

RF TEST REPORT



Report No.: FCC_IC_RF_SL18102201-SEN-005 Rev 3.0

Supersede Report No.: FCC_IC_RF_SL18102201-SEN-005 Rev 2.0

Applicant	:	Sensormatic Electronics LLC
Product Name	:	Electronic Article Surveillance System (EAS)
Model No.	:	AMS-9080
Regulatory Model	:	LFAMS1803
Test Standard	:	FCC 15 Subpart C RSS-210 Issue 9: 2016
Test Method	:	FCC 15.209 ANSI C63.10 2013 RSS Gen Issue 5 2018
FCC ID	:	BVCAMSUSUPC
IC ID	:	3506A-AMSUSUPC
Dates of test	:	12/03/2018-12/06/2018
Issue Date	:	02/26/2018
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	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



775 Montague Expressway, Milpitas, CA 95035, USA • Phone: (+1) 408 526 1188 • Facsimile (+1) 408 526 1088

Visit us at: www.siemic.com; Follow us at:



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

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
6.3	EUT test modes/configuration Description.....	7
7	SUPPORTING EQUIPMENT/SOFTWARE AND CABLING DESCRIPTION.....	8
7.1	Supporting Equipment	8
7.2	Cabling Description	8
7.3	Test Software Description	8
8	TEST SUMMARY	9
9	MEASUREMENT UNCERTAINTY	10
10	MEASUREMENTS, EXAMINATION AND DERIVED RESULTS	11
10.1	Antenna Requirement.....	11
10.2	Conducted Emissions.....	12
10.3	Radiated Measurements.....	15
10.3.1	Radiated Measurements below 30MHz.....	15
10.3.2	Occupied bandwidth	22
	ANNEX A. TEST INSTRUMENT	24
	ANNEX A. SIEMIC ACCREDITATION	25

1 Report Revision History

Report No.	Report Version	Description	Issue Date
FCC_IC_RF_SL18102201-SEN-005	None	Original	12/14/2018
FCC_IC_RF_SL18102201-SEN-005 Rev 1.0	Rev 1.0	Updated per reviewer	01/09/2018
FCC_IC_RF_SL18102201-SEN-005 Rev 2.0	Rev 2.0	Updated per reviewer	01/20/2018
FCC_IC_RF_SL18102201-SEN-005 Rev 3.0	Rev 3.0	Updated per reviewer	02/22/2018

2 Executive Summary

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

Company: Sensormatic Electronics, LLC
Product: Ultra 1.5m ABS Pedestal System
Model: AMS-9080
Regulatory Model: LFAMS1803

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	:	Sensormatic Electronics, LLC
Applicant Address	:	6600 Congress Ave, Boca Raton, FL-33487
Manufacturer Name	:	Sensormatic Electronics, LLC
Manufacturer Address	:	6600 Congress Ave, Boca Raton, FL-33487

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

Product Name	:	Electronic Article Surveillance System (EAS)
Model No.	:	AMS-9080
Regulatory Model	:	LFAMS1803
Trade Name	:	Sensormatic
Serial No.	:	ENGINEERING SAMPLE 1
Input Power	:	120VAC, 60HZ
Product Hardware version	:	HWProto1
Product Software version	:	SWProto1
Date of EUT received	:	12/01/2018
Working Frequencies	:	0.0578-0.0582MHz

6.2 Radio Description

Specifications for Radio:

Radio Type	RFID
Operating Frequency	0.0578-0.0582MHz
Modulation	ASK
Antenna Model	AMS-1156
Regulatory Model	LFAMS1802
Antenna Type	Loop Antenna
Antenna Gain	0 dBi
Antenna Connector Type	Screw Terminal

Channel List:

Type	Mode	Channel No.	Frequency (MHz)	Available (Y/N)
RFID	58kHz	1	0.058	Y

6.3 EUT test modes/configuration Description

Mode	Note
RF test	EUT is set to continuously transmit at 58kHz
Note: None	

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

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

Index	Supporting Equipment Description	Model	Serial No	Manu	Note
-	-	-	-	-	-

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 58kHz 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 v03r02	☒ Pass
	IC	-		☐ N/A
AC Conducted Emissions Voltage	FCC	15.207(a)	ANSI C63.10 2013 RSS Gen. 8.8	☒ Pass
	IC	RSS Gen (7.2.2)		☐ N/A
Remark	None			

