



# ADDENDUM TO HAIER AMERICA LLC TEST REPORT FC07-071

## FOR THE

## WIFI AND BLUETOOTH ENABLED MEDIA PLAYER, MW101AM

# FCC PART 15 SUBPART C SECTIONS 15.247, 15.207 & 15.209, SUBPART B SECTIONS 15.107 & 15.109, CLASS B AND RSS-210 ISSUE 7

#### **TESTING**

DATE OF ISSUE: NOVEMBER 5, 2007

## PREPARED FOR:

Haier America Trading Company, LLC Haier Building 1356 Broadway New York, New York 10018

P.O. No.: 4971 W.O. No.: 86173

#### PREPARED BY:

Mary Ellen Clayton CKC Laboratories, Inc. 5046 Sierra Pines Drive Mariposa, CA 95338

Date of test: August 27 - November 1, 2007

Report No.: FC07-071A

This report contains a total of 170 pages and may be reproduced in full only. Partial reproduction may only be done with the written consent of CKC Laboratories, Inc. The results in this report apply only to the items tested, as identified herein.

Page 1 of 170 Report No: FC07-071A



## TABLE OF CONTENTS

Administrative Information	3
Approvals	3
FCC to Canada Standard Correlation Matrix	4
Conditions During Testing	4
FCC 15.31(m) Number Of Channels	5
FCC 15.33(a) Frequency Ranges Tested	5
FCC 15.203 Antenna Requirements	
EUT Operating Frequency	5
Equipment Under Test (EUT) Description	6
Equipment Under Test	6
Peripheral Devices	6
Report of Emissions Measurements	7
Testing Parameters	7
FCC 15.107 – AC Conducted Emissions	9
FCC 15.109 – Radiated Emissions	44
FCC 15.207 – AC Conducted Emissions	65
FCC 15.209/15.247(d) – Antenna Conducted Spurious Emissions	94
FCC 15.209/15.247(d) – OATS Radiated Spurious Emissions	97
FCC Part 15.247(a)(1) Channel Frequency Separation	129
FCC Part 15.247(a)(1) Occupied Bandwidth	131
FCC Part 15.247(a)(1) 20dB Bandwidth	134
FCC Part 15.247(a)(1)(iii) Average Time of Occupancy	138
FCC Part 15.247(a)(2) –6dB Bandwidth	147
FCC Part 15.247(b)(3) RF Power Output	151
FCC Part 15.247(e) Power Spectral Density	
Bandedge	
RSS-210 99% Bandwidth	165

Page 2 of 170 Report No: FC07-071A



#### ADMINISTRATIVE INFORMATION

**DATE OF TEST:** August 27 –

**DATE OF RECEIPT:** August 27, 2007

November 1, 2007

**REPRESENTATIVE:** Chris Doughty,

Synapse Product Development, LLC

**MANUFACTURER:** 

Haier America Trading Company, LLC Haier Building 1356 Broadway New York, New York 10018

**TEST LOCATION:** 

CKC Laboratories, Inc. 110 Olinda Place Brea, CA 92823 22116 23<sup>rd</sup> Drive S.E. Suite A Bothell, WA 98021-4412

TEST METHOD: ANSI C63.4 (2003), RSS-210 Issue 7 and RSS GEN Issue 2

PURPOSE OF TEST: Original Report: To perform the testing of the WiFi and Bluetooth Enabled Media Player, MW101AM with the requirements for FCC Part 15 Subpart C Sections 15.247, 15.207 & 15.209, Subpart B Sections 15.107 & 15.109 Class B and RSS-210 devices. **Addendum A:** To clarify the frequency ranges and number of channels on page 5 with no new testing and to add FCC 15.107 and 15.109 data with new testing to conform to ANSI C63.4 test setup.

#### **APPROVALS**

Steve Behm, Director of Engineering Services

**QUALITY ASSURANCE:** 

**TEST PERSONNEL:** 

Joyce Walker, Quality Assurance Administrative

Manager

Katie Molina, Senior EMC Engineer/Lab

Manager

Eddie Wong, EMC Engineer

Ryan Rutledge, EMC Test Technologist



## FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian	Canadian	FCC		
Standard	Section	Standard	FCC Section	Test Description
RSS GEN	7.1.4	47CFR	15.203	Antenna Connector Requirements
RSS GEN	7.2.1	47CFR	15.35(c)	Pulsed Operation
				AC Mains Conducted Emissions
RSS GEN	7.2.2	47CFR	15.207	Requirement
RSS 210	2.1	47CFR	15.215(c)	Frequency Stability Recommendation
RSS 210	2.2	47CFR	15.205	Restricted Bands of Operation
RSS 210	2.6	47CFR	15.209	General Radiated Emissions Requirement
RSS 210	A8.1	47CFR	15.247(a)(1)	Definition of FHSS
RSS 210	A8.1	47CFR	15.247(h)	Incorporation of Intelligence
RSS 210	A8.1(1)	47CFR	15.247(a)(1)	Minimum Channel Bandwidth
RSS 210	A8.1(1)	47CFR	15.247(g)	Hopping Sequence
RSS 210	A8.1(2)	47CFR	15.247(a)(1)	Carrier Separation
RSS 210	A8.1(2)	47CFR	15.247(a)(1)	Carrier Separation 2400 Alternative
RSS 210	A8.1(4)	47CFR	15.247(a)(1)(iii)	Average Time of Occupancy
RSS 210	A8.1(4)	47CFR	15.247(a)(1)(iii)	Number of Hopping Channels
RSS 210	A8.2(1)	47CFR	15.247(a)(2)	Minimum 6dB Bandwidth
RSS 210	A8.2(2)	47CFR	15.247(e)	Peak Power Spectral Density
RSS 210	A8.3(1)	47CFR	15.247(f)	Hybrid Systems - Time of Occupancy
RSS 210	A8.3(1)	47CFR	15.247(f)	Hybrid Systems - Power Spectral Density
RSS 210	A8.4(2)	47CFR	15.247(b)(1)	RF Power Output
RSS 210	A8.4(2)	NA	NA	EIRP Limit
RSS 210	A8.4(4)	47CFR	15.247(b)(3)	RF Power Output
RSS 210	A8.4(4)	NA	NA	EIRP Limit
RSS 210	A8.4(5)	47CFR	15.247(c)(1)	Directional Gain Requirements
RSS 210	A8.4(6)	47CFR	15.247(c)(2)	Beam Steering Antennas
RSS 210	A8.5	47CFR	15.247(d)	Spurious Emissions
	IC 3172-A		90473	Site File No.

Rule Sections for RSS 210 are IN ACCORDANCE WITH RSS 210 Issue 7

## **CONDITIONS DURING TESTING**

No modifications to the EUT were necessary during testing. Note: The manufacturer declares the equipment cannot transmit while plugged into a USB Connection and performing a file transfer.

Page 4 of 170 Report No: FC07-071A



## FCC 15.31(m) Number Of Channels

This device was tested on 3 channels and operates on 79 channels for Bluetooth and 13 channels for 802.11b/g.

## FCC 15.33(a) Frequency Ranges Tested

15.107 Conducted Emissions: 150 kHz – 30 MHz 15.109 Radiated Emissions: 9 kHz – 25 GHz 15.207 Conducted Emissions: 150 kHz – 30 MHz 15.209/15.247(d) Radiated Emissions: 9 kHz – 25 GHz

## FCC 15.203 Antenna Requirements

The antenna is an integral part of the EUT and is non-removable; therefore the EUT complies with Section 15.203 of the FCC rules.

## **EUT Operating Frequency**

The EUT was operating at 2402 MHz - 2480 MHz for Bluetooth and 2412 MHz - 2462 MHz for 802.11 b/g.

Page 5 of 170 Report No: FC07-071A



## **EQUIPMENT UNDER TEST (EUT) DESCRIPTION**

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

The following model was tested by CKC Laboratories: MW101

Since the time of testing the manufacturer has chosen to use the following model name in its place. Any differences between the names does not affect their EMC characteristics and therefore meets the level of testing equivalent to the tested model name shown on the data sheets: **MW101AM** 

## **EQUIPMENT UNDER TEST**

## WiFi and Bluetooth Enabled Media Player AC Power Supply

Manuf: Haier America LLC Manuf: Haier America LLC

Model: MW101AM Model: LSD-D03

Serial: EG001002Y0000000142 Serial: NA FCC ID: VLPMW101AM FCC ID: NA

## PERIPHERAL DEVICES

The EUT was tested with the following peripheral devices:

AC Adapter Laptop PC

Manuf: Dell Manuf: Dell Model: HP-OQ065B83 Model: PP11L

Serial: CN-0N2765-47890-4B4-4350 Serial: CN-0C4708-48643-5CC-1983

Page 6 of 170 Report No: FC07-071A



#### REPORT OF EMISSIONS MEASUREMENTS

#### TESTING PARAMETERS

#### TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within  $+15^{\circ}$ C and  $+35^{\circ}$ C. The relative humidity was between 20% and 75%.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

#### **CORRECTION FACTORS**

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in  $dB\mu V/m$ , the spectrum analyzer reading in  $dB\mu V$  was corrected by using the following formula. This reading was then compared to the applicable specification limit.

	SAMPLE CALCULA	TIONS
	Meter reading	$(dB\mu V)$
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	$(dB\mu V/m)$

Page 7 of 170 Report No: FC07-071A



#### TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. When conducted emissions testing was performed, a 10 dB external attenuator was used with internal offset correction in the analyzer.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE										
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING							
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz							
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz							
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz							

#### SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

## **Peak**

In this mode, the spectrum analyzer/receiver readings were recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

## **Quasi-Peak**

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

#### Average

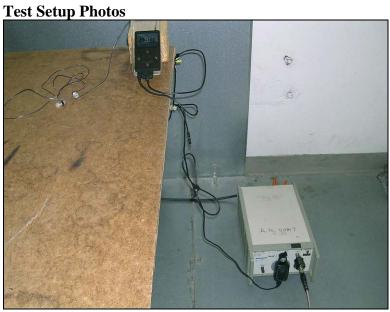
For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.

Page 8 of 170 Report No: FC07-071A



## FCC 15.107 – AC CONDUCTED EMISSIONS

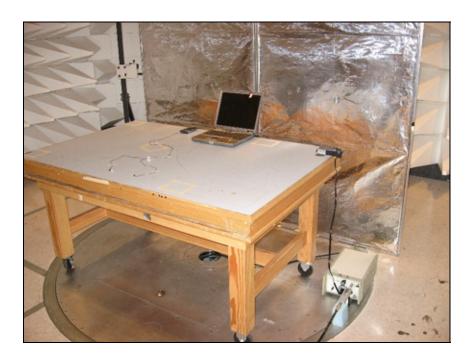
ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE									
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING						
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz						





Page 9 of 170 Report No: FC07-071A





Testing 11/1/07



#### **Test Data Sheets**

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC Specification: FCC 15.107 Class B COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 05:02:54
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 51

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

## Support Devices:

Function Manufacturer	Model #	S/N	
-----------------------	---------	-----	--

## Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11b mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

## Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L1) Insertion Loss 00847 EMCO 3816/2NM

Measurement Data:			Re	eading lis	ted by ma	argin.			Test Lead	l: Black		
	#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
		MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
	1	416.157k	37.6	+0.2	+6.2	+0.1	+0.0	+0.0	44.1	47.5	-3.4	Black
	1	Ave										
	٨	416.157k	45.2	+0.2	+6.2	+0.1	+0.0	+0.0	51.7	47.5	+4.2	Black
	3	694.677k	35.7	+0.2	+6.1	+0.1	+0.1	+0.0	42.2	46.0	-3.8	Black
	4	720.857k	35.6	+0.1	+6.1	+0.1	+0.1	+0.0	42.0	46.0	-4.0	Black

Page 11 of 170 Report No: FC07-071A



5	1.081M	35.7	+0.1	+6.1	+0.0	+0.1	+0.0	42.0	46.0	-4.0	Black
6	867.752k	35.2	+0.1	+6.1	+0.0	+0.1	+0.0	41.5	46.0	-4.5	Black
7	362.344k	37.3	+0.2	+6.2	+0.1	+0.0	+0.0	43.8	48.7	-4.9	Black
8	591.414k	32.9	+0.2	+6.1	+0.1	+0.1	+0.0	39.4	46.0	-6.6	Black
^	591.414k	42.7	+0.2	+6.1	+0.1	+0.1	+0.0	49.2	46.0	+3.2	Black
10	5.157M	35.8	+0.1	+6.2	+0.2	+0.2	+0.0	42.5	50.0	-7.5	Black
11	5.571M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	50.0	-7.6	Black
12	373.252k	33.7	+0.2	+6.2	+0.1	+0.0	+0.0	40.2	48.4	-8.2	Black
13	237.507k	37.4	+0.2	+6.1	+0.1	+0.1	+0.0	43.9	52.2	-8.3	Black
14	480.655k	30.2	+0.2	+6.2	+0.1	+0.1	+0.0	36.8	46.3	-9.5	Black
^	481.606k	42.9	+0.2	+6.2	+0.1	+0.1	+0.0	49.5	46.3	+3.2	Black
16	20.598M	32.0	+0.3	+6.1	+0.4	+1.3	+0.0	40.1	50.0	-9.9	Black
17	300.715k	33.1	+0.2	+6.2	+0.1	+0.1	+0.0	39.7	50.2	-10.5	Black
^	304.168k	42.9	+0.2	+6.2	+0.1	+0.1	+0.0	49.5	50.1	-0.6	Black
19	945.249k	29.2	+0.1	+6.1	+0.0	+0.1	+0.0	35.5	46.0	-10.5	Black
^	945.249k	42.4	+0.1	+6.1	+0.0	+0.1	+0.0	48.7	46.0	+2.7	Black
21	528.825k	28.3	+0.2	+6.2	+0.1	+0.1	+0.0	34.9	46.0	-11.1	Black
22	1.018M	28.4	+0.1	+6.1	+0.0	+0.1	+0.0	34.7	46.0	-11.3	Black
^	1.018M	43.6	+0.1	+6.1	+0.0	+0.1	+0.0	49.9	46.0	+3.9	Black
24	765.540k	28.1	+0.1	+6.1	+0.1	+0.1	+0.0	34.5	46.0	-11.5	Black
^	764.489k	40.0	+0.1	+6.1	+0.1	+0.1	+0.0	46.4	46.0	+0.4	Black
26		27.1	+0.1	+6.1	+0.0	+0.1	+0.0	33.4	46.0	-12.6	Black
^	1.120M	42.3	+0.1	+6.1	+0.0	+0.1	+0.0	48.6	46.0	+2.6	Black
28	1.549M	26.3	+0.1	+6.1	+0.1	+0.1	+0.0	32.7	46.0	-13.3	Black
^	1.549M	43.0	+0.1	+6.1	+0.1	+0.1	+0.0	49.4	46.0	+3.4	Black

