Excellence in Compliance Testing

Certification Test Report

FCC ID: X6P-0003441
IC: 8832A-0003441

FCC Rule Part: 15.231
IC Radio Standards Specification: RSS-210

ACS Report Number: 11-0045.W06.11.A

Manufacturer: HomeRun Holdings
Model: QR1051433

Test Begin Date: April 26, 2011
Test End Date: May 5, 2011

Report Issue Date: June 1, 2011

FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612-0

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Prepared by: _____

Kirby Munroe
Director, Wireless Certifications
ACS, Inc.

This report contains 18 pages

TABLE OF CONTENTS

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.

1.2 Product description

The USB timer remote control allows Qmotion Shades to be controlled automatically, without the press of a button, or manually with button. The USB timer remote control can be setup to work anywhere in North America to operate shades based on time of day, day of week, sunrise, and sunset. The USB timer remote control is programmed using a USB interface to a home computer. Users may down load the program to their computer on-line or use a CD to receive the software for the product. The QR1051433 is a wall mounted transmitter which operates on a single channel at 433.92 MHz.

Frequency Range: 433.92 MHz
Operating channels: 1
Modulation: ASK (OOK)
Operating Voltage: 3.0V lithium battery

Manufacturer Information:
HomeRun Holdings Corp.
6370 Mt. Pleasant St. NW
North Canton OH 44720
USA

Test Sample Serial Number(s): ACS#2

Test Sample Condition: The test sample was provided in working order with no visible defects.

1.3 Test Methodology and Considerations

The QR1051433 is a stand-alone device which is either wall mounted or handheld. This device was tested in three orientations which represent normal intended operation. The EUT is a device that connects to the AC power lines indirectly, obtaining its power through a computer which is connected to the AC power lines. The EUT is programmed through a computer with the transmitter disabled in firmware.

This device operates manually at non-periodic rates with a press of a button or automatically at a periodic rate exceeding that specified in 15.231(a). The QR1051433 was tested to the 15.231(e) radiated emission limits to show compliance for automatic periodic operation. For manual non-periodic operation, compliance with 15.231(a)(1) is also shown.

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: 894540
Industry Canada Lab Code: IC 4175A-1
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:

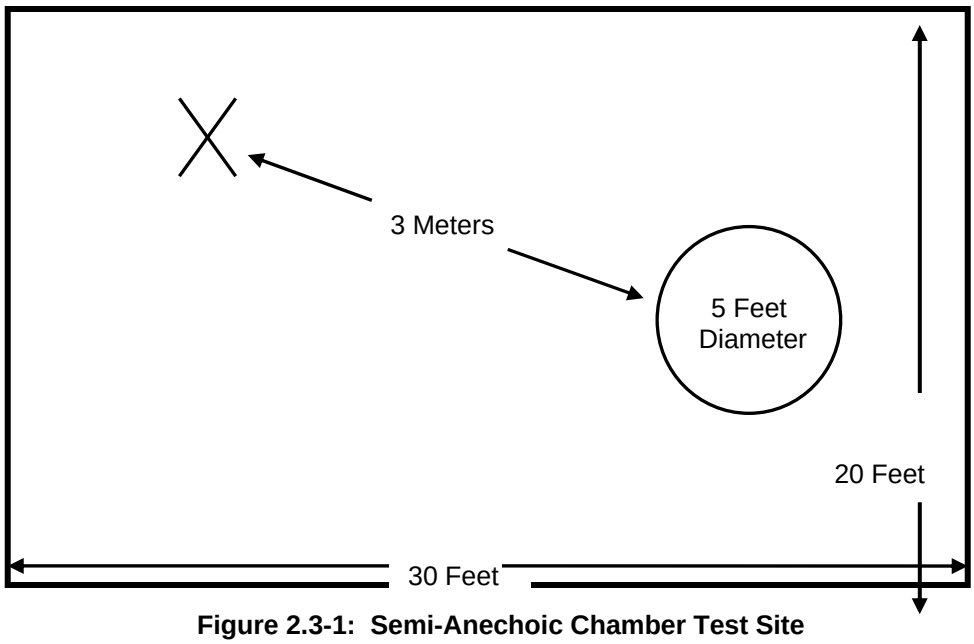


Figure 2.3-1: Semi-Anechoic Chamber Test Site

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:

