

RF TEST REPORT

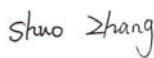
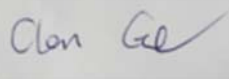


Report No.: FCC_IC RF_SL15090101-SLX-021_UNII

Supersede Report No.:

Applicant	:	Solectria Renewables LLC
Product Name	:	802.11a/b/g/n module
Model No.	:	SX-PCEAN2
Test Standard	:	47 CFR 15.407
Test Method	:	ANSI C63.10: 2013 RSS Gen Iss 4: Nov 2014 789033 D02 General UNII Test Procedures New Rules v01r03
FCC ID	:	2AKA9-SXPCEAN2
IC ID	:	22112-SXPCEAN2
Dates of test	:	10/27/2016 to 11/04/2016
Issue Date	:	11/04/2016
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:

	
Shuo Zhang	Chen Ge
Test Engineer	Engineer Reviewer

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



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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/RA, 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

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1 Report Revision History

Report No.	Report Version	Description	Issue Date
FCC_IC RF_SL15090101-SLX-021_UNII	None	Original	11/07/2016

2 Executive Summary

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

Company: Sillex Technology, Inc.
Product: 802.11a/b/g/n module
Model: SX-PCEAN2

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	:	Solectria Renewables LLC
Applicant Address	:	360 Merrimack Street, Bldg 9 FL 2, Lawrence, MA 01843
Manufacturer Name	:	Solectria Renewables LLC
Manufacturer Address	:	360 Merrimack Street, Bldg 9 FL 2, Lawrence, MA 01843

4 Test site information

Lab performing tests	SIEMIC Laboratories
Lab Address	775 Montague Expressway, Milpitas, CA 95035
FCC Test Site No.	881796
IC Test Site No.	4842D-2
VCCI Test Site No.	A0133

5 Modification

Index	Item	Description	Note
-	-	-	-

6 EUT Information

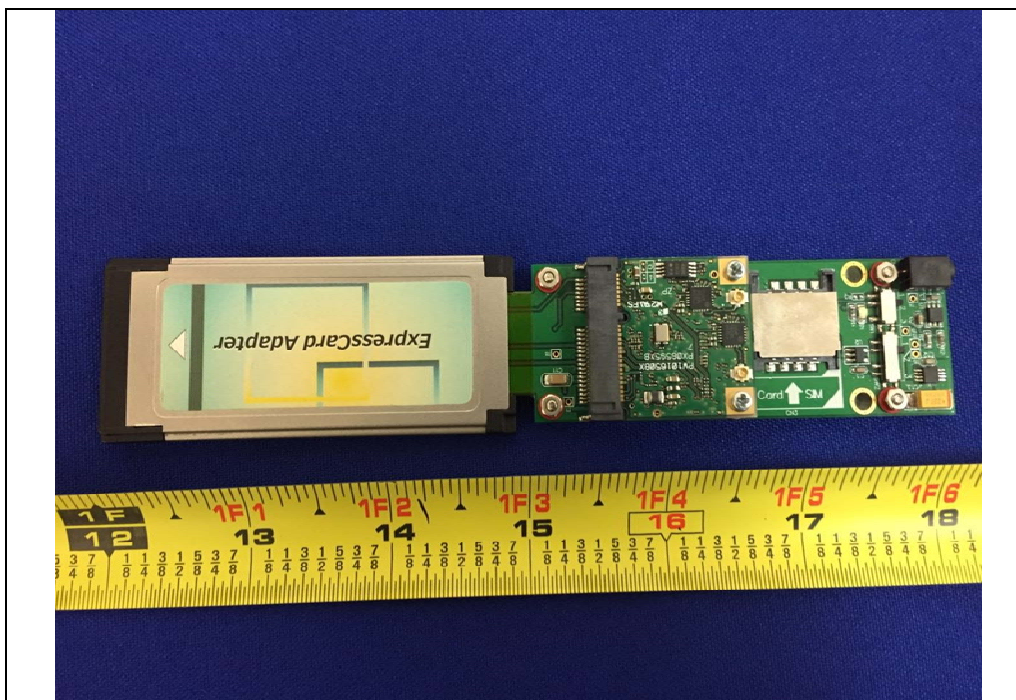
6.1 EUT Description

Product Name	802.11a/b/g/n module
Model No.	SX-PCEAN2
Trade Name	Solectria Renewables LLC
Serial No.	N/A
Host Model No.	N/A
Input Power	3.3VDC
Power Adapter Manu/Model	N/A
Power Adapter SN	N/A
Date of EUT received	10/26/2016
Equipment Class/ Category	UNII
Clock Frequencies	40 MHz
Port/Connectors	PCIe

