RF TEST REPORT

SIEMIC
A Bureau Veritas Group Company

Report No.: FCC_SL18071803-SEV-034A2-Co-location
Supersede Report No.:

Applicant	:	ChargePoint, Inc.
Host Product Name	:	CT4000 Charging Station
Host Model No.	:	CT4000
Test Standard	:	47 CFR Part 22, 24, 27 RSS 130, 132, 133, 139
Test Method	:	RSS-Gen Issue 5, Apr 2018 ANSI C63.10: 2013
FCC ID	:	1.Cellular module : W38-HL7588 2.WLAN module : W38-241083S 3.RFID module : W38-UICFG
IC ID		1.Cellular module: 8854A-HL7588 2. WLAN module: 8854A-241083S 3.RFID module: 8854A-UICFG
Dates of test	:	12/04/2018
Issue Date	:	12/17/2018
Test Result	:	☒ Pass ☐ Fail
Equipment complied with the specification [X] Equipment did not comply with the specification [ ]		

This Test Report is Issued Under the Authority of:	
Gary Chou	
Gary Chou	**Chen Ge**
Test Engineer	Engineer Reviewer

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

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	Safety, EMC, RF/Wireless, Telecom
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 & R&TTE Directive
Japan	MIC (RCB 208)	RF, Telecom
Hong Kong	OFTA (US002)	RF, Telecom

CONTENTS

1 REPORT REVISION HISTORY 4
2 EXECUTIVE SUMMARY 5
3 CUSTOMER INFORMATION 5
4 TEST SITE INFORMATION 5
5 MODIFICATION 5
6 EUT INFORMATION 6
6.1 EUT Description 6
6.2 Radio Description 6
7 SUPPORTING EQUIPMENT/SOFTWARE AND CABLING DESCRIPTION 9
7.1 Supporting Equipment 9
7.2 Cabling Description 9
7.3 Test Software Description 9
8 TEST SUMMARY 10
9 MEASUREMENT UNCERTAINTY 11
9.1 Conducted Emissions 11
9.2 Radiated Emissions (30MHz to 1GHz) 11
9.3 Radiated Emissions (1GHz to 40GHz) 12
9.4 RF conducted measurement 12
10 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS 13
10.1 Radiated Spurious Emissions below 1GHz 13
10.2 Radiated Spurious Emissions between 1GHz – 18GHz 16
ANNEX A. TEST INSTRUMENT 18
ANNEX B. SIEMIC ACCREDITATION 19

1 Report Revision History

Report No.	Report Version	Description	Issue Date
FCC_SL18071803-SEV-034A2-Co-location	None	Original	12/17/2018

2 Executive Summary

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

Company: ChargePoint, Inc.
Host Product: CT4000 Charging Station
Host Model: CT4000

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	ChargePoint, Inc.
Applicant Address	254 E. Hacienda Ave , Campbell, CA 95008
Manufacturer Name	ChargePoint, Inc.
Manufacturer Address	254 E. Hacienda Ave , Campbell, CA 95008

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 Product Name	:	CT4000 Charging Station
Host Model No.	:	CT4000
Trade Name	:	ChargePoint
Serial No.	:	183560A03817
Input Power	:	120Vac/ 60Hz
Input Adaptor Manufactures:	:	OPEN PEAK
Input Adaptor Model Name:	:	LFS054000D-A8S
Product Hardware version	:	N/A
Product Software version	:	N/A
Date of EUT received	:	10/08/2018
Equipment Class/ Category	:	Class B
Port/Connectors	:	1X USB Port, 1X Console Port

6.2 Radio Description

Spec for WLAN Radio:

Radio Type	802.11b	802.11g	802.11n-20M
Operating Frequency	2412-2462MHz	2412-2462MHz	2412-2462MHz
Modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (BPSK, QPSK, 16QAM, 64QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM)
Channel Spacing	5MHz	5MHz	5MHz
Number of Channels	11	11	11
Antenna Type	PIFA		
Antenna Gain (Peak)	2.5dBi		
Antenna Connector Type	N/A		