Page 12 of 170 Report No: FC07-071A



30	661.500k Ave	25.7	+0.2	+6.1	+0.1	+0.1	+0.0	32.2	46.0	-13.8	Black
^	660.499k	40.6	+0.2	+6.1	+0.1	+0.1	+0.0	47.1	46.0	+1.1	Black
32	842.100k Ave	25.7	+0.1	+6.1	+0.0	+0.1	+0.0	32.0	46.0	-14.0	Black
^	842.300k	43.2	+0.1	+6.1	+0.0	+0.1	+0.0	49.5	46.0	+3.5	Black
34	2.143M Ave	25.0	+0.1	+6.1	+0.1	+0.1	+0.0	31.4	46.0	-14.6	Black
^	2.149M	41.6	+0.1	+6.1	+0.1	+0.1	+0.0	48.0	46.0	+2.0	Black
36	1.382M Ave	24.9	+0.1	+6.1	+0.0	+0.1	+0.0	31.2	46.0	-14.8	Black
^	1.383M	41.5	+0.1	+6.1	+0.0	+0.1	+0.0	47.8	46.0	+1.8	Black
38	1.804M Ave	24.3	+0.1	+6.1	+0.1	+0.1	+0.0	30.7	46.0	-15.3	Black
^	1.804M	39.2	+0.1	+6.1	+0.1	+0.1	+0.0	45.6	46.0	-0.4	Black
40	2.576M Ave	24.0	+0.1	+6.2	+0.1	+0.2	+0.0	30.6	46.0	-15.4	Black
^	2.578M	45.0	+0.1	+6.2	+0.1	+0.2	+0.0	51.6	46.0	+5.6	Black
42	2.076M Ave	24.0	+0.1	+6.1	+0.1	+0.1	+0.0	30.4	46.0	-15.6	Black
^	2.076M	42.1	+0.1	+6.1	+0.1	+0.1	+0.0	48.5	46.0	+2.5	Black
44	2.741M Ave	23.2	+0.1	+6.2	+0.1	+0.2	+0.0	29.8	46.0	-16.2	Black
^	2.741M	44.0	+0.1	+6.2	+0.1	+0.2	+0.0	50.6	46.0	+4.6	Black
٨	2.748M	43.9	+0.1	+6.2	+0.1	+0.2	+0.0	50.5	46.0	+4.5	Black
47	541.237k Ave	22.6	+0.2	+6.1	+0.1	+0.1	+0.0	29.1	46.0	-16.9	Black
^	541.237k	38.7	+0.2	+6.1	+0.1	+0.1	+0.0	45.2	46.0	-0.8	Black
49	1.290M Ave	22.8	+0.1	+6.1	+0.0	+0.1	+0.0	29.1	46.0	-16.9	Black
^	1.294M	39.2	+0.1	+6.1	+0.0	+0.1	+0.0	45.5	46.0	-0.5	Black
51	2.838M Ave	21.7	+0.1	+6.2	+0.1	+0.2	+0.0	28.3	46.0	-17.7	Black
^	2.838M	41.0	+0.1	+6.2	+0.1	+0.2	+0.0	47.6	46.0	+1.6	Black
53	2.908M Ave	20.1	+0.1	+6.2	+0.1	+0.2	+0.0	26.7	46.0	-19.3	Black
^	2.914M	41.9	+0.1	+6.2	+0.1	+0.2	+0.0	48.5	46.0	+2.5	Black

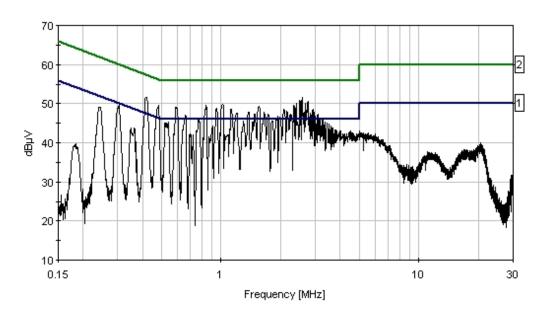
Page 13 of 170 Report No: FC07-071A



55	3.080M	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	Black
	Ave										
٨	3.080M	40.6	+0.1	+6.2	+0.1	+0.2	+0.0	47.2	46.0	+1.2	Black
57	3.012M	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	Black
	Ave										
٨	3.012M	38.2	+0.1	+6.2	+0.1	+0.2	+0.0	44.8	46.0	-1.2	Black
59	902.721k	19.7	+0.1	+6.1	+0.0	+0.1	+0.0	26.0	46.0	-20.0	Black
	Ave										
٨	902.721k	38.1	+0.1	+6.1	+0.0	+0.1	+0.0	44.4	46.0	-1.6	Black
61	3.425M	19.1	+0.1	+6.2	+0.2	+0.2	+0.0	25.8	46.0	-20.2	Black
	Ave										
٨	3.425M	38.3	+0.1	+6.2	+0.2	+0.2	+0.0	45.0	46.0	-1.0	Black
63	3.603M	19.0	+0.1	+6.2	+0.2	+0.2	+0.0	25.7	46.0	-20.3	Black
	Ave										
٨	3.603M	37.7	+0.1	+6.2	+0.2	+0.2	+0.0	44.4	46.0	-1.6	Black
65	3.782M	18.5	+0.1	+6.2	+0.2	+0.2	+0.0	25.2	46.0	-20.8	Black
	Ave										
٨	3.782M	36.7	+0.1	+6.2	+0.2	+0.2	+0.0	43.4	46.0	-2.6	Black
67	4.509M	16.6	+0.1	+6.2	+0.2	+0.2	+0.0	23.3	46.0	-22.7	Black
	Ave										
٨	4.509M	36.4	+0.1	+6.2	+0.2	+0.2	+0.0	43.1	46.0	-2.9	Black
	· <del>-</del>					- · <del>-</del>					
69	3.693M	16.2	+0.1	+6.2	+0.2	+0.2	+0.0	22.9	46.0	-23.1	Black
	Ave	~									
^	3.693M	37.0	+0.1	+6.2	+0.2	+0.2	+0.0	43.7	46.0	-2.3	Black
71	245.264k	21.9	+0.2	+6.1	+0.1	+0.1	+0.0	28.4	51.9	-23.5	Black
	Ave										
^	245.264k	42.7	+0.2	+6.1	+0.1	+0.1	+0.0	49.2	51.9	-2.7	Black



CKC Laboratories, Inc. Date: 9/15/2007 Time: 05:02:54 Synapse Product Development, LLC WO#: 86173 FCC 15.107 Class B COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 51



Sweep Data
2 - FCC 15.107 Class B COND [QP]

1 - FCC 15.107 Class B COND [AVE]



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC Specification: FCC 15.107 Class B COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 05:21:34
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 52

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

**Equipment Under Test (\* = EUT):** 

	. ,			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N

## Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11b mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

## Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L2) Insertion Loss 00847 EMCO 3816/2NM

Measui	rement Data:	Re	eading lis	ted by ma	argin.			Test Lea	d: White		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	3.795M	36.7	+0.1	+6.2	+0.2	+0.2	+0.0	43.4	46.0	-2.6	White
2	2.034M	36.9	+0.1	+6.1	+0.1	+0.1	+0.0	43.3	46.0	-2.7	White
3	3.433M	36.6	+0.1	+6.2	+0.2	+0.2	+0.0	43.3	46.0	-2.7	White
4	4.262M	36.6	+0.1	+6.2	+0.2	+0.2	+0.0	43.3	46.0	-2.7	White
5	551.417k	36.7	+0.2	+6.1	+0.1	+0.1	+0.0	43.2	46.0	-2.8	White

Page 16 of 170 Report No: FC07-071A



6	4.475M	36.4	+0.1	+6.2	+0.2	+0.2	+0.0	43.1	46.0	-2.9	White
7	865.570k	36.7	+0.1	+6.1	+0.0	+0.1	+0.0	43.0	46.0	-3.0	White
8	1.902M	36.6	+0.1	+6.1	+0.1	+0.1	+0.0	43.0	46.0	-3.0	White
9	3.773M	36.3	+0.1	+6.2	+0.2	+0.2	+0.0	43.0	46.0	-3.0	White
10	4.811M	36.3	+0.1	+6.2	+0.2	+0.2	+0.0	43.0	46.0	-3.0	White
11	820.483k	36.4	+0.1	+6.1	+0.1	+0.1	+0.0	42.8	46.0	-3.2	White
12	507.784k	36.2	+0.2	+6.2	+0.1	+0.1	+0.0	42.8	46.0	-3.2	White
13	4.067M	36.1	+0.1	+6.2	+0.2	+0.2	+0.0	42.8	46.0	-3.2	White
14	4.101M	35.9	+0.1	+6.2	+0.2	+0.2	+0.0	42.6	46.0	-3.4	White
15	4.866M	35.8	+0.1	+6.2	+0.2	+0.2	+0.0	42.5	46.0	-3.5	White
16	3.756M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	46.0	-3.6	White
17	1.456M	36.1	+0.1	+6.1	+0.0	+0.1	+0.0	42.4	46.0	-3.6	White
18	4.288M	35.6	+0.1	+6.2	+0.2	+0.2	+0.0	42.3	46.0	-3.7	White
19	548.508k	35.7	+0.2	+6.1	+0.1	+0.1	+0.0	42.2	46.0	-3.8	White
20	1.877M	35.8	+0.1	+6.1	+0.1	+0.1	+0.0	42.2	46.0	-3.8	White
21	4.913M	35.5	+0.1	+6.2	+0.2	+0.2	+0.0	42.2	46.0	-3.8	White
22	423.428k	36.9	+0.2	+6.2	+0.1	+0.1	+0.0	43.5	47.4	-3.9	White
23	1.039M	35.7	+0.1	+6.1	+0.0	+0.1	+0.0	42.0	46.0	-4.0	White
24	3.939M	35.3	+0.1	+6.2	+0.2	+0.2	+0.0	42.0	46.0	-4.0	White
25	4.211M	35.2	+0.1	+6.2	+0.2	+0.2	+0.0	41.9	46.0	-4.1	White
26	4.679M	35.2	+0.1	+6.2	+0.2	+0.2	+0.0	41.9	46.0	-4.1	White
27	421.247k	36.7	+0.2	+6.2	+0.1	+0.1	+0.0	43.3	47.4	-4.1	White
28	4.237M	35.1	+0.1	+6.2	+0.2	+0.2	+0.0	41.8	46.0	-4.2	White
29	4.637M	35.1	+0.1	+6.2	+0.2	+0.2	+0.0	41.8	46.0	-4.2	White
30	818.301k	35.3	+0.1	+6.1	+0.1	+0.1	+0.0	41.7	46.0	-4.3	White
L											