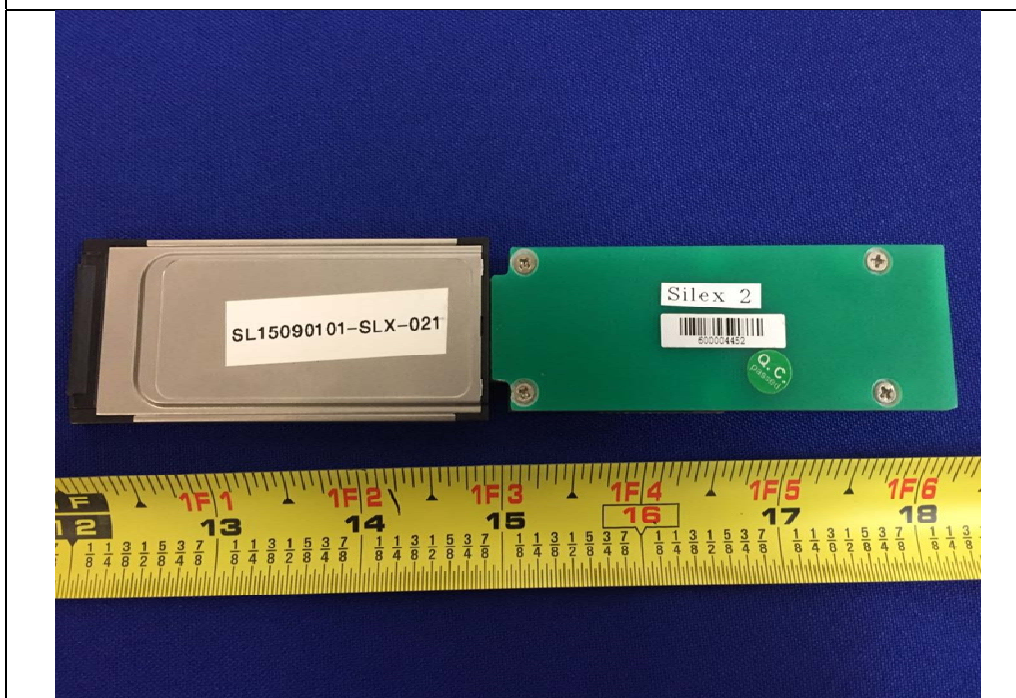
6.2 Radio Description

Radio Type	802.11a	802.11n-20M	802.11n-40M
Operating Frequency	5180-5240MHz 5745-5825MHz	5180-5240MHz 5745-5825MHz	5190-5230MHz 5755-5795MHz
Modulation	OFDM (BPSK, QPSK, 16QAM, 64QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM)
Channel Spacing	20MHz	20MHz	40MHz
Number of Channels	9	9	4
Antenna Type	External Omni Antenna		
Antenna Gain (Peak)	5GHz: 8 dBi		
Antenna Connector Type	U.FL		
Note	2.4GHz and 5GHz Radio transmit simultaneously		