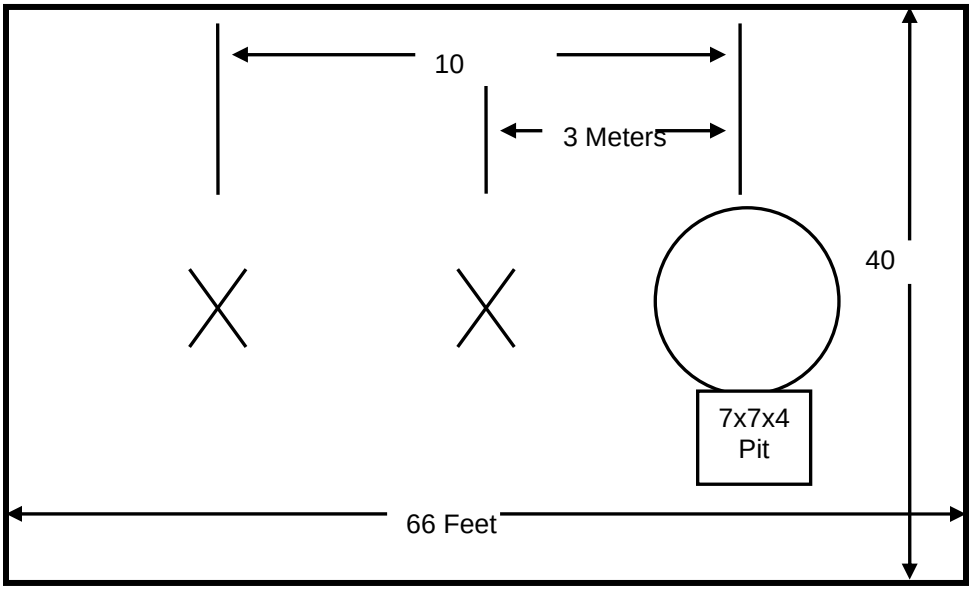


Figure 2.3-2: Open Area Test Site

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 4.1.3-1:

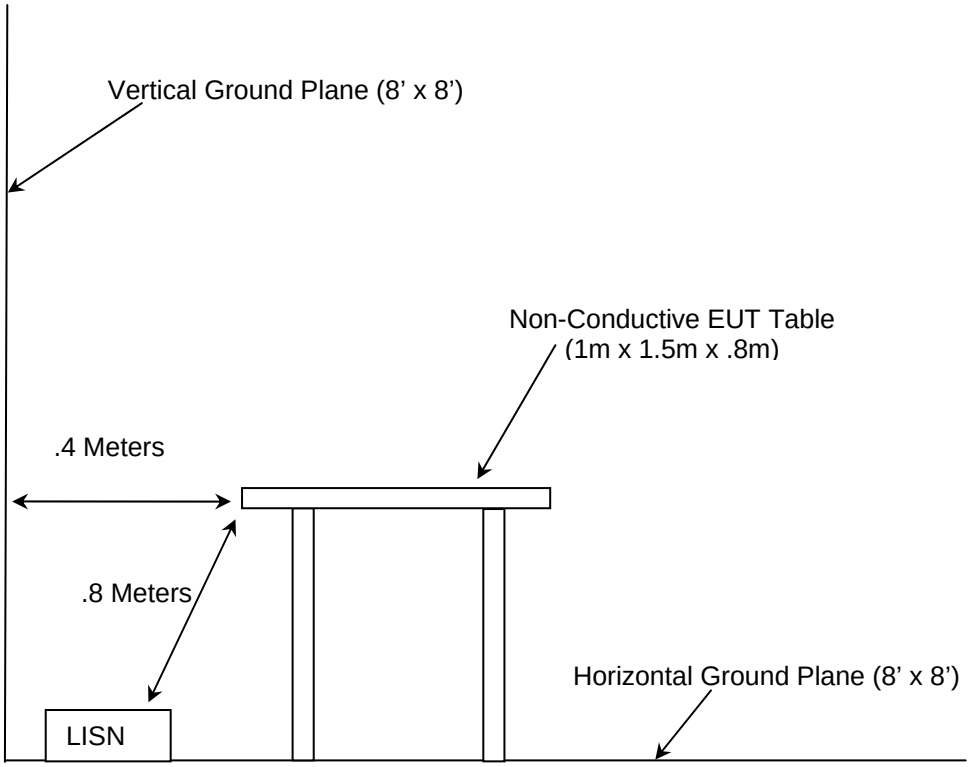


Figure 2.4-1: AC Mains Conducted EMI Site

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
- US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2010
- US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2010
- Industry Canada Radio Standards Specification: RSS-210 - Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Issue 8 Dec 2010
- Industry Canada Radio Standards Specification: RSS-GEN – General Requirements and Information for the Certification of Radiocommunication Equipment, Issue3, Dec 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

