Excellence in Compliance Testing

Certification Test Report

FCC ID: QHC-KVEVZE41

FCC Rule Part: 15.247

ACS Report Number: 14-0144.W03.2A

Manufacturer: Itron
Model: 570974-001

Test Begin Date: April 21, 2014
Test End Date: May 9, 2014

Report Issue Date: May 29, 2014

FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612-0

This report is not be used to claim certification, approval, or endorsement by NVLAP, NIST or any government agency.

Reviewed by:
Kirby Munroe
Director, Wireless Certifications
ACS, Inc.

This report contains 31 pages

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1 GENERAL

1.1 Purpose

The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations and Industry Canada's Radio Standards Specification RSS-210 for limited modular approval (LMA) certification.

1.2 Product description

The 570974-001 is an electricity metering module used in the GE Kv2c EPS meter platform in forms 2S, 3S, 4S, 9S, 12S, 16S, and 45S. The 570974-001 includes (1) 900 MHz FHSS radio, (1) HAN 802.15.4 2.4 GHz radio for home automation interface with Zigbee compliant devices and an on-board Sierra Wireless CDMA modem SL5011 (FCC ID: N7NSL5011 / IC: 2417C-SL5011). The Sierra Wireless CDMA modem SL5011 is modular approved and not covered under the scope of this report.

The 570974-001 is designed to be integrated into 2S, 3S, 4S, 9S, 12S, 16S, and 45S electric utility meter forms and be collocated and transmit simultaneously with the on-board Sierra Wireless CDMA modem SL5011 (FCC ID: N7NSL5011 / IC: 2417C-SL5011).

Technical Details:

Detail	Description
Frequency Range	910.0 - 921.8 MHz
Number of Channels	50
Modulation Format	FSK
Operating Voltage	28 VDC (Via supply of host meter)
Antenna Type / Gain	Slot Antenna; 0dBi

Manufacturer Information:
Itron Inc.
4400 Old Canton Road
Suite 300
Jackson, MS 39211

EUT Serial Numbers: E0400022J01

Test Sample Condition: The test samples were provided in good working order with no visible defects.

1.3 Test Methodology and Considerations

The 570974-001 is designed to be integrated into 2S, 3S, 4S, 9S, 12S, 16S, and 45S electric utility meter forms therefore for radiated emissions, including band edge, the EUT were evaluated in the multiple hosts and worst case data presented in this report. Worst case data represents 16S electric utility meter form at 120Vac/60Hz.

The EUT is designed to be integrated into 2S, 3S, 4S, 9S, 12S, 16S, and 45S electric utility meter host forms and be collocated and transmit simultaneously with the (1) HAN 802.15.4 2.4 GHz radio and the on-board Sierra Wireless CDMA modem SL5011 (FCC ID: N7NSL5011 / IC: 2417C-SL5011). Radiated inter-modulation testing was performed for all combinations of simultaneous transmission and found to be in compliance.

(2) antenna options for the on-board Sierra Wireless CDMA modem SL5011 (FCC ID: N7NSL5011 / IC: 2417C-SL5011) are available. The antenna options include an under glass flexible ribbon (0 dBi both bands) or external mono-pole (+3dBi 800 band, +4dBi 1900 band). Use of the external mono-pole requires an antenna interface PCB for providing an external antenna connection. Both antenna options were evaluated for radiated emissions to determine the effects on the 802.15.4 transceiver covered under this report. Both antenna options were also evaluated for radiated inter-modulation products for all combinations of simultaneous transmission.

The host electric utility meter forms can operate at various input voltages. Input voltage did not affect the RF parameters however each meter form was evaluated for AC power line conducted emissions at all possible input voltages and all data is presented in this report.

2 TEST FACILITIES

2.1 Location

The radiated and conducted emissions test sites are located at the following address:

Advanced Compliance Solutions
5015 B.U. Bowman Drive
Buford, GA 30518
Phone: (770) 831-8048
Fax: (770) 831-8598

2.2 Laboratory Accreditations/Recognitions/Certifications

ACS is accredited to ISO/IEC 17025 by the National Institute of Standards and Technology under their National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 200612-0. Unless otherwise specified, all tests methods described within this report are covered under the ISO/IEC 17025 scope of accreditation.

The Semi-Anechoic Chamber Test Site, Open Area Test Site (OATS) and Conducted Emissions Site have been fully described, submitted to, and accepted by the FCC, Industry Canada and the Japanese Voluntary Control Council for Interference by information technology equipment.

FCC Registration Number: 511277
Industry Canada Lab Code: IC 4175A
VCCI Member Number: 1831

- VCCI OATS Registration Number R-1526
- VCCI Conducted Emissions Site Registration Number: C-1608

2.3 Radiated Emissions Test Site Description

2.3.1 Semi-Anechoic Chamber Test Site

The Semi-Anechoic Chamber Test Site consists of a 20' x 30' x 18' shielded enclosure. The chamber is lined with Toyo Ferrite Grid Absorber, model number FFG-1000. The ferrite tile grid is 101 x 101 x 19mm thick and weighs approximately 550 grams. These tiles are mounted on steel panels and installed directly on the inner walls of the chamber.

The turntable is 150cm in diameter and is located 160cm from the back wall of the chamber. The chamber is grounded via 1 – 8' copper ground rod, installed at the center of the back wall, it is bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is all steel, flush mounted table installed in an all steel frame. The table is remotely operated from inside the control room located 25' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Behind the turntable is a 3' x 6' x 4' deep shielded pit used for support equipment if necessary. The pit is equipped with 1 – 4" PVC chases from the turntable to the pit that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit.

A diagram of the Semi-Anechoic Chamber Test Site is shown in Figure 2.3-1 below:

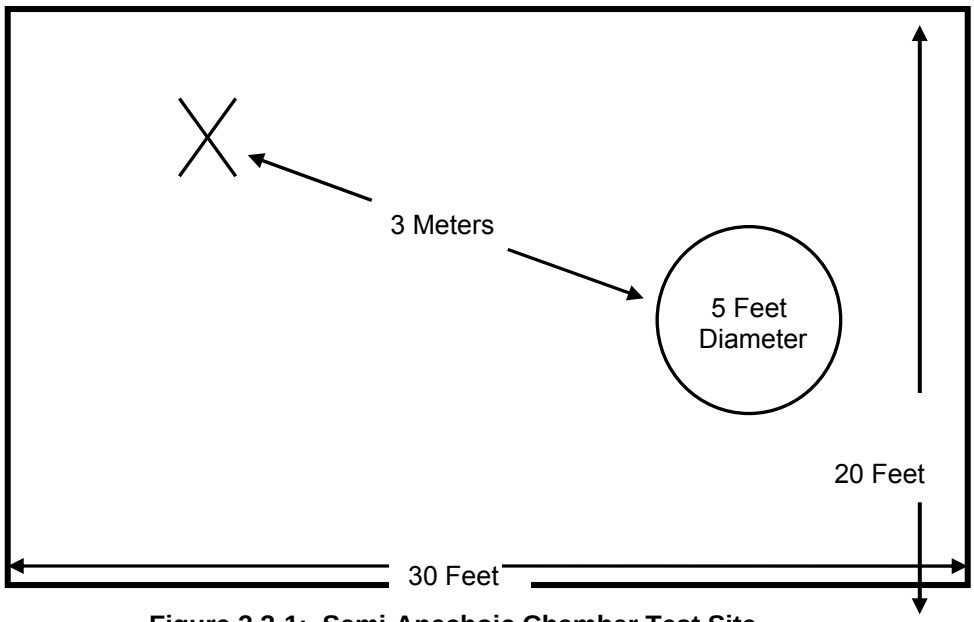

Figure 2.3-1: Semi-Anechoic Chamber Test Site

2.3.2 Open Area Tests Site (OATS)

The open area test site consists of a 40' x 66' concrete pad covered with a perforated electro-plated galvanized sheet metal. The perforations in the sheet metal are 1/8" holes that are staggered every 3/16". The individual sheets are placed to overlap each other by 1/4" and are riveted together to provide a continuous seam. Rivets are spaced every 3" in a 3 x 20 meter perimeter around the antenna mast and EUT area. Rivets in the remaining area are spaced as necessary to properly secure the ground plane and maintain the electrical continuity.

The entire ground plane extends 12' beyond the turntable edge and 16' beyond the antenna mast when set to a 10 meter measurement distance. The ground plane is grounded via 4 – 8' copper ground rods, each installed at a corner of the ground plane and bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is an all aluminum 10' flush mounted table installed in an all aluminum frame. The table is remotely operated from inside the control room located 40' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Adjacent to the turntable is a 7' x 7' square and 4' deep concrete pit used for support equipment if necessary. The pit is equipped with 5 – 4" PVC chases from the pit to the control room that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit. The pit is covered with 2 sheets of 1/4" diamond style re-enforced steel sheets. The sheets are painted to match the perforated steel ground plane; however the underside edges have been masked off to maintain the electrical continuity of the ground plane. All reflecting objects are located outside of the ellipse defined in ANSI C63.4.