6.3 EUT Photos - Internal



Radio Module & Antenna – Top view



Radio Module & Antenna – Bottom view

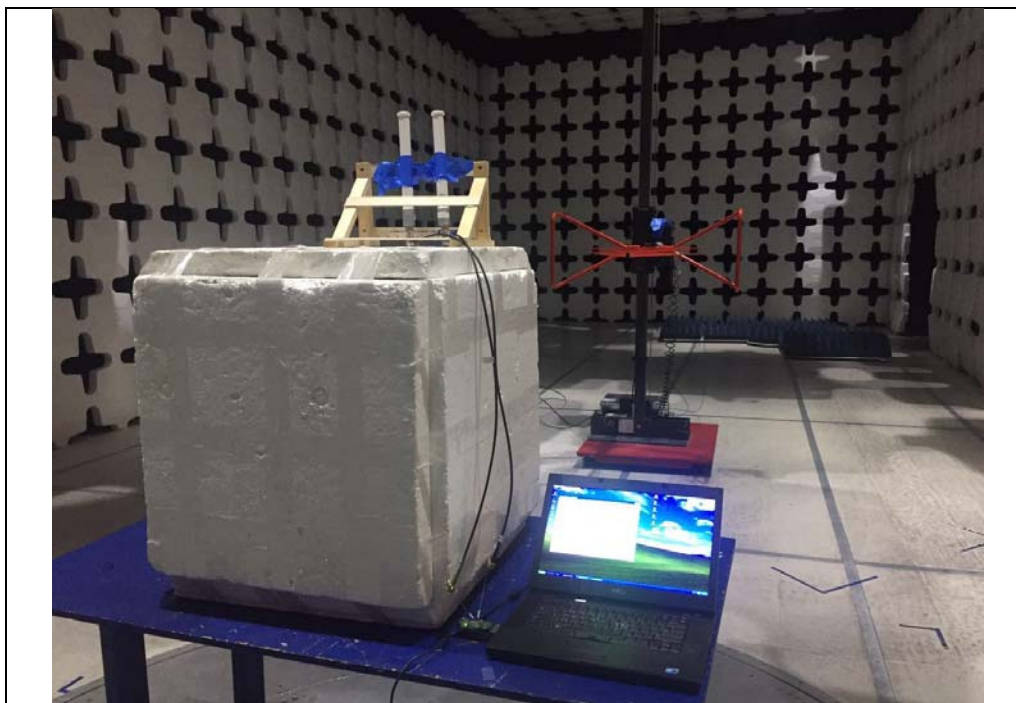


Laird OC24528 antenna



Trendnet TEW-AO57 antenna

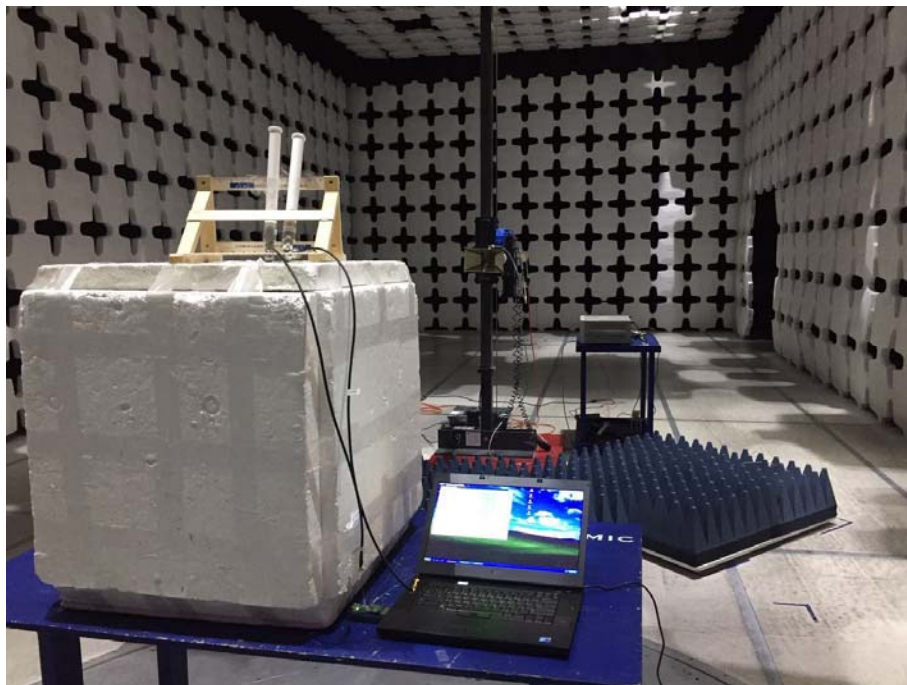
6.4 EUT Test Setup Photos



Radiated Emissions (<1GHz) – Front View



Radiated Emissions (<1GHz) – Rear View



Radiated Emissions (>1GHz) – Front View



Radiated Emissions (>1GHz) – Rear View

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

Item	Supporting Equipment Description	Model	Serial Number	Manufacturer	Note
1	Laptop	DELL/E56510	N/A	Dell	-

7.2 Cabling Description

Name	Connection Start		Connection Stop		Length / shielding Info		Note
	From	I/O Port	To	I/O Port	Length (m)	Shielding	
EC	EUT	EC	Laptop	EC	0	Unshielded	-

7.3 Test Software Description

Test Item	Software	Description
RF Testing	Command Line in windows	Set the EUT to transmit continuously in diferent test mode

