# RF TEST REPORT



# Report No.: FCC\_IC\_RF\_SL18042001-SFE-033\_Co-Location Supersede Report No.: NONE

Applicant	:	L'Oreal USA Products, Inc		
Product Name	;	Skin Blend Makeup Machine		
Model No.	;	SK001-XX		
Test Standard	:	FCC 15.225, 15.209, 15.247 RSS-210 Issue 9: 2016, RSS247 Issue 2		
Test Method	:	FCC 15.225, 15.209, 15.247 ANSI C63.10 2013 RSS Gen Issue 4 2014		
FCC ID	•••	RFID: SX9RFID2, BLE: SH6MDBT40		
IC ID		RFID: 5675A-RFID2, BLE: 8017A-MDBT40		
Dates of test	•••	05/02/2018		
Issue Date	:	05/17/2018		
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:	
Dlavolhavy	and
Vijay Chaudhary	Chen Ge
RF Test Engineer	Engineer Reviewer
This test report may I	be reproduced in full only
Test result presented in this test repo	ort is applicable to the tested sample only

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



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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	2 of 22

# **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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Test report FCC\_IC\_RF\_SL18042001-SFE-033\_Co-Location 3 of 22 Page

# **CONTENTS**

	RE	EPORT REVISION HISTORY	4
2	EX	ECUTIVE SUMMARY	5
3	CL	JSTOMER INFORMATION	5
4	TE	ST SITE INFORMATION	5
5	M	ODIFICATION	5
6	EU	JT INFORMATION	6
6	6.1	EUT Description	6
6	6.2	Radio Description	6
6	6.4	EUT test modes/configuration Description	7
7	SU	JPPORTING EQUIPMENT/SOFTWARE AND CABLING DESCRIPTION	8
7	7.1	Supporting Equipment	8
7	7.2	Cabling Description	8
7	7.3	Test Software Description	8
8	TE	ST SUMMARY	9
9	ME	EASUREMENT UNCERTAINTY	10
ç	9.1	Emissions (30MHz to 1GHz)	10
ç	9.2	Radiated Emissions (1GHz to 40GHz)	10
ç	9.3	RF conducted measurement	
و 10	9.3	RF conducted measurement MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	11
10	9.3 10.1		11 <b>12</b>
<b>10</b>		MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	11 <b>12</b> 12
<b>10</b>	10.1 10.2	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	11 <b>12</b> 12 13
<b>10</b>	10.1 10.2 10	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS         Antenna Requirement.         Radiated Measurements         .2.1       Radiated Measurements below 30MHz         .2.2       Radiated Measurements 30MHz to 1GHz	11 12 13 13 13 16
<b>10</b> 1	10.1 10.2 10 10 10	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS         Antenna Requirement.         Radiated Measurements         2.1       Radiated Measurements below 30MHz         2.2       Radiated Measurements 30MHz to 1GHz         2.3       Radiated Spurious Emissions between 1GHz-25GHz	11 12 13 13 16 18
<b>10</b> 1 1	10.1 10.2 10 10 10 <b>NEX</b>	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS         Antenna Requirement.         Radiated Measurements         .2.1       Radiated Measurements below 30MHz         .2.2       Radiated Measurements 30MHz to 1GHz	11 12 13 13 16 18 18

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location	
Page	4 of 22	

#### **Report Revision History** 1

Report No.	Report Version	Description	Issue Date
FCC_IC_RF_SL18042001-SFE-033_Co-Location	None	Original	05/17/2018

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location	
Page	5 of 22	

# 2 Executive Summary

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

Company:	L'Oreal USA Products, Inc
Product:	Skin Blend Makeup Machine
Model:	SK001-XX

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

# 3 Customer information

Applicant Name	:	L'Oreal USA Products, Inc
Applicant Address	:	175 Terminal Ave, Clark, NJ 07066
Manufacturer Name	:	L'Oreal USA Products, Inc
Manufacturer Address	:	175 Terminal Ave, Clark, NJ 07066

# 4 <u>Test site information</u>

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	ltem	Description	Note
-	-	-	-
-	-	-	-