A diagram of the Open Area Test Site is shown in Figure 2.3-2 below:

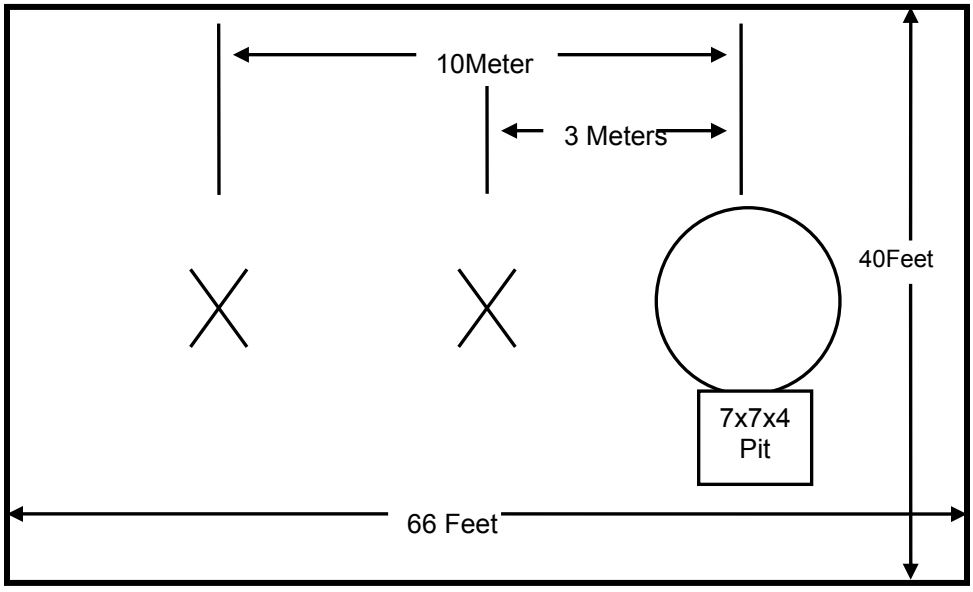

Figure 2.3-2: Open Area Test Site

2.4 Conducted Emissions Test Site Description

The AC mains conducted EMI site is located in the main EMC lab. It consists of an 8' x 8' solid aluminum horizontal ground reference plane (GRP) bonded every 3" to an 8' X 8' vertical ground plane.

The site is of sufficient size to test table top and floor standing equipment in accordance with section 6.1.4 of ANSI C63.4.

A diagram of the room is shown below in figure 2.4-1:

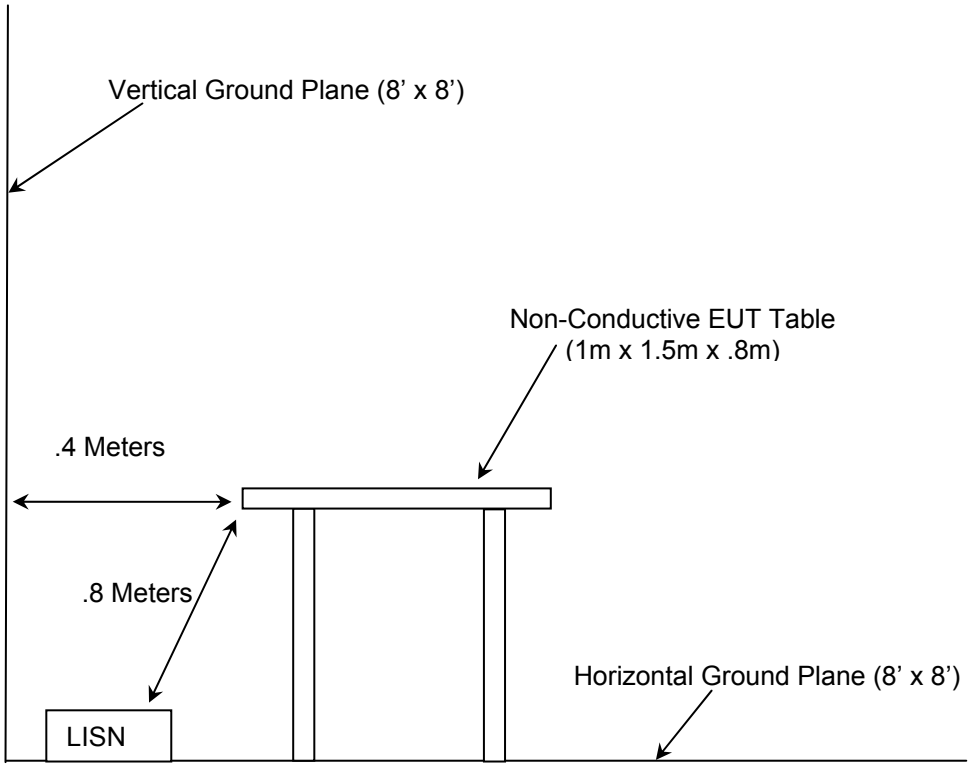

Figure 2.4-1: AC Mains Conducted EMI Site

3 APPLICABLE STANDARD REFERENCES

The following standards were used:

- ANSI C63.4-2003: Method of Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the 9KHz to 40GHz
- ANSI C63.10-2009: American National Standard for Testing Unlicensed Wireless Devices
- US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2014
- US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2014
- FCC Public Notice DA 00-705 – Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems, March 30, 2000
- Industry Canada Radio Standards Specification: RSS-210 – Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Issue 8, December 2010
- Industry Canada Radio Standards Specification: RSS-GEN – General Requirements and Information for the Certification of Radiocommunication Equipment, Issue 3, December 2010.

4 LIST OF TEST EQUIPMENT

The calibration interval of test equipment is annually or the manufacturer's recommendations. Where the calibration interval deviates from the annual cycle based on the instrument manufacturer's recommendations, it shall be stated below.

Table 4-1: Test Equipment

AssetID	Manufacturer	Model #	Equipment Type	Serial #	Last Calibration Date	Calibration Due Date
1	Rohde & Schwarz	ESMI - Display	Spectrum Analyzers	833771/007	8/2/2012	8/2/2014
2	Rohde & Schwarz	ESMI-Receiver	Spectrum Analyzers	839587/003	8/2/2012	8/2/2014
30	Spectrum Technologies	DRH-0118	Antennas	970102	4/23/2013	4/23/2015
40	EMCO	3104	Antennas	3211	2/14/2013	2/14/2015
73	Agilent	8447D	Amplifiers	2727A05624	7/16/2013	7/16/2014
153	EMCO	3825/2	LISN	9411-2268	7/31/2012	7/31/2014
167	ACS	Chamber EMI Cable Set	Cable Set	167	11/7/2013	11/7/2014
168	Hewlett Packard	11947A	Attenuators	44829	1/27/2014	1/27/2015
267	Agilent	N1911A	Meters	MY45100129	7/30/2013	7/30/2015
268	Agilent	N1921A	Sensors	MY45240184	7/30/2013	7/30/2015
292	Florida RF Cables	SMR-290AW-480.0-SMR	Cables	None	3/17/2014	3/17/2015
324	ACS	Belden	Cables	8214	6/17/2013	6/17/2014
331	Microwave Circuits	H1G513G1	Filters	31417	6/19/2013	6/19/2014
338	Hewlett Packard	8449B	Amplifiers	3008A01111	7/30/2013	7/30/2015
340	Aeroflex/Weinschel	AS-20	Attenuators	7136	7/30/2013	7/30/2014
412	Electro Metrics	LPA-25	Antennas	1241	7/27/2012	7/27/2014
422	Florida RF	SMS-200AW-72.0-SMR	Cables	805	11/7/2013	11/7/2014
616	Florida RF Cables	SMRE-200W-12.0-SMRE	Cables	N/A	9/26/2013	9/26/2014
622	Rohde & Schwarz	FSV40	Analyzers	101338	11/19/2013	11/19/2014
RE361	Agilent	AT/E7405A	Analyzers	MY42000089	5/28/2013	5/28/2014

5 SUPPORT EQUIPMENT

Table 5-1: Support Equipment

Item	Equipment Type	Manufacturer	Model Number	Serial Number
1	Form 2S, 3S, 4S, 9S, 12S, 16S, and 45S Electric Utility Meter	Itron Inc.	2S: FM2S 3S: FM3S 4S: FM4S 9S: FM9S 12S: FM12S 16S: FM16S 45S: FM45S	2S: **57 847 145** 3S: **60 321 863** 4S: **60 321 799** 9S: **59 133 935** 12S: **57 847 345** 16S: **57 847 077** 45S: **57 847 182**
2	Isolation Transformer	Hammond Manufacturing	171B	N/A