Page 17 of 170 Report No: FC07-071A



31	4.573M	35.0	+0.1	+6.2	+0.2	+0.2	+0.0	41.7	46.0	-4.3	White
32	4.309M	34.9	+0.1	+6.2	+0.2	+0.2	+0.0	41.6	46.0	-4.4	White
33	4.373M	34.9	+0.1	+6.2	+0.2	+0.2	+0.0	41.6	46.0	-4.4	White
34	4.696M	34.9	+0.1	+6.2	+0.2	+0.2	+0.0	41.6	46.0	-4.4	White
35	3.973M	34.8	+0.1	+6.2	+0.2	+0.2	+0.0	41.5	46.0	-4.5	White
36	4.973M	34.8	+0.1	+6.2	+0.2	+0.2	+0.0	41.5	46.0	-4.5	White
37	1.498M	35.0	+0.1	+6.1	+0.1	+0.1	+0.0	41.4	46.0	-4.6	White
38	1.817M	35.0	+0.1	+6.1	+0.1	+0.1	+0.0	41.4	46.0	-4.6	White
39	4.501M	34.7	+0.1	+6.2	+0.2	+0.2	+0.0	41.4	46.0	-4.6	White
40	1.957M	34.9	+0.1	+6.1	+0.1	+0.1	+0.0	41.3	46.0	-4.7	White
41	630.682k	34.8	+0.2	+6.1	+0.1	+0.1	+0.0	41.3	46.0	-4.7	White
42	853.934k	35.0	+0.1	+6.1	+0.0	+0.1	+0.0	41.3	46.0	-4.7	White
43	3.701M	34.6	+0.1	+6.2	+0.2	+0.2	+0.0	41.3	46.0	-4.7	White
44	776.123k	34.8	+0.1	+6.1	+0.1	+0.1	+0.0	41.2	46.0	-4.8	White
45	1.417M	34.9	+0.1	+6.1	+0.0	+0.1	+0.0	41.2	46.0	-4.8	White
46	3.854M	34.4	+0.1	+6.2	+0.2	+0.2	+0.0	41.1	46.0	-4.9	White
47	278.600k Ave	27.6	+0.2	+6.1	+0.1	+0.1	+0.0	34.1	50.9	-16.8	White
٨	282.351k	43.3	+0.2	+6.1	+0.1	+0.1	+0.0	49.8	50.7	-0.9	White
49	2.493M Ave	21.7	+0.1	+6.2	+0.1	+0.2	+0.0	28.3	46.0	-17.7	White
٨	2.493M	42.9	+0.1	+6.2	+0.1	+0.2	+0.0	49.5	46.0	+3.5	White
51	2.595M Ave	21.4	+0.1	+6.2	+0.1	+0.2	+0.0	28.0	46.0	-18.0	White
٨	2.595M	42.2	+0.1	+6.2	+0.1	+0.2	+0.0	48.8	46.0	+2.8	White
53	481.350k Ave	21.0	+0.2	+6.2	+0.1	+0.1	+0.0	27.6	46.3	-18.7	White
٨	478.696k	39.4	+0.2	+6.2	+0.1	+0.1	+0.0	46.0	46.4	-0.4	White

Page 18 of 170 Report No: FC07-071A



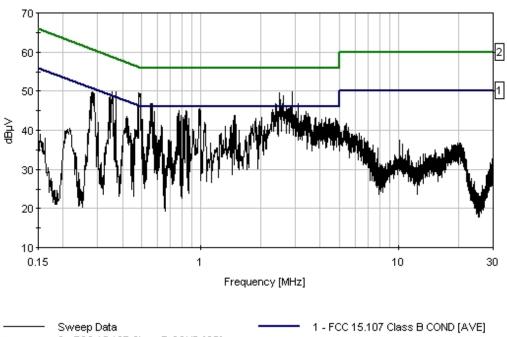
55	2.391M Ave	20.6	+0.1	+6.2	+0.1	+0.2	+0.0	27.2	46.0	-18.8	White
٨	2.391M	40.1	+0.1	+6.2	+0.1	+0.2	+0.0	46.7	46.0	+0.7	White
57	2.469M Ave	20.5	+0.1	+6.2	+0.1	+0.2	+0.0	27.1	46.0	-18.9	White
58	2.606M	20.5	+0.1	+6.2	+0.1	+0.2	+0.0	27.1	46.0	-18.9	White
59	2.880M	19.4	+0.1	+6.2	+0.1	+0.2	+0.0	26.0	46.0	-20.0	White
^	2.880M	43.3	+0.1	+6.2	+0.1	+0.2	+0.0	49.9	46.0	+3.9	White
61	2.310M	19.1	+0.1	+6.2	+0.1	+0.2	+0.0	25.7	46.0	-20.3	White
^	2.310M	38.7	+0.1	+6.2	+0.1	+0.2	+0.0	45.3	46.0	-0.7	White
63	349.879k	21.6	+0.2	+6.2	+0.1	+0.1	+0.0	28.2	49.0	-20.8	White
^	Ave 347.072k	42.4	+0.2	+6.2	+0.1	+0.1	+0.0	49.0	49.0	+0.0	White
65	3.374M	17.5	+0.1	+6.2	+0.2	+0.2	+0.0	24.2	46.0	-21.8	White
^	3.374M	37.0	+0.1	+6.2	+0.2	+0.2	+0.0	43.7	46.0	-2.3	White
67	556.507k	17.6	+0.2	+6.1	+0.1	+0.1	+0.0	24.1	46.0	-21.9	White
^	4ve 556.507k	40.4	+0.2	+6.1	+0.1	+0.1	+0.0	46.9	46.0	+0.9	White
69	3.029M	17.4	+0.1	+6.2	+0.1	+0.2	+0.0	24.0	46.0	-22.0	White
^	3.029M	38.1	+0.1	+6.2	+0.1	+0.2	+0.0	44.7	46.0	-1.3	White
71	491.059k	17.2	+0.2	+6.2	+0.1	+0.1	+0.0	23.8	46.1	-22.3	White
^	491.059k	42.7	+0.2	+6.2	+0.1	+0.1	+0.0	49.3	46.1	+3.2	White
73	3.399M	17.0	+0.1	+6.2	+0.2	+0.2	+0.0	23.7	46.0	-22.3	White
74		16.8	+0.1	+6.2	+0.2	+0.2	+0.0	23.5	46.0	-22.5	White
^	3.399M	38.2	+0.1	+6.2	+0.2	+0.2	+0.0	44.9	46.0	-1.1	White
76	3.097M	16.0	+0.1	+6.2	+0.1	+0.2	+0.0	22.6	46.0	-23.4	White
^	3.097M	40.1	+0.1	+6.2	+0.1	+0.2	+0.0	46.7	46.0	+0.7	White
78	353.298k	17.6	+0.2	+6.2	+0.1	+0.1	+0.0	24.2	48.9	-24.7	White
^	Ave 355.798k	43.3	+0.2	+6.2	+0.1	+0.1	+0.0	49.9	48.8	+1.1	White

Page 19 of 170 Report No: FC07-071A



80	983.523k	10.7	+0.1	+6.1	+0.0	+0.1	+0.0	17.0	46.0	-29.0	White
A	Ave										
٨	983.523k	39.2	+0.1	+6.1	+0.0	+0.1	+0.0	45.5	46.0	-0.5	White
82	1.473M	9.1	+0.1	+6.1	+0.0	+0.1	+0.0	15.4	46.0	-30.6	White
A	4ve										
٨	1.481M	37.6	+0.1	+6.1	+0.0	+0.1	+0.0	43.9	46.0	-2.1	White
٨	1.464M	37.5	+0.1	+6.1	+0.0	+0.1	+0.0	43.8	46.0	-2.2	White
^	1.473M	36.9	+0.1	+6.1	+0.0	+0.1	+0.0	43.2	46.0	-2.8	White
86	369.615k	6.0	+0.2	+6.2	+0.1	+0.1	+0.0	12.6	48.5	-35.9	White
A	Ave										
٨	369.615k	43.3	+0.2	+6.2	+0.1	+0.1	+0.0	49.9	48.5	+1.4	White

CKC Laboratories, Inc. Date: 9/15/2007 Time: 05:21:34 Synapse Product Development, LLC WO#: 86173 FCC 15:107 Class B COND [AVE] Test Lead: White 110V 60Hz Sequence#: 52



2 - FCC 15.107 Class B COND [QP]



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC Specification: FCC 15.107 Class B COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 06:02:53
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 54

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

#### Test Equipment:

1 1				
Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

**Equipment Under Test (\* = EUT):** 

1 1	):			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N
1 1 1 1 1			

#### Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11g mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

## Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L1) Insertion Loss 00847 EMCO 3816/2NM

Measur	rement Data:	Re	eading lis	ted by ma	argin.		Test Lead: Black				
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	4.445M	35.3	+0.1	+6.2	+0.2	+0.2	+0.0	42.0	46.0	-4.0	Black
2	445.245k	36.3	+0.2	+6.2	+0.1	+0.0	+0.0	42.8	47.0	-4.2	Black
3	383.432k	37.4	+0.2	+6.2	+0.1	+0.0	+0.0	43.9	48.2	-4.3	Black
4	313.620k	38.9	+0.2	+6.2	+0.1	+0.1	+0.0	45.5	49.9	-4.4	Black

Page 21 of 170 Report No: FC07-071A



5 484.207k Ave	34.9	+0.2	+6.2	+0.1	+0.1	+0.0	41.5	46.3	-4.8	Black
^ 479.423k	44.8	+0.2	+6.2	+0.1	+0.1	+0.0	51.4	46.3	+5.1	Black
7 344.823k Ave	37.7	+0.2	+6.2	+0.1	+0.1	+0.0	44.3	49.1	-4.8	Black
8 476.321k Ave	35.0	+0.2	+6.2	+0.1	+0.1	+0.0	41.6	46.4	-4.8	Black
9 482.351k Ave	34.8	+0.2	+6.2	+0.1	+0.1	+0.0	41.4	46.3	-4.9	Black
10 343.209k Ave	36.8	+0.2	+6.2	+0.1	+0.1	+0.0	43.4	49.1	-5.7	Black
11 485.799k Ave	33.8	+0.2	+6.2	+0.1	+0.1	+0.0	40.4	46.2	-5.8	Black
12 347.395k Ave	36.5	+0.2	+6.2	+0.1	+0.0	+0.0	43.0	49.0	-6.0	Black
13 346.495k Ave	36.3	+0.2	+6.2	+0.1	+0.0	+0.0	42.8	49.0	-6.2	Black
14 346.495k Ave	36.1	+0.2	+6.2	+0.1	+0.0	+0.0	42.6	49.0	-6.4	Black
15 346.495k Ave	36.0	+0.2	+6.2	+0.1	+0.0	+0.0	42.5	49.0	-6.5	Black
^ 343.209k	45.2	+0.2	+6.2	+0.1	+0.1	+0.0	51.8	49.1	+2.7	Black
^ 348.526k	45.0	+0.2	+6.2	+0.1	+0.0	+0.0	51.5	49.0	+2.5	Black
18 760.852k Ave	32.0	+0.1	+6.1	+0.1	+0.1	+0.0	38.4	46.0	-7.6	Black
^ 760.852k	43.1	+0.1	+6.1	+0.1	+0.1	+0.0	49.5	46.0	+3.5	Black
20 276.476k Ave	36.7	+0.2	+6.1	+0.1	+0.1	+0.0	43.2	50.9	-7.7	Black
21 347.395k Ave	34.5	+0.2	+6.2	+0.1	+0.0	+0.0	41.0	49.0	-8.0	Black
22 970.765k Ave	31.0	+0.1	+6.1	+0.0	+0.1	+0.0	37.3	46.0	-8.7	Black
^ 970.765k	44.6	+0.1	+6.1	+0.0	+0.1	+0.0	50.9	46.0	+4.9	Black
24 746.910k Ave	30.1	+0.1	+6.1	+0.1	+0.1	+0.0	36.5	46.0	-9.5	Black
25 2.468M Ave	28.3	+0.1	+6.2	+0.1	+0.2	+0.0	34.9	46.0	-11.1	Black
^ 2.468M	44.5	+0.1	+6.2	+0.1	+0.2	+0.0	51.1	46.0	+5.1	Black
27 2.051M Ave	28.4	+0.1	+6.1	+0.1	+0.1	+0.0	34.8	46.0	-11.2	Black
^ 2.051M	41.7	+0.1	+6.1	+0.1	+0.1	+0.0	48.1	46.0	+2.1	Black

Page 22 of 170 Report No: FC07-071A



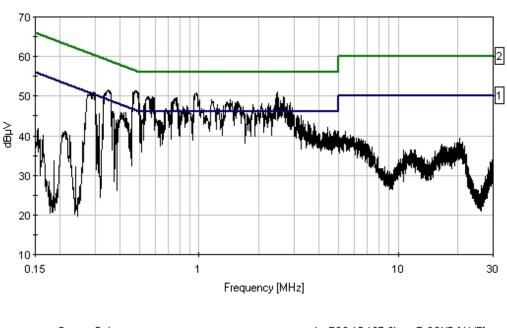
29	1.651M Ave	28.2	+0.1	+6.1	+0.1	+0.1	+0.0	34.6	46.0	-11.4	Black
٨	1.651M	40.9	+0.1	+6.1	+0.1	+0.1	+0.0	47.3	46.0	+1.3	Black
31	1.430M Ave	27.1	+0.1	+6.1	+0.0	+0.1	+0.0	33.4	46.0	-12.6	Black
٨	1.430M	42.7	+0.1	+6.1	+0.0	+0.1	+0.0	49.0	46.0	+3.0	Black
33	2.238M Ave	26.7	+0.1	+6.2	+0.1	+0.2	+0.0	33.3	46.0	-12.7	Black
٨	2.238M	41.5	+0.1	+6.2	+0.1	+0.2	+0.0	48.1	46.0	+2.1	Black
35	2.693M	26.7	+0.1	+6.2	+0.1	+0.2	+0.0	33.3	46.0	-12.7	Black
٨	Ave 2.693M	43.1	+0.1	+6.2	+0.1	+0.2	+0.0	49.7	46.0	+3.7	Black
37	1.766M	26.5	+0.1	+6.1	+0.1	+0.1	+0.0	32.9	46.0	-13.1	Black
٨	Ave 1.766M	38.7	+0.1	+6.1	+0.1	+0.1	+0.0	45.1	46.0	-0.9	Black
39	2.863M	23.9	+0.1	+6.2	+0.1	+0.2	+0.0	30.5	46.0	-15.5	Black
٨	Ave 2.863M	41.8	+0.1	+6.2	+0.1	+0.2	+0.0	48.4	46.0	+2.4	Black
41	1.745M	23.3	+0.1	+6.1	+0.1	+0.1	+0.0	29.7	46.0	-16.3	Black
٨	Ave 1.745M	39.2	+0.1	+6.1	+0.1	+0.1	+0.0	45.6	46.0	-0.4	Black
43	869.933k Ave	20.8	+0.1	+6.1	+0.0	+0.1	+0.0	27.1	46.0	-18.9	Black
٨	869.933k	41.3	+0.1	+6.1	+0.0	+0.1	+0.0	47.6	46.0	+1.6	Black
45	462.698k	19.8	+0.2	+6.2	+0.1	+0.1	+0.0	26.4	46.6	-20.2	Black
٨	Ave 462.698k	44.0	+0.2	+6.2	+0.1	+0.1	+0.0	50.6	46.6	+4.0	Black
47	328.892k	21.2	+0.2	+6.2	+0.1	+0.1	+0.0	27.8	49.5	-21.7	Black
٨	Ave 328.892k	42.1	+0.2	+6.2	+0.1	+0.1	+0.0	48.7	49.5	-0.8	Black
49		16.8	+0.2	+6.2	+0.1	+0.1	+0.0	23.4	46.0	-22.6	Black
٨	Ave 503.421k	41.4	+0.2	+6.2	+0.1	+0.1	+0.0	48.0	46.0	+2.0	Black
^	507.784k	37.1	+0.2	+6.2	+0.1	+0.1	+0.0	43.7	46.0	-2.3	Black
52		15.1	+0.2	+6.1	+0.1	+0.1	+0.0	21.6	46.0	-24.4	Black
٨	Ave 576.869k	42.8	+0.2	+6.1	+0.1	+0.1	+0.0	49.3	46.0	+3.3	Black