Radio Type	802.11a/n20	802.11n40
Operating Frequency	5180-5240MHz 5745-5825MHz	5190-5230MHz 5755-5795MHz
Modulation	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Channel Spacing	20MHz	40MHz
Number of Channels	9	4
Antenna Type	PIFA	
Antenna Gain (Peak)	3.5dBi	
Antenna Connector Type	N/A	

Spec for WCDMA Radio:

Item	WCDMA	WCDMA
Operating Band /Radio Type	WCDMA Band II	WCDMA Band V
Bandwidth	3.84MHz	3.84MHz
Modulation	QPSK	QPSK
Tx Frequency Range (MHz)	1850MHz to 1910MHz	824MHz to 849MHz
Rx Frequency Range (MHz)	1930MHz to 1990MHz	869MHz to 894MHz
Antenna Type	Embedded	Embedded
Antenna Gain	2 dBi	2 dBi
Antenna Connector Type	N/A	N/A

Item	LTE	LTE	LTE
Operating Band /Radio Type	LTE Band 2	LTE Band 4	LTE Band 5
Bandwidth	5MHz, 10MHz, 15MHz, 20MHz	5MHz, 10MHz, 15MHz, 20MHz	5MHz, 10MHz
Modulation	QPSK/16QAM/64QAM	QPSK/16QAM/64QAM	QPSK/16QAM/64QAM
Antenna Type	Embedded	Embedded	Embedded
Antenna Gain	2 dBi	2 dBi	2 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: 824 MHz to 849 MHz RX: 869 MHz to 894 MHz

Item	LTE	LTE
Operating Band /Radio Type	LTE Band 13	LTE Band 17
Bandwidth	5MHz, 10MHz	5MHz, 10MHz
Modulation	QPSK/16QAM/64QAM	QPSK/16QAM/64QAM
Antenna Type	Embedded	Embedded
Antenna Gain	2 dBi	2 dBi
Frequency TX(MHz)	TX: 777 MHz to 787 MHz RX: 746 MHz to 756 MHz	TX: 704 MHz to 716 MHz RX: 734 MHz to 746 MHz

Spec for RFID (13.56 MHz) Radio:

Radio Type	RFID
Operating Frequency	13.56 MHz
Modulation	ASK
Channel Spacing	N/A
Number of Channels	1
Antenna Type	LOOP
Antenna Connector Type	N/A

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

Item	Supporting Equipment Description	Model	Serial Number	Manufacturer	Note
1	Laptop	Lattitude 3550	N/A	Dell	N/A
2	Adaptor	DKI10FB	DKI10FB	OPEN PEAK	N/A
3	Acess Point	DIR-524	Q91B1CC007271	D-LINK	N/A
4	Dummy Load	N/A	N/A	N/A	N/A
5	Power Source	T 3-53040-S	DKI10FB	ACME	N/A

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
Co-location	CMD	Sent Data to EUT Via WIFI

8 Test Summary

Requirement

Test Item	Test standard		Test Method/Procedure		Pass / Fail
Radiated Spurious Emissions	FCC	47 CFR Part 22, 24, 27	FCC	ANSI C63.10: 2013 RSS-Gen Issue 5, Apr 2018	☒ Pass ☐ N/A
	IC	RSS 130, 132, 133, 139	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.				

9 Measurement Uncertainty

9.1 Conducted Emissions

The test is to measure the conducted emissions to the mains port of the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the LISN
- Uncertainty of cables
- Uncertainty due to the mismatches
- Etc, see the below table for details

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Filter Insertion Loss	0.25	Normal	2	1	0.125
LISN Insertion Loss	0.40	Normal	2	1	0.20
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.86605081
PRF Response	1.5	Rectangular	1.732	1	0.86605081
Mismatch LISN - Receiver	0.25	U-Shape	1.414	1	0.1768033
LISN Impedance	2.5	Triangular	2.449	1	1.0208248
Combined Standard Uncertainty					1.928133
Expanded Uncertainty (K=2)					**3.856266**

The total derived measurement uncertainty is +/- 3.86 dB.

