	XMR2023EG912UGL	Original Grant	FG2D1203A	XMR2023EG912UGL2	All sections applicable
	PCB (LTE)	B2/4/5/7/12/13/17/25/26/38/41/66	XMR2023EG912UGL	Original Grant	FG2D1203B FG2D1203C	XMR2023EG912UGL2	All sections applicable
	PCB (LTE)	B26 (90S)	XMR2023EG912UGL	Original Grant	FG2D1203D	XMR2023EG912UGL2	All sections applicable



2.4 Spot Check Verification Data Section

Conducted power test and radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model

Summary for power and RSE spot check for each rule entry and technology is listed as below:

Test Item	Mode	XMR2023EG912UGL Parent Worst Result	XMR2023EG912UGL2 Variant Check Result	Difference (dB)
Conducted Power (dBm)	GSM850	33.5	32.95	-0.55
	GSM1900	30.67	29.85	-0.82
	LTE B2	23.54	23.25	-0.29
	LTE B4	23.51	23.49	-0.02
	LTE B5	23.33	23.28	-0.05
	LTE B7	23.68	23.62	-0.06
	LTE B12	23.51	23.44	-0.07
	LTE B13	23.31	23.14	-0.17
	LTE B17	23.46	23.4	-0.06
	LTE B25	23.47	23.3	-0.17
	LTE B26	23.35	23.33	-0.02
	LTE B66	23.68	23.61	-0.07
	LTE B38	23.62	23.59	-0.03
	LTE B41	23.69	23.64	-0.05

Test Item	Mode	XMR2023EG912UGL Parent Worst Result	XMR2023EG912UGL2 Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBm)	GSM1900	-36.96	-34.05	2.91
	LTE B13	-22.54	-22.34	0.2

Conclusion:

Radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Based on the spot check test result, the test data from the original model is representative for the variant model. The power level and RSE spot check are shown within expected level compliant to limit line.

We are using power measurements from 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.



3 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 12, 2022	Feb. 22, 2023	Oct. 11, 2023	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 25, 2022	Feb. 22, 2023	Aug. 24, 2023	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2023	Feb. 22, 2023	Jan. 04, 2024	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2023	Feb. 22, 2023	Jan. 04, 2024	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz~44G, MAX 30dB	Oct. 12, 2022	Feb. 22, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 16, 2022	Feb. 22, 2023	Oct. 15, 2023	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	May 24, 2022	Feb. 22, 2023	May 23, 2023	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Jan. 04, 2023	Feb. 22, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 04, 2023	Feb. 22, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz~1GHz	Jan. 04, 2023	Feb. 22, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 04, 2023	Feb. 22, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz~18Ghz	Oct. 12, 2022	Feb. 22, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz~18Ghz	Oct. 12, 2022	Feb. 22, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Feb. 22, 2023	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Feb. 22, 2023	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Feb. 22, 2023	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required.

4 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±0.46 dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.1dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.1dB
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-THE END-