6 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM

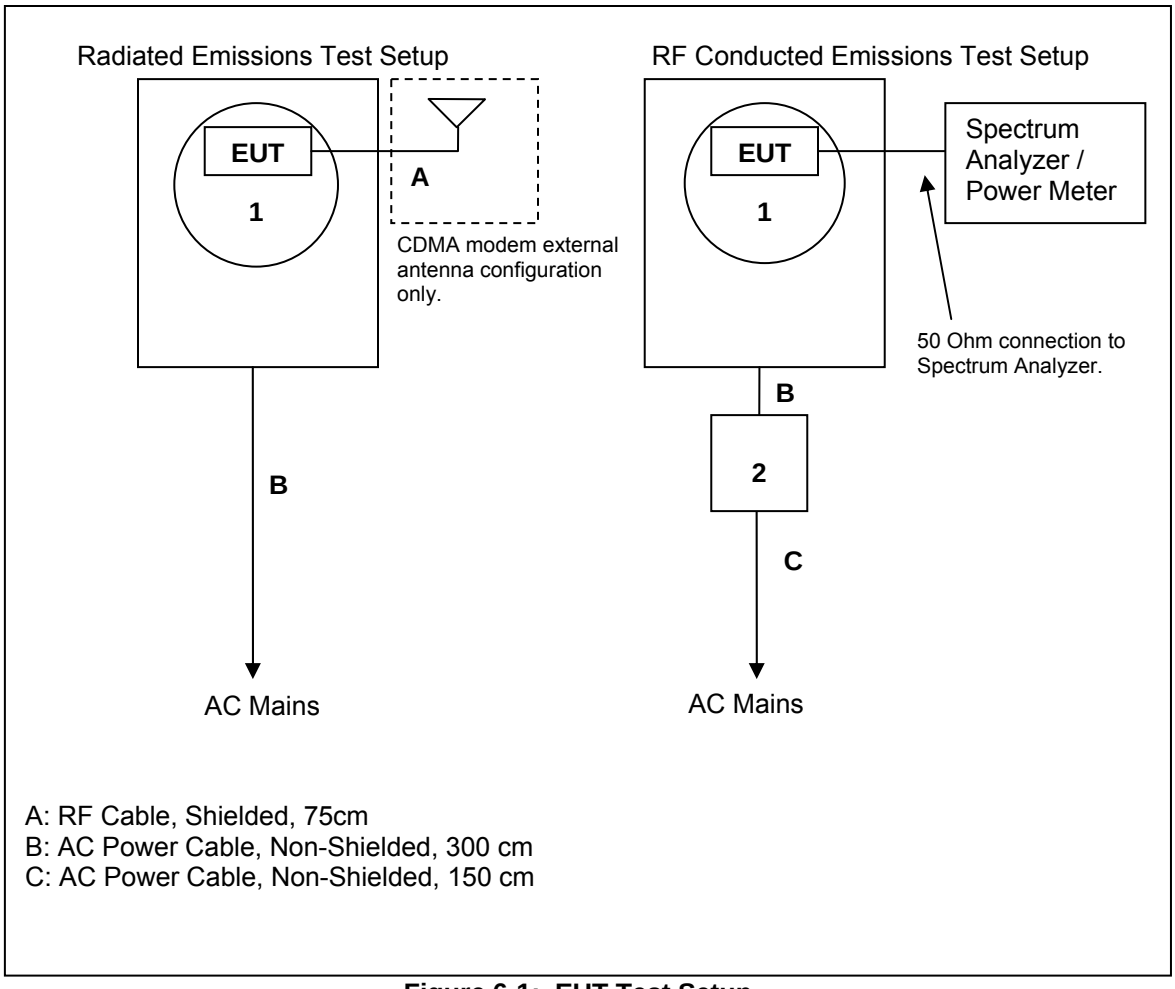

Figure 6-1: EUT Test Setup

7 SUMMARY OF TESTS

Along with the tabular data shown below, plots were taken of all signals deemed important enough to document.

7.1 Antenna Requirement – FCC 15.203

The EUT utilizes a 0dBi integral slot antenna terminated at 50ohms into a U.FL RF connector thus satisfying Part 15.203.

7.2 Power Line Conducted Emissions – FCC 15.207; IC RSS-Gen 7.2.4

7.2.1 Measurement Procedure

ANSI C63.4 sections 6 and 7 were the guiding documents for this evaluation. Conducted emissions were performed from 150kHz to 30MHz with the spectrum analyzer's resolution bandwidth set to 9kHz and the video bandwidth set to 30kHz. The calculation for the conducted emissions is as follows:

Corrected Reading = Analyzer Reading + LISN Loss + Cable Loss
Margin = Applicable Limit - Corrected Reading

7.2.2 Measurement Results

Results of the test are shown below in Tables 7.2.2-1 – 7.2.2-28.

Table 7.2.2-1: Conducted EMI Results – 2S Meter Host (120 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
19.9854	31.58	27.905	10.763	42.342	38.668	60	50	17.658	11.332
18.4332	27.474	23.74	10.768	38.241	34.508	60	50	21.759	15.492
14.1572	35.196	31.57	10.66	45.855	42.23	60	50	14.145	7.77
0.689838	27.663	21.813	10.276	37.938	32.089	56	46	18.062	13.911
0.513	15.756	10.068	10.19	25.945	20.258	56	46	30.055	25.742
0.17415	23.972	21.096	10.319	34.291	31.415	65.31	55.31	31.019	23.895

Table 7.2.2-2: Conducted EMI Results – 2S Meter Host (120 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
20.4596	35.744	31.98	10.786	46.53	42.766	60	50	13.47	7.234
17.4682	25.536	21.953	10.771	36.306	32.723	60	50	23.694	17.277
14.3421	26.239	22.539	10.686	36.924	33.225	60	50	23.076	16.775
0.689218	14.837	9.501	10.275	25.112	19.776	56	46	30.888	26.224
0.5063	9.882	5.637	10.189	20.071	15.827	56	46	35.929	30.173
0.173156	22.465	18.914	10.32	32.784	29.234	65.338	55.338	32.554	26.105

Table 7.2.2-3: Conducted EMI Results – 2S Meter Host (277 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
14.3476	29.699	25.671	10.686	40.385	36.357	60	50	19.615	13.643
4.3016	23.779	19.175	10.334	34.113	29.51	56	46	21.887	16.49
2.81541	22.885	17.705	10.292	33.176	27.997	56	46	22.824	18.003
0.7484	24.829	19.436	10.237	35.066	29.674	56	46	20.934	16.326
0.662044	26.191	19.231	10.249	36.44	29.48	56	46	19.56	16.52
0.48215	23.758	18.776	10.189	33.947	28.965	56.51	46.51	22.563	17.545

Table 7.2.2-4: Conducted EMI Results – 2S Meter Host (277 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
24.3602	18.131	14.219	10.984	29.115	25.204	60	50	30.885	24.796
22.9177	24.455	20.378	10.911	35.366	31.289	60	50	24.634	18.711
22.3417	25.33	21.67	10.882	36.211	32.552	60	50	23.789	17.448
21.4725	24.783	21.665	10.837	35.62	32.502	60	50	24.38	17.498
18.0712	16.894	13.013	10.769	27.662	23.782	60	50	32.338	26.218
15.0802	20.827	17.249	10.778	31.605	28.027	60	50	28.395	21.973

Table 7.2.2-5: Conducted EMI Results – 3S Meter Host (120 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
29.2333	12.704	8.899	11.255	23.959	20.154	60	50	36.041	29.846
28.6005	12.908	8.874	11.2	24.108	20.074	60	50	35.892	29.926
22.3208	30.452	26.716	10.881	41.332	37.597	60	50	18.668	12.403
20.4473	34.981	31.328	10.785	45.766	42.113	60	50	14.234	7.887
13.9688	28.156	24.507	10.636	38.792	35.143	60	50	21.208	14.857
0.644888	13.31	7.939	10.233	23.543	18.173	56	46	32.457	27.827

Table 7.2.2-6: Conducted EMI Results – 3S Meter Host (120 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
24.2906	21.67	17.808	10.981	32.65	28.789	60	50	27.35	21.211
20.6284	33.774	29.889	10.795	44.568	40.683	60	50	15.432	9.317
14.6786	33.995	30.319	10.733	44.728	41.052	60	50	15.272	8.948
4.49683	15.682	11.202	10.338	26.019	21.54	56	46	29.981	24.46
0.6556	24.921	18.891	10.243	35.164	29.134	56	46	20.836	16.866
0.5037	13.823	10.525	10.189	24.012	20.714	56	46	31.988	25.286