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	6 of 22

#### **EUT Information** 6

#### EUT Description <u>6.1</u>

Product Name	:	Skin Blend Makeup Machine
Model No.	:	SK001-XX
Trade Name	:	SKINCEUTICALS
Serial No.	:	N/A
Input Power	:	100-240VAC, 50/60HZ
Power Supply Manufacturer	:	ARTESYN
Power Supply Model	:	LCB100Q
Product Hardware version	:	N/A
Product Software version	:	N/A
Date of EUT received	:	05/02/2018

#### <u>6.2</u> **Radio Description**

### Specifications for Radio:

Radio Type	RFID
Operating Frequency	13.56MHz
Modulation	ASK
Channel Spacing	None
Antenna Type	Patch Antenna
Antenna Gain(dB)	1 dBi
Antenna Connector Type	u.FL Connector

### Specifications for Bluetooth:

Radio Type	Bluetooth (BLE)
Operating Frequency	2402MHz-2480MHz
Modulation	FHSS
Channel Spacing	1MHz
Antenna Type	Chip Antenna
Antenna Gain	1.3 dBi
Antenna Connector Type	u.FL Connector

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	7 of 22

#### EUT test modes/configuration Description <u>6.4</u>

Mode	Note
RF test	EUT is set to continuously transmit at 13.56MHz and BLE
Note: None	

Test Item	Operating mode	Tested antenna port		
Antenna Requirement	N/A	-		
Conducted Emissions Voltage	N/A	-		
Radiated Spurious Emission	Continuous Transmit	-		
Frequency Stability	N/A	-		
Occupied Bandwidth	N/A	-		
Note: - None				

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# 7 <u>Supporting Equipment/Software and cabling Description</u>

## 7.1 Supporting Equipment

Index	Supporting Equipment Description	Model	Serial No	Manu	Note
1	Laptop	Aspire One Cloud Book	A01-131-C1G9	ACER	-
-	-	-	-	-	-

## 7.2 Cabling Description

Nome	Connection Start		Connection Stop		Length / shielding Info		Nata
Name	From	I/O Port	То	I/O Port	Length (m)	Shielding	Note
USB	EUT	Connector	Computer	USB	5	-	-

# 7.3 Test Software Description

Test Item	Software	Description
RF Testing	Termie	Set the EUT to transmit continuously in BLE and 13.56MHz test mode
-	-	-

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	9 of 22

#### **Test Summary** 8

Test Item	Test standard		Test Method/Procedure	Pass / Fail
Antenna Requirement	FCC	15.203	ANSI C63.10 – 2013	⊠ Pass
	IC	-	558074 D01 DTS Meas. Guidance v03r02	🗆 N/A
AC Conducted Emissions Voltage	FCC	15.225(a)	ANSI C63.10 2013	⊠ Pass
AC Conducted Emissions voltage	IC	RSS Gen (7.2.2)	RSS Gen. 8.8	□ N/A
Remark		None		

Test Item		Test standard		Test Method/Procedure	Pass / Fail	
Radiated Spurious Emission	FCC		FCC	RSS Gen 7.1	⊠ Pass	
Radiated Spurious Emission	IC	-	IC	RSS Gell 7.1	□ N/A	
Fraguency Stability	FCC	-	FCC	-	□ Pass	
Frequency Stability	IC	-	IC	-	⊠ N/A	
Occupied Rendwidth	FCC	-	FCC	-	Pass	
Occupied Bandwidth	IC	-	IC	-	⊠ N/A	
Remark	<ol> <li>All measurement uncertainties are not taken into consideration for all presented test result.</li> <li>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.</li> <li>Only Radiated Spurious Emission for colocation has been tested for this report</li> </ol>					

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# 9 Measurement Uncertainty

### 9.1 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 Uncertaint		3.0059131			
Expanded Uncertainty (K=2)		6.0118262			

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

### 9.2 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	U-Shape	1.414	1	1.4144272	
Combined Standard Uncertain	4.2363				
Expanded Uncertainty (K=2		8.4726			

