RF TEST REPORT

SIEMIC
A Bureau Veritas Group Company

Report No.: RF_FCC IC_ SL18091001-SEV-074_Co-Location_Rev2.0
Supersede Report No.: RF_FCC IC_ SL18091001-SEV-074_Co-Location_Rev1.0

Applicant	:	Getaround, Inc.
Product Description	:	Cellular Module
Module Model No.	:	SARA-R410M
Host Model No.		Connect 4M
Bluetooth Module Model No.	:	CU002927
Test Standard	:	FCC 15.247, Part 22, 24, 27 RSS 247 Issue 2, RSS-Gen Issue 5, RSS-130 Issue 2, RSS-133 Issue 6, RSS-139 Issue 3
Test Method	:	ANSI C63.10 2013, RSS Gen Issue 5 KDB 558074 D01 DTS Meas Guidance v05r01 ANSI C63.26-2015, ANSI/TIA-603-E-2016 KDB 971168 D01 v03r01
FCC ID	:	2AOTVCU003020
IC	:	23570-CU003020
Dates of test	:	01/28/2019 – 01/30/2019
Issue Date	:	02/11/2019
Test Result	:	☒ Pass ☐ Fail

This Test Report is Issued Under the Authority of:	
Shuo	
Shuo Zhang	**Chen Ge**
RF Test Engineer	Engineer Reviewer
This test report may be reproduced in full only **Test result presented in this test report is applicable to the tested sample only**	

Issued By:
SIEMIC Laboratories
775 Montague Expressway, Milpitas, CA 95035

ilac-MRA
A2LA ACCREDITED
TESTING CERT # 2742-01

Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC, RF/Wireless, Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless, Telecom
Taiwan	BSMI, NCC, NIST	EMC, RF, Telecom, Safety
Hong Kong	OFTA, NIST	RF/Wireless, Telecom
Australia	NATA, NIST	EMC, RF, Telecom, Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF, Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	EMC, RF/Wireless, Telecom, Safety
Europe	A2LA, NIST	EMC, RF, Telecom, Safety
Israel	MOC, NIST	EMC, RF, Telecom, Safety

Accreditations for Product Certifications

Country	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC, RF, Telecom
Canada	IC FCB, NIST	EMC, RF, Telecom
Singapore	iDA, NIST	EMC, RF, Telecom
EU	NB	EMC & RED Directive
Japan	MIC (RCB 208)	RF, Telecom
Hong Kong	OFTA (US002)	RF, Telecom

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1 Report Revision History

Report No.	Report	Description	Issue Date
RF_FCC IC_ SL18091001-SEV-074_Co-Location	None	Original	02/11/2019
RF_FCC IC_ SL18091001-SEV-074_Co-Location_Rev1.0	1.0	Update referenced report	04/11/2019
RF_FCC IC_ SL18091001-SEV-074_Co-Location_Rev2.0	2.0	Update per reviewer	04/16/2019

2 Executive Summary

The purpose of this test program was to demonstrate compliance of following product

Company:	Getaround, Inc
Product Desdription:	Cellular Module
Model:	SARA-R410M

against the current Stipulated Standards. The specified model product stated above has demonstrated compliance with the Stipulated Standard listed on 1st page

3 Customer information

Applicant Name	Getaround, Inc
Applicant Address	1177 Harrison Street, San Francisco, CA 94103
Manufacturer Name	Getaround, Inc
Manufacturer Address	1177 Harrison Street, San Francisco, CA 94103

4 Test site information

Lab performing tests	:	SIEMIC Laboratories
Lab Address	:	775 Montague Expressway, Milpitas, CA 95035
FCC Test Site No.	:	540430
IC Test Site No.	:	4842D-2
VCCI Test Site No.	:	A0133

5 Modification

Index	Item	Description	Note
-	-	-	-
-	-	-	-

6 EUT Information

6.1 EUT Description

Host Model No.	Connect 4M
Module Model No.	SARA-R410M
Bluetooth Module Model No.	CU002927
Input Power	12 V Battery Powered
Product Hardware version	N/A
Date of EUT received	01/01/2019
Equipment Class/ Category	PCB, DTS
Port/Connectors	N/A
Remark	N/A