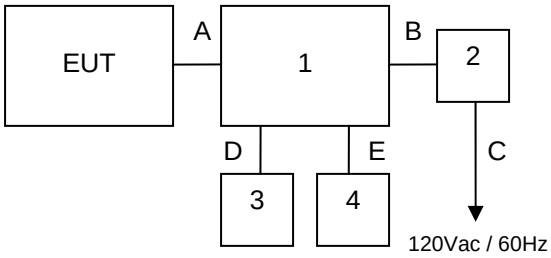
AssetID	Manufacturer	Model #	Equipment Type	Serial #	Last Calibration Date	Calibration Due Date
22	Agilent	8449B	Amplifiers	3008A00526	9/2/2010	8/30/2011
152	EMCO	3825/2	LISN	9111-1905	11/2/2010	11/2/2012
168	Hewlett Packard	11947A	Attenuators	44829	2/4/2011	2/4/2012
193	ACS	OATS cable Set	Cable Set	193	1/6/2011	1/6/2012
211	Eagle	C7RFM3NFNM	Filters	HLC-700	12/23/2010	12/23/2011
213	TEC	PA 102	Amplifiers	44927	12/23/2010	12/23/2011
277	Emco	93146	Antennas	9904-5199	8/25/2010	8/25/2012
283	Rohde & Schwarz	FSP40	Spectrum Analyzers	1000033	8/31/2010	8/31/2011
324	ACS	Belden	Cables	8214	7/9/2010	7/9/2011
329	A.H.Systems	SAS-571	Antennas	721	8/4/2009	8/4/2011
343	Florida RF Cables	SMRE-200W-12.0-SMRE	Cables	N/A	4/15/2011	4/15/2012
430	RF Cables	SMS-290AW-480-SMS	Cables	N/A	4/15/2011	4/15/2012
486	Hewlett Packard	8591E	Analyzers	3543A04709	6/16/2010	6/16/2011
RE40	Agilent Technologies	E7405A	Spectrum Analyzers	US39150132	7/20/2010	7/20/2011

5 SUPPORT EQUIPMENT

Table 5-1: Support Equipment

Item	Equipment Type	Manufacturer	Model Number	Serial Number	FCC ID
1	Laptop	Dell	PP10L	CN-0H2049-48643-46F-1251	N/A
2	Laptop Power Supply	Dell	PA-1650-05D2	CN-0F7970-71615-55M-6BF4	N/A
3	Serial Mouse	Microsoft	37964	2392073	C3KMS1
4	USB Keyboard	Dell	L100	CN-0RH659-73571-86M-0DRI	N/A

6 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM



AC Line Conducted Emissions Setup

Radiated Emissions Setup

A: USB Mini Cable, 100cm, Non-shielded
B: Power Cable, 200cm, Shielded
C: Power Cable, 75cm, Non-shielded
D: Serial Cable, 200cm, Non-shielded
E: USB Cable, 150cm, Non-shielded

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: CFR 47 Part 15.203

The QR1051433 utilizes an integral PCB antenna which cannot be removed without permanently damaging the device thus satisfying Part 15.203.

7.2 Power Line Conducted Emissions – FCC: CFR 47 Part 15.207/ IC: RSS-GEN 7.2.4

7.2.1 Measurement Procedure

The EUT is a device that connects to the AC power lines indirectly, obtaining its power through a computer which is connected to the AC power lines. The EUT is programmed through a computer with the transmitter disabled in firmware.

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 and Tables 7.2.2-1 to 7.2.2-2.

Table 7.2.2-1: Line 1 Conducted EMI Results

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
0.253	42.35	36.99	10.02	52.37	47.01	61.66	51.66	9.3	4.7
0.307	39.79	31.44	10.12	49.91	41.56	60.05	50.05	10.1	8.5
0.352	39.36	32.77	10.17	49.53	42.94	58.92	48.92	9.4	6.0
0.607	35.88	28.12	10.00	45.88	38.12	56.00	46.00	10.1	7.9
0.918	35.87	29.48	10.00	45.87	39.48	56.00	46.00	10.1	6.5
1.705	31.89	24.06	10.00	41.89	34.06	56.00	46.00	14.1	11.9

Table 7.2.2-2: Line 2 Conducted EMI Results

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
0.326	38.76	26.62	10.14	48.90	36.76	59.55	49.55	10.7	12.8
0.356	37.23	35.69	10.18	47.41	45.87	58.82	48.82	11.4	3.0
0.484	33.3	17.52	10.00	43.30	27.52	56.27	46.27	13.0	18.8
0.51	26.93	22.05	10.00	36.93	32.05	56.00	46.00	19.1	14.0
1.048	31.5	20.43	10.00	41.50	30.43	56.00	46.00	14.5	15.6
1.326	36.57	28.56	10.00	46.57	38.56	56.00	46.00	9.4	7.4

7.3 Periodic Operation – FCC: CFR 47 15.231(e) / IC: RSS-210 A1.1.5

7.3.1 Test Methodology

Devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

The plot below also represents the transmitter as manually operated. A single press of the button yields identical results therefore showing compliance to Part 15.231(a)(1) which requires a switch to automatically deactivate the transmitter within not more than 5 seconds of being released. After a single press of the button, the transmitter deactivates after < 1 second.