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

### 9.3 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 Unce	0.476087				
Expanded Uncertainty (	0.952174				

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

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# 10 Measurements, examination and derived results

# 10.1 Antenna Requirement

Spec	Requirement	Applicable
§15.203	<ul> <li>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.</li> <li>Antenna requirement must meet at least one of the following: <ul> <li>a) Antenna must be permanently attached to the device.</li> <li>b) The antenna must use a unique type of connector to attach to the device.</li> <li>c) Device must be professionally installed. The installer shall be responsible for ensuring that the correct antenna is employed by the device.</li> </ul> </li> </ul>	
Remark	All Radio use u.Fl connector for antenna connection.	
Result	🖾 PASS 🗆 FAIL	

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	13 of 22

### 10.2 Radiated Measurements

### 10.2.1 Radiated Measurements below 30MHz

### Requirement(s):

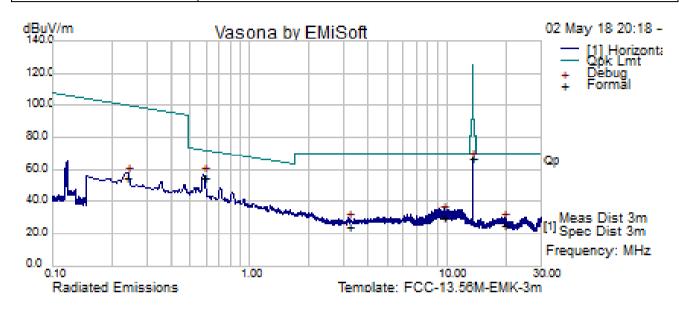
47 CFR §15.225 RSS-210 (B.6)       Operation within the band 13.110–14.010 MHz (a) The field strength of any emissions swithin the band 13.553–13.567 MHz shall not exceed 15.848 microvolts/meter at 30 meters. (c) Within the bands 13.110–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters. (c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters. (c) Whith in the bands 13.110–13.410 MHz and 13.710–14.010 MHz band shall not exceed 106 microvolts/meter at 30 meters.         Test Setup       Image: transmit and the ground from the center of the loop. The measuring antenna was positioned 1 meter about the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter about the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter about the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter about the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter about the highest output power. The EUT was set 3 meter away from the measuring antenna was positioned 1 meter about the highest output power. The BUT was set 3 meter away from the measuring antenna was positioned 1 meter about the highest output power. The time is converted from microvolt/meter to decibel microvolt/meter. Test Data       05/02/2018-05/03/2018       Teny perature Remark       22°C Relative Humidity Almospheric Pressure 1026mbar         Result       Image: Fa	Spec	Requirement			Applicable				
Test Setup       3 m       at im height         For Setup       Social       Turn Table         Ground Plane       For < 30MHz, Radiated emissions were measured according to ANSI C63.10. The EUT was set to transmit at the highest output power.		<ul> <li>(a) The field strength of any emission 15,848 microvolts/meter at 30 meter</li> <li>(b) Within the bands 13.410–13.553 emissions shall not exceed 334 micr</li> <li>(c) Within the bands 13.110–13.410 emissions shall not exceed 106 micr</li> <li>(d) The field strength of any emission</li> </ul>	<ul> <li>(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.</li> <li>(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.</li> <li>(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.</li> <li>(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band</li> </ul>						
Procedure       the highest output power. The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the center of the loop. The measuring bandwidth was set to 10 kHz. The limit is converted from microvolt/meter to decibel microvolt/meter.         Test Date       05/02/2018-05/03/2018       Environmental conditions       Temperature Relative Humidity Atmospheric Pressure       22°C 40% 1026mbar         Remark       -       -       -       -       -       -       -         Test Data       Yes (See below)       N/A       N/A       -       -       -         Test Plot       Yes (See below)       N/A       N/A       -       -       -	Test Setup	EUT& Support Units 80cm EUT& Turn 7 Support Units Gr	3 m Table round Plane st Receiver						
Test Date       05/02/2018-05/03/2018       Environmental conditions       Relative Humidity Atmospheric Pressure       40% 1026mbar         Remark       - <td>Procedure</td> <td>the highest output power. The EUT was set 3 meter away from the ground from the center of the loc</td> <td>n the measuring antenna. The lo pp. The measuring bandwidth wa</td> <td>oop antenna was positione as set to 10 kHz.</td> <td></td>	Procedure	the highest output power. The EUT was set 3 meter away from the ground from the center of the loc	n the measuring antenna. The lo pp. The measuring bandwidth wa	oop antenna was positione as set to 10 kHz.					
Result     Image: Pass     Image: Fail       Test Data     Image: Yes (See below)     Image: N/A       Test Plot     Image: Yes (See below)     Image: N/A	Test Date	05/02/2018-05/03/2018	Environmental conditions	Relative Humidity	40%				
Test Data     ⊠ Yes (See below)     □ N/A       Test Plot     ⊠ Yes (See below)     □ N/A	Remark	-							
Test Plot ⊠ Yes (See below) □ N/A	Result	🛛 Pass 🛛 🗆 Fail							
	Test Data 🛛 Yes	s (See below)							
Test was done by Vijay Chaudhary at 10-meter chamber.	Test Plot 🛛 🖂 Yes	s (See below)							
	Test was done by V	Vijay Chaudhary at 10-meter chamb	er.						