Page 23 of 170 Report No: FC07-071A



54	722.310k	14.3	+0.1	+6.1	+0.1	+0.1	+0.0	20.7	46.0	-25.3	Black
A	Ave										
^	722.310k	40.8	+0.1	+6.1	+0.1	+0.1	+0.0	47.2	46.0	+1.2	Black
56	595.049k	12.4	+0.2	+6.1	+0.1	+0.1	+0.0	18.9	46.0	-27.1	Black
A	Ave										
٨	595.049k	43.0	+0.2	+6.1	+0.1	+0.1	+0.0	49.5	46.0	+3.5	Black
58	364.001k	14.5	+0.2	+6.2	+0.1	+0.0	+0.0	21.0	48.6	-27.6	Black
A	Ave										
^	363.070k	39.6	+0.2	+6.2	+0.1	+0.0	+0.0	46.1	48.7	-2.6	Black
60	301.258k	10.5	+0.2	+6.2	+0.1	+0.1	+0.0	17.1	50.2	-33.1	Black
A	Ave										
^	301.258k	44.2	+0.2	+6.2	+0.1	+0.1	+0.0	50.8	50.2	+0.6	Black

CKC Laboratories, Inc. Date: 9/15/2007 Time: 06:02:53 Synapse Product Development, LLC WO#: 86173 FCC 15.107 Class B COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 54





Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC Specification: FCC 15.107 Class B COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 05:43:46
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 53

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

**Equipment Under Test (\* = EUT):** 

1 1	- /-			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N

## Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11g mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

## Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L2) Insertion Loss 00847 EMCO 3816/2NM

Measur	rement Data:	Re	eading lis	ted by ma	argin.			Test Lead	d: White		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	3.165M	36.9	+0.1	+6.2	+0.1	+0.2	+0.0	43.5	46.0	-2.5	White
2	3.710M	36.7	+0.1	+6.2	+0.2	+0.2	+0.0	43.4	46.0	-2.6	White
3	304.895k	40.8	+0.2	+6.2	+0.1	+0.1	+0.0	47.4	50.1	-2.7	White
4	4.109M	36.3	+0.1	+6.2	+0.2	+0.2	+0.0	43.0	46.0	-3.0	White
5	1.137M	36.6	+0.1	+6.1	+0.0	+0.1	+0.0	42.9	46.0	-3.1	White

Page 25 of 170 Report No: FC07-071A



6	1.379M	36.3	+0.1	+6.1	+0.0	+0.1	+0.0	42.6	46.0	-3.4	White
7	1.617M	36.2	+0.1	+6.1	+0.1	+0.1	+0.0	42.6	46.0	-3.4	White
8	4.849M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	46.0	-3.6	White
9	4.552M	35.4	+0.1	+6.2	+0.2	+0.2	+0.0	42.1	46.0	-3.9	White
10	4.364M	35.2	+0.1	+6.2	+0.2	+0.2	+0.0	41.9	46.0	-4.1	White
11	659.044k	35.3	+0.2	+6.1	+0.1	+0.1	+0.0	41.8	46.0	-4.2	White
12	4.666M	35.1	+0.1	+6.2	+0.2	+0.2	+0.0	41.8	46.0	-4.2	White
13	2.259M	34.7	+0.1	+6.2	+0.1	+0.2	+0.0	41.3	46.0	-4.7	White
14	1.081M	34.3	+0.1	+6.1	+0.0	+0.1	+0.0	40.6	46.0	-5.4	White
15	4.909M	33.9	+0.1	+6.2	+0.2	+0.2	+0.0	40.6	46.0	-5.4	White
16	515.057k	33.9	+0.2	+6.2	+0.1	+0.1	+0.0	40.5	46.0	-5.5	White
17	4.883M	33.6	+0.1	+6.2	+0.2	+0.2	+0.0	40.3	46.0	-5.7	White
18	360.890k	36.0	+0.2	+6.2	+0.1	+0.1	+0.0	42.6	48.7	-6.1	White
19	1.783M	33.5	+0.1	+6.1	+0.1	+0.1	+0.0	39.9	46.0	-6.1	White
20	5.148M	37.2	+0.1	+6.2	+0.2	+0.2	+0.0	43.9	50.0	-6.1	White
21	5.024M	36.8	+0.1	+6.2	+0.2	+0.2	+0.0	43.5	50.0	-6.5	White
22	5.562M	36.8	+0.1	+6.2	+0.2	+0.2	+0.0	43.5	50.0	-6.5	White
23	1.677M	33.0	+0.1	+6.1	+0.1	+0.1	+0.0	39.4	46.0	-6.6	White
24	5.743M	36.4	+0.1	+6.2	+0.2	+0.2	+0.0	43.1	50.0	-6.9	White
25	6.094M	36.2	+0.1	+6.2	+0.2	+0.3	+0.0	43.0	50.0	-7.0	White
26	1.200M	32.6	+0.1	+6.1	+0.0	+0.1	+0.0	38.9	46.0	-7.1	White
27	5.202M	35.9	+0.1	+6.2	+0.2	+0.2	+0.0	42.6	50.0	-7.4	White
28	1.736M	32.1	+0.1	+6.1	+0.1	+0.1	+0.0	38.5	46.0	-7.5	White
29	715.766k	32.0	+0.1	+6.1	+0.1	+0.1	+0.0	38.4	46.0	-7.6	White
30	5.382M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	50.0	-7.6	White

Page 26 of 170 Report No: FC07-071A



31	5.508M	35.6	+0.1	+6.2	+0.2	+0.2	+0.0	42.3	50.0	-7.7	White
32	6.274M	35.5	+0.1	+6.2	+0.2	+0.3	+0.0	42.3	50.0	-7.7	White
33	2.634M Ave	20.7	+0.1	+6.2	+0.1	+0.2	+0.0	27.3	46.0	-18.7	White
^	2.634M	44.4	+0.1	+6.2	+0.1	+0.2	+0.0	51.0	46.0	+5.0	White
35	477.324k	21.0	+0.2	+6.2	+0.1	+0.1	+0.0	27.6	46.4	-18.8	White
^	Ave 480.152k	41.0	+0.2	+6.2	+0.1	+0.1	+0.0	47.6	46.3	+1.3	White
^	477.324k	37.5	+0.2	+6.2	+0.1	+0.1	+0.0	44.1	46.4	-2.3	White
38	271.045k	25.7	+0.2	+6.1	+0.1	+0.1	+0.0	32.2	51.1	-18.9	White
^	Ave 271.045k	42.3	+0.2	+6.1	+0.1	+0.1	+0.0	48.8	51.1	-2.3	White
40	2.510M Ave	20.5	+0.1	+6.2	+0.1	+0.2	+0.0	27.1	46.0	-18.9	White
^	2.510M	44.4	+0.1	+6.2	+0.1	+0.2	+0.0	51.0	46.0	+5.0	White
42	477.324k Ave	20.7	+0.2	+6.2	+0.1	+0.1	+0.0	27.3	46.4	-19.1	White
43	480.152k Ave	20.3	+0.2	+6.2	+0.1	+0.1	+0.0	26.9	46.3	-19.4	White
44	2.812M Ave	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	White
^	2.812M	39.3	+0.1	+6.2	+0.1	+0.2	+0.0	45.9	46.0	-0.1	White
46	2.931M Ave	17.8	+0.1	+6.2	+0.1	+0.2	+0.0	24.4	46.0	-21.6	White
٨	2.931M	42.0	+0.1	+6.2	+0.1	+0.2	+0.0	48.6	46.0	+2.6	White
48	2.872M Ave	17.7	+0.1	+6.2	+0.1	+0.2	+0.0	24.3	46.0	-21.7	White
۸	2.872M	39.1	+0.1	+6.2	+0.1	+0.2	+0.0	45.7	46.0	-0.3	White
50	3.467M Ave	17.6	+0.1	+6.2	+0.2	+0.2	+0.0	24.3	46.0	-21.7	White
٨	3.467M	40.3	+0.1	+6.2	+0.2	+0.2	+0.0	47.0	46.0	+1.0	White
52	3.233M Ave	17.0	+0.1	+6.2	+0.1	+0.2	+0.0	23.6	46.0	-22.4	White
٨	3.233M	39.6	+0.1	+6.2	+0.1	+0.2	+0.0	46.2	46.0	+0.2	White
54	4.067M Ave	16.4	+0.1	+6.2	+0.2	+0.2	+0.0	23.1	46.0	-22.9	White
٨	4.067M	39.4	+0.1	+6.2	+0.2	+0.2	+0.0	46.1	46.0	+0.1	White

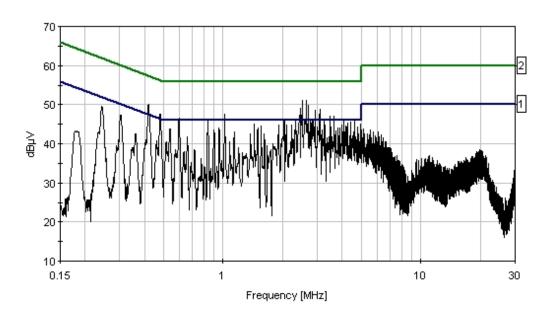
Page 27 of 170 Report No: FC07-071A



56	4.250M	16.3	+0.1	+6.2	+0.2	+0.2	+0.0	23.0	46.0	-23.0	White
	Ave										
٨	4.250M	38.7	+0.1	+6.2	+0.2	+0.2	+0.0	45.4	46.0	-0.6	White
58	3.650M	16.3	+0.1	+6.2	+0.2	+0.2	+0.0	23.0	46.0	-23.0	White
	Ave	10.5	10.1	10.2	10.2	10.2	10.0	23.0	10.0	23.0	VV IIIC
٨	3.650M	40.4	+0.1	+6.2	+0.2	+0.2	+0.0	47.1	46.0	+1.1	White
	3.030W	40.4	⊤0.1	⊤0.∠	±0.2	+0.2	+0.0	4/.1	40.0	⊤1.1	vv iiitc
60	3.110M	15.8	+0.1	+6.2	+0.1	+0.2	+0.0	22.4	46.0	-23.6	White
		13.8	+0.1	+0.2	+0.1	+0.2	+0.0	22.4	40.0	-23.0	wille
٨	Ave	40.1	0.1		0.1	0.0	0.0	40.7	460	2.7	XX 71
^	3.110M	42.1	+0.1	+6.2	+0.1	+0.2	+0.0	48.7	46.0	+2.7	White
62	557.058k	15.7	+0.2	+6.1	+0.1	+0.1	+0.0	22.2	46.0	-23.8	White
	Ave										
63	953.754k	15.0	+0.1	+6.1	+0.0	+0.1	+0.0	21.3	46.0	-24.7	White
	Ave										
٨	953.754k	37.8	+0.1	+6.1	+0.0	+0.1	+0.0	44.1	46.0	-1.9	White
65	2.038M	14.8	+0.1	+6.1	+0.1	+0.1	+0.0	21.2	46.0	-24.8	White
	Ave										
٨	2.038M	39.5	+0.1	+6.1	+0.1	+0.1	+0.0	45.9	46.0	-0.1	White
	2.030111	37.3	10.1	10.1	10.1	10.1	10.0	13.7	10.0	0.1	VV IIIC
67	619.111k	12.2	+0.2	+6.1	+0.1	+0.1	+0.0	18.7	46.0	-27.3	White
		12.2	+0.2	+0.1	+0.1	+0.1	+0.0	10.7	40.0	-21.3	vv iiite
	Ave	10.0	. 0. 1	1	. 0. 0	. 0. 1	. 0. 0	10.5	46.0	27.5	XX71. *4 .
68		12.2	+0.1	+6.1	+0.0	+0.1	+0.0	18.5	46.0	-27.5	White
	Ave						0.0		4.10		
^	1.018M	41.2	+0.1	+6.1	+0.0	+0.1	+0.0	47.5	46.0	+1.5	White
70	420.521k	12.7	+0.2	+6.2	+0.1	+0.1	+0.0	19.3	47.4	-28.1	White
	Ave										
٨	420.521k	43.6	+0.2	+6.2	+0.1	+0.1	+0.0	50.2	47.4	+2.8	White
72	561.457k	11.2	+0.2	+6.1	+0.1	+0.1	+0.0	17.7	46.0	-28.3	White
	Ave										
73		10.4	+0.1	+6.1	+0.0	+0.1	+0.0	16.7	46.0	-29.3	White
,3	Ave	10.1		1 0.1	1 3.0		10.0	10.7	10.0	27.5	,, 11100
٨	837.210k	39.7	+0.1	+6.1	+0.0	+0.1	+0.0	46.0	46.0	+0.0	White
	057.210K	37.1	10.1	10.1	10.0	10.1	10.0	+0.0	+0.0	10.0	** IIIC
75	597.959k	8.0	+0.2	+6.1	+0.1	+0.1	+0.0	14.5	46.0	-31.5	White
13		0.0	+0.2	+0.1	+0.1	+0.1	+0.0	14.3	40.0	-31.3	vv iiite
<u> </u>	Ave	40.1	0.2	1	0.1	0.1	0.0	16.6	46.0	0.6	XX 71
٨	597.959k	40.1	+0.2	+6.1	+0.1	+0.1	+0.0	46.6	46.0	+0.6	White