Test Item	Test standard		Test Method/Procedure		Pass / Fail
Radiated Spurious Emission	FCC	15.209	FCC	ANSI C63.10 2013	☒ Pass
	IC	RSS	IC	RSS Gen 7.1	☐ N/A
Frequency Stability	FCC	15.225(e)	FCC	-	☐ Pass
	IC	RSS210(B.6)	IC	RSS Gen 6.11	☒ N/A
Occupied Bandwidth	FCC	-	FCC	-	☒ Pass
	IC	RSS Gen (6.6)	IC	RSS Gen 6.6	☐ 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.				

9 Measurement Uncertainty

Test Item	Description	Uncertainty
AC Conducted Emissions Voltage	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2	$\pm 3.5\text{dB}$
Radiated Spurious Emissions	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

10 Measurements, examination and derived results

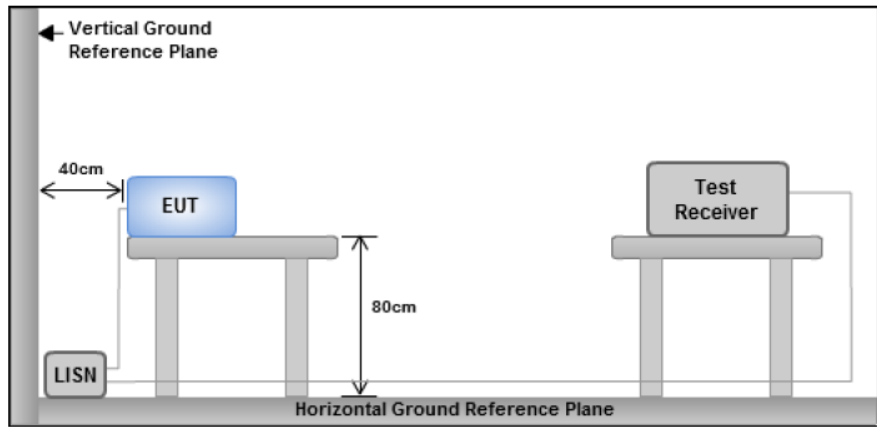
10.1 Antenna Requirement

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	Device use loop antenna (Inductive loop coil transmitter) The device must be professionally installed. The installer shall be responsible for ensuring that the correct antenna is employed by the device.	
Result	☒ PASS ☐ FAIL	

10.2 Conducted Emissions

Conducted Emission Limit

Frequency ranges (MHz)	Limit (dBuV)	
	QP	Average
0.15 ~ 0.5	66 – 56	56 – 46
0.5 ~ 5	56	46
5 ~ 30	60	50

Spec	Item	Requirement	Applicable
47CFR§15.207 RSS-GEN	a)	For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequency ranges.	☒
Test Setup	 Note: 1. Support units were connected to second LISN. 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes		
Procedure	- The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B. - The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains. - The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. - All other supporting equipment was powered separately from another main supply.		
Remark	EUT tested with AC 120V 60Hz		
Result	☒ Pass ☐ Fail		