9.2 Radiated Emissions (30MHz to 1GHz)

The test is to measure the radiated emissions of the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the antenna
- Uncertainty of cables
- Uncertainty due to the mismatches
- NSA Calibration
- Etc., details see the below table

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Filter Insertion Loss	0.25	Normal	2	1	0.125
Antenna Factor	0.65	Normal	2	1	0.325
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.86605081
PRF Response	1.5	Rectangular	1.732	1	0.86605081
Mismatch Filter - Receiver	0.25	U-Shape	1.414	1	0.1768033
NSA Calibration	4.0	U-Shape	1.414	1	2.8288543
Combined Standard Uncertainty					3.0059131
Expanded Uncertainty (K=2)					**6.0118262**

The total derived measurement uncertainty is +/- 6.00 dB.

9.3 Radiated Emissions (1GHz to 40GHz)

The test is to measure the radiated emissions of the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the antenna
- Uncertainty of cables
- Uncertainty due to the mismatches
- VSWR Calibration
- Etc., details see the below table

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.0692840
Cable Insertion Loss	0.21	Normal	2	1	0.1050000
Filter Insertion Loss	0.25	Normal	2	1	0.1250000
Antenna Factor	0.65	Normal	2	1	0.3250000
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.8660508
PRF Response	1.5	Rectangular	1.732	1	0.8660508
Mismatch Filter - Receiver	0.25	U-Shape	1.414	1	0.1768033
VSWR Calibration	2.0	U-Shape	1.414	1	1.4144272
Combined Standard Uncertainty					4.2363
Expanded Uncertainty (K=2)					**8.4726**

The total derived measurement uncertainty is +/- 8.47 dB.

9.4 RF conducted measurement

The test is to measure the RF output power from the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the Reference Level Uncertainty
- Uncertainty of variable attenuators
- Uncertainty of cables
- Uncertainty due to the mismatches

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Reference Level	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Attenuator	0.25	Normal	2	1	0.125
Mismatch	0.25	U-Shape	1.414	1	0.1768033
Combined Standard Uncertainty					0.476087
Expanded Uncertainty (K=2)					**0.952174**

The total derived measurement uncertainty is +/- 0.95 dB.

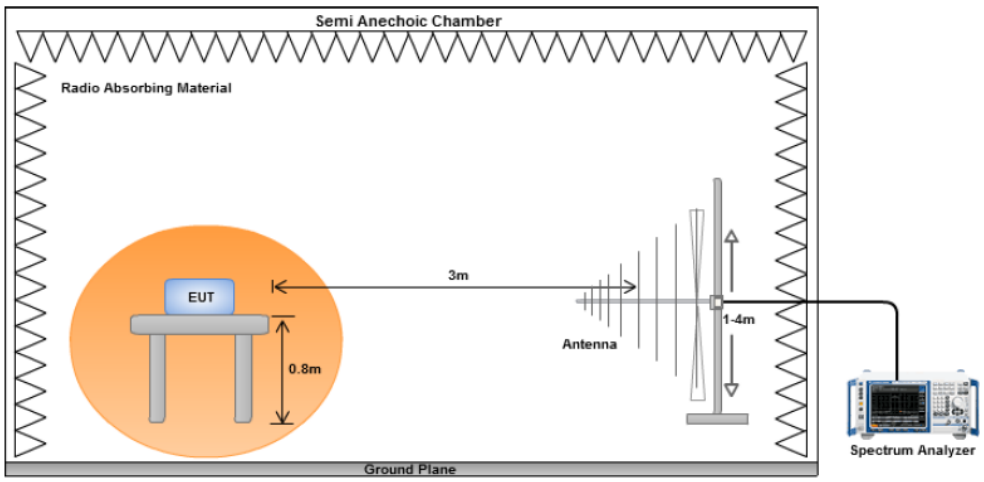
10 Measurements, Examination and Derived Results

10.1 Radiated Spurious Emissions below 1GHz

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§15.247(d) RSS210(A8.5)	a)	Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges	☒

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.
Remark	The EUT was scanned up to 1GHz. Both horizontal and vertical polarities were investigated. The results show only the worst case.
Result	☒ Pass ☐ Fail