CKC Laboratories, Inc. Date: 9/15/2007 Time: 05:43:46 Synapse Product Development, LLC WO#: 86173 FCC 15.107 Class B COND [AVE] Test Lead: White 110V 60Hz Sequence#: 53



1 - FCC 15.107 Class B COND [AVE]



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC Specification: FCC 15.107 Class B COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 07:16:27
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 55

Player

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

#### Equipment Under Test (\* = EUT):

-1r	— · - /·			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Support Devices.			
Function	Manufacturer	Model #	S/N

#### Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receives. Hopping, transmit audio data in Bluetooth signal. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

## Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L1) Insertion Loss 00847 EMCO 3816/2NM

Measu	rement Data:	Re	eading lis	ted by ma	argin.			Test Lead	d: Black		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	388.331k	31.9	+0.2	+6.2	+0.1	+0.0	+0.0	38.4	48.1	-9.7	Black
	Ave										
2	398.703k	30.0	+0.2	+6.2	+0.1	+0.0	+0.0	36.5	47.9	-11.4	Black
	Ave										
٨	398.704k	43.0	+0.2	+6.2	+0.1	+0.0	+0.0	49.5	47.9	+1.6	Black
4	444.926k	28.7	+0.2	+6.2	+0.1	+0.0	+0.0	35.2	47.0	-11.8	Black
	Ave										
5	616.433k	26.8	+0.2	+6.1	+0.1	+0.1	+0.0	33.3	46.0	-12.7	Black
	Ave										

Page 30 of 170 Report No: FC07-071A



6 Av	742.672k	26.5	+0.1	+6.1	+0.1	+0.1	+0.0	32.9	46.0	-13.1	Black
	742.672k	41.4	+0.1	+6.1	+0.1	+0.1	+0.0	47.8	46.0	+1.8	Black
8 Av	622.683k	24.7	+0.2	+6.1	+0.1	+0.1	+0.0	31.2	46.0	-14.8	Black
	622.683k	40.4	+0.2	+6.1	+0.1	+0.1	+0.0	46.9	46.0	+0.9	Black
10 Av	388.331k	26.4	+0.2	+6.2	+0.1	+0.0	+0.0	32.9	48.1	-15.2	Black
	388.331k	45.0	+0.2	+6.2	+0.1	+0.0	+0.0	51.5	48.1	+3.4	Black
۸	384.159k	42.8	+0.2	+6.2	+0.1	+0.0	+0.0	49.3	48.2	+1.1	Black
13 Av	384.159k	26.1	+0.2	+6.2	+0.1	+0.0	+0.0	32.6	48.2	-15.6	Black
14 Av	2.765M	23.3	+0.1	+6.2	+0.1	+0.2	+0.0	29.9	46.0	-16.1	Black
٨	2.765M	41.8	+0.1	+6.2	+0.1	+0.2	+0.0	48.4	46.0	+2.4	Black
16 Av	2.778M	23.0	+0.1	+6.2	+0.1	+0.2	+0.0	29.6	46.0	-16.4	Black
٨	2.778M	42.5	+0.1	+6.2	+0.1	+0.2	+0.0	49.1	46.0	+3.1	Black
18 Av	2.591M	23.0	+0.1	+6.2	+0.1	+0.2	+0.0	29.6	46.0	-16.4	Black
٨	2.591M	43.8	+0.1	+6.2	+0.1	+0.2	+0.0	50.4	46.0	+4.4	Black
20 Av	439.427k	23.3	+0.2	+6.2	+0.1	+0.0	+0.0	29.8	47.1	-17.3	Black
	439.427k	42.7	+0.2	+6.2	+0.1	+0.0	+0.0	49.2	47.1	+2.1	Black
۸	437.973k	42.1	+0.2	+6.2	+0.1	+0.0	+0.0	48.6	47.1	+1.5	Black
23 Av	1.468M	21.8	+0.1	+6.1	+0.0	+0.1	+0.0	28.1	46.0	-17.9	Black
٨	1.468M	42.2	+0.1	+6.1	+0.0	+0.1	+0.0	48.5	46.0	+2.5	Black
25 Av	1.103M	21.3	+0.1	+6.1	+0.0	+0.1	+0.0	27.6	46.0	-18.4	Black
٨	1.103M	41.1	+0.1	+6.1	+0.0	+0.1	+0.0	47.4	46.0	+1.4	Black
27 Av	552.144k ve	20.9	+0.2	+6.1	+0.1	+0.1	+0.0	27.4	46.0	-18.6	Black
	552.144k	42.5	+0.2	+6.1	+0.1	+0.1	+0.0	49.0	46.0	+3.0	Black
29 Av	3.063M ve	20.7	+0.1	+6.2	+0.1	+0.2	+0.0	27.3	46.0	-18.7	Black
٨	3.063M	40.0	+0.1	+6.2	+0.1	+0.2	+0.0	46.6	46.0	+0.6	Black

Page 31 of 170 Report No: FC07-071A

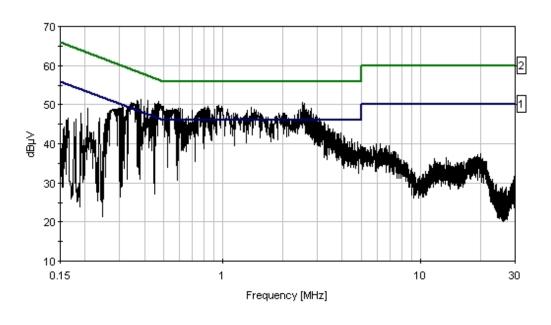


31	1.919M	20.0	+0.1	+6.1	+0.1	+0.1	+0.0	26.4	46.0	-19.6	Black
	Ave										
٨	1.919M	41.4	+0.1	+6.1	+0.1	+0.1	+0.0	47.8	46.0	+1.8	Black
33	852.480k	20.0	+0.1	+6.1	+0.0	+0.1	+0.0	26.3	46.0	-19.7	Black
	Ave	20.0	10.1	10.1	10.0	10.1	10.0	20.5	10.0	17.7	Bluck
^	852.480k	42.3	+0.1	+6.1	+0.0	+0.1	+0.0	48.6	46.0	+2.6	Black
	032.400K	72.3	10.1	10.1	10.0	10.1	10.0	70.0	40.0	12.0	Diack
35	797.212k	19.5	+0.1	+6.1	+0.1	+0.1	+0.0	25.9	46.0	-20.1	Black
	Ave	17.3	+0.1	+0.1	+0.1	+0.1	+0.0	23.9	40.0	-20.1	Diack
^	797.212k	42.7	ι Λ. 1	ı <b>6</b> 1	±0.1	±0.1	+0.0	49.1	46.0	+3.1	Dlask
	797.212K	42.7	+0.1	+6.1	+0.1	+0.1	+0.0	49.1	40.0	+3.1	Black
	44.5.4201	20.6			0.1			27.1		20.4	D1 1
37		20.6	+0.2	+6.2	+0.1	+0.0	+0.0	27.1	47.5	-20.4	Black
	Ave										
^	415.429k	44.6	+0.2	+6.2	+0.1	+0.0	+0.0	51.1	47.5	+3.6	Black
39	591.413k	18.7	+0.2	+6.1	+0.1	+0.1	+0.0	25.2	46.0	-20.8	Black
	Ave										
^	591.413k	42.5	+0.2	+6.1	+0.1	+0.1	+0.0	49.0	46.0	+3.0	Black
41	365.979k	20.7	+0.2	+6.2	+0.1	+0.0	+0.0	27.2	48.6	-21.4	Black
	Ave										
^	365.979k	44.0	+0.2	+6.2	+0.1	+0.0	+0.0	50.5	48.6	+1.9	Black
43	605.957k	16.8	+0.2	+6.1	+0.1	+0.1	+0.0	23.3	46.0	-22.7	Black
	Ave	10.0	10.2	10.1	10.1	10.1	10.0	25.5	10.0	22.7	Diuck
^	605.957k	42.6	+0.2	+6.1	+0.1	+0.1	+0.0	49.1	46.0	+3.1	Black
	003.937K	42.0	⊤0.∠	⊤0.1	⊤0.1	⊤0.1	±0.0	₩2.1	40.0	⊤3.1	DIACK
45	512 1401-	14.2	+0.2	+6.2	+0.1	+0.1	+0.0	20.8	46.0	-25.2	Dlask
	512.148k	14.2	+0.2	+0.2	+0.1	+0.1	+0.0	20.8	46.0	-23.2	Black
	Ave	41.7	.0.2		. 0. 1	. 0. 1	. 0. 0	40.2	46.0	. 2. 2	D1 1
٨	512.148k	41.7	+0.2	+6.2	+0.1	+0.1	+0.0	48.3	46.0	+2.3	Black

Page 32 of 170 Report No: FC07-071A



CKC Laboratories, Inc. Date: 9/15/2007 Time: 07:16:27 Synapse Product Development, LLC WO#: 86173 FCC 15.107 Class B COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 55





Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC Specification: FCC 15.107 Class B COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 07:36:37
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 56

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AO 110V 60Hz

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

**Equipment Under Test (\* = EUT):** 

	- )-			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AQ	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N
1 1 1 1 1			

#### Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receives. Hopping, transmit audio data in Bluetooth signal. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

## Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L2) Insertion Loss 00847 EMCO 3816/2NM

Measu	rement Data:	Re	eading lis	isted by margin. Test Lead: White							
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	159.859k	32.6	+0.6	+6.2	+0.1	+0.2	+0.0	39.7	55.5	-15.8	White
	Ave										
^	159.859k	48.0	+0.6	+6.2	+0.1	+0.2	+0.0	55.1	55.5	-0.4	White
3	2.621M	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	White
Ave											
^	2.621M	39.7	+0.1	+6.2	+0.1	+0.2	+0.0	46.3	46.0	+0.3	White

Page 34 of 170 Report No: FC07-071A



5 2.472M Ave	18.9	+0.1	+6.2	+0.1	+0.2	+0.0	25.5	46.0	-20.5	White
^ 2.472M	39.1	+0.1	+6.2	+0.1	+0.2	+0.0	45.7	46.0	-0.3	White
7 510.693k Ave	17.2	+0.2	+6.2	+0.1	+0.1	+0.0	23.8	46.0	-22.2	White
^ 510.693k	41.1	+0.2	+6.2	+0.1	+0.1	+0.0	47.7	46.0	+1.7	White
9 2.668M Ave	17.1	+0.1	+6.2	+0.1	+0.2	+0.0	23.7	46.0	-22.3	White
^ 2.668M	42.5	+0.1	+6.2	+0.1	+0.2	+0.0	49.1	46.0	+3.1	White
11 621.956k Ave	14.1	+0.2	+6.1	+0.1	+0.1	+0.0	20.6	46.0	-25.4	White
^ 621.956k	41.0	+0.2	+6.1	+0.1	+0.1	+0.0	47.5	46.0	+1.5	White
13 472.151k Ave	14.4	+0.2	+6.2	+0.1	+0.1	+0.0	21.0	46.5	-25.5	White
^ 472.151k	46.7	+0.2	+6.2	+0.1	+0.1	+0.0	53.3	46.5	+6.8	White
^ 474.333k	39.6	+0.2	+6.2	+0.1	+0.1	+0.0	46.2	46.4	-0.2	White
16 1.115M Ave	13.9	+0.1	+6.1	+0.0	+0.1	+0.0	20.2	46.0	-25.8	White
^ 1.115M	41.4	+0.1	+6.1	+0.0	+0.1	+0.0	47.7	46.0	+1.7	White
18 484.514k Ave	13.5	+0.2	+6.2	+0.1	+0.1	+0.0	20.1	46.3	-26.2	White
19 792.122k Ave	13.1	+0.1	+6.1	+0.1	+0.1	+0.0	19.5	46.0	-26.5	White
^ 792.122k	40.4	+0.1	+6.1	+0.1	+0.1	+0.0	46.8	46.0	+0.8	White
21 745.581k Ave	12.5	+0.1	+6.1	+0.1	+0.1	+0.0	18.9	46.0	-27.1	White
^ 745.581k	43.3	+0.1	+6.1	+0.1	+0.1	+0.0	49.7	46.0	+3.7	White
23 484.514k Ave	12.5	+0.2	+6.2	+0.1	+0.1	+0.0	19.1	46.3	-27.2	White
^ 484.514k	45.3	+0.2	+6.2	+0.1	+0.1	+0.0	51.9	46.3	+5.6	White
25 2.748M Ave	11.8	+0.1	+6.2	+0.1	+0.2	+0.0	18.4	46.0	-27.6	White
^ 2.748M	38.8	+0.1	+6.2	+0.1	+0.2	+0.0	45.4	46.0	-0.6	White
27 4.207M Ave	11.5	+0.1	+6.2	+0.2	+0.2	+0.0	18.2	46.0	-27.8	White
^ 4.207M	39.1	+0.1	+6.2	+0.2	+0.2	+0.0	45.8	46.0	-0.2	White
L										