Table 7.2.2-7: Conducted EMI Results – 3S Meter Host (277 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
23.3014	24.878	20.827	10.93	35.808	31.758	60	50	24.192	18.242
22.8208	26.561	22.468	10.906	37.467	33.374	60	50	22.533	16.626
21.2244	26.486	22.508	10.825	37.311	33.333	60	50	22.689	16.667
20.57	20.969	16.58	10.792	31.76	27.372	60	50	28.24	22.628
20.3135	21.087	17.288	10.779	31.865	28.067	60	50	28.135	21.933
14.4044	22.643	18.51	10.694	33.337	29.205	60	50	26.663	20.795

Table 7.2.2-8: Conducted EMI Results – 3S Meter Host (277 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
22.7859	24.957	21.112	10.904	35.861	32.016	60	50	24.139	17.984
21.9632	26.633	22.724	10.862	37.495	33.586	60	50	22.505	16.414
21.2291	24.319	20.154	10.825	35.144	30.979	60	50	24.856	19.021
14.5375	25.89	22.163	10.713	36.603	32.876	60	50	23.397	17.124
3.79162	22.683	18.251	10.326	33.008	28.576	56	46	22.992	17.424
0.503269	26.034	19.406	10.189	36.223	29.595	56	46	19.777	16.405

Table 7.2.2-9: Conducted EMI Results – 4S Meter Host (120 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
25.2119	22.304	18.589	11.028	33.331	29.617	60	50	26.669	20.383
23.8032	24.188	20.322	10.956	35.144	31.278	60	50	24.856	18.722
22.7886	24.096	20.401	10.904	35	31.306	60	50	25	18.694
22.322	22.987	19.255	10.881	33.867	30.136	60	50	26.133	19.864
13.2322	23.524	20.079	10.606	34.13	30.685	60	50	25.87	19.315
0.1769	29.202	25.328	10.318	39.52	35.647	65.231	55.231	25.712	19.585

Table 7.2.2-10: Conducted EMI Results – 4S Meter Host (120 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
23.9223	20.636	16.775	10.962	31.598	27.737	60	50	28.402	22.263
21.9779	19.678	15.976	10.863	30.541	26.84	60	50	29.459	23.16
13.6218	29.654	25.917	10.622	40.276	36.539	60	50	19.724	13.461
0.686694	24.037	17.317	10.273	34.309	27.59	56	46	21.691	18.41
0.5014	20.146	17.228	10.189	30.335	27.418	56	46	25.665	18.582
0.17325	27.981	23.755	10.32	38.3	34.075	65.336	55.336	27.035	21.261

Table 7.2.2-11: Conducted EMI Results – 4S Meter Host (277 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
23.5942	18.824	14.977	10.945	29.769	25.922	60	50	30.231	24.078
14.7513	25.97	22.161	10.743	36.713	32.904	60	50	23.287	17.096
14.3443	22.295	18.526	10.686	32.981	29.212	60	50	27.019	20.788
13.8733	21.475	17.326	10.632	32.107	27.959	60	50	27.893	22.041
0.260731	24.459	19.726	10.237	34.696	29.963	62.836	52.836	28.141	22.874
0.195625	24.286	21.386	10.311	34.596	31.697	64.696	54.696	30.1	22.999

Table 7.2.2-12: Conducted EMI Results – 4S Meter Host (277 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
15.1495	25.671	21.935	10.778	36.449	32.713	60	50	23.551	17.287
14.6119	29.394	25.8	10.724	40.117	36.524	60	50	19.883	13.476
0.525238	27.936	21.876	10.19	38.125	32.066	56	46	17.875	13.934
0.5159	24.52	16.823	10.19	34.709	27.013	56	46	21.291	18.987
0.26785	29.469	26.193	10.229	39.698	36.422	62.633	52.633	22.935	16.211
0.199644	25.235	21.086	10.309	35.544	31.395	64.582	54.582	29.038	23.187

Table 7.2.2-13: Conducted EMI Results – 9S Meter Host (120 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
27.1492	17.92	14.39	11.126	29.046	25.516	60	50	30.954	24.484
20.8158	33.05	28.06	10.81	43.86	38.87	60.00	50.00	16.1	11.1
20.5236	32.417	28.944	10.789	43.206	39.733	60	50	16.794	10.267
14.2895	27.942	24.328	10.678	38.62	35.007	60	50	21.38	14.993
0.502999	14.601	12.565	10.189	24.79	22.754	56	46	31.21	23.246
0.159269	16.323	10.567	10.327	26.65	20.894	65.735	55.735	39.086	34.841

Table 7.2.2-14: Conducted EMI Results – 9S Meter Host (120 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
20.6922	36.02	30.95	10.80	46.82	41.75	60.00	50.00	13.2	8.2
20.4858	35.49	30.4	10.79	46.28	41.19	60.00	50.00	13.7	8.8
20.1279	35.1	30.03	10.77	45.87	40.80	60.00	50.00	14.1	9.2
14.436	37.45	32.37	10.64	48.09	43.01	60.00	50.00	11.9	7.0
0.695024	24.943	20.86	10.281	35.223	31.141	56	46	20.777	14.859
0.50245	14.263	12.051	10.189	24.452	22.241	56	46	31.548	23.759

Table 7.2.2-15: Conducted EMI Results – 9S Meter Host (277 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
23.4607	21.016	17.318	10.939	31.954	28.257	60	50	28.046	21.743
22.1028	23.975	20.169	10.87	34.844	31.039	60	50	25.156	18.961
21.4063	24.842	20.924	10.834	35.676	31.758	60	50	24.324	18.242
20.6892	22.682	18.309	10.798	33.479	29.107	60	50	26.521	20.893
13.8919	21.697	17.394	10.633	32.33	28.027	60	50	27.67	21.973
13.744	20.622	16.454	10.627	31.249	27.081	60	50	28.751	22.919

Table 7.2.2-16: Conducted EMI Results – 9S Meter Host (277 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
21.4384	27.62	23.53	10.836	38.455	34.366	60	50	21.545	15.634
17.5657	21.583	17.604	10.77	32.353	28.375	60	50	27.647	21.625
14.6137	31.654	27.226	10.724	42.378	37.95	60	50	17.622	12.05
3.61082	22.06	17.789	10.323	32.382	28.112	56	46	23.618	17.888
0.766337	25.253	17.003	10.22	35.472	27.222	56	46	20.528	18.778
0.187113	23.996	21.226	10.314	34.31	31.54	64.94	54.94	30.63	23.399

Table 7.2.2-17: Conducted EMI Results – 12S Meter Host (120 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
29.4472	10.417	6.586	11.288	21.704	17.873	60	50	38.296	32.127
24.5601	26.622	22.937	10.994	37.616	33.931	60	50	22.384	16.069
19.8115	27.366	23.43	10.763	38.129	34.193	60	50	21.871	15.807
13.974	24.81	21.365	10.636	35.446	32.001	60	50	24.554	17.999
0.49995	14.807	10.54	10.189	24.996	20.73	56.001	46.001	31.005	25.272
0.168188	22.664	19.67	10.322	32.986	29.992	65.48	55.48	32.495	25.488

Table 7.2.2-18: Conducted EMI Results – 12S Meter Host (120 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
24.6717	19.661	16.164	11	30.661	27.164	60	50	29.339	22.836
19.6435	27.161	23.558	10.764	37.924	34.321	60	50	22.076	15.679
16.6365	24.594	21.14	10.773	35.367	31.913	60	50	24.633	18.087
13.8449	30.098	26.508	10.631	40.729	37.139	60	50	19.271	12.861
0.695769	25.217	20.165	10.281	35.498	30.446	56	46	20.502	15.554
0.623425	22.522	18.497	10.213	32.735	28.71	56	46	23.265	17.29

Table 7.2.2-19: Conducted EMI Results – 12S Meter Host (277 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
24.5865	15.766	12.051	10.996	26.761	23.047	60	50	33.239	26.953
24.0827	15.268	11.226	10.97	26.238	22.196	60	50	33.762	27.804
18.0771	17.478	12.98	10.769	28.246	23.749	60	50	31.754	26.251
15.9814	18.511	14.129	10.775	29.286	24.905	60	50	30.714	25.095
15.6106	19.239	15.576	10.776	30.015	26.353	60	50	29.985	23.647
14.3451	22.847	19.143	10.686	33.533	29.829	60	50	26.467	20.171

Table 7.2.2-20: Conducted EMI Results – 12S Meter Host (277 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
20.7273	13.212	8.923	10.8	24.011	19.723	60	50	35.989	30.277
14.4812	26.171	22.263	10.705	36.876	32.969	60	50	23.124	17.031
5.98594	22.8	19.092	10.37	33.169	29.462	60	50	26.831	20.538
5.03006	22.797	18.603	10.347	33.144	28.95	60	50	26.856	21.05
0.670406	29.519	23.158	10.257	39.776	33.416	56	46	16.224	12.584
0.52285	25.817	19.396	10.19	36.006	29.586	56	46	19.994	16.414