8 Test Summary

Test Item	Test standard		Test Method/Procedure	Pass / Fail
26 & 6 dB Emission Bandwidth	FCC/IC	15.407 (a) (2)	789033 D02 General UNII Test Procedures New Rules v01r03	☒ Pass* ☐ N/A
99% Bandwidth	IC	RSS 247 (A9.2) (2)	RSS Gen (6.6)	☒ Pass* ☐ N/A
Maximum conducted Output Power	FCC/IC	15.407 (a) (2)	789033 D02 General UNII Test Procedures New Rules v01r03	☒ Pass* ☐ N/A
Power reduction (Antenna Gain > 6 dBi)	FCC/IC	15.407 (a) (2)	-	☒ Pass* ☐ N/A
Band Edge and Radiated Spurious Emissions	FCC/IC	15.407(b)(2), 15.407(b)(6)	ANSI C63.4 – 2014 789033 D02 General UNII Test Procedures New Rules v01r03	☒ Pass ☐ N/A
Power Spectral Density	FCC/IC	15.407 (a) (2)	789033 D02 General UNII Test Procedures New Rules v01r03	☒ Pass* ☐ N/A
Frequency Stability	FCC/IC	15.407 (g)	-	☒ Pass* ☐ N/A
Transmit Power Control (TPC)	FCC/IC	15.407 (h)(1)	-	☒ Pass* ☐ N/A
User Manual	FCC/IC	-	-	☒ Pass* ☐ N/A
Remark	- All measurement uncertainties are not taken into consideration for all presented test result. - 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. - Note:* for 5GHz please refer 10604551H-B-R1			

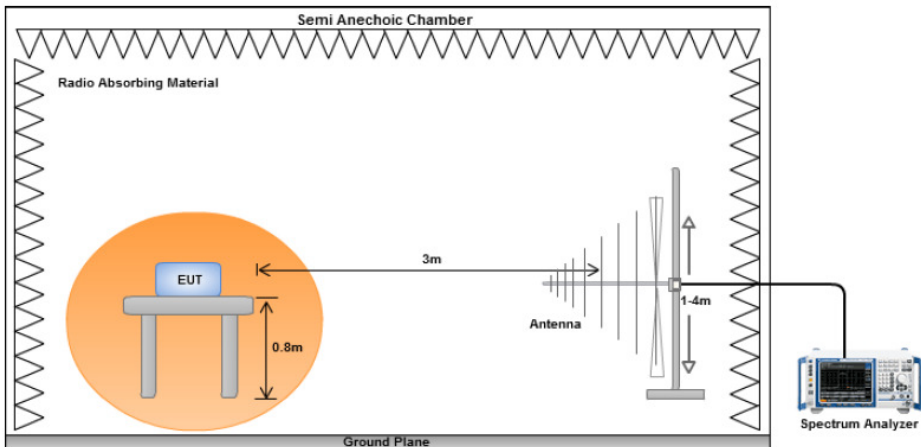
9 Measurement Uncertainty

Emissions			
Test Item	Frequency Range	Description	Uncertainty
Band Edge and 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)	+5.6dB/-4.5dB
Band Edge and 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)	+4.3dB/-4.1dB

10 Measurements, Examination and Derived Results

10.1 Radiated Spurious Emissions below 1GHz

Requirement(s):