6.2 Radio Description

LTE-M:

Item	LTE-M		
Operating Band /Radio Type	Band 2	Band 4	Band 12
Bandwidth	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz	1.4MHz, 3MHz, 5MHz, 10MHz
Modulation	QPSK/16QAM	QPSK/16QAM	QPSK/16QAM
Antenna Type	Omnidirectional Antenna	Omnidirectional Antenna	Omnidirectional Antenna
Antenna Gain	3.2 dBi	3.2 dBi	1.0 dBi
Frequency TX(MHz)	TX: 1850 MHz to 1910 MHz RX: 1930 MHz to 1990 MHz	TX: 1710 MHz to 1755 MHz RX: 2110 MHz to 2155 MHz	TX: 699 MHz to 716 MHz RX: 729 MHz to 746 MHz

Bluetooth LE:

Radio Type	Bluetooth (Ver4.1)
Operating Frequency	2402MHz-2480MHz
Modulation	GFSK
Channel Spacing	2MHz
Antenna Type	SMD
Antenna Gain	3.5 dBi
Antenna Connector Type	u.FL
Note	N/A

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

Item	Supporting Equipment Description	Model	Serial Number	Manufacturer	Note
1	UXM Wireless Test Set	E7515A	TH54200251	Keysight Technology	-

7.2 Cabling Description

Name	Connection Start		Connection Stop		Length / shielding Info		Note
	From	I/O Port	To	I/O Port	Length (m)	Shielding	
							-

7.3 Test Software Description

Test Item	Software	Description
RF Testing	Tera term	Set the EUT to transmit continuously in different test mode

8 Test Summary

Test Item	Test standard		Test Method/Procedure	Pass / Fail
Antenna Requirement	FCC	15.203	ANSI C63.10 – 2013 558074 D01 DTS Meas Guidance v05r01	☒ Pass ☐ N/A
	IC	-		

Test Item	Test standard		Test Method/Procedure		Pass / Fail
Radiated Spurious Emission	FCC	§15.247 §2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	FCC	ANSI C63.26-2015 ANSI/TIA-603-E-2016 KDB 971168 D01 v03r01 KDB 558074 D01 DTS Meas Guidance v05r01	☒ Pass ☐ N/A
	IC	RSS-Gen Issue 5 §6.13 RSS-130 Issue 2 §4.6 RSS-133 Issue 6 §6.5 RSS-139 Issue 3 §6.6	IC		
Remark	1. All measurement uncertainties do not take into consideration for all presented test results. 2. The applicant shall ensure frequency stability by showing that an emission is maintained within the band of operation under all normal operating conditions as specified in the user's manual. 3. Only radiated spurious emission test in this report, for other test item, please refer to: 4. **FCC ID: 2AOTVCU003020, IC: 23570-CU003020 for LTE**. **FCC ID: 2AOTVCU002927, IC: 23570-CU002927 for BLE**.				

9 Measurement Uncertainty

Emissions			
Test Item	**Frequency Range**	**Description**	**Uncertainty**
AC Conducted Emissions	150KHz – 30MHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2	±3.5dB
RF conducted measurement	150KHz – 40GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2	±0.95dB
Radiated Spurious Emissions	30MHz – 1GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	±6dB
Radiated Spurious Emissions	1GHz – 40GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	±6dB