Table 7.2.2-21: Conducted EMI Results – 16S Meter Host (120 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
25.0422	17.771	13.311	11.019	28.79	24.33	60	50	31.21	25.67
23.848	30.457	26.818	10.958	41.415	37.776	60	50	18.585	12.224
19.8213	33.714	30.062	10.763	44.477	40.825	60	50	15.523	9.175
14.0997	32.301	28.81	10.651	42.952	39.462	60	50	17.048	10.538
13.9902	32.563	29.243	10.637	43.2	39.88	60	50	16.8	10.12
0.500638	25.051	23.351	10.189	35.24	33.541	56	46	20.76	12.459

Table 7.2.2-22: Conducted EMI Results – 16S Meter Host (120 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
24.4466	20.148	16.478	10.989	31.136	27.467	60	50	28.864	22.533
19.9438	33.084	29.491	10.763	43.846	40.254	60	50	16.154	9.746
13.9891	35.462	31.922	10.637	46.099	42.559	60	50	13.901	7.441
1.00253	24.165	23.197	10.187	34.352	33.384	56	46	21.648	12.616
0.672625	28.363	23.057	10.259	38.622	33.316	56	46	17.378	12.684
0.5011	26.406	24.093	10.189	36.595	34.283	56	46	19.405	11.717

Table 7.2.2-23: Conducted EMI Results – 16S Meter Host (277 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
23.7885	22.274	18.728	10.955	33.229	29.683	60	50	26.771	20.317
22.2003	20.276	16.178	10.874	31.15	27.052	60	50	28.85	22.948
17.6703	20.964	16.31	10.77	31.734	27.08	60	50	28.266	22.92
14.6732	29.529	25.812	10.732	40.261	36.544	60	50	19.739	13.456
0.266706	26.527	22.43	10.231	36.757	32.661	62.666	52.666	25.908	20.005
0.182494	26.488	23.089	10.316	36.804	33.405	65.072	55.072	28.268	21.666

Table 7.2.2-24: Conducted EMI Results – 16S Meter Host (277 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
14.6341	30.962	27.323	10.727	41.688	38.049	60	50	18.312	11.951
5.28086	25.386	21.288	10.353	35.739	31.642	60	50	24.261	18.358
5.0157	21.191	16.195	10.347	31.538	26.542	60	50	28.462	23.458
4.9848	21.538	16.244	10.346	31.884	26.591	56	46	24.116	19.409
4.43134	25.074	20.663	10.337	35.41	30.999	56	46	20.59	15.001
0.647906	30.819	24.248	10.236	41.055	34.484	56	46	14.945	11.516

Table 7.2.2-25: Conducted EMI Results – 45S Meter Host (120 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
29.9727	21.998	18.483	11.367	33.365	29.85	60	50	26.635	20.15
25.9452	12.136	8.467	11.065	23.201	19.532	60	50	36.799	30.468
20.1599	22.34	18.779	10.771	33.11	29.549	60	50	26.89	20.451
13.4188	22.511	18.846	10.613	33.124	29.46	60	50	26.876	20.54
0.312463	13.144	8.901	10.194	23.337	19.095	61.358	51.358	38.021	32.263
0.174969	23.669	20.143	10.319	33.988	30.462	65.287	55.287	31.299	24.825

Table 7.2.2-26: Conducted EMI Results – 45S Meter Host (120 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
20.7456	29.17	25.747	10.801	39.97	36.547	60	50	20.03	13.453
14.1277	30.887	27.456	10.655	41.542	38.112	60	50	18.458	11.888
4.65597	16.489	11.961	10.341	26.829	22.302	56	46	29.171	23.698
0.649744	27.283	22.756	10.238	37.521	32.994	56	46	18.479	13.006
0.51215	22.401	18.365	10.19	32.59	28.555	56	46	23.41	17.445
0.170269	23.497	18.403	10.321	33.818	28.724	65.421	55.421	31.603	26.697

Table 7.2.2-27: Conducted EMI Results – 45S Meter Host (277 VAC) – Line 1

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
14.1356	16.352	12.375	10.656	27.008	23.032	60	50	32.992	26.968
7.74526	11.859	8.341	10.413	22.272	18.755	60	50	37.728	31.245
6.90942	13.503	9.717	10.391	23.894	20.108	60	50	36.106	29.892
3.71509	13.378	9.197	10.324	23.702	19.522	56	46	32.298	26.478
0.4925	13.996	8.736	10.189	24.185	18.926	56.214	46.214	32.029	27.289
0.187494	20.971	17.453	10.314	31.285	27.767	64.929	54.929	33.644	27.161

Table 7.2.2-28: Conducted EMI Results – 45S Meter Host (277 VAC) – Line 2

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
14.4755	24.785	20.577	10.704	35.489	31.281	60	50	24.511	18.719
4.50709	24.273	20.326	10.338	34.611	30.664	56	46	21.389	15.336
2.80459	25.493	19.344	10.29	35.783	29.634	56	46	20.217	16.366
1.28289	25.433	19.528	10.19	35.623	29.718	56	46	20.377	16.282
0.485406	26.811	21.377	10.189	37	31.566	56.417	46.417	19.417	14.851
0.482	26.792	21.668	10.189	36.981	31.857	56.514	46.514	19.533	14.657

7.3 Peak Output Power - FCC 15.247(b)(2); IC RSS-210 A8.4(1)

7.3.1 Measurement Procedure (Conducted Method)

The RF output port of the EUT was directly connected to the input of a power meter. The device employs ≥ 50 channels therefore the power is limited to 1 Watt.

7.3.2 Measurement Results

Results are shown below in Table 7.3.2-1 below:

Table 7.3.2-1: RF Output Power

Frequency [MHz]	Level [dBm]
910.0	15.40
914.8	16.15
921.8	14.88

7.4 Channel Usage Requirements

7.4.1 Carrier Frequency Separation – FCC 15.247(a)(1); IC RSS-210 A8.1(b)

7.4.1.1 Measurement Procedure

The RF output port of the EUT was directly connected to the input of the spectrum analyzer. The span of the spectrum analyzer was set wide enough to capture two adjacent peaks and the RBW and VBW were set to ≥ 1% of the span.

7.4.1.2 Measurement Results

Results are shown below in Figure 7.4.1.2-1.

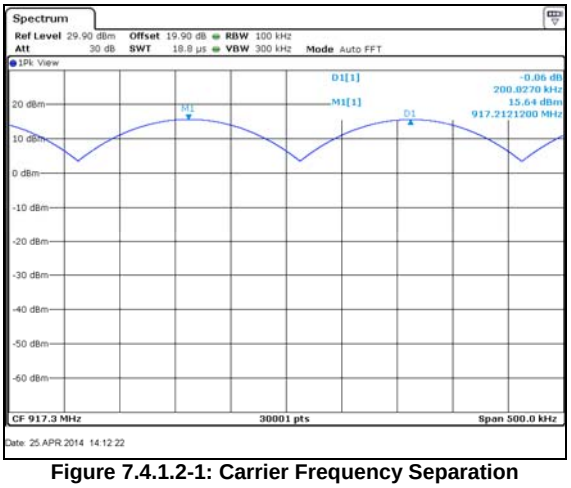

Figure 7.4.1.2-1: Carrier Frequency Separation

7.4.2 Number of Hopping Channels – FCC 15.247(a)(1)(i); IC RSS-210 A8.1(c)

7.4.2.1 Measurement Procedure

The RF output port of the EUT was directly connected to the input of the spectrum analyzer. The span of the spectrum analyzer was set wide enough to capture the frequency band of operation. The RBW was set to ≥ 1% of the span and VBW set to ≥ RBW.

7.4.2.2 Measurement Results

Results are shown below in Figures 7.4.2.2-1 to 7.4.2.2-3.