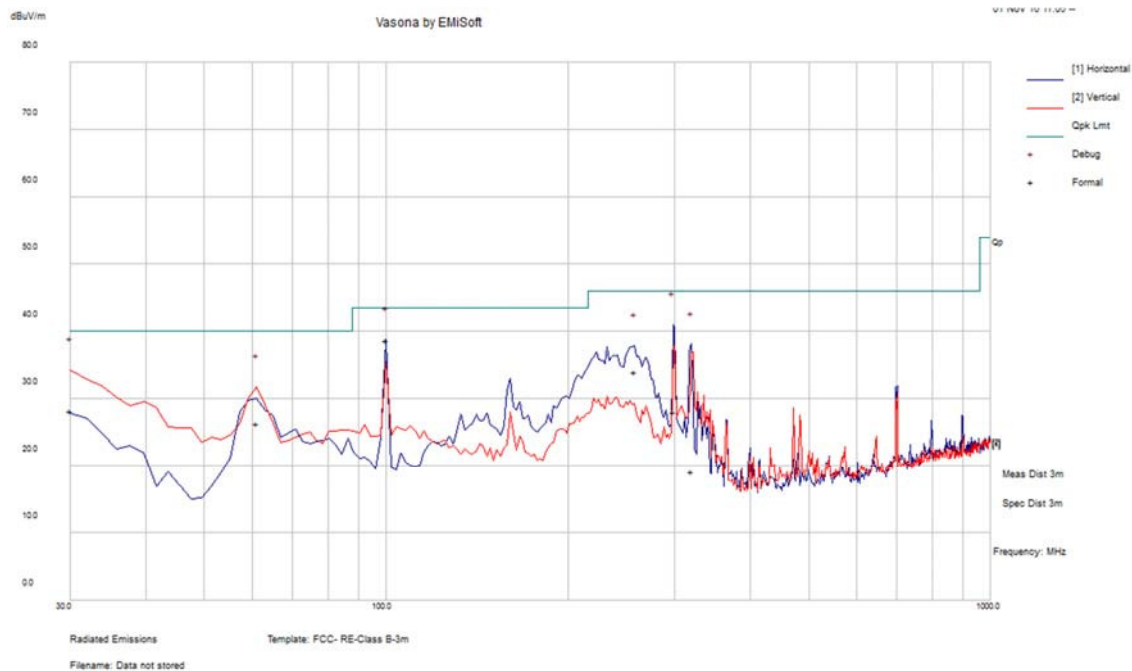
Spec	Item	Requirement	Applicable										
47CFR§15.209(d) RSS-GEN (5.5)	a)	Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges <table><tr><th>Frequency range (MHz)</th><th>Field Strength (uV/m)</th></tr><tr><td>30 – 88</td><td>100</td></tr><tr><td>88 – 216</td><td>150</td></tr><tr><td>216 960</td><td>200</td></tr><tr><td>Above 960</td><td>500</td></tr></table>	Frequency range (MHz)	Field Strength (uV/m)	30 – 88	100	88 – 216	150	216 960	200	Above 960	500	☒
Frequency range (MHz)	Field Strength (uV/m)												
30 – 88	100												
88 – 216	150												
216 960	200												
Above 960	500												
Test Setup													
Procedure	1. 2. The EUT was switched on and allowed to warm up to its normal operating condition. 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. b. c. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. The EUT was then rotated to the direction that gave the maximum emission. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. 4. A Quasi-peak measurement was then made for that frequency point. 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 Shuo Zhang at 10m chamber.

Radiated Emission Test Results (Below 1GHz)



Frequency MHz	Raw dBuV/m	CL dB	AF dB	Level dBuV/m	Measurement Type	Po l	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
99.89	66.55	1.65	-29.47	38.73	Quasi Max	H	297	297	43.52	-4.79	Pass
298.51	51.43	2.89	-26.31	28.01	Quasi Max	H	102	12	46.02	-18.01	Pass
30.00	43.48	0.99	-16.29	28.18	Quasi Max	V	175	323	40	-11.82	Pass
319.49	41.97	2.95	-25.87	19.05	Quasi Max	H	171	335	46.02	-26.97	Pass
257.58	58.85	2.79	-27.63	34.02	Quasi Max	H	131	313	46.02	-12	Pass
60.99	56.41	1.43	-31.58	26.26	Quasi Max	V	102	269	40	-13.74	Pass

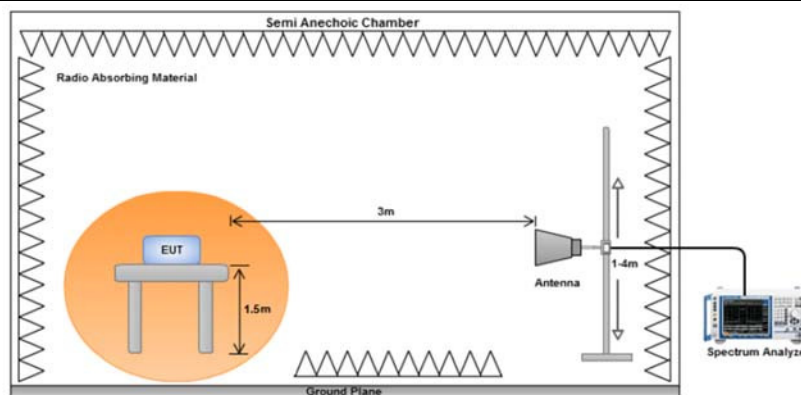
Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

10.2 Radiated Spurious Emissions between 1GHz – 40GHz

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§ 15.407(b)(2), 15.407(b)(6)	(1)	For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.	☒
	(2)	For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.	☐
	(3)	For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.	☐
	(4)	For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.	☒
	(5)	Restricted band, emission must also comply with the radiated emission limits specified in 15.209	☒

Test Setup



Procedure

- The EUT was switched on and allowed to warm up to its normal operating condition.
- 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:
 - Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
 - The EUT was then rotated to the direction that gave the maximum emission.
 - Finally, the antenna height was adjusted to the height that gave the maximum emission.
- An average measurement was then made for that frequency point.
- 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 ☐ Fail

Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☐ Yes (See below) ☒ N/A

Test was done by Shuo Zhang at 10m chamber.