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	14 of 22

Test specification:	Radiated Spurious Emissions	Radiated Spurious Emissions			
Mains Power:	110 VDC, 60Hz				
Tested by:	Vijay Chaudhary	Result:	⊠ Pass □ Fail		
Test Date:	05/02/2018				
Remarks:	Co-Location <i>f</i> = 100kHz – 30MHz plo	Co-Location $f$ = 100kHz – 30MHz plot, and loop antenna O Degree (BLE Low Ch & RFID)			



### Quasi Max Measurement

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol (0/90)	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
0.58	28.20	10	17.06	55.26	Quasi Max	0	99	8	72.23	-16.97	Pass
9.58	18.95	10	1.55	30.5	Quasi Max	0	99	253	69.54	-39.04	Pass
19.54	13.66	10.94	0.97	25.58	Quasi Max	0	99	226	69.54	-43.96	Pass
3.17	10.51	10	4.23	24.73	Quasi Max	0	99	316	69.54	-44.81	Pass
0.23	20.59	10	24.75	55.34	Quasi Max	0	99	331	100.03	-44.69	Pass
13.56	54.11	10.84	1.67	66.61	Quasi Max	0	99	230	124.92	-58.31	Pass

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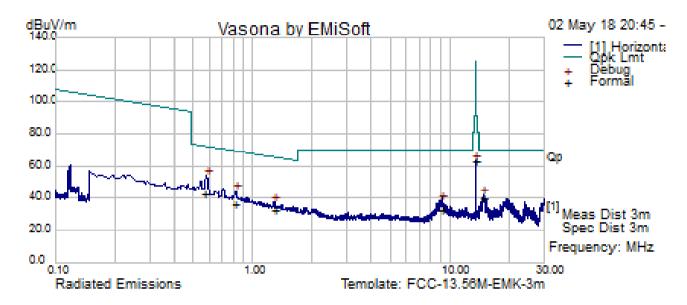
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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	15 of 22

Test specification:	Radiated Spurious Emissions	Radiated Spurious Emissions					
Mains Power:	110 VDC, 60Hz						
Tested by:	Vijay Chaudhary	Result:	⊠ Pass □ Fail				
Test Date:	05/02/2018						
Remarks:	Co-Location <i>f</i> = 100kHz – 30MHz plo	Co-Location $f$ = 100kHz – 30MHz plot, and loop antenna 90 Degrees (BLE Low Ch & RFID)					



Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol (0/90)	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
0.57	15.59	10	17.28	42.87	Quasi Max	90	99	273	72.46	-29.59	Pass
0.81	12.40	10	14.47	36.87	Quasi Max	90	99	70	69.43	-32.56	Pass
14.81	27.36	10.87	1.69	39.92	Quasi Max	90	99	185	69.54	-29.62	Pass
1.28	11.93	10	10.85	32.77	Quasi Max	90	99	304	65.42	-32.64	Pass
9.08	21.17	10	1.56	32.73	Quasi Max	90	99	332	69.54	-36.81	Pass
13.55	50.78	10.84	1.67	63.29	Quasi Max	90	99	111	124.92	-61.63	Pass