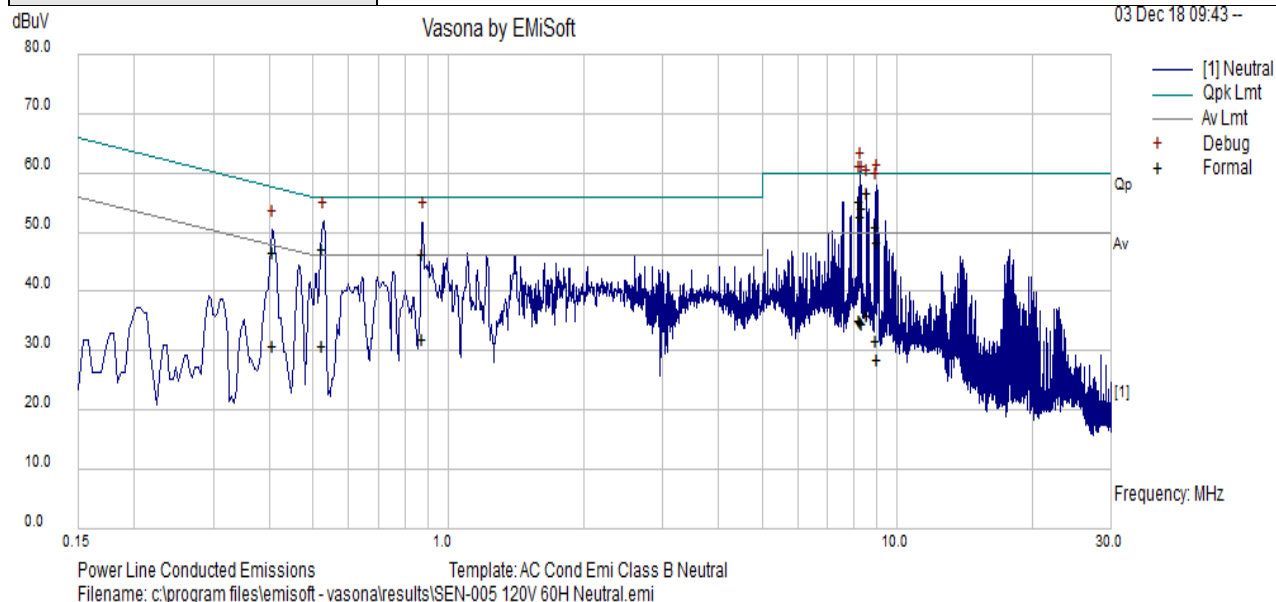
Test Data ☒ Yes ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by *John Plotner* at *Conducted Emission Test Site*.

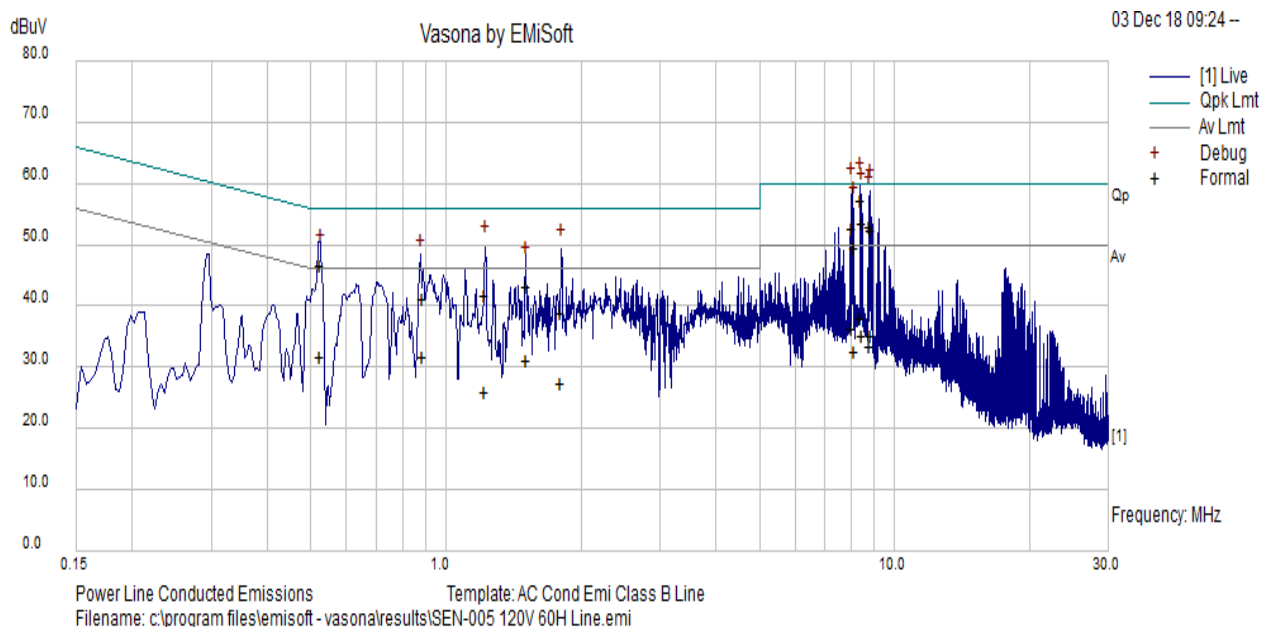
Conducted Emission Test Results

Test specification:	Conducted Emissions			
Environmental Conditions:	Temp(°C):	18	Result:	
	Humidity (%):	45		X Pass
	Atmospheric(mbar):	1019		
Mains Power:	120V 50Hz			
Tested by:	John Plotner			Fail
Test Date:	December 3, 2018			
Remarks:	Neutral			