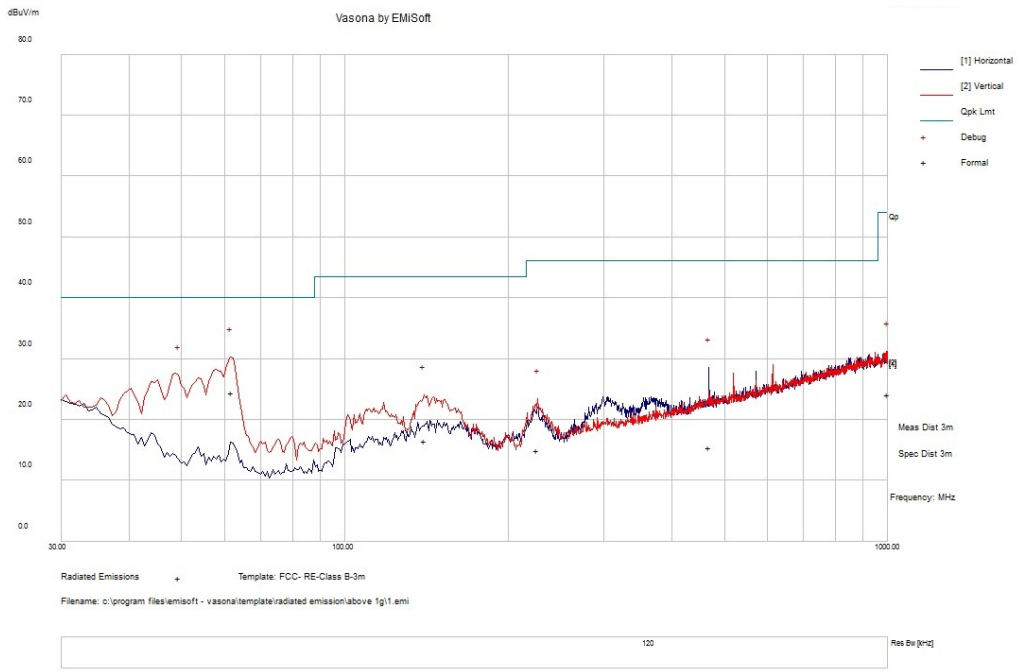
Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Gary Chou at 10m chamber.

Radiated Emission Test Results (Below 1GHz)

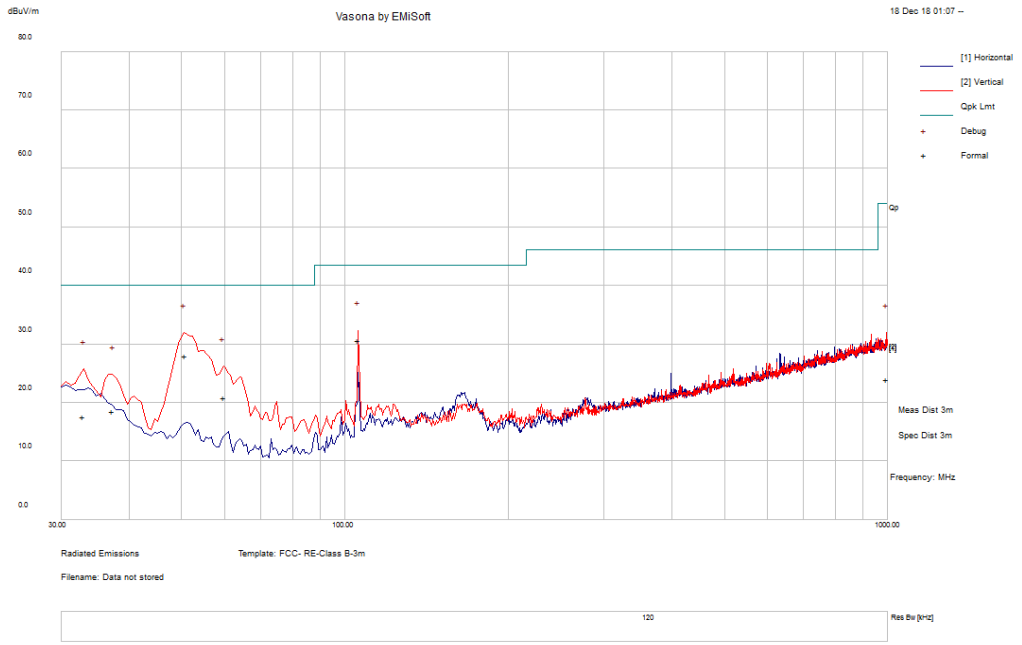
Test specification	Below 1GHz			
Environmental Conditions:	Temp (°C):	26.1	Result	Pass
	Humidity (%)	47.5		
	Atmospheric (mbar):	1020		
Mains Power:	120VAC, 60Hz			
Tested by:	Gary Chou			
Test Date:	10/08/2018			
Remarks:	2.4GHz WLAN, LTE and RFID transmitting simultaneiusly			



Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
61.75	40.18	11.52	-27.33	24.37	Quasi Max	V	103	171	40	-15.63	Pass
49.49	8.23	11.44	-26.26	-6.59	Quasi Max	H	316	3	40	-46.59	Pass
467.96	20.45	14.16	-18.75	15.86	Quasi Max	H	162	177	46	-30.14	Pass
139.97	27.61	12.19	-23.33	16.47	Quasi Max	V	119	74	43.5	-27.03	Pass
226.18	26.89	12.85	-24.71	15.03	Quasi Max	V	155	162	46	-30.97	Pass
1000	19.24	16.28	-12	23.52	Quasi Max	V	103	339	54	-30.48	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Test specification	Below 1GHz			
Environmental Conditions:	Temp (°C):	26.1	Result	Pass
	Humidity (%)	47.5		
	Atmospheric (mbar):	1020		
Mains Power:	120VAC, 60Hz			
Tested by:	Gary Chou			
Test Date:	10/08/2018			
Remarks:	5 GHz WLAN, LTE and RFID transmitting simultaneiusly			

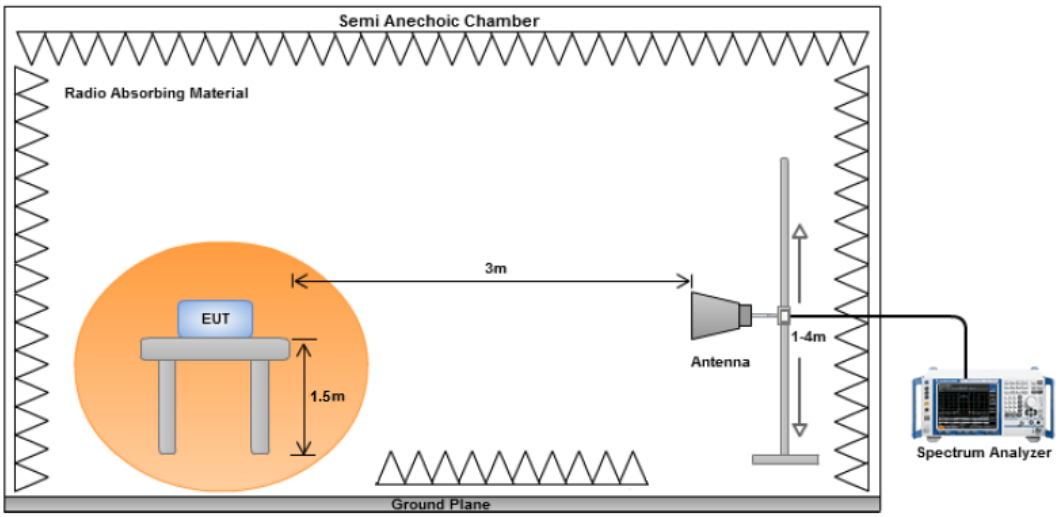


Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
50.785	43.13	11.45	-26.61	27.98	Quasi Max	V	102	217	40	-12.02	Pass
105.635938	43.01	11.92	-24.31	30.62	Quasi Max	V	347	240	43.5	-12.88	Pass
59.947188	36.81	11.51	-27.35	20.97	Quasi Max	V	105	171	40	-19.03	Pass
32.940313	21.32	11.16	-14.81	17.67	Quasi Max	V	113	144	40	-22.33	Pass
37.257563	25.6	11.25	-18.31	18.54	Quasi Max	V	115	11	40	-21.46	Pass
995.204375	19.59	16.21	-11.76	24.04	Quasi Max	V	164	202	54	-29.96	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