### Quasi Max Measurement

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	16 of 22

# 10.2.2 Radiated Measurements 30MHz to 1GHz

### Requirement(s):

Spec	Requirement	Applicable
47 CFR §15.225 RSS-210 (B.6)	Operation within the band 13.110–14.010 MHz:(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.(d) The field strength of any emissions appearing outside of the 13.110–14.010 	
Test Setup	Semi Anechoic Chamber Radio Absorbing Malerial	
Procedure	<ol> <li>The EUT was switched on and allowed to warm up to its normal operating condition</li> <li>The test was carried out at the selected frequency points obtained from the EUT cha Maximization of the emissions, was carried out by rotating the EUT, changing the ar polarization, and adjusting the antenna height in the following manner:         <ul> <li>Vertical or horizontal polarisation (whichever gave the higher emission lev rotation of the EUT) was chosen.</li> <li>The EUT was then rotated to the direction that gave the maximum emissis c. Finally, the antenna height was adjusted to the height that gave the maxim</li> </ul> </li> <li>A Quasi-peak measurement was then made for that frequency point.</li> <li>Steps 2 and 3 were repeated for the next frequency point, until all selected frequency measured.</li> </ol>	aracterisation. ntenna /el over a full on. num emission.
Test Date	05/02/2018-05/03/2018 Environmental conditions Temperature Relative Humidity Atmospheric Pressure	20.1°C 36% 1026mbar
Remark	•	
Result	⊠ Pass □ Fail	
est Data 🛛 🖾 Yes	(See below)	
	(See below)	
est was done by V	ijay Chaudhary at 10-meter chamber.	

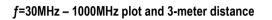
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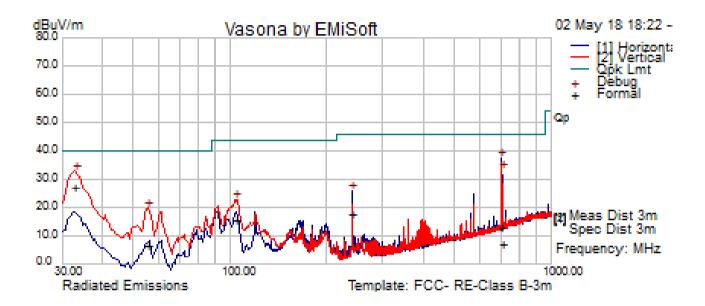
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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	17 of 22

Test specification:	Radiated Emissions	adiated Emissions					
Mains Power:	110 VDC, 60Hz						
Tested by:	Vijay Chaudhary		Result:	⊠ Pass □ Fail			
Test Date:	05/02/2018						
Remarks:	Co-Location Testing (BLE & RFID)	Co-Location Testing (BLE & RFID)					





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
32.80	31.40	11.16	-15.5	27.06	Quasi Max	V	112	134	40	-12.94	Pass
700.03	13.58	15.13	-15.56	13.15	Quasi Max	Н	104	85	46	-32.85	Pass
702.31	7.64	15.15	-15.47	7.32	Quasi Max	Н	260	10	46	-38.68	Pass
239.98	30.17	12.89	-25.09	17.97	Quasi Max	Н	131	251	46	-28.03	Pass
55.25	22.53	11.48	-27.51	6.50	Quasi Max	V	103	93	40	-33.50	Pass
104.39	28.63	11.91	-24.68	15.86	Quasi Max	V	101	9	43.5	-27.64	Pass