Frequency (MHz)	Raw (dBuV)	Cable Loss (dB)	Factors (dB)	Level (dBuV)	Measurement Type	Line/Neutral	Limit (dBuV)	Margin (dB)	Pass/Fail
8.554649	47.06	9.36	0.2	56.61	Quasi Peak	Neutral	60	-3.39	Pass
8.205707	45.62	9.36	0.18	55.16	Quasi Peak	Neutral	60	-4.84	Pass
8.322565	44.38	9.36	0.19	53.92	Quasi Peak	Neutral	60	-6.08	Pass
8.266373	43.11	9.36	0.19	52.65	Quasi Peak	Neutral	60	-7.35	Pass
0.523862	37.83	9.33	0.03	47.19	Quasi Peak	Neutral	56	-8.81	Pass
8.95886	41.27	9.36	0.21	50.84	Quasi Peak	Neutral	60	-9.16	Pass
8.554649	26.27	9.36	0.2	35.83	Average	Neutral	50	-14.17	Pass
8.205707	25.51	9.36	0.18	35.05	Average	Neutral	50	-14.95	Pass
8.266373	25.26	9.36	0.19	34.8	Average	Neutral	50	-15.2	Pass
0.523862	21.28	9.33	0.03	30.64	Average	Neutral	46	-15.36	Pass
8.322565	24.83	9.36	0.19	34.37	Average	Neutral	50	-15.63	Pass
8.95886	22.1	9.36	0.21	31.67	Average	Neutral	50	-18.33	Pass

Test specification:	Conducted Emissions			
Environmental Conditions:	Temp(°C):	18	Result:	
	Humidity (%):	45		X Pass
	Atmospheric(mbar):	1019		
Mains Power:	120V 50Hz			
Tested by:	John Plotner			Fail
Test Date:	December 3, 2018			
Remarks:	Line			