Page 35 of 170 Report No: FC07-071A

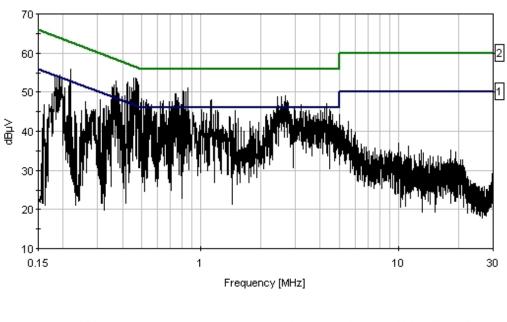


29	4.330M Ave	11.0	+0.1	+6.2	+0.2	+0.2	+0.0	17.7	46.0	-28.3	White
٨	4.330M	40.3	+0.1	+6.2	+0.2	+0.2	+0.0	47.0	46.0	+1.0	White
31	371.070k Ave	12.3	+0.2	+6.2	+0.1	+0.1	+0.0	18.9	48.5	-29.6	White
٨	371.070k	46.2	+0.2	+6.2	+0.1	+0.1	+0.0	52.8	48.5	+4.3	White
٨	371.070k	39.8	+0.2	+6.2	+0.1	+0.1	+0.0	46.4	48.5	-2.1	White
34	811.029k	10.0	+0.1	+6.1	+0.1	+0.1	+0.0	16.4	46.0	-29.6	White
٨	Ave 811.029k	43.9	+0.1	+6.1	+0.1	+0.1	+0.0	50.3	46.0	+4.3	White
36	686.677k Ave	9.6	+0.2	+6.1	+0.1	+0.1	+0.0	16.1	46.0	-29.9	White
٨	686.677k	41.0	+0.2	+6.1	+0.1	+0.1	+0.0	47.5	46.0	+1.5	White
38	456.880k Ave	10.1	+0.2	+6.2	+0.1	+0.1	+0.0	16.7	46.7	-30.0	White
٨	456.880k	46.9	+0.2	+6.2	+0.1	+0.1	+0.0	53.5	46.7	+6.8	White
40	821.210k Ave	8.6	+0.1	+6.1	+0.1	+0.1	+0.0	15.0	46.0	-31.0	White
٨	821.210k	43.6	+0.1	+6.1	+0.1	+0.1	+0.0	50.0	46.0	+4.0	White
42	840.117k Ave	8.4	+0.1	+6.1	+0.0	+0.1	+0.0	14.7	46.0	-31.3	White
٨	840.118k	43.8	+0.1	+6.1	+0.0	+0.1	+0.0	50.1	46.0	+4.1	White
44	544.145k Ave	7.6	+0.2	+6.1	+0.1	+0.1	+0.0	14.1	46.0	-31.9	White
٨	544.145k	40.5	+0.2	+6.1	+0.1	+0.1	+0.0	47.0	46.0	+1.0	White
٨	540.509k	39.1	+0.2	+6.1	+0.1	+0.1	+0.0	45.6	46.0	-0.4	White
47	424.156k Ave	8.7	+0.2	+6.2	+0.1	+0.1	+0.0	15.3	47.4	-32.1	White
٨	424.156k	46.0	+0.2	+6.2	+0.1	+0.1	+0.0	52.6	47.4	+5.2	White
49	362.343k Ave	9.3	+0.2	+6.2	+0.1	+0.1	+0.0	15.9	48.7	-32.8	White
^	362.343k	45.3	+0.2	+6.2	+0.1	+0.1	+0.0	51.9	48.7	+3.2	White
51	4.475M Ave	5.1	+0.1	+6.2	+0.2	+0.2	+0.0	11.8	46.0	-34.2	White
^	4.475M	38.8	+0.1	+6.2	+0.2	+0.2	+0.0	45.5	46.0	-0.5	White
53	4.475M Ave	5.1	+0.1	+6.2	+0.2	+0.2	+0.0	11.8	46.0	-34.2	White



54	197.995k	7.6	+0.2	+6.1	+0.1	+0.2	+0.0	14.2	53.7	-39.5	White
	Ave										
^	197.995k	46.7	+0.2	+6.1	+0.1	+0.2	+0.0	53.3	53.7	-0.4	White
٨	196.540k	46.6	+0.2	+6.1	+0.1	+0.2	+0.0	53.2	53.8	-0.6	White
57	192.904k	7.2	+0.2	+6.1	+0.1	+0.2	+0.0	13.8	53.9	-40.1	White
	Ave										
^	192.904k	47.7	+0.2	+6.1	+0.1	+0.2	+0.0	54.3	53.9	+0.4	White
59	186.359k	6.8	+0.2	+6.1	+0.1	+0.2	+0.0	13.4	54.2	-40.8	White
1	Ave										
^	186.359k	47.3	+0.2	+6.1	+0.1	+0.2	+0.0	53.9	54.2	-0.3	White
^	181.996k	47.2	+0.3	+6.1	+0.1	+0.2	+0.0	53.9	54.4	-0.5	White

CKC Laboratories, Inc. Date: 9/15/2007 Time: 07:36:37 Synapse Product Development, LLC WO#: 86173 FCC 15.107 Class B COND [AVE] Test Lead: White 110V 60Hz Sequence#: 56



Sweep Data
 2 - FCC 15.107 Class B COND [QP]

1 - FCC 15.107 Class B COND [AVE]



Customer: Synapse Product Development Specification: FCC 15.107(a) Class B - AVE

Work Order #: 87002 Date: 11/1/2007
Test Type: Conducted Emissions Time: 17:07:37
Equipment: Wireless Music Player Sequence#: 6

Manufacturer: Synapse Tested By: Ryan Rutledge Model: MW101AM 120V 60Hz

S/N: EG001002Y0000000142

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	S/N: MY46186330	10/03/2007	10/03/2009	AN02872
Bothell 5m Cable Set	S/N: P05444	04/26/2007	04/26/2009	ANP05444
20' RG-214 Coax	S/N: 16	11/09/2006	11/09/2008	ANP05360
TTE High Pass Filter	S/N: G7752	07/17/2006	07/17/2008	AN02611
10dB BNC Attenuator	S/N: 7	05/01/2006	05/01/2008	ANP05506
EMCO 3816/2NM	S/N: 9606-1049	06/01/2007	06/01/2009	AN01492
LISN				

**Equipment Under Test (\* = EUT):** 

Function	Manufacturer	Model #	S/N
Wireless Music Player*	Synapse	MW101AM	EG001002Y00000000142

Support Devices:

Support Devices.			
Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PP11L	CN-0C4708-48643-5CC- 1983
AC Adapter	Dell	HP-OQ065B83	CN-0N2765-47890-4B4- 4350

## Test Conditions / Notes:

USB transfer mode

# Transducer Legend:

T1=ATT-ANP05506-050106	T2=CAB-ANP05444-042607 - CPC3 Cable Set
T3=CAB-ANP05360-110906	T4=CDN-AN01492-060107 - Neutral
T5=FIL-AN02611-071706	

Measur	rement Data:	Re	eading lis	ted by ma	argin.			Test Lead	d: Neutral		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5								
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	2.891M	34.8	+10.0	+0.2	+0.1	+0.2	+0.0	45.4	46.0	-0.6	Neutr
			+0.1								
2	506.331k	34.6	+10.0	+0.1	+0.1	+0.2	+0.0	45.3	46.0	-0.7	Neutr
			+0.3								
3	2.727M	34.7	+10.0	+0.2	+0.1	+0.2	+0.0	45.3	46.0	-0.7	Neutr
			+0.1								
4	2.644M	34.4	+10.0	+0.2	+0.1	+0.2	+0.0	45.1	46.0	-0.9	Neutr
			+0.2								

Page 38 of 170 Report No: FC07-071A

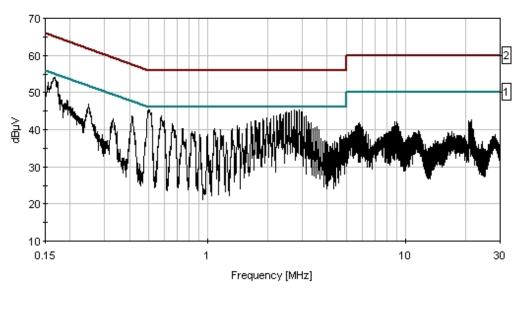


5	2.808M	34.5	+10.0	+0.2	+0.1	+0.2	+0.0	45.1	46.0	-0.9	Neutr
			+0.1								
6	165.635k	43.2	+10.0	+0.1	+0.0	+0.2	+0.0	54.1	55.2	-1.1	Neutr
			+0.6								
7	2.478M	34.1	+10.0	+0.2	+0.1	+0.2	+0.0	44.8	46.0	-1.2	Neutr
			+0.2								
8	2.974M	34.2	+10.0	+0.2	+0.1	+0.2	+0.0	44.8	46.0	-1.2	Neutr
			+0.1								
9	2.559M	33.8	+10.0	+0.2	+0.1	+0.2	+0.0	44.5	46.0	-1.5	Neutr
			+0.2								
10	2.312M	33.5	+10.0	+0.2	+0.1	+0.2	+0.0	44.2	46.0	-1.8	Neutr
			+0.2								
11	2.395M	33.2	+10.0	+0.2	+0.1	+0.2	+0.0	43.9	46.0	-2.1	Neutr
			+0.2								
12	577.961k	33.2	+10.0	+0.1	+0.1	+0.2	+0.0	43.8	46.0	-2.2	Neutr
			+0.2								
13	2.147M	33.1	+10.0	+0.2	+0.1	+0.2	+0.0	43.8	46.0	-2.2	Neutr
			+0.2								
14	3.140M	33.1	+10.0	+0.2	+0.1	+0.2	+0.0	43.8	46.0	-2.2	Neutr
			+0.2								
15	2.227M	33.0	+10.0	+0.2	+0.1	+0.2	+0.0	43.7	46.0	-2.3	Neutr
			+0.2								
16	3.055M	32.9	+10.0	+0.2	+0.1	+0.2	+0.0	43.5	46.0	-2.5	Neutr
			+0.1								
17	1.981M	32.5	+10.0	+0.2	+0.1	+0.2	+0.0	43.2	46.0	-2.8	Neutr
			+0.2								
18	154.727k	40.5	+10.0	+0.1	+0.0	+0.2	+0.0	52.8	55.7	-2.9	Neutr
			+2.0								
19	1.898M	32.1	+10.0	+0.2	+0.1	+0.2	+0.0	42.8	46.0	-3.2	Neutr
			+0.2								
20	2.066M	32.1	+10.0	+0.2	+0.1	+0.2	+0.0	42.8	46.0	-3.2	Neutr
			+0.2								

Page 39 of 170 Report No: FC07-071A



CKC Laboratories Date: 11/1/2007 Time: 17:07:37 Synapse Product Development WO#: 87002 FCC 15:107(a) Class B - AVE Test Lead: Neutral 120V 60Hz Sequence#: 6 Polarity: Neutral Notes: USB transfer mode



Sweep Data
 2 - FCC 15.107(a) Class B - QP

1 - FCC 15.107(a) Class B - AVE



Customer: Synapse Product Development FCC 15.107(a) Class B - AVE

Work Order #: 87002 Date: 11/1/2007
Test Type: Conducted Emissions Time: 17:06:50
Equipment: Wireless Music Player Sequence#: 5

Manufacturer: Synapse Tested By: Ryan Rutledge Model: MW101AM 120V 60Hz

S/N: EG001002Y0000000142

## Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	S/N: MY46186330	10/03/2007	10/03/2009	AN02872
Bothell 5m Cable Set	S/N: P05444	04/26/2007	04/26/2009	ANP05444
20' RG-214 Coax	S/N: 16	11/09/2006	11/09/2008	ANP05360
TTE High Pass Filter	S/N: G7752	07/17/2006	07/17/2008	AN02611
10dB BNC Attenuator	S/N: 7	05/01/2006	05/01/2008	ANP05506
EMCO 3816/2NM	S/N: 9606-1049	06/01/2007	06/01/2009	AN01492
LISN				

**Equipment Under Test (\* = EUT):** 

Function	Manufacturer	Model #	S/N
Wireless Music Player*	Synapse	MW101AM	EG001002Y00000000142

Support Devices:

Support Devices.			
Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PP11L	CN-0C4708-48643-5CC- 1983
AC Adapter	Dell	HP-OQ065B83	CN-0N2765-47890-4B4- 4350

## Test Conditions / Notes:

USB transfer mode

# Transducer Legend:

T1=ATT-ANP05506-050106	T2=CAB-ANP05444-042607 - CPC3 Cable Set
T3=CAB-ANP05360-110906	T4=CDN-AN01492-060107 - Line
T5=FIL-AN02611-071706	