Radiated Emission Test Results (Above 1GHz)

W52:

Above 1GHz-40GHz – 802.11a – 5180MHz

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
17947.35	39.33	9.14	8.36	56.83	Peak Max	H	192	70	74	-17.17	Pass
7013.31	47.63	5.79	-0.27	53.15	Peak Max	V	105	10	74	-20.85	Pass
1596.43	53.03	2.82	-15.06	40.78	Peak Max	V	111	202	74	-33.22	Pass
17947.35	27.41	9.14	8.36	44.91	Average Max	H	192	70	54	-9.09	Pass
7013.31	42.45	5.79	-0.27	47.97	Average Max	V	105	10	54	-6.03	Pass
1596.43	38.07	2.82	-15.06	25.82	Average Max	V	111	202	54	-28.18	Pass

Above 1GHz-40GHz – 802.11a – 5200MHz

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
17914.23	39.63	9.13	8.54	57.3	Peak Max	H	261	112	74	-16.71	Pass
7033.81	42.64	5.8	-0.37	48.07	Peak Max	V	360	208	74	-25.93	Pass
1596.27	55.09	2.82	-15.06	42.85	Peak Max	V	108	182	74	-31.15	Pass
17914.23	27.3	9.13	8.54	44.97	Average Max	H	261	112	54	-9.04	Pass
7033.81	29.63	5.8	-0.37	35.06	Average Max	V	360	208	54	-18.94	Pass
1596.27	39.3	2.82	-15.06	27.06	Average Max	V	108	182	54	-26.94	Pass

Above 1GHz-40GHz – 802.11a – 5240MHz

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
17925.10	39.84	9.13	8.48	57.46	Peak Max	V	256	168	74	-16.54	Pass
10562.15	41.26	7.33	0.26	48.85	Peak Max	H	180	161	74	-25.15	Pass
1595.98	52.35	2.82	-15.06	40.11	Peak Max	V	107	213	74	-33.89	Pass
17925.10	27.67	9.13	8.48	45.28	Average Max	V	256	168	54	-8.72	Pass
10562.15	29.12	7.33	0.26	36.71	Average Max	H	180	161	54	-17.29	Pass
1595.98	38.15	2.82	-15.06	25.9	Average Max	V	107	213	54	-28.1	Pass

Above 1GHz-40GHz – 802.11n-20M – 5180MHz

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
17947.35	39.33	9.14	8.36	56.83	Peak Max	H	192	70	74	-17.17	Pass
7013.31	47.63	5.79	-0.27	53.15	Peak Max	V	105	10	74	-20.85	Pass
1596.43	53.03	2.82	-15.06	40.78	Peak Max	V	111	202	74	-33.22	Pass
17947.35	27.41	9.14	8.36	44.91	Average Max	H	192	70	54	-9.09	Pass
7013.31	42.45	5.79	-0.27	47.97	Average Max	V	105	10	54	-6.03	Pass
1596.43	38.07	2.82	-15.06	25.82	Average Max	V	111	202	54	-28.18	Pass

Above 1GHz-40GHz – 802.11n-20M – 5200MHz

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
17934.94	39.54	9.14	8.43	57.11	Peak Max	H	131	23	74	-16.9	Pass
7013.56	44.44	5.79	-0.27	49.96	Peak Max	V	105	12	74	-24.04	Pass
1596.03	54.53	2.82	-15.06	42.29	Peak Max	V	276	136	74	-31.71	Pass
17934.94	27.62	9.14	8.43	45.18	Average Max	H	131	23	54	-8.82	Pass
7013.56	36.39	5.79	-0.27	41.91	Average Max	V	105	12	54	-12.09	Pass
1596.03	39.44	2.82	-15.06	27.19	Average Max	V	276	136	54	-26.81	Pass