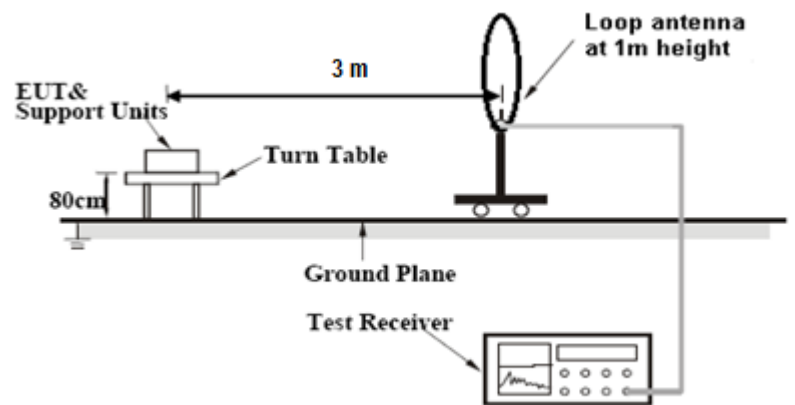


Frequency (MHz)	Raw (dBuV)	Cable Loss (dB)	Factors (dB)	Level (dBuV)	Measurement Type	Line/Neutral	Limit (dBuV)	Margin (dB)	Pass/Fail
8.379493	47.55	9.36	0.17	57.07	Quasi Peak	Live	60	-2.93	Pass
8.439725	43.97	9.36	0.17	53.49	Quasi Peak	Live	60	-6.51	Pass
8.787008	43.15	9.36	0.18	52.69	Quasi Peak	Live	60	-7.31	Pass
8.033206	43.1	9.36	0.15	52.61	Quasi Peak	Live	60	-7.39	Pass
8.843084	42.64	9.36	0.18	52.17	Quasi Peak	Live	60	-7.83	Pass
0.52114	37.04	9.33	0.04	46.41	Quasi Peak	Live	56	-9.59	Pass
8.379493	28.28	9.36	0.17	37.8	Average	Live	50	-12.2	Pass
8.033206	26.69	9.36	0.15	36.2	Average	Live	50	-13.8	Pass
0.882056	22.29	9.33	0.04	31.65	Average	Live	46	-14.35	Pass
0.52114	22.18	9.33	0.04	31.55	Average	Live	46	-14.45	Pass
8.843084	25.51	9.36	0.18	35.05	Average	Live	50	-14.95	Pass
8.787008	23.73	9.36	0.18	33.27	Average	Live	50	-16.73	Pass

10.3 Radiated Measurements

10.3.1 Radiated Measurements below 30MHz

Requirement(s):

Spec	Requirement		Applicable
47 CFR §15.209 RSS Gen (6.6)	Operation within the band below 30 MHz (a) The field strength of any emissions within the band 0.009-0.490 MHz shall not exceed 2400/F(kHz) microvolts/meter at 300 meters. (b) Within the bands 0.490- 1.705 MHz, the field strength of any emissions shall not exceed 24000/F(kHz) microvolts/meter at 30 meters. (c) Within the bands 1.705- 30.0 MHz the field strength of any emissions shall not exceed 30 microvolts/meter at 30 meters.		☒
Test Setup			
Procedure	For < 30MHz, Radiated emissions were measured according to ANSI C63.10. The EUT was set to transmit at 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	12/04/2018	Environmental conditions	Temperature 22°C Relative Humidity 40% Atmospheric Pressure 1026mbar
Remark	Distance correction = 60*log(300/10) = 88.62. Limit: 2400/58 = 41.38uV/m @300m, which is 32.33dBuV/m. Limit @10m: 33.33+88.62 = 121.95dBuV/m.		
Result	☒ Pass ☐ Fail		

Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Gary Chou at Open-Site.

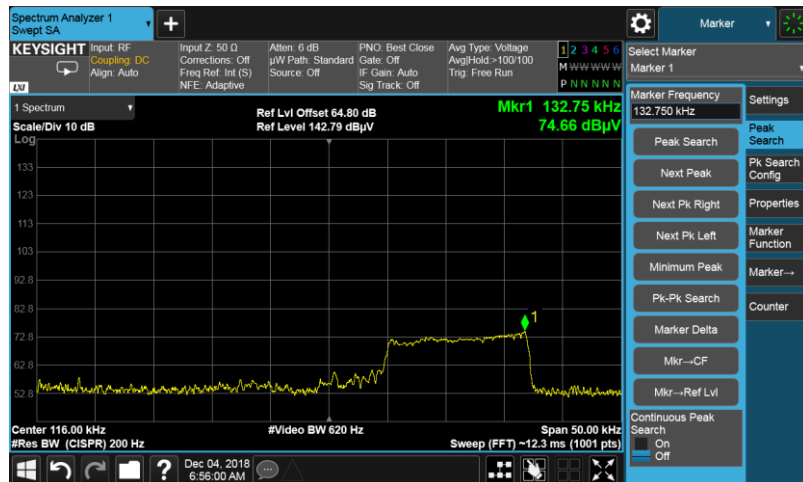
Test specification:	Radiated Spurious Emissions			
Mains Power:	120 VAC,60 Hz		Result:	☒ Pass ☐ Fail
Tested by:	Gary Chou			
Test Date:	12/04/2018			
Remarks:	58kHz f= 100kHz – 30MHz, loop antenna at 0 degree			

Frequency kHz	Level dBuV/m	Measurement Type	Pol (0/90)	Hgt cm	Limit dBuV/m	Margin dB	Pass /Fail
58	110.74	Peak	0	100	121.95	-11.21	Pass
116	74.66	Peak	0	100	115.85	-41.19	Pass
174	65.77	Peak	0	100	112.33	-46.56	Pass
232	67.77	Peak	0	100	109.83	-42.06	Pass

Testing is done at 10m distance.