Measure	ement Data:	Re	eading lis	ted by ma	argin.			Test Lead	d: Line		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5								
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	2.638M	35.3	+10.0	+0.2	+0.1	+0.1	+0.0	45.9	46.0	-0.1	Line
			+0.2								
2	2.970M	35.4	+10.0	+0.2	+0.1	+0.1	+0.0	45.9	46.0	-0.1	Line
			+0.1								
3	2.064M	35.2	+10.0	+0.2	+0.1	+0.1	+0.0	45.8	46.0	-0.2	Line
			+0.2								
4	2.310M	35.1	+10.0	+0.2	+0.1	+0.1	+0.0	45.7	46.0	-0.3	Line
			+0.2								
5	2.804M	34.8	+10.0	+0.2	+0.1	+0.1	+0.0	45.3	46.0	-0.7	Line
			+0.1								

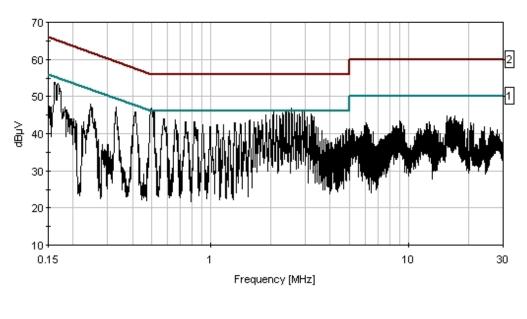
Page 41 of 170 Report No: FC07-071A



6	3.220M	34.7	+10.0	+0.2	+0.1	+0.1	+0.0	45.3	46.0	-0.7	Line
			+0.2								
7	1.898M	34.5	+10.0	+0.2	+0.1	+0.1	+0.0	45.1	46.0	-0.9	Line
			+0.2								
8	2.721M	34.6	+10.0	+0.2	+0.1	+0.1	+0.0	45.1	46.0	-0.9	Line
			+0.1								
9	2.147M	34.4	+10.0	+0.2	+0.1	+0.1	+0.0	45.0	46.0	-1.0	Line
			+0.2								
10	2.223M	34.1	+10.0	+0.2	+0.1	+0.1	+0.0	44.7	46.0	-1.3	Line
			+0.2								
11	3.055M	34.1	+10.0	+0.2	+0.1	+0.1	+0.0	44.6	46.0	-1.4	Line
			+0.1								
12	3.303M	34.0	+10.0	+0.2	+0.1	+0.1	+0.0	44.6	46.0	-1.4	Line
			+0.2								
13	168.180k	42.8	+10.0	+0.1	+0.0	+0.1	+0.0	53.5	55.0	-1.5	Line
			+0.5								
14	412.158k	35.5	+10.0	+0.1	+0.1	+0.1	+0.0	45.9	47.6	-1.7	Line
			+0.1								
15	495.550k	33.4	+10.0	+0.1	+0.1	+0.1	+0.0	44.0	46.1	-2.1	Line
	Ave		+0.3								
^	498.332k	36.3	+10.0	+0.1	+0.1	+0.1	+0.0	46.9	46.0	+0.9	Line
			+0.3								
17	2.557M	31.0	+10.0	+0.2	+0.1	+0.1	+0.0	41.6	46.0	-4.4	Line
	Ave		+0.2								
^	2.557M	36.2	+10.0	+0.2	+0.1	+0.1	+0.0	46.8	46.0	+0.8	Line
	2 4523 5	20.7	+0.2		0.4	0.1	0.0	44.4	460	4.0	
19	2.473M	30.5	+10.0	+0.2	+0.1	+0.1	+0.0	41.1	46.0	-4.9	Line
	Ave	27.7	+0.2		0.4	0.1	0.0	150	460	0.2	
٨	2.474M	35.7	+10.0	+0.2	+0.1	+0.1	+0.0	46.3	46.0	+0.3	Line
21	2 0001 4	20.2	+0.2	. 0. 2	. 0.1	. 0. 1	. 0. 0	20.7	46.0		т •
21	2.890M	29.2	+10.0	+0.2	+0.1	+0.1	+0.0	39.7	46.0	-6.3	Line
٨	Ave	25.5	+0.1	.0.2	.0.1	.0.1	.00	46.0	46.0	.00	т :
	2.891M	35.5	+10.0	+0.2	+0.1	+0.1	+0.0	46.0	46.0	+0.0	Line
22	2.20514	20.1	+0.1	.0.2	ı O 1	.0.1	.00	20.7	46.0	( )	T :
23	2.395M	29.1	+10.0	+0.2	+0.1	+0.1	+0.0	39.7	46.0	-6.3	Line
٨	Ave	25.0	+0.2	.0.2	.0.1	.0.1	.00	165	46.0	.0.5	T 2
	2.395M	35.9	+10.0	+0.2	+0.1	+0.1	+0.0	46.5	46.0	+0.5	Line
25	510 5701	12.2	+0.2	, O 1	+0.1	<sub>+</sub> () 1	10.0	22.0	16.0	22.1	T 2
	512.570k	13.3	+10.0	+0.1	+0.1	+0.1	+0.0	23.9	46.0	-22.1	Line
٨	Ave 517.239k	35.4	+0.3	, O 1	+0.1	<sub>+</sub> () 1	10.0	16.0	16.0	100	T 2
	317.239K	33.4	+10.0	+0.1	+0.1	+0.1	+0.0	46.0	46.0	+0.0	Line
			+0.3								



CKC Laboratories Date: 11/1/2007 Time: 17:06:50 Synapse Product Development WO#: 87002 FCC 15:107(a) Class B - AVE Test Lead: Line 120V 60Hz Sequence#: 5 Polarity: Line Notes: USB transfer mode



Sweep Data2 - FCC 15.107(a) Class B - QP

1 - FCC 15.107(a) Class B - AVE



# FCC 15.109 – RADIATED EMISSIONS

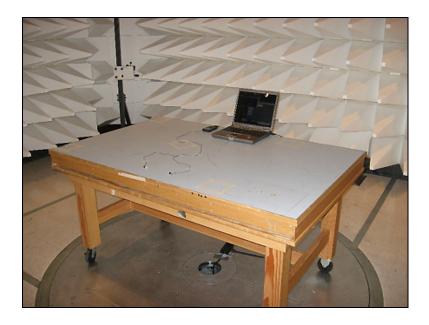
**Test Setup Photos** 











Testing 11/1/07





Testing 11/1/07



#### **Test Data Sheets**

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.109 Class B

Work Order #: 86173 Date: 9/15/2007
Test Type: Radiated Scan Time: 11:39:40
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 80

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

#### Test Equipment:

z cot z quipinent				
Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N	
WiFi and Bluetooth	Haier America LLC	MW101	NA	
Enabled Media Player*				
AC Power Supply	Haier America LLC	LSD-D03	NA	

## Support Devices:

Support Devices.			
Function	Manufacturer	Model #	S/N

#### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive. Digital power setting code = 20. Modulation: 802.11b (11mbs QPSK) Frequency: 2437MHz. Frequency range of measurement = 30MHz-1000MHz. 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz. The emission profile of all three orthogonal orientations were investigated during preliminary investigation. Worst case is EUT placed up right. 23°C, 53% relative humidity. Note: Evaluation of cost reduced Power supply design.

# Transducer Legend:

T1=Preamp 8447D 060108	T2=Bilog AN01995 020208 Chase
T3=Cable #10 051609	T4=Cable #15, Site A, 010509

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

	#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
		MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\mu V/m$	dB	Ant
	1	38.767M	48.5	-27.8	+14.8	+0.1	+1.1	+0.0	36.7	40.0	-3.3	Vert
	(	QP										
ſ	٨	38.767M	53.9	-27.8	+14.8	+0.1	+1.1	+0.0	42.1	40.0	+2.1	Vert
ſ	3	42.289M	48.4	-27.8	+12.9	+0.1	+1.1	+0.0	34.7	40.0	-5.3	Vert
Ī	4	46.890M	49.2	-27.7	+10.5	+0.1	+1.2	+0.0	33.3	40.0	-6.7	Vert

Page 47 of 170 Report No: FC07-071A



5	56.255M	51.2	-27.7	+7.2	+0.1	+1.3	+0.0	32.1	40.0	-7.9	Vert
6	120.420M	46.4	-27.6	+11.3	+0.3	+2.0	+0.0	32.4	43.5	-11.1	Horiz
7	76.530M	47.7	-27.8	+7.1	+0.1	+1.6	+0.0	28.7	40.0	-11.3	Vert
8	61.890M	47.6	-27.7	+6.2	+0.1	+1.3	+0.0	27.5	40.0	-12.5	Vert
9	141.600M	44.1	-27.7	+11.3	+0.2	+2.1	+0.0	30.0	43.5	-13.5	Horiz
10	146.820M	43.8	-27.7	+11.1	+0.2	+2.2	+0.0	29.6	43.5	-13.9	Vert
11	69.390M	45.0	-27.7	+6.0	+0.0	+1.5	+0.0	24.8	40.0	-15.2	Vert
12	506.160M	35.3	-27.6	+18.3	+0.3	+4.2	+0.0	30.5	46.0	-15.5	Vert
13	39.250M	35.2	-27.8	+14.6	+0.1	+1.1	+0.0	23.2	40.0	-16.8	Horiz
14	141.530M	40.7	-27.7	+11.3	+0.2	+2.1	+0.0	26.6	43.5	-16.9	Vert
15	208.520M	41.3	-27.6	+9.5	+0.2	+2.6	+0.0	26.0	43.5	-17.5	Horiz
16	538.280M	31.4	-27.4	+19.3	+0.5	+4.4	+0.0	28.2	46.0	-17.8	Vert
17	800.780M	26.9	-27.1	+21.9	+0.6	+5.5	+0.0	27.8	46.0	-18.2	Vert
18	433.900M	33.9	-27.7	+16.7	+0.4	+3.9	+0.0	27.2	46.0	-18.8	Vert
19	301.300M	37.2	-27.6	+13.2	+0.2	+3.2	+0.0	26.2	46.0	-19.8	Horiz
20	458.400M	32.1	-27.6	+17.3	+0.4	+4.0	+0.0	26.2	46.0	-19.8	Vert
21	225.000M	39.2	-27.6	+10.8	+0.2	+2.7	+0.0	25.3	46.0	-20.7	Horiz
22	195.230M	38.4	-27.6	+8.8	+0.2	+2.6	+0.0	22.4	43.5	-21.1	Horiz
23	256.630M	36.7	-27.7	+12.6	+0.3	+2.9	+0.0	24.8	46.0	-21.2	Horiz
24	114.250M	34.5	-27.6	+11.0	+0.3	+1.9	+0.0	20.1	43.5	-23.4	Horiz
25	156.950M	34.9	-27.7	+10.4	+0.2	+2.3	+0.0	20.1	43.5	-23.4	Vert
26	329.710M	32.0	-27.6	+14.0	+0.3	+3.4	+0.0	22.1	46.0	-23.9	Vert
27	224.450M	30.9	-27.6	+10.7	+0.2	+2.7	+0.0	16.9	46.0	-29.1	Vert
L											



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.109 Class B

Work Order #: 86173 Date: 9/15/2007
Test Type: Radiated Scan Time: 11:55:21
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 81

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309

#### **Equipment Under Test (\* = EUT):**

(	— / ·		_
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

#### Support Devices:

····FF				
Function	Manufacturer	Model #	S/N	

## Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive. Digital power setting code = 20. Modulation: 802.11g (54mbs, OFDM-64QAM). Frequency: 2437MHz. Frequency range of measurement = 30MHz - 1000MHz. 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz. The emission profile of all three orthogonal orientations were investigated during preliminary investigation. Worst case is EUT placed up right. 23°C, 53% relative humidity. Note: Evaluation of cost reduced Power supply design.

## Transducer Legend:

T1=Preamp 8447D 060108	T2=Bilog AN01995 020208 Chase
T3=Cable #10 051609	T4=Cable #15, Site A, 010509

Meas	surement Data:	Re	eading lis	ted by ma	argin.		Те	est Distance	e: 3 Meters	1	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
	1 38.567M	50.1	-27.8	+14.9	+0.1	+1.1	+0.0	38.4	40.0	-1.6	Vert
	QP										
	^ 38.567M	54.8	-27.8	+14.9	+0.1	+1.1	+0.0	43.1	40.0	+3.1	Vert
	3 46.617M	50.0	-27.7	+10.6	+0.1	+1.2	+0.0	34.2	40.0	-5.8	Vert

Page 49 of 170 Report No: FC07-071A



4	43.342M QP	47.7	-27.8	+12.3	+0.1	+1.1	+0.0	33.4	40.0	-6.6	Vert
^	43.342M	51.5	-27.8	+12.3	+0.1	+1.1	+0.0	37.2	40.0	-2.8	Vert
6	120.370M	46.2	-27.6	+11.3	+0.3	+2.0	+0.0	32.2	43.5	-11.3	Horiz
7	265.900M	46.0	-27.7	+12.7	+0.3	+3.0	+0.0	34.3	46.0	-11.7	Horiz
8	70.532M	46.9	-27.7	+6.1	+0.0	+1.5	+0.0	26.8	40.0	-13.2	Vert
9	146.830M	44.0	-27.7	+11.1	+0.2	+2.2	+0.0	29.8	43.5	-13.7	Horiz
10	161.160M	43.6	-27.7	+10.1	+0.2	+2.3	+0.0	28.5	43.5	-15.0	Horiz
11	39.030M	35.5	-27.8	+14.7	+0.1	+1.1	+0.0	23.6	40.0	-16.4	Vert
12	300.030M	40.3	-27.6	+13.2	+0.2	+3.2	+0.0	29.3	46.0	-16.7	Horiz
13	465.570M	34.5	-27.6	+17.4	+0.4	+4.1	+0.0	28.8	46.0	-17.2	Vert
14	85.720M	40.5	-27.8	+8.1	+0.1	+1.7	+0.0	22.6	40.0	-17.4	Vert
15	401.760M	36.4	-27.8	+15.8	+0.4	+3.7	+0.0	28.5	46.0	-17.5	Horiz
16	433.620M	35.1	-27.7	+16.7	+0.4	+3.9	+0.0	28.4	46.0	-17.6	Vert
17	161.200M	41.0	-27.7	+10.1	+0.2	+2.3	+0.0	25.9	43.5	-17.6	Vert
18	146.770M	38.4	-27.7	+11.1	+0.2	+2.2	+0.0	24.2	43.5	-19.3	Vert
19	131.060M	36.5	-27.6	+11.4	+0.3	+2.1	+0.0	22.7	43.5	-20.8	Vert
20	232.640M	37.1	-27.6	+11.3	+0.2	+2.8	+0.0	23.8	46.0	-22.2	Horiz
21	123.290M	35.0	-27.6	+11.4	+0.3	+2.0	+0.0	21.1	43.5	-22.4	Vert
22	69.030M	37.0	-27.7	+6.0	+0.0	+1.5	+0.0	16.8	40.0	-23.2	Horiz
23	402.000M	29.8	-27.8	+15.9	+0.4	+3.7	+0.0	22.0	46.0	-24.0	Vert
24	185.760M	35.2	-27.7	+8.9	+0.3	+2.5	+0.0	19.2	43.5	-24.3	Vert
25	320.760M	31.6	-27.6	+13.8	+0.2	+3.3	+0.0	21.3	46.0	-24.7	Vert



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.109 Class B

Work Order #: 86173 Date: 9/15/2007
Test Type: Radiated Scan Time: 16:16:54
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 11

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101AM

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	

## Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive Digital power setting code = 63. Modulation: Bluetooth. Frequency: 2441MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. Frequency range of measurement = 30 MHz - 1000MHz. 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz. Note: Evaluation of Cost reduced Power supply design.