The transmitter was activated and was evaluated using a spectrum analyzer at zero span. Justification for the silent period requirements per 15.231(e) can be found in the theory of operation.

7.3.2 Test Results

The results are shown in Figure 7.3.2-1.

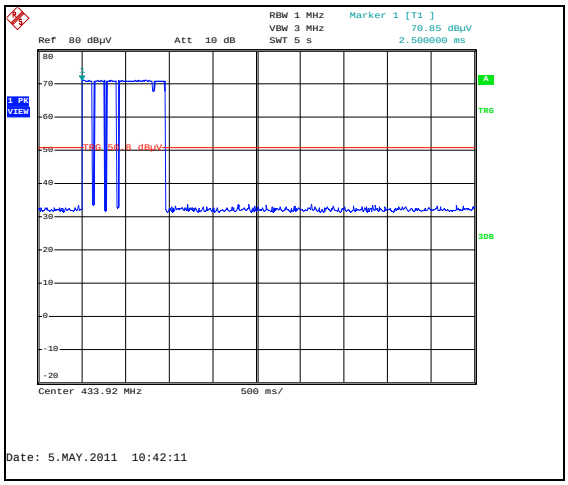


Figure 7.3.2-1: Manual Non-Periodic and Automatic Periodic TX Hold Time

7.4 Occupied Bandwidth – FCC: CFR 47 15.231(c)(1)/ IC: RSS-210 A1.1.3

7.4.1 Test Methodology

For devices operating above 70MHz and below 900 MHz, the bandwidth of the emission shall be no wider than 0.25% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier for FCC compliance. The 99% occupied bandwidth is also provided.

7.4.2 Test Results

The 20dB and 99% bandwidths were measured as 3.66kHz and 6.62kHz respectively. 0.25% of the 433.92MHz center frequency is equivalent to 1.085MHz. Therefore the 20dB and 99% bandwidths of the emission is less than 0.25% of the center frequency. The results are shown in Figure 7.4.2-1 and 7.4.2-2.

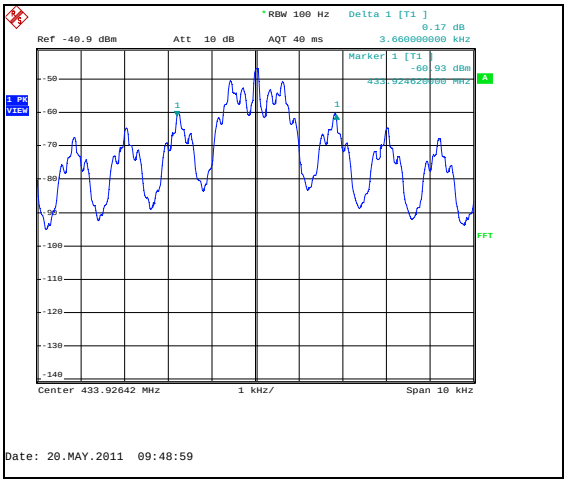


Figure 7.4.2-1: Occupied Bandwidth – 20dB

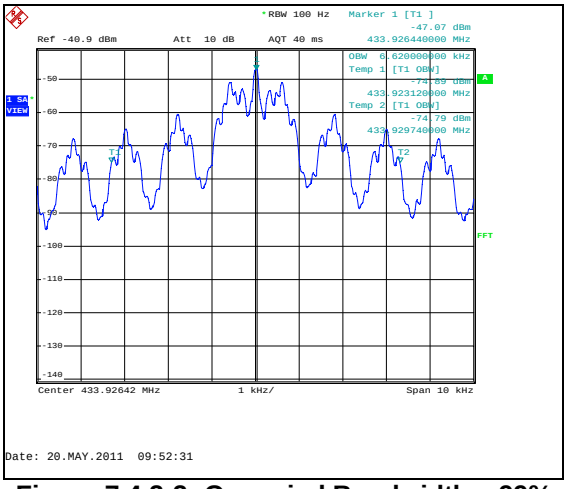


Figure 7.4.2-2: Occupied Bandwidth – 99%

7.5 Radiated Emissions (Field Strength/Spurious) – FCC: CFR 47 15.231(e)/ IC: RSS-210 A1.1.5

7.5.1 Test Methodology

Radiated emissions tests were made over the frequency range of 30MHz to 5GHz, 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, average measurements were made using a resolution bandwidth (RBW) of 120 kHz and a video bandwidth (VBW) of 300 kHz. For frequencies above 1000MHz, average and peak measurements were made with RBW of 1 MHz and a VBW of 3 MHz.