Fundamental – 58kHz



2nd harmonic – 116kHz



3rd harmonic – 174kHz

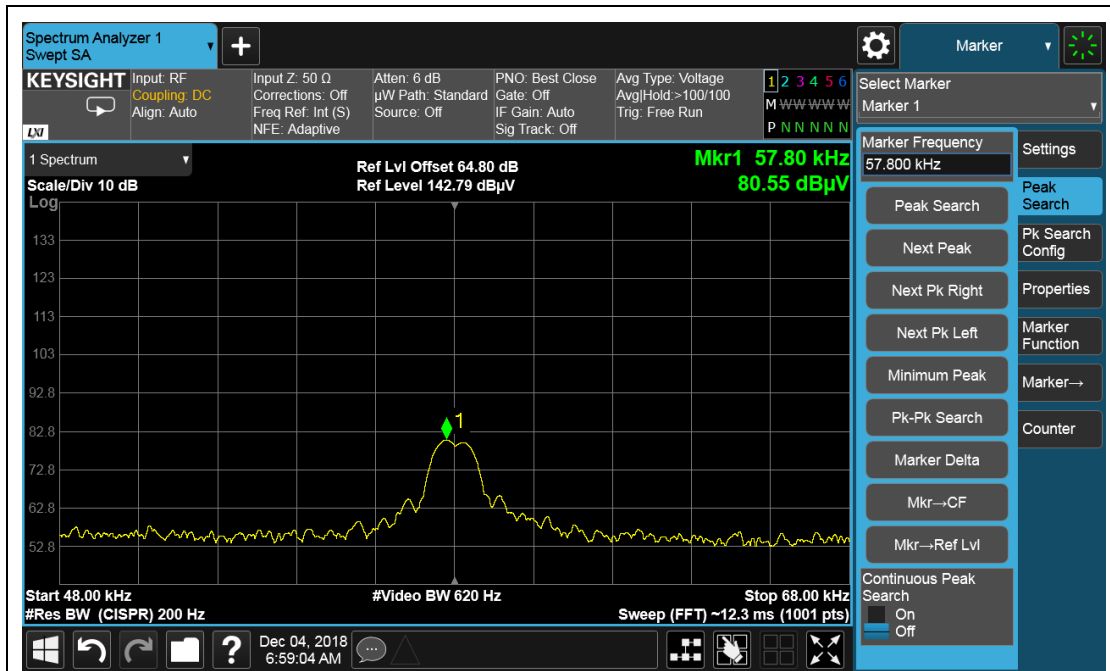


4th harmonic – 232kHz

Test specification:	Radiated Spurious Emissions			
Mains Power:	120 VAC,60 Hz		Result:	☒ Pass ☐ Fail
Tested by:	Gary Chou			
Test Date:	12/04/2018			
Remarks:	58KHz f= 100kHz – 30MHz, loop antenna at 90 degree			

Frequency kHz	Level dBuV/m	Measurement Type	Pol (0/90)	Hgt cm	Limit dBuV/m	Margin dB	Pass /Fail
58	80.55	Peak	0	100	121.88	-41.33	Pass
116	79.20	Peak	0	100	115.85	-36.65	Pass
174	67.48	Peak	0	100	112.33	-44.85	Pass
232	65.99	Peak	0	100	109.83	-43.84	Pass

Testing is done at 10m distance.