### f=30MHz – 1000MHz Measurements

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	18 of 22

## 10.2.3 Radiated Spurious Emissions between 1GHz-25GHz

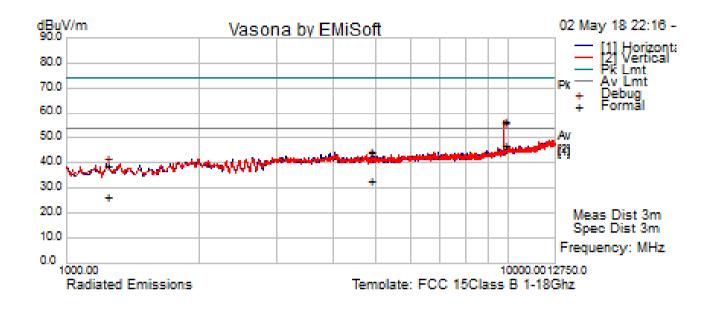
### Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§15.247(d), RSS210(A8.5)	a)		
	b)	□       20 dB down       ⊠       30 dB down         or restricted band, emission must also comply with the radiated emission limits specified in 15.209	
Test Setup	Radio	Semi Anechoic Chamber Absorbing Material	Spectrum Analyzer
Procedure	2. T W ai a. b. c. 3. A 4. S	rotation of the EUT) was chosen. The EUT was then rotated to the direction that gave the maximum emi	characterisation. e antenna polarization, level over a full ssion. aximum emission.
Remark		as scanned up to 40GHz. Both horizontal and vertical polarities were investig he worst case.	ated. The results
Result	⊠ Pass		
Test Plot	(See below) (See below) <b>/ijay Chaudh</b>	☐ N/A ⊠ N/A ary at 10-meter chamber.	
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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	19 of 22

Test specification:	Radiated Emissions	adiated Emissions						
Mains Power:	110V DC							
Tested by:	Vijay Chaudhary		Result:	⊠ Pass □ Fail				
Test Date:	05/02/2018							
Remarks:	Co-Location Testing (BLE & RFID)	Co-Location Testing (BLE & RFID)						



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
9766.79	50.22	5.51	0.83	56.55	Peak Max	Н	101	255	74	-17.45	Pass
4884.11	41.13	4.18	-1.00	44.30	Peak Max	Н	176	333	74	-29.70	Pass
1236.07	43.11	2.09	-6.08	39.12	Peak Max	Н	225	139	74	-34.88	Pass
9766.79	40.77	5.51	0.83	47.10	Average Max	Н	101	255	54	-6.90	Pass
4884.11	29.56	4.18	-1.00	32.74	Average Max	Н	176	333	54	-21.26	Pass
1236.07	30.45	2.09	-6.08	26.46	Average Max	Н	225	139	54	-27.54	Pass

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	20 of 22

# Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Radiated Emissions						
Spectrum Analyzer	N9030B	10SL0289	09/06/2017	1 Year	09/06/2018	~
ETS-Lingren Loop Antenna	6512	00049120	07/14/2016	1 Year	07/14/2019	•
Bi-Log antenna (30MHz~2GHz)	JB6	A111717	12/05/2017	1 Year	12/05/2018	<b>&gt;</b>
Horn Antenna (1-26.5GHz)	3115	10SL0059	11/09/017	1 Year	11/09/2018	•
Pre-Amplifier (1-40GHz) SAS-474		579	05/04/2017	1 Year	05/04/2018	

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Test report	FCC_IC_RF_SL18042001-SFE-033_Co-Location
Page	21 of 22

# Annex A. 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	A	Radio Equipment: EN45011: EN ISO/IEC 17065	
	A	Electromagnetic Compatibility: EN45011 – EN ISO/IEC 17065	
Singapore iDA CB(Certification Body)	đđ	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	
	A	Telecom: CS-03 Part I, II, V, VI, VII, VIII	

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Test report FCC\_IC\_RF\_SL18042001-SFE-033\_Co-Location 22 of 22 Page

Japan Recognized Certification Body Designation	ād	<b>Radio</b> : A1. Terminal equipment for purpose of calling <b>Telecom</b> : B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law		
		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		
Korea CAB Accreditation		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		
		<b>Telecom:</b> 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	Ā	LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08		
Taiwan BSMI CAB Recognition	A	CNS 13438		
Japan VCCI	B	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	A	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		

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