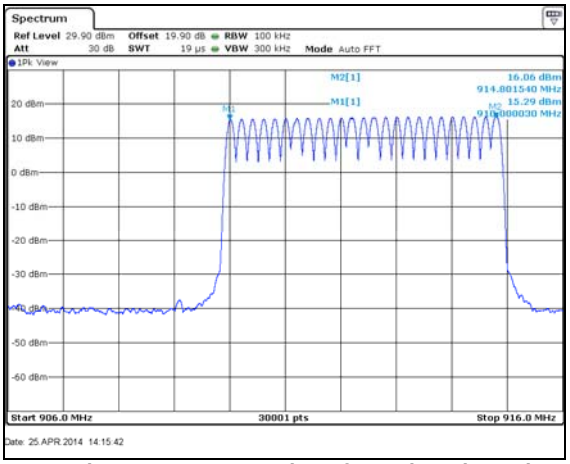

Figure 7.4.2.2-1: Number of Hopping Channels

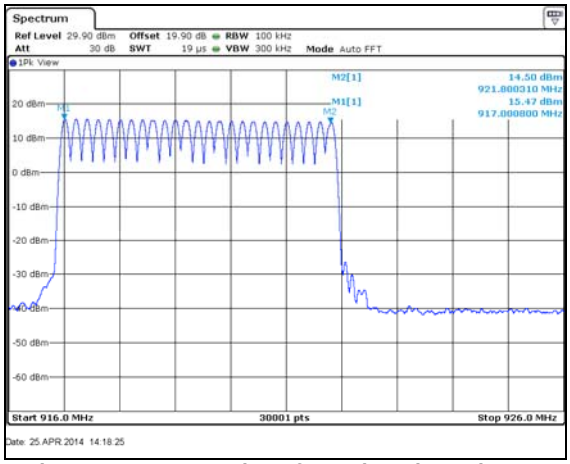

Figure 7.4.2.2-2: Number of Hopping Channels

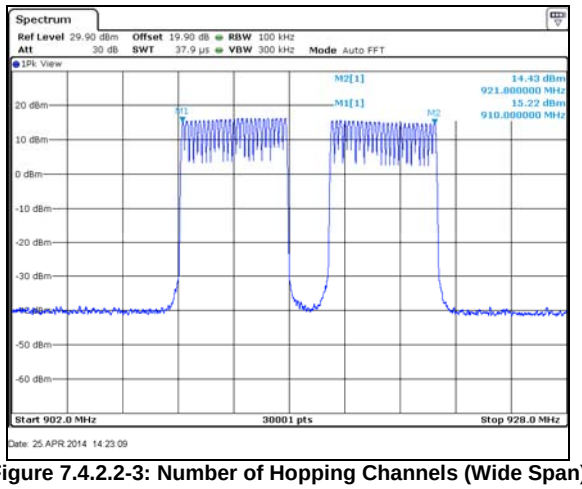

Figure 7.4.2.2-3: Number of Hopping Channels (Wide Span)

7.4.3 Channel Dwell Time – FCC 15.247(a)(1)(i); IC RSS-210 A8.1(c)

7.4.3.1 Measurement Procedure

The span was set to 0 Hz, centered on a hopping channel. The RBW was set to 1 MHz and the VBW to 3MHz. Sweep time was set such to capture the burst duration of the emission. The marker – delta function of the analyzer was employed to measure the burst duration.

7.4.3.2 Measurement Results

A single transmission is shown in Table 7.4.3.2-1 and Figure 7.4.3.2-1 below.

Table 7.4.3.2-1: Channel Dwell Time

Single Occurrence (ms)	Number of Occurrences / 20s	Total Dwell Time (ms)
57.11	1	57.11

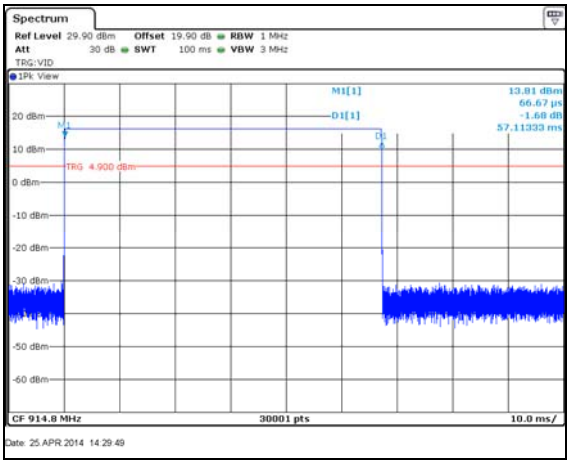

Figure 7.4.3.2-1: Dwell Time

Detailed description of timing provided in theory of operation.

7.4.4 20dB / 99% Bandwidth - FCC 15.247(a)(1)(i); IC RSS-210 A8.1(c)

7.4.4.1 Measurement Procedure

The RF output port of the EUT was directly connected to the input of the spectrum analyzer. The span of the spectrum analyzer display was set between two times and five times the occupied bandwidth (OBW) of the emission. The RBW of the spectrum analyzer was set to approximately 1 % to 5 % of the OBW. The trace was set to max hold with a peak detector active. The Delta function of the analyzer was utilized to determine the 20 dB bandwidth of the emission.

The occupied bandwidth measurement function of the analyzer was used for the 99% bandwidth. The span of the analyzer 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 was set to 3 times the resolution bandwidth. A sampling detector was used.

7.4.4.2 Measurement Results

Results are shown below in Table 7.4.4.2-1 and Figures 7.4.4.2-1 to 7.4.4.2-6.

Table 7.4.4.2-1: 20dB / 99% Bandwidth

Frequency [MHz]	20dB Bandwidth [kHz]	99% Bandwidth [kHz]
910.0	138.54	138.81
914.8	138.74	138.57
921.8	138.55	138.43