Above 1GHz-40GHz – 802.11n-20M – 5240MHz

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
17372.98	39.46	9.01	7.65	56.11	Peak Max	H	345	52	74	-17.89	Pass
7011.92	42.51	5.79	-0.26	48.04	Peak Max	H	323	293	74	-25.96	Pass
1596.67	46.63	2.82	-15.06	34.39	Peak Max	H	320	61	74	-39.61	Pass
17372.98	27.06	9.01	7.65	43.72	Average Max	H	345	52	54	-10.29	Pass
7011.92	29.6	5.79	-0.26	35.13	Average Max	H	323	293	54	-18.87	Pass
1596.67	34.11	2.82	-15.06	21.87	Average Max	V	118	82	54	-32.13	Pass

Above 1GHz-40GHz – 802.11n-40M – 5190MHz

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
17862.93	38.77	9.12	8.23	56.12	Peak Max	H	120	270	74	-17.88	Pass
10620.13	41.23	7.43	0.27	48.93	Peak Max	H	222	35	74	-25.07	Pass
6999.65	41.92	5.78	-0.2	47.5	Peak Max	V	228	145	74	-26.5	Pass
17862.93	27.43	9.12	8.23	44.78	Average Max	H	120	270	54	-9.22	Pass
10620.13	29.54	7.43	0.27	37.24	Average Max	V	324	204	54	-16.76	Pass
6999.65	29.71	5.78	-0.2	35.29	Average Max	V	228	145	54	-18.71	Pass

Above 1GHz-40GHz – 802.11n-40M – 5230MHz

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
17734.20	38.67	9.09	8.17	55.93	Peak Max	V	288	141	74	-18.07	Pass
10543.95	40.42	7.3	0.3	48.02	Peak Max	V	125	68	74	-25.98	Pass
6999.42	41.96	5.78	-0.2	47.54	Peak Max	V	286	229	74	-26.46	Pass
17734.20	27.14	9.09	8.17	44.4	Average Max	V	288	141	54	-9.6	Pass
10543.95	28.66	7.3	0.3	36.26	Average Max	V	125	68	54	-17.74	Pass
6999.42	29.74	5.78	-0.2	35.32	Average Max	V	286	229	54	-18.68	Pass

W58:

Above 1GHz-40GHz – 802.11a – 5745MHz

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
17702.93	39.21	9.08	8.46	56.75	Peak Max	V	139	38	74	-17.25	Pass
11489.10	41.51	7.61	1.86	50.98	Peak Max	V	349	98	74	-23.02	Pass
1596.71	55.05	2.82	-15.06	42.81	Peak Max	V	134	194	74	-31.2	Pass
17702.93	27.21	9.08	8.46	44.75	Average Max	V	139	38	54	-9.25	Pass
11489.10	29.03	7.61	1.86	38.5	Average Max	V	349	98	54	-15.5	Pass
1596.71	39.78	2.82	-15.06	27.54	Average Max	V	134	194	54	-26.46	Pass

Above 1GHz-40GHz – 802.11a – 5785MHz

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
17659.37	38.78	9.07	8.32	56.17	Peak Max	V	314	243	74	-17.83	Pass
11569.05	40.87	7.56	1.97	50.4	Peak Max	V	388	197	74	-23.6	Pass
1596.98	56.07	2.82	-15.06	43.83	Peak Max	V	145	186	74	-30.17	Pass
17659.37	26.82	9.07	8.32	44.21	Average Max	V	314	243	54	-9.79	Pass
11569.05	29.01	7.56	1.97	38.54	Average Max	V	388	197	54	-15.46	Pass
1596.98	40.79	2.82	-15.06	28.55	Average Max	V	145	186	54	-25.45	Pass

Above 1GHz-40GHz – 802.11a – 5825MHz

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
17979.74	39.56	9.15	8.19	56.89	Peak Max	H	255	15	74	-17.11	Pass
11653.54	39.88	7.51	1.87	49.27	Peak Max	V	205	114	74	-24.73	Pass
1596.42	55.88	2.82	-15.06	43.64	Peak Max	V	144	192	74	-30.36	Pass
17979.74	27.44	9.15	8.19	44.78	Average Max	H	255	15	54	-9.22	Pass
11653.54	27.95	7.51	1.87	37.34	Average Max	V	205	114	54	-16.67	Pass
1596.42	40.9	2.82	-15.06	28.65	Average Max	V	144	192	54	-25.35	Pass

Above 1GHz-40GHz – 802.11n-20M – 5745MHz

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
11488.51	41.1	7.61	1.86	50.57	Peak Max	H	368	296	74	-23.43	Pass
17232.87	39.82	8.99	5.7	54.52	Peak Max	H	223	186	74	-19.49	Pass
1595.74	55.33	2.82	-15.06	43.09	Peak Max	V	105	274	74	-30.91	Pass
11488.51	29.47	7.61	1.86	38.94	Average Max	H	368	296	54	-15.06	Pass
17232.87	27.54	8.99	5.7	42.24	Average Max	V	105	3	54	-11.76	Pass
1595.74	40.67	2.82	-15.06	28.43	Average Max	V	105	274	54	-25.57	Pass