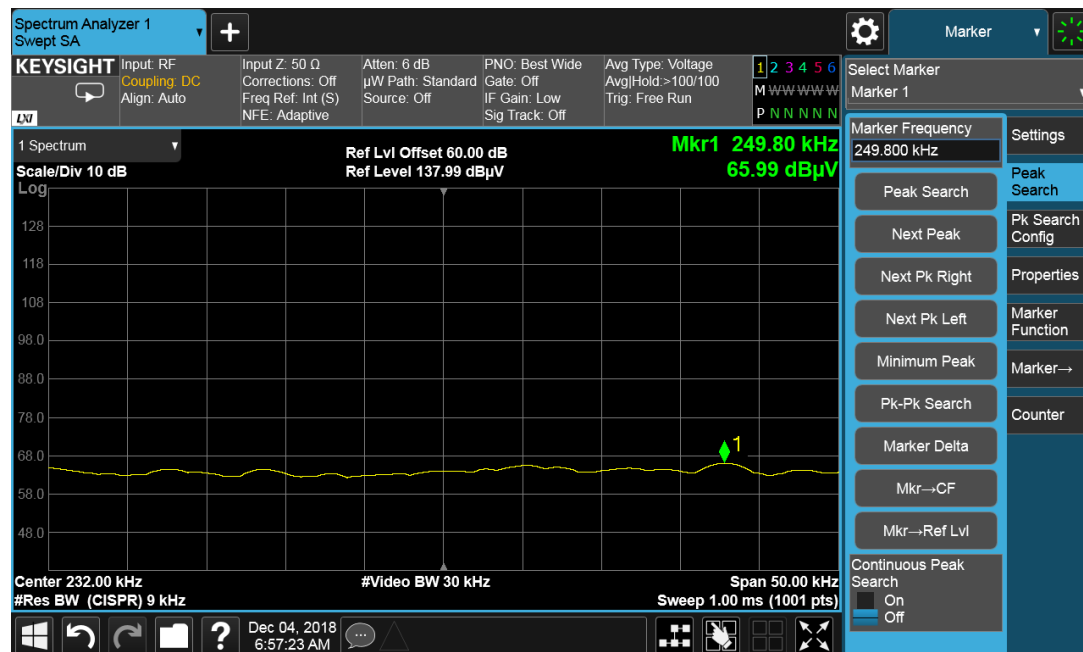
Fundamental – 58kHz



2nd harmonic – 116kHz



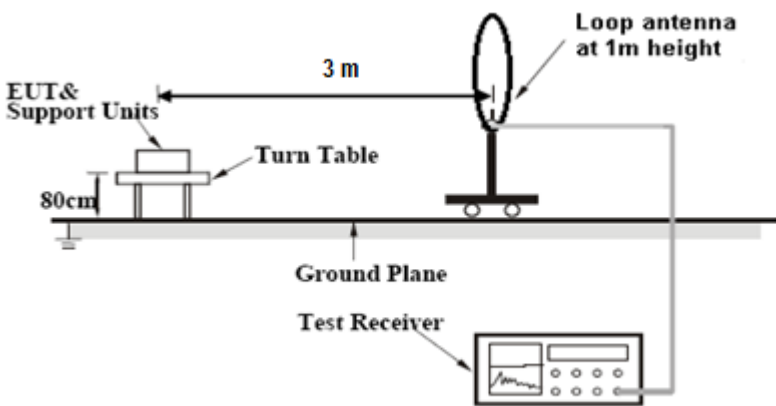
3rd harmonic – 174kHz



4th harmonic – 232kHz

10.3.2 Occupied bandwidth

Requirement(s):

Spec	Requirement	Applicable									
RSS-Gen 4.6.1	The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyser shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used given that a peak or peak hold may produce a wider bandwidth than actual. The trace data points are recovered and directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.	☒									
Test Setup											
Procedure	- The EUT was switched on and allowed to warm up to its normal operating condition. - To measure conducted, a SMA cable was used to replace the EUT antenna. To measure radiated, an external antenna was used to detect EUT transmission signal. - Measurement of the 99% Occupied Bandwidth of EUT transmission signal and make record.										
Test Date	12/04/2018	<table border="1"> <tr> <td>Environmental conditions</td> <td>Temperature</td> <td>22°C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>39%</td> </tr> <tr> <td></td> <td>Atmospheric Pressure</td> <td>1025mbar</td> </tr> </table>	Environmental conditions	Temperature	22°C		Relative Humidity	39%		Atmospheric Pressure	1025mbar
Environmental conditions	Temperature	22°C									
	Relative Humidity	39%									
	Atmospheric Pressure	1025mbar									
Remark	-										
Result	☒ Pass ☐ Fail										