Further, compliance with the provisions of 15.205 was demonstrated using the measurement instrumentation specified in that section where applicable.

7.5.2 Duty Cycle Correction

For average radiated measurements, the measured level was reduced by a factor -6.99dB to account for the duty cycle of the EUT. The worst case duty cycle was determined to be 44.7%. The duty cycle correction factor is determined using the formula: 20log (0.447) = -6.99dB. Determination of the duty cycle correction is included in the plots and justification below.

Period (T) = 100ms
Number Pulses (N1) = 44
Pulse Width (T1) = 825us
Number Pulse (N2) = 5
Pulse Width (T2) = 1.68ms
(N1*T1 + N2*T2)/T = ((44*0.825) + (5*1.68))/100 = 0.447
20*Log(0.447) = -6.99dB Average Correction Factor

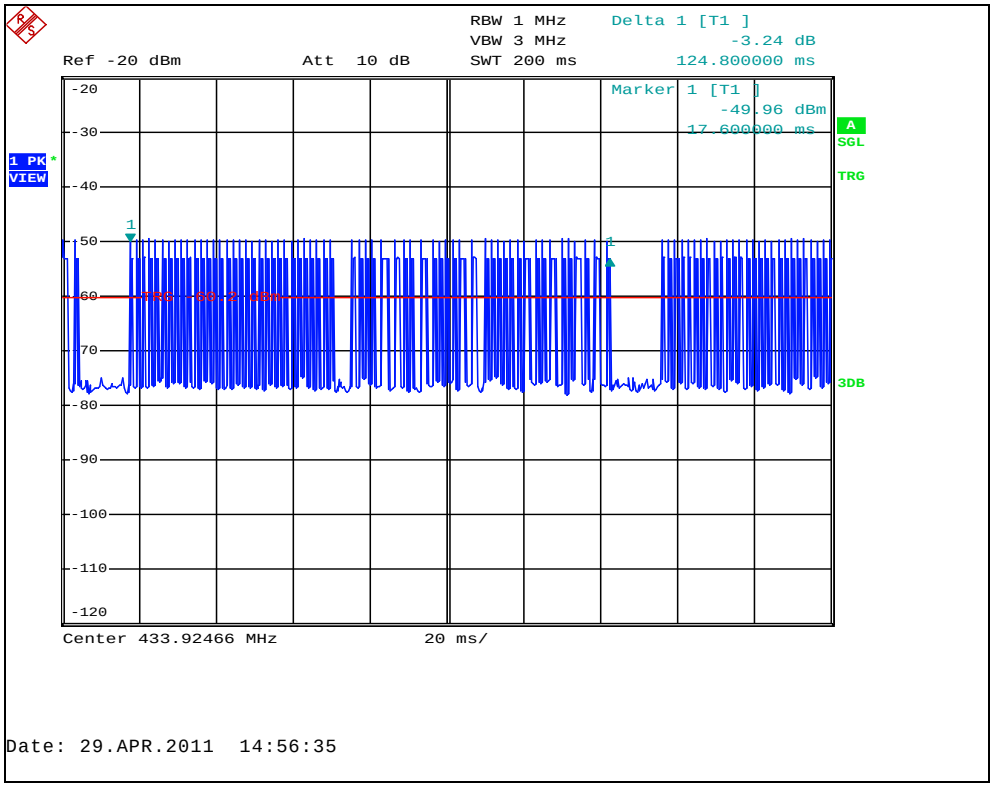


Figure 7.5.2-1: Pulse Train Period