10 Measurements, examination and derived results

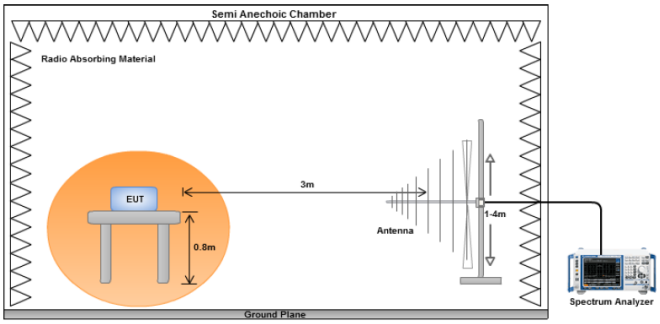
10.1 Antenna Requirement

Spec	Requirement	Applicable
§15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. Antenna requirement must meet at least one of the following: a) Antenna must be permanently attached to the device. b) The antenna must use a unique type of connector to attach to the device. c) Device must be professionally installed. The installer shall be responsible for ensuring that the correct antenna is employed by the device.	☒
Remark	The BLE and LTE radio use an u.fl connector for antenna connection which meet the requirement. The antenna is SMD type.	
Result	☒ PASS ☐ FAIL	

10.2 Radiated Measurements

10.2.1 Radiated Measurements 30MHz to 1GHz

Requirement(s):

Spec	Requirement	Applicable
47 CFR §15.209 RSS-247	**Frequency range (MHz)** / **Field Strength (uV/m)** 30 – 88 / 100 88 – 216 / 150 216 960 / 200 Above 960 / 500	☒
Test Setup		
Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. A Quasi-peak measurement was then made for that frequency point. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.	

Test Date	01/28/2019 – 01/30/2019	Environmental conditions	Temperature 20.1°C Relative Humidity 36% Atmospheric Pressure 1026mbar
Remark	-		
Result	☒ Pass ☐ Fail		

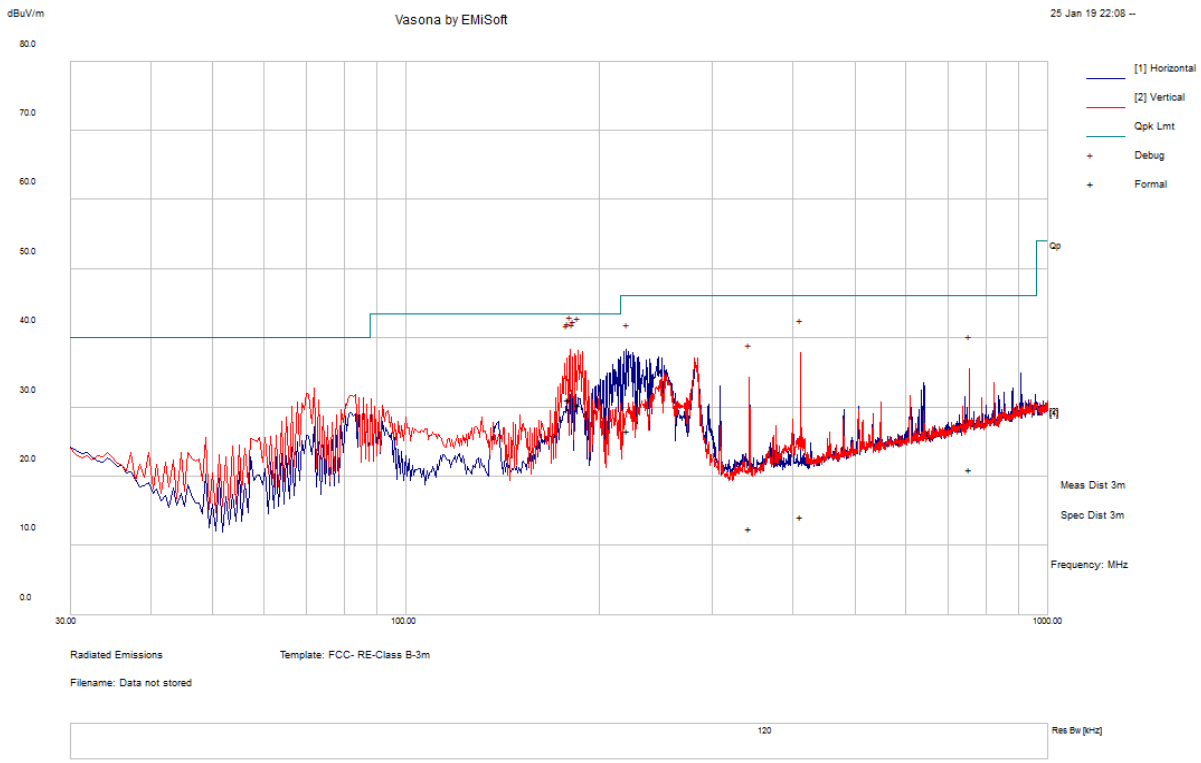
Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Shuo Zhang at 10-meter chamber.