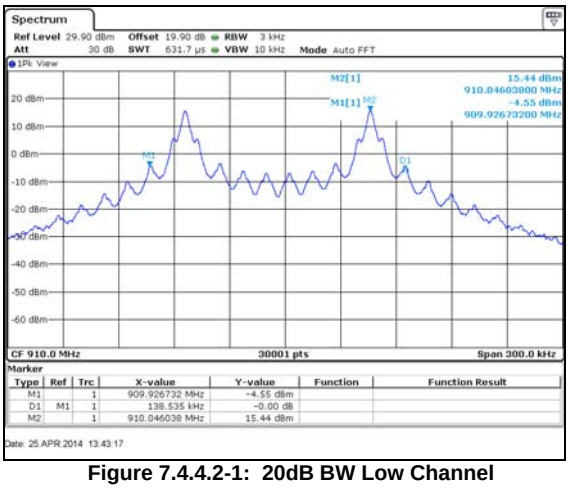

Figure 7.4.4.2-1: 20dB BW Low Channel

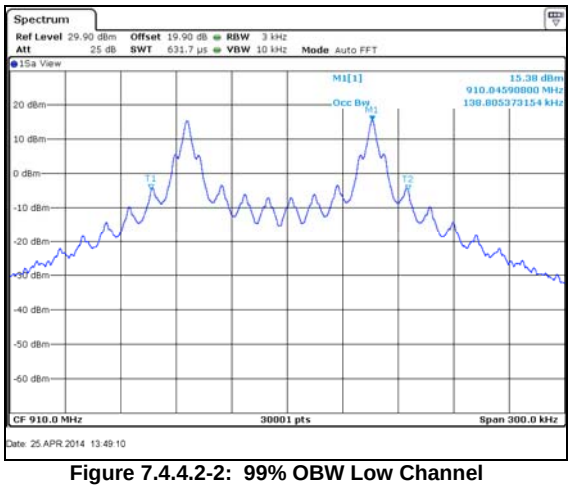

Figure 7.4.4.2-2: 99% OBW Low Channel

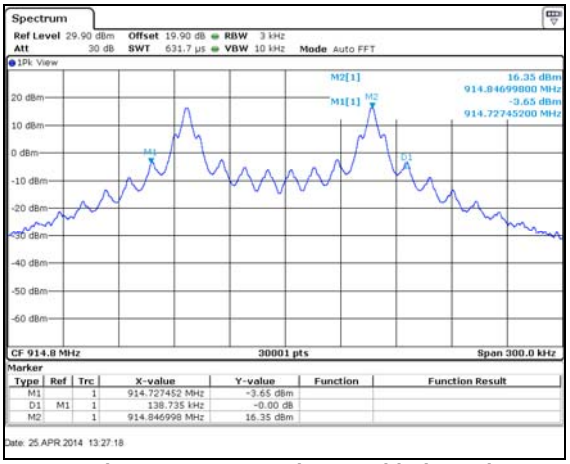

Figure 7.4.4.2-3: 20dB BW Mid Channel

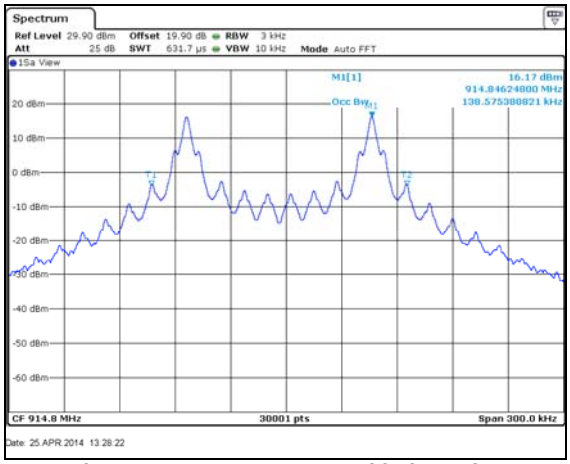

Figure 7.4.4.2-4: 99% OBW Mid Channel

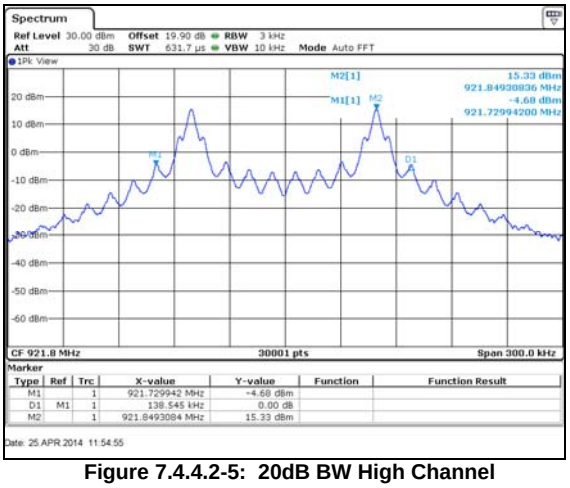

Figure 7.4.4.2-5: 20dB BW High Channel

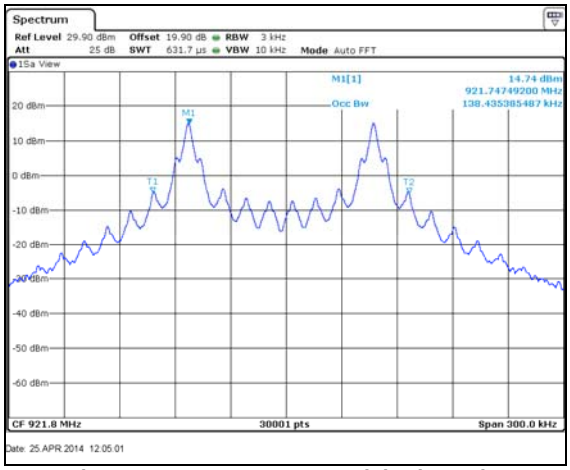

Figure 7.4.4.2-6: 99% OBW High Channel

7.5 Band-Edge Compliance and Spurious Emissions

7.5.1 Band-Edge Compliance of RF Conducted Emissions - FCC 15.247(d); IC RSS-210 A8.5

7.5.1.1 Measurement Procedure

The RF output port of the EUT was directly connected to the input of the spectrum analyzer. The EUT was investigated at the lowest and highest channel available to determine band-edge compliance. For each measurement the spectrum analyzer's RBW was set to ~ 1% of the span, and the VBW was set to >> RBW.

7.5.1.2 Measurement Results

Results are shown in the figures 7.5.1.2-1 to 7.5.1.2-4 below.

NON-HOPPING MODE:

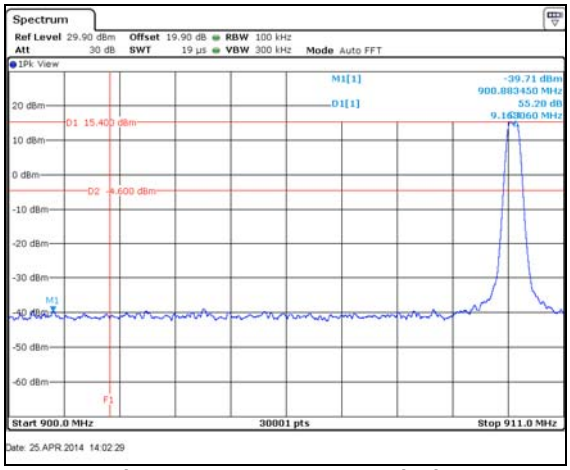

Figure 7.5.1.2-1: Lower Band-edge

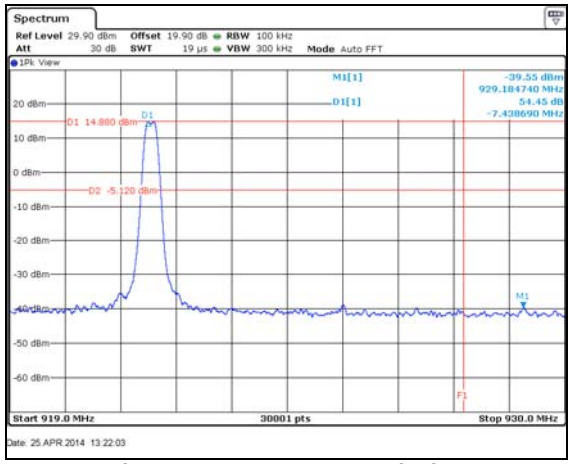

Figure 7.5.1.2-2: Upper Band-edge

HOPPING MODE:

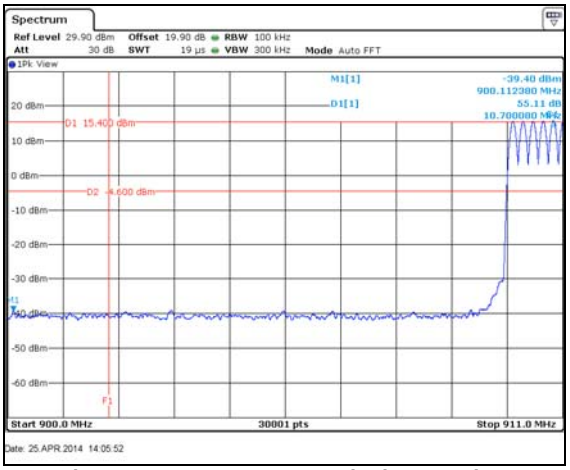

Figure 7.5.1.2-3: Lower Band-edge Hopping

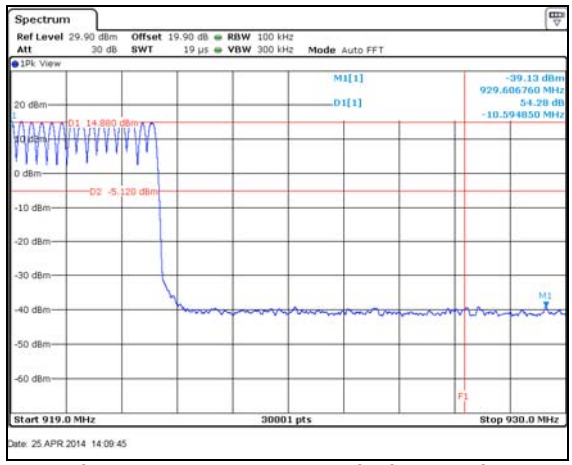

Figure 7.5.1.2-4: Upper Band-edge Hopping

7.5.2 RF Conducted Spurious Emissions - FCC 15.247(d); IC RSS-210 A8.5

7.5.2.1 Measurement Procedure

The RF output port of the EUT was directly connected to the input of the spectrum analyzer. The EUT was investigated for conducted spurious emissions from 30MHz to 10GHz, 10 times the highest fundamental frequency. Measurements were made at the low, center and high channels of the EUT. For each measurement, the spectrum analyzer's RBW was set to 100kHz. A peak detector function was used with the trace set to max hold.

7.5.2.2 Measurement Results

Results are shown below in Figures 7.5.2.2-1 to 7.5.2.2-6:

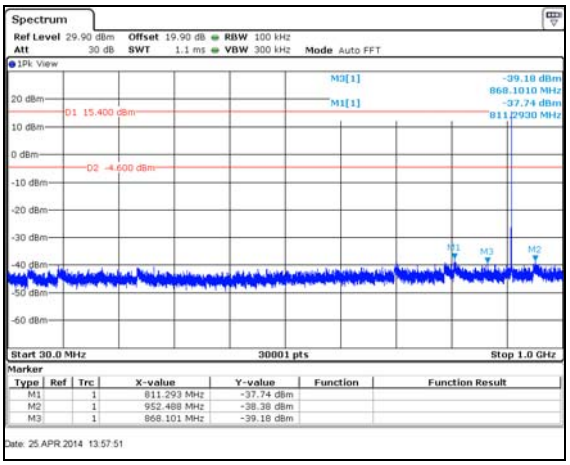

Figure 7.5.2.2-1: 30 MHz – 1 GHz – Low Channel

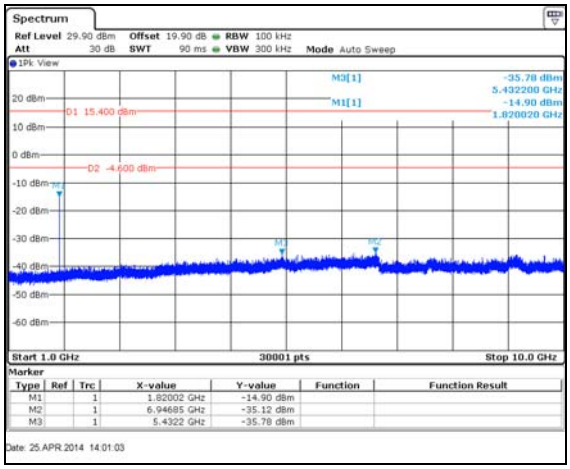

Figure 7.5.2.2-2: 1 GHz – 10 GHz – Low Channel

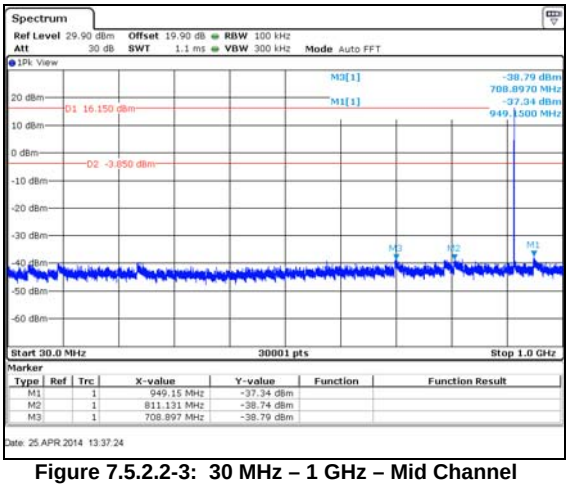

Figure 7.5.2.2-3: 30 MHz – 1 GHz – Mid Channel

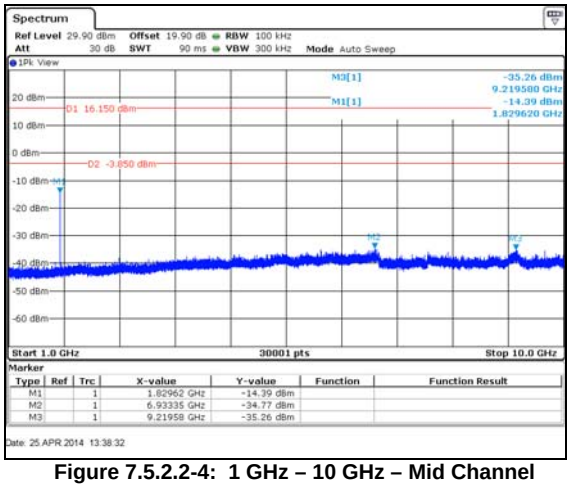

Figure 7.5.2.2-4: 1 GHz – 10 GHz – Mid Channel

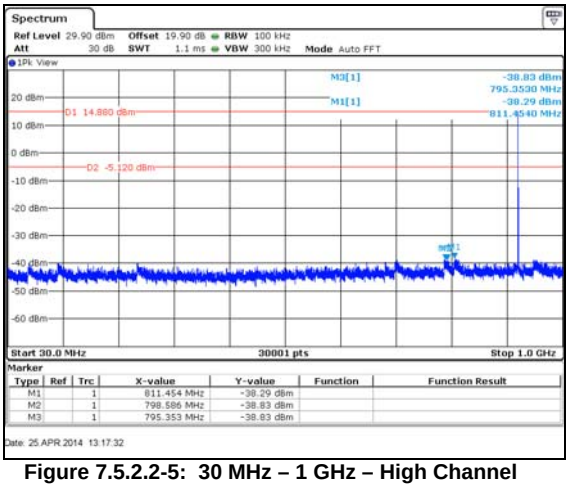

Figure 7.5.2.2-5: 30 MHz – 1 GHz – High Channel

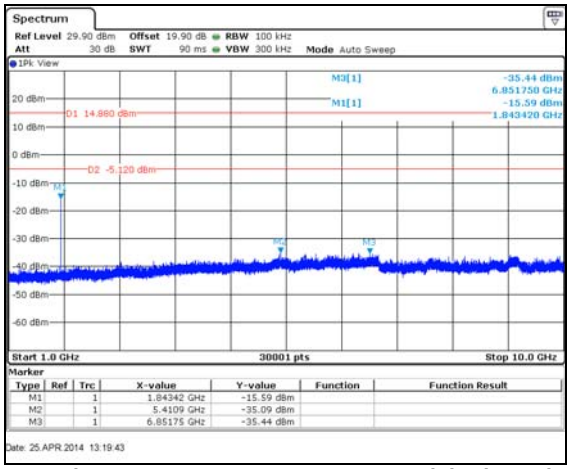

Figure 7.5.2.2-6: 1 GHz – 10 GHz – High Channel

7.5.3 Radiated Spurious Emissions - FCC 15.205, 15.209; IC RSS-210 2.2, RSS-Gen 7.2.2

7.5.3.1 Measurement Procedure

Radiated emissions tests were made over the frequency range of 30MHz to 10GHz, 10 times the highest fundamental frequency.

The EUT was rotated through 360° and the receive antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. For frequencies below 1000MHz, quasi-peak measurements were made using a resolution bandwidth RBW of 120 kHz and a video bandwidth VBW of 300 kHz. For frequencies above 1000MHz, peak and average measurements were made with RBW and VBW of 1 MHz and 3MHz respectively.

The EUT was caused to generate a continuous modulated carrier on the hopping channel.

Each emission found to be in a restricted band was compared to the applicable radiated emission limits.

7.5.3.2 Duty Cycle Correction

For average radiated measurements, using a 57.2% duty cycle, the measured level was reduced by a factor 4.852dB. The duty cycle correction factor is determined using the formula: 20log (57.2/100). See Section 7.4.3 for details.

7.5.3.3 Measurement Results

Radiated spurious emissions found in the band of 30MHz to 10GHz are reported in the Table 7.5.3.3-1 below.

Table 7.5.3.3-1: Radiated Spurious Emissions Tabulated Data – 16S Host (120VAC/60Hz) Internal Antenna

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
Low Channel										
2730	56.03	52.45	H	-4.57	51.46	43.03	74.0	54.0	22.5	11.0
2730	57.84	54.05	V	-4.57	53.27	44.63	74.0	54.0	20.7	9.4
3640	52.16	45.04	H	-1.21	50.95	38.98	74.0	54.0	23.0	15.0
3640	52.93	46.51	V	-1.21	51.72	40.45	74.0	54.0	22.3	13.6
4550	48.14	37.57	H	1.04	49.18	33.76	74.0	54.0	24.8	20.2
4550	48.15	37.75	V	1.04	49.19	33.94	74.0	54.0	24.8	20.1
Mid Channel										
2744.4	59.16	56.23	H	-4.51	54.65	46.87	74.0	54.0	19.3	7.1
2744.4	62.81	59.97	V	-4.51	58.30	50.61	74.0	54.0	15.7	3.4
3659.2	53.42	48.19	H	-1.14	52.28	42.20	74.0	54.0	21.7	11.8
3659.2	54.81	49.56	V	-1.14	53.67	43.57	74.0	54.0	20.3	10.4
4574	49.21	40.16	H	1.09	50.30	36.39	74.0	54.0	23.7	17.6
4574	50.33	42.17	V	1.09	51.42	38.40	74.0	54.0	22.6	15.6
High Channel										
2765.4	58.03	54.84	H	-4.42	53.61	45.57	74.0	54.0	20.4	8.4
2765.4	58.95	55.93	V	-4.42	54.53	46.66	74.0	54.0	19.5	7.3
3687.2	54.26	48.8	H	-1.04	53.22	42.91	74.0	54.0	20.8	11.1
3687.2	53.25	46.56	V	-1.04	52.21	40.67	74.0	54.0	21.8	13.3
4609	48.15	38.74	H	1.15	49.30	35.04	74.0	54.0	24.7	19.0
4609	48.69	39.07	V	1.15	49.84	35.37	74.0	54.0	24.2	18.6

7.5.3.4 Sample Calculation:

$R_C = R_U + CF_T$

Where:

CF_T	=	Total Correction Factor (AF+CA+AG)-DC (Average Measurements Only)
R_U	=	Uncorrected Reading
R_C	=	Corrected Level
AF	=	Antenna Factor
CA	=	Cable Attenuation
AG	=	Amplifier Gain
DC	=	Duty Cycle Correction Factor

Example Calculation: Peak

Corrected Level: 56.03 - 4.57 = 51.46dBuV/m
Margin: 74dBuV/m – 51.46dBuV/m = 22.5dB

Example Calculation: Average

Corrected Level: 52.45 - 4.57 - 4.85 = 43.03dBuV
Margin: 54dBuV – 43.03dBuV = 11.0dB

8 CONCLUSION

In the opinion of ACS, Inc. the 570974-001, manufactured by Itron meets the requirements of FCC Part 15 subpart C and Industry Canada's Radio Standards Specification RSS-210.

END REPORT