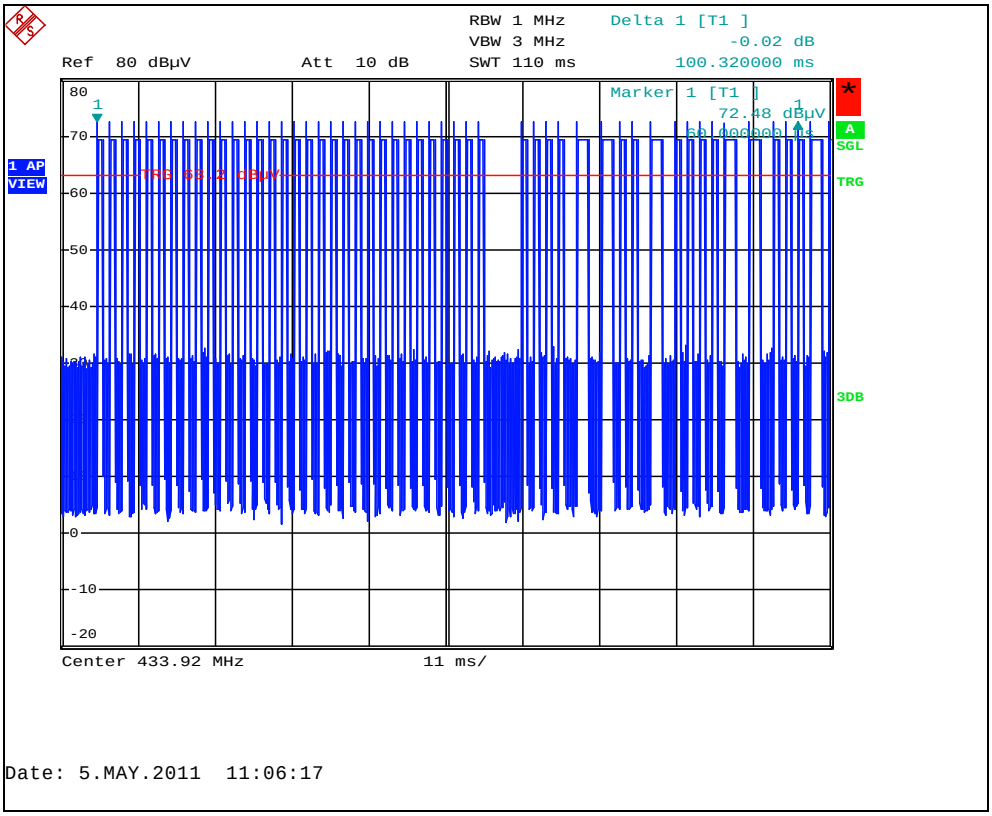


Figure 7.5.2-2: Duty Cycle - 100ms Period

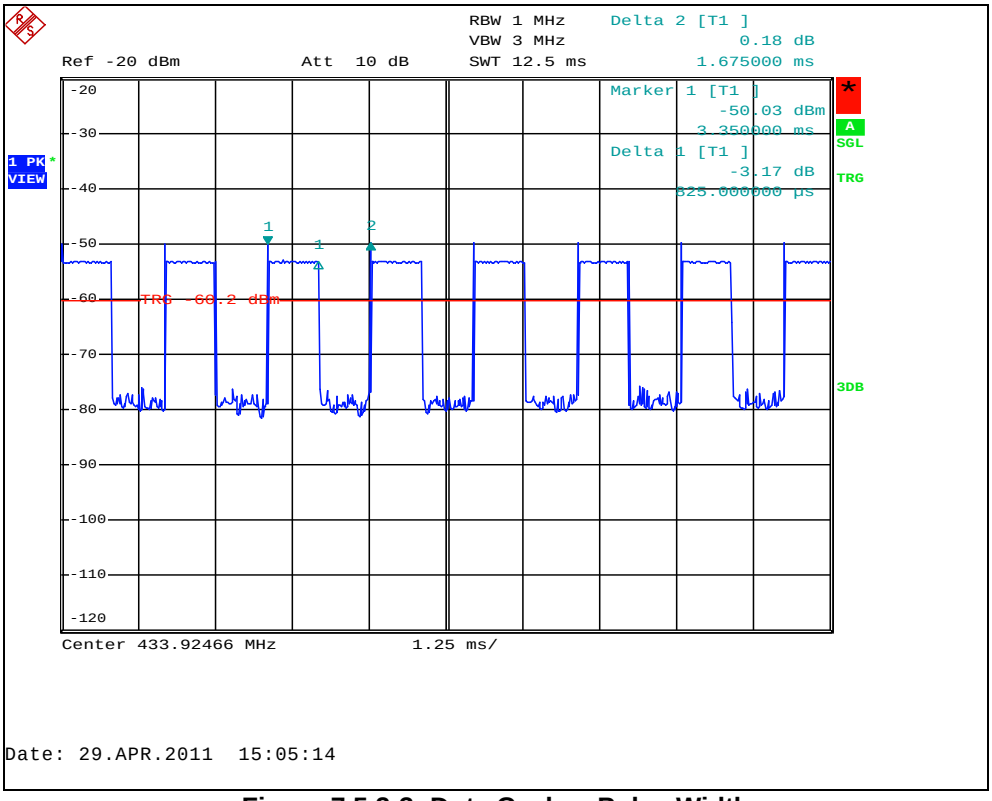


Figure 7.5.2-3: Duty Cycle – Pulse Width

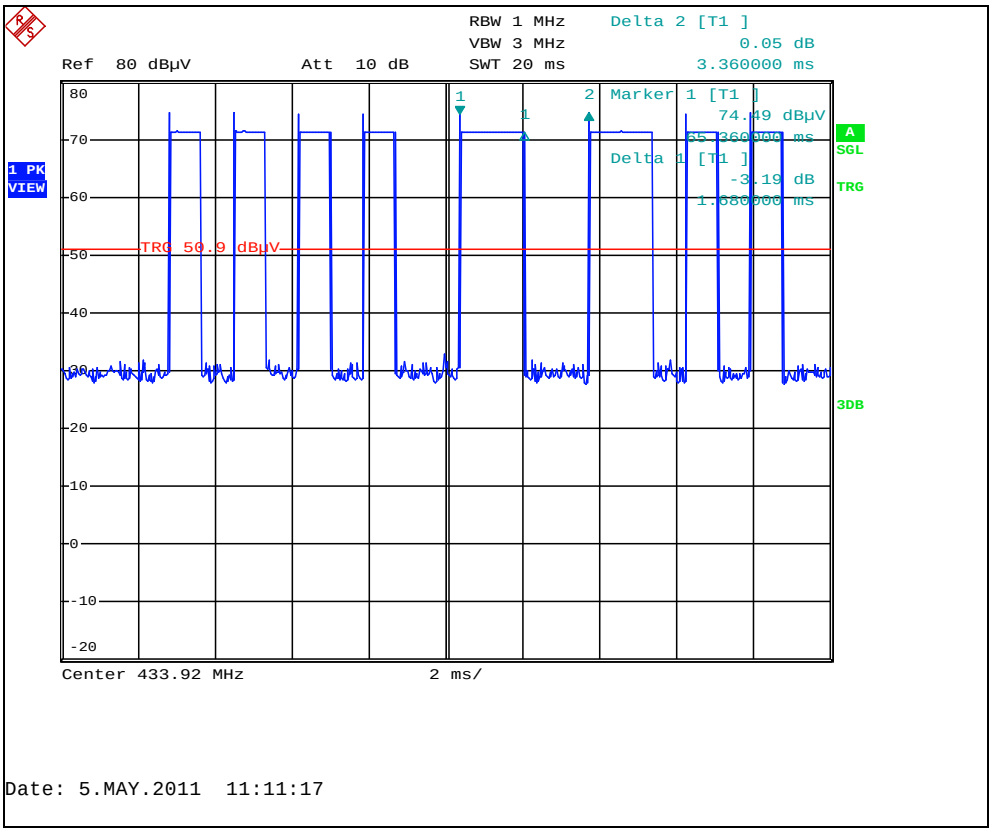


Figure 7.5.2-4: Duty Cycle – Pulse Width

7.5.3 Test Results

Radiated spurious emissions are reported in Tables 7.5.3-1 through 7.5.3-3. Emissions not reported were below the noise floor of the measurement system.

Table 7.5.3-1: Radiated Emissions – X Position

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
Fundamental Frequency										
433.92	82.07	82.07	H	-5.56	76.51	69.52	92.9	72.9	16.4	3.4
433.92	65.78	65.78	V	-5.56	60.22	53.23	92.9	72.9	32.7	19.6
Spurious Emissions										
867.84	54.34	54.34	H	3.16	57.50	50.51	72.9	52.9	15.4	2.4
867.84	53.03	53.03	V	3.16	56.19	49.20	72.9	52.9	16.7	3.7