Test specification:	Radiated Emissions			
Mains Power:	120VAC, 60Hz		Result:	☒ Pass ☐ Fail
Tested by:	Shuo Zhang			
Test Date:	01/28/2019			
Remarks:	LTE and BLE radio transmit simultaneously			

f=30MHz – 1000MHz plot and 3-meter distance

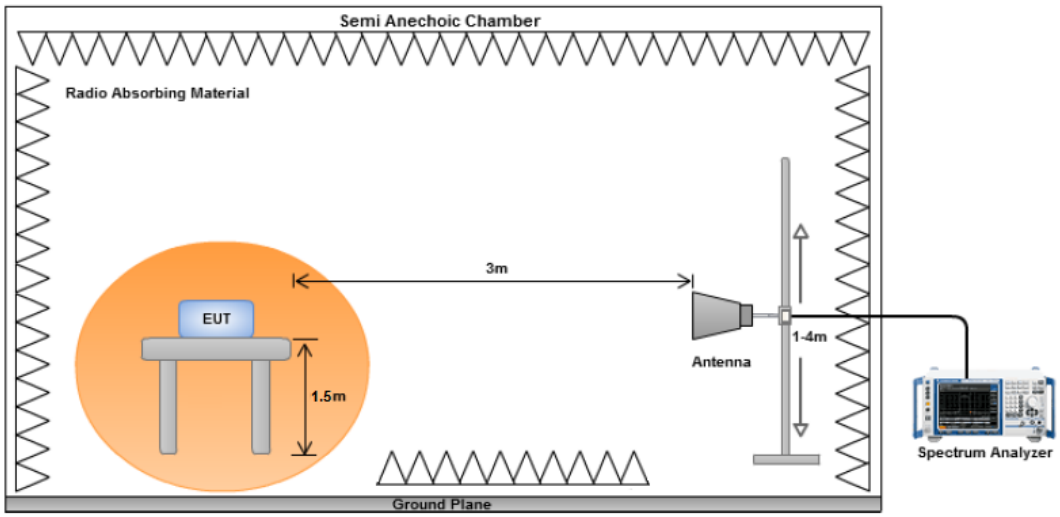


f=30MHz – 1000MHz Measurements

Frequency MHz	Raw dBµV/m	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
185.40	43.11	12.48	-25.18	30.41	Quasi Max	V	172	67	43.5	-13.09	Pass
178.92	43.83	12.42	-25.04	31.21	Quasi Max	V	230	69	43.5	-12.29	Pass
411.52	20.29	13.87	-19.99	14.17	Quasi Max	V	103	7	46	-31.83	Pass
221.18	38.74	12.81	-24.88	26.68	Quasi Max	V	129	12	46	-19.33	Pass
754.35	20.55	15.34	-14.84	21.05	Quasi Max	V	150	82	46	-24.95	Pass
342.78	19.99	13.51	-20.97	12.54	Quasi Max	V	180	118	46	-33.46	Pass

10.2.2 Radiated Spurious Emissions between 1GHz-25GHz

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§15.209 RSS247	a)	Frequency range (MHz) / Field Strength (uV/m) 30 – 88 / 100 88 – 216 / 150 216 960 / 200 Above 960 / 500	☒
Test Setup			
Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. An average measurement was then made for that frequency point. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.	
Remark	The EUT was scanned up to 40GHz. Both horizontal and vertical polarities were investigated. The results show only the worst case.	
Result	☒ Pass	

Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☐ Yes (See below) ☒ N/A

Test was done by Shuo Zhang at 10-meter chamber.