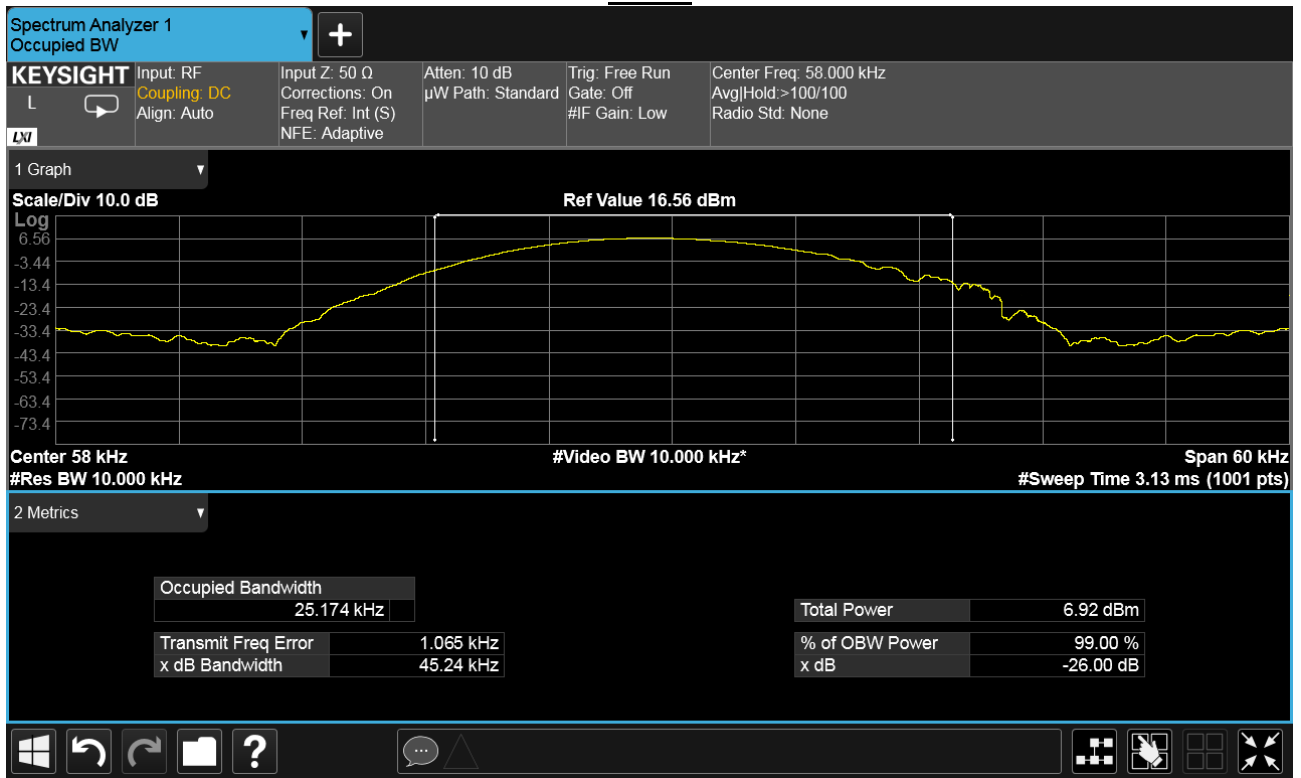
Test Data ☐ Yes (See below) ☒ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Gary Chou at open site.

Test results:

58 kHz



Frequency (kHz)	Occupied Bandwidth (kHz)
58	25.17

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Radiated Emissions						
Spectrum Analyzer	N9030B	10SL0289	09/06/2018	1 Year	09/06/2019	☒
ETS-Lingren Loop Antenna	6512	00049120	07/14/2018	1 Year	07/14/2019	☒
Bi-Log antenna (30MHz~2GHz)	JB6	A111717	10/05/2018	1 Year	10/05/2019	☒
Horn Antenna (1-26.5GHz)	3115	10SL0059	11/09/2018	1 Year	11/09/2019	☒
EMI Test Receiver	ESIB 40	100179	09/06/2018	1 Year	09/06/2019	
Transient Limiter (9 kHz - 100 MHz)	EM-7600-5	106	07/14/2018	1 Year	07/14/2019	☒
LISN	3816/2NM	214372	10/05/2018	1 Year	10/05/2019	☒
LISN	3810/2NM	34169	11/09/2018	1 Year	11/09/2019	☒

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		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