Above 1GHz-40GHz – 802.11n-20M – 5785MHz

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
17924.91	39.33	9.13	8.48	56.94	Peak Max	H	246	346	74	-17.06	Pass
11569.77	41.68	7.56	1.98	51.21	Peak Max	H	117	279	74	-22.79	Pass
1595.20	56.23	2.82	-15.06	43.98	Peak Max	V	154	141	74	-30.02	Pass
17924.91	27.16	9.13	8.48	44.77	Average Max	H	246	346	54	-9.23	Pass
11569.77	29.16	7.56	1.98	38.7	Average Max	V	137	267	54	-15.3	Pass
1595.20	40.09	2.82	-15.06	27.85	Average Max	V	154	141	54	-26.15	Pass

Above 1GHz-40GHz – 802.11n-20M – 5825MHz

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
17976.93	39.13	9.15	8.2	56.48	Peak Max	V	214	206	74	-17.52	Pass
11647.53	40.15	7.52	1.89	49.56	Peak Max	V	267	91	74	-24.44	Pass
1596.64	55.04	2.82	-15.06	42.8	Peak Max	V	107	276	74	-31.2	Pass
17976.93	27.47	9.15	8.2	44.82	Average Max	V	214	206	54	-9.18	Pass
11647.53	28.11	7.52	1.89	37.52	Average Max	V	267	91	54	-16.48	Pass
1596.64	40.3	2.82	-15.06	28.06	Average Max	V	107	276	54	-25.95	Pass

Above 1GHz-40GHz – 802.11n-40M – 5755MHz

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
17405.27	38.64	9.01	7.88	55.53	Peak Max	V	204	76	74	-18.47	Pass
11530.30	41.39	7.58	1.88	50.85	Peak Max	V	244	133	74	-23.15	Pass
1595.58	54.17	2.82	-15.06	41.93	Peak Max	V	105	279	74	-32.07	Pass
17405.27	26.74	9.01	7.88	43.63	Average Max	V	204	76	54	-10.37	Pass
11530.30	28.91	7.58	1.88	38.37	Average Max	V	244	133	54	-15.63	Pass
1595.58	39.69	2.82	-15.06	27.45	Average Max	V	105	279	54	-26.56	Pass

Above 1GHz-40GHz – 802.11n-40M – 5795MHz

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
17712.19	38.84	9.08	8.38	56.3	Peak Max	V	103	131	74	-17.7	Pass
11592.22	42.06	7.55	2.03	51.64	Peak Max	V	138	58	74	-22.36	Pass
1596.65	55.45	2.82	-15.06	43.2	Peak Max	V	106	274	74	-30.8	Pass
17712.19	27.18	9.08	8.38	44.63	Average Max	V	103	131	54	-9.37	Pass
11592.22	28.74	7.55	2.03	38.32	Average Max	V	138	58	54	-15.68	Pass
1596.65	40.7	2.82	-15.06	28.45	Average Max	V	106	274	54	-25.55	Pass

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Conducted Emissions						
R & S Receiver	ESIB 40	100179	06/08/2016	1 Year	06/08/2017	☒
CHASE LISN	MN2050B	1018	08/07/2016	1 Year	08/07/2017	☒
Radiated Emissions						
R & S Receiver	ESIB 40	1018	08/07/2016	1 Year	08/07/2017	☒
Bi-Log antenna (30MHz~2GHz)	JB1	A030702	08/12/2016	1 Year	08/12/2017	☒
Horn Antenna (1GHz~26GHz)	3115	100059	08/25/2016	1 Year	08/25/2017	☒
3 Meters SAC	3M	N/A	08/08/2016	1 Year	08/08/2017	☒
10 Meters SAC	10M	N/A	09/05/2016	1 Year	09/05/2017	☒
RF Conducted Measurement						
Spectrum Analyzer	N9010A	10SL0219	08/20/2016	1 Year	08/20/2017	☒
R & S Receiver	ESIB 40	100179	06/08/2016	1 Year	06/08/2017	☒
ETS-Lingren USB RF Power Sensor	7002-006	10SL0190	09/03/2016	1 Year	09/03/2017	☒

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