Test specification:	Radiated Emissions			
Mains Power:	120VAC, 60Hz		Result:	☒ Pass ☐ Fail
Tested by:	Shuo Zhang			
Test Date:	01/28/2019			

Remarks:	LTE and BLE radio transmit simultaneously

Frequency MHz	Raw dBµV/m	Cable Loss	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
6824.85	40.14	5.03	-0.33	44.85	Peak Max	V	100	247	74	-29.15	Pass
3475.61	41.67	3.57	-1.74	43.5	Peak Max	V	165	70	74	-30.5	Pass
4528.54	41.24	4.22	-1.18	44.28	Peak Max	V	100	99	74	-29.72	Pass
6824.85	27.14	5.03	-0.33	31.85	Average Max	V	100	247	54	-22.15	Pass
3475.61	28.88	3.57	-1.74	30.71	Average Max	V	165	70	54	-23.29	Pass
4528.54	27.71	4.22	-1.18	30.75	Average Max	V	100	99	54	-23.25	Pass

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Radiated Emissions						
Spectrum Analyzer	N9010A	10SL0219	05/13/2018	1 Year	05/13/2019	☑
Bi-Log antenna (30MHz~1GHz)	JB1	A030702	03/09/2018	1 Year	03/09/2019	☑
Horn Antenna (1GHz~18GHz)	3115	100059	11/09/2018	1 Year	11/09/2019	☑
Horn Antenna (18GHz~40GHz)	PA-840	181251	06/23/2018	1 Year	06/23/2019	☑
Preamplifier (100KHz-7GHz)	LPA-6-30	11170602	03/09/2018	1 Year	03/09/2019	☑
Preamplifier (0.01-50 GHz)	RAMP00M50GA	17032300047	02/19/2018	1 Year	02/19/2019	☑
UXM Wireless Test Set	E7515A	TH54200251	07/25/2018	1 Year	07/25/2019	☑

Annex B. SIEMIC Accreditation

Accreditations	Document	Scope / Remark
ISO 17025 (A2LA)		Please see the documents for the detailed scope
ISO Guide 65 (A2LA)		Please see the documents for the detailed scope
TCB Designation		A1, A2, A3, A4, B1, B2, B3, B4, C
FCC DoC Accreditation		FCC Declaration of Conformity Accreditation
FCC Site Registration		3 meter site
FCC Site Registration		10 meter site
IC Site Registration		3 meter site
IC Site Registration		10 meter site
EU NB		**Radio Equipment: EN45011:** EN ISO/IEC 17065
		Electromagnetic Compatibility: EN45011 – EN ISO/IEC 17065
Singapore iDA CB(Certification Body)		Phase I, Phase II
Vietnam MIC CAB Accreditation		Please see the document for the detailed scope
Hong Kong OFCA		**(Phase II)** OFCA Foreign Certification Body for Radio and Telecom
		(Phase I) Conformity Assessment Body for Radio and Telecom
Industry Canada CAB		**Radio:** Scope A – All Radio Standard Specification in Category I
		Telecom: CS-03 Part I, II, V, VI, VII, VIII

Japan Recognized Certification Body Designation		**Radio**: A1. Terminal equipment for purpose of calling **Telecom**: B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law
Korea CAB Accreditation		**EMI:** KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI **EMS:** KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS
		Radio: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68
		Telecom: President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4
Taiwan NCC CAB Recognition		LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08
Taiwan BSMI CAB Recognition		CNS 13438
Japan VCCI		R-3083: Radiation 3 meter site C-3421: Main Ports Conducted Interference Measurement T-1597: Telecommunication Ports Conducted Interference Measurement
Australia CAB Recognition		**EMC:** AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4
		Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771
		Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06 AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1
Australia NATA Recognition		AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016,AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2