10.2 Radiated Spurious Emissions between 1GHz – 18GHz

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§15.247(d) RSS210(A8.5)	a)	For non-restricted band, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB or 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, determined by the measurement method on output power to be used. Attenuation below the general limits specified in § 15.209(a) is not required ☐ 20 dB down ☒ 30 dB down	☒
	b)	or restricted band, emission must also comply with the radiated emission limits specified in 15.209	☒
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	Both horizontal and vertical polarities were investigated. The results show only the worst case. There isn't outstanding emission found at the edge of restricted frequency.		
Result	☒ Pass ☐ Fail		

Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☐ Yes (See below) ☒ N/A

Test was done by Gary Chou at 10m chamber.

Radiated Emission Test Results (Above 1GHz)

Above 1GHz-2.4GHz WLAN, LTE and RFID transmit simultaneously

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1669.32	36.25	7.09	-14.29	29.05	Peak Max	H	314	144	74	-44.95	Pass
1752.38	61.43	7	-13.44	54.99	Peak Max	H	175	283	74	-19.01	Pass
7262.79	33.29	4.1	0.06	37.45	Peak Max	H	361	239	74	-36.55	Pass
16770.11	37.37	1.14	5.77	44.28	Peak Max	H	175	351	74	-29.72	Pass
1669.32	24.64	7.09	-14.29	17.44	Average Max	H	314	144	54	-36.56	Pass
1752.38	58.58	7	-13.44	52.14	Average Max	H	175	283	54	-1.86	Pass
7262.79	21.26	4.1	0.06	25.42	Average Max	H	361	239	54	-28.58	Pass
16770.11	24.45	1.14	5.77	31.36	Average Max	H	175	351	54	-22.64	Pass

Above 1GHz-5 GHz WLAN, LTE and RFID transmit simultaneously

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1671.43	36.43	7.09	-14.29	29.23	Peak Max	H	314	144	74	-44.77	Pass
1754.24	61.27	7	-13.44	54.83	Peak Max	H	175	283	74	-19.17	Pass
7259.46	33.36	4.1	0.06	37.52	Peak Max	H	361	239	74	-36.48	Pass
16769.18	37.54	1.14	5.77	44.45	Peak Max	H	175	351	74	-29.55	Pass
1671.43	24.62	7.09	-14.29	17.42	Average Max	H	314	144	54	-36.58	Pass
1754.24	58.71	7	-13.44	52.27	Average Max	H	175	283	54	-1.73	Pass
7259.46	21.34	4.1	0.06	25.5	Average Max	H	361	239	54	-28.5	Pass
16769.18	24.28	1.14	5.77	31.19	Average Max	H	175	351	54	-22.81	Pass

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Radiated Emissions						
50GHz Spectrum Analyzer	N9030B (PXA)	MY57140584	1/3/2018	1 Year	1/2/2019	YES
R & S Wideband Communication Tester	CMW500	108852	07/28/2018	1 Year	07/28/2019	YES
R & S Universal Radio Communication Tester	CMU200	111078	N/A	N/A	N/A	YES
Broadband Hybrid Antenna (30MHz - 6GHz)	JB6	A111717	12/04/2018	1 Year	12/04/2019	YES
Horn Antenna (1~18GHz)	3115	100059	01/26/2018	1 Year	01/26/2019	YES
Horn Antenna (1-18GHz)	3117	218554	11/22/2018	1 Year	11/22/2019	YES
Pre-Amplifier (1-40GHz)	SAS-474	579	06/23/2018	1 Year	6/23/2019	YES
RF Pre-Amplifier (9kHz - 6.5GHz)	LPA-6-30	11170601	07/23/2018	1 Year	7/23/2019	YES

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 & Telecommunications Terminal Equipment:** EN45001 – EN ISO/IEC 17025
		Electromagnetic Compatibility: EN45001 – EN ISO/IEC 17025
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
		Radio communications: 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