1301.76	52.55	52.55	H	-6.92	45.63	38.65	74.0	54.0	28.4	15.4
1301.76	48.17	48.17	V	-6.92	41.25	34.27	74.0	54.0	32.7	19.7
1735.68	48.62	48.62	H	-3.49	45.13	38.14	74.0	54.0	28.9	15.9
1735.68	48.40	48.40	V	-3.49	44.91	37.92	74.0	54.0	29.1	16.1
2169.6	52.16	52.16	H	-0.57	51.59	44.60	74.0	54.0	22.4	9.4
2169.6	58.73	58.73	V	-0.57	58.16	51.17	74.0	54.0	15.8	2.8
2603.52	51.78	51.78	H	0.72	52.50	45.52	74.0	54.0	21.5	8.5
2603.52	52.13	52.13	V	0.72	52.85	45.87	74.0	54.0	21.2	8.1
3037.44	50.56	50.56	H	1.75	52.31	45.33	74.0	54.0	21.7	8.7
3037.44	51.15	51.15	V	1.75	52.90	45.92	74.0	54.0	21.1	8.1
3471.36	53.04	53.04	H	2.65	55.69	48.71	74.0	54.0	18.3	5.3
3471.36	51.22	51.22	V	2.65	53.87	46.89	74.0	54.0	20.1	7.1
3905.28	47.69	47.69	H	4.30	51.99	44.01	74.0	54.0	22.0	9.0
3905.28	48.34	48.34	V	4.30	52.64	45.66	74.0	54.0	21.4	8.4

Table 7.5.3-2: Radiated Emissions – Y Position

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
Fundamental Frequency										
433.92	75.95	75.95	H	-5.56	70.39	63.40	92.9	72.9	22.5	9.5
433.92	81.61	81.61	V	-5.56	76.05	69.06	92.9	72.9	16.9	3.8
Spurious Emissions										
867.84	48.68	48.68	H	3.16	51.84	44.85	72.9	52.9	21.1	8.0
867.84	41.19	41.19	V	3.16	44.35	37.36	72.9	52.9	28.6	15.5
1301.76	45.07	45.07	H	-6.92	38.15	31.17	74.0	54.0	35.8	22.8
1301.76	52.92	52.92	V	-6.92	46.00	39.02	74.0	54.0	28.0	15.0
1735.68	44.80	44.80	H	-3.49	41.31	34.32	74.0	54.0	32.7	19.7
1735.68	46.73	46.73	V	-3.49	43.24	36.25	74.0	54.0	30.8	17.8
2169.6	56.45	56.45	H	-0.57	55.88	48.89	74.0	54.0	18.1	5.1
2169.6	55.23	55.23	V	-0.57	54.66	47.67	74.0	54.0	19.3	6.3
2603.52	52.88	52.88	H	0.72	53.60	46.62	74.0	54.0	20.4	7.4
2603.52	53.72	53.72	V	0.72	54.44	47.46	74.0	54.0	19.6	6.6
3037.44	50.71	50.71	H	1.75	52.46	45.48	74.0	54.0	21.5	8.5
3037.44	51.66	51.66	V	1.75	53.41	46.43	74.0	54.0	20.6	7.6
3471.36	51.70	51.70	H	2.65	54.35	47.37	74.0	54.0	19.6	6.6
3471.36	52.62	52.62	V	2.65	55.27	48.29	74.0	54.0	18.7	5.7
3905.28	49.88	49.88	H	4.30	54.18	47.20	74.0	54.0	19.8	6.8
3905.28	46.78	46.78	V	4.30	51.08	44.10	74.0	54.0	22.9	9.9

Table 7.5.3-3: Radiated Emissions – Z Position

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
Fundamental Frequency										
433.92	76.95	76.95	H	-5.56	71.39	64.40	92.9	72.9	21.5	8.5
433.92	81.39	81.39	V	-5.56	75.83	68.84	92.9	72.9	17.1	4.0
Spurious Emissions										
867.84	45.89	45.89	H	3.16	49.05	42.06	72.9	52.9	23.9	10.8
867.84	54.83	54.83	V	3.16	57.99	51.00	72.9	52.9	14.9	1.9
1301.76	42.44	42.44	H	-6.92	35.52	28.54	74.0	54.0	38.5	25.5
1301.76	49.69	49.69	V	-6.92	42.77	35.79	74.0	54.0	31.2	18.2
1735.68	48.93	48.93	H	-3.49	45.44	38.45	74.0	54.0	28.6	15.6
1735.68	48.99	48.99	V	-3.49	45.50	38.51	74.0	54.0	28.5	15.5
2169.6	50.41	50.41	H	-0.57	49.84	42.85	74.0	54.0	24.2	11.2
2169.6	60.41	60.41	V	-0.57	59.84	52.85	74.0	54.0	14.2	1.2
2603.52	49.42	49.42	H	0.72	50.14	43.16	74.0	54.0	23.9	10.9
2603.52	57.53	57.53	V	0.72	58.25	51.27	74.0	54.0	15.8	2.7
3037.44	50.47	50.47	H	1.75	52.22	45.24	74.0	54.0	21.8	8.8
3037.44	51.75	51.75	V	1.75	53.50	46.52	74.0	54.0	20.5	7.5
3471.36	51.62	51.62	H	2.65	54.27	47.29	74.0	54.0	19.7	6.7
3471.36	51.07	51.07	V	2.65	53.72	46.74	74.0	54.0	20.3	7.3
3905.28	46.53	46.53	H	4.30	50.83	43.85	74.0	54.0	23.2	10.2
3905.28	48.09	48.09	V	4.30	52.39	45.41	74.0	54.0	21.6	8.6

7.5.4 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: Fundamental Frequency (X Orientation)

PEAK:
Corrected Level: 82.07 - 5.56 = 76.51dBuV
Margin: 92.9dBuV – 76.51dBuV = 16.4dB

AVERAGE:
Corrected Level: 82.07 - 5.56 - 6.99 = 69.52dBuV
Margin: 72.9dBuV – 69.52dBuV = 3.4dB

8 CONCLUSION

In the opinion of ACS, Inc. the QR1051433 manufactured by HomeRun Holdings met the requirements of FCC Part 15 subpart C and Industry Canada's Radio Standards Specification RSS-210.

END REPORT