# Transducer Legend:

T1=Preamp 8447D 060108	T2=Bilog AN01995 020208 Chase
T3=Cable #10 051609	T4=Cable #15, Site A, 010509

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	!	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
		MHz	dΒμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
	1	41.817M	48.2	-27.8	+13.1	+0.1	+1.1	+0.0	34.7	40.0	-5.3	Vert

Page 51 of 170 Report No: FC07-071A



2	40.317M	47.2	-27.8	+14.0	+0.1	+1.1	+0.0	34.6	40.0	-5.4	Vert
3	38.250M QP	44.6	-27.8	+15.0	+0.1	+1.1	+0.0	33.0	40.0	-7.0	Vert
٨	38.250M	49.5	-27.8	+15.0	+0.1	+1.1	+0.0	37.9	40.0	-2.1	Vert
5	433.620M	40.3	-27.7	+16.7	+0.4	+3.9	+0.0	33.6	46.0	-12.4	Horiz
6	207.330M	45.7	-27.6	+9.4	+0.2	+2.6	+0.0	30.3	43.5	-13.2	Horiz
7	264.400M	44.0	-27.7	+12.7	+0.3	+3.0	+0.0	32.3	46.0	-13.7	Horiz
8	361.080M	39.9	-27.6	+14.8	+0.3	+3.5	+0.0	30.9	46.0	-15.1	Horiz
9	401.780M	38.2	-27.8	+15.8	+0.4	+3.7	+0.0	30.3	46.0	-15.7	Horiz
10	369.880M	37.4	-27.7	+15.0	+0.3	+3.6	+0.0	28.6	46.0	-17.4	Horiz
11	51.070M	38.8	-27.7	+8.8	+0.1	+1.2	+0.0	21.2	40.0	-18.8	Horiz
12	433.900M	33.2	-27.7	+16.7	+0.4	+3.9	+0.0	26.5	46.0	-19.5	Vert
13	297.200M	37.3	-27.6	+13.2	+0.2	+3.2	+0.0	26.3	46.0	-19.7	Horiz
14	465.530M	31.8	-27.6	+17.4	+0.4	+4.1	+0.0	26.1	46.0	-19.9	Vert
15	304.700M	36.9	-27.6	+13.3	+0.2	+3.2	+0.0	26.0	46.0	-20.0	Horiz
16	417.830M	32.9	-27.7	+16.3	+0.4	+3.8	+0.0	25.7	46.0	-20.3	Vert
17	155.970M	37.5	-27.7	+10.5	+0.2	+2.3	+0.0	22.8	43.5	-20.7	Vert
18	386.050M	32.8	-27.7	+15.5	+0.4	+3.6	+0.0	24.6	46.0	-21.4	Horiz
19	474.020M	29.8	-27.6	+17.6	+0.4	+4.1	+0.0	24.3	46.0	-21.7	Horiz
20	490.350M	29.4	-27.6	+17.9	+0.3	+4.2	+0.0	24.2	46.0	-21.8	Vert
21	74.320M	37.2	-27.7	+6.7	+0.0	+1.5	+0.0	17.7	40.0	-22.3	Horiz
22	144.620M	35.2	-27.7	+11.2	+0.2	+2.2	+0.0	21.1	43.5	-22.4	Horiz
23	208.430M	35.2	-27.6	+9.5	+0.2	+2.6	+0.0	19.9	43.5	-23.6	Vert
24	231.970M	35.0	-27.6	+11.3	+0.2	+2.8	+0.0	21.7	46.0	-24.3	Horiz
L											



25	232.480M	33.8	-27.6	+11.3	+0.2	+2.8	+0.0	20.5	46.0	-25.5	Vert
26	352.480M	28.4	-27.6	+14.6	+0.3	+3.5	+0.0	19.2	46.0	-26.8	Vert
27	195.870M	32.2	-27.6	+8.8	+0.2	+2.6	+0.0	16.2	43.5	-27.3	Vert
28	382.480M	25.6	-27.7	+15.4	+0.4	+3.6	+0.0	17.3	46.0	-28.7	Vert



Customer: Synapse Product Development

Specification: 15.109 CLASS B

Work Order #: 87002 Date: 11/1/2007
Test Type: Radiated Scan Time: 15:57:10
Equipment: Wireless Music Player Sequence#: 1

Manufacturer: Synapse Tested By: Ryan Rutledge

Model: MW101AM

S/N: EG001002Y0000000142

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	S/N: MY46186330	10/03/2007	10/03/2009	AN02872
Bothell 5m Cable Set	S/N: P05444	04/26/2007	04/26/2009	ANP05444
20' RG-214 Coax	S/N: 16	11/09/2006	11/09/2008	ANP05360
HP 8447D PreAmp	S/N: 2944A08601	07/10/2006	07/10/2008	AN01517
Chase BILOG	S/N: 2458	01/31/2007	01/31/2009	AN01993

Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
Wireless Music Player*	Synapse	MW101AM	EG001002Y00000000142

## Support Devices:

Support 2 criters.			
Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PP11L	CN-0C4708-48643-5CC- 1983
AC Adapter	Dell	HP-OQ065B83	CN-0N2765-47890-4B4- 4350

## Test Conditions / Notes:

USB transfer mode

#### Transducer Legend:

T1=ANT AN01993 25-1000MHz	T2=AMP-AN01517-071006
T3=CAB-ANP05444-042607 - CPC3 Cable Set	T4=CAB-ANP05360-110906

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

Meusu	remem Dam.	17.0	Laumg ns	icu by ma	ugm.	iii. Test Distance. 5 Meters					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	160.166M	58.3	+10.6	-27.3	+1.2	+0.7	+0.0	43.5	43.5	+0.0	Vert
	QP						33				100
٨	160.158M	62.1	+10.6	-27.3	+1.2	+0.7	+0.0	47.3	43.5	+3.8	Vert
							33				100
3	432.908M	52.3	+16.6	-27.9	+1.9	+1.2	+0.0	44.1	46.0	-1.9	Vert
	QP						171				100
٨	432.936M	58.1	+16.6	-27.9	+1.9	+1.2	+0.0	49.9	46.0	+3.9	Vert
							171				100
5	199.989M	57.1	+9.0	-27.4	+1.2	+0.8	+0.0	40.7	43.5	-2.8	Vert
	QP						25				200
^	200.004M	58.9	+9.0	-27.4	+1.2	+0.8	+0.0	42.5	43.5	-1.0	Vert
							25				200

Page 54 of 170 Report No: FC07-071A

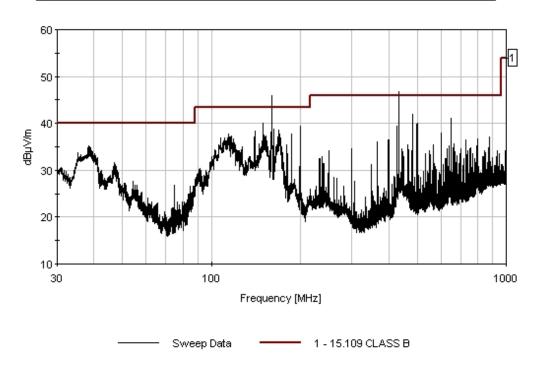


7 599.986M	47.0	+19.7	-28.4	+2.2	+1.4	+0.0	41.9	46.0	-4.1	Vert
QP						90				144
^ 600.012M	49.1	+19.7	-28.4	+2.2	+1.4	+0.0	44.0	46.0	-2.0	Vert
						90				144
9 150.008M	53.0	+11.2	-27.4	+1.2	+0.6	+0.0	38.6	43.5	-4.9	Vert
QP	57.0	11.0	27.4	1.0	0.6	119	40.0	10.5	0.7	100
^ 150.012M	57.2	+11.2	-27.4	+1.2	+0.6	+0.0	42.8	43.5	-0.7	Vert
11 (40.005)/	44.0	. 20. 2	20.6	. 2 2	. 1 5	119	40.2	46.0		100
11 649.995M	44.9	+20.2	-28.6	+2.3	+1.5	+0.0	40.3	46.0	-5.7	Vert
QP ^ 649.980M	46.4	+20.2	-28.6	+2.3	.1.5	276	41.8	46.0	-4.2	100
^ 049.980WI	40.4	+20.2	-28.0	+2.3	+1.5	+0.0 276	41.8	46.0	-4.2	Vert 100
13 140.637M	50.3	+11.6	-27.4	+1.1	+0.6	+0.0	36.2	43.5	-7.3	Vert
QP	30.3	+11.0	-27.4	+1.1	+0.0	+0.0	30.2	43.3	-1.3	100
^ 140.625M	53.4	+11.6	-27.4	+1.1	+0.6	+0.0	39.3	43.5	-4.2	Vert
140.023111	33.4	111.0	-27.4	11.1	10.0	10.0	37.3	73.3	-4.2	100
15 499.995M	45.5	+18.0	-28.2	+2.0	+1.2	+0.0	38.5	46.0	-7.5	Vert
QP	13.3	110.0	20.2	12.0	11.2	321	50.5	10.0	7.5	100
^ 499.999M	49.6	+18.0	-28.2	+2.0	+1.2	+0.0	42.6	46.0	-3.4	Vert
	.,,,,					321				100
17 479.994M	44.5	+17.6	-28.0	+2.0	+1.2	+0.0	37.3	46.0	-8.7	Vert
QP						142				200
^ 479.972M	51.2	+17.6	-28.0	+2.0	+1.2	+0.0	44.0	46.0	-2.0	Vert
						142				200
19 38.513M	43.1	+14.2	-27.6	+0.6	+0.3	+0.0	30.6	40.0	-9.4	Vert
QP						128				100
^ 38.446M	48.3	+14.3	-27.6	+0.6	+0.3	+0.0	35.9	40.0	-4.1	Vert
						128				100
21 497.883M	42.5	+18.0	-28.2	+2.0	+1.2	+0.0	35.5	46.0	-10.5	Vert
QP						169				100
^ 497.914M	52.4	+18.0	-28.2	+2.0	+1.2	+0.0	45.4	46.0	-0.6	Vert
						169				100
23 114.678M	46.5	+11.3	-27.5	+1.1	+0.6	+0.0	32.0	43.5	-11.5	Vert
QP	50.6	11.0	27.5	1.1	0.6	92	20.1	10.5		100
^ 114.735M	52.6	+11.3	-27.5	+1.1	+0.6	+0.0	38.1	43.5	-5.4	Vert
25 160 46214	16.2	.0.7	27.2	. 1. 2	.07	92	20.6	12.5	12.0	100
25 169.462M	46.2	+9.7	-27.2	+1.2	+0.7	+0.0	30.6	43.5	-12.9	Vert
QP ^ 169.451M	56.2	+9.7	-27.2	+1.2	+0.7	+0.0	40.6	43.5	-2.9	Vert
109.431W	30.2	+9.7	-21.2	+1.2	+0.7	+0.0 140	40.0	43.3	-2.9	100
27 162.884M	41.2	+10.3	-27.3	+1.2	+0.7	+0.0	26.1	43.5	-17.4	Vert
QP	71.4	+10.5	-21.3	⊤1.∠	±0.7	+0.0 11	20.1	+3.3	-1/. <del>4</del>	100
^ 162.872M	54.3	+10.3	-27.3	+1.2	+0.7	+0.0	39.2	43.5	-4.3	Vert
102.07211	J <del>-1</del> .J	110.5	-41.3	11.4	10.7	+0.0 11	37.4	73.3	- <del>1</del> .J	100
						11				100



29 426.584M	30.9	+16.5	-27.8	+1.9	+1.2	+0.0	22.7	46.0	-23.3	Vert
QP						154				100
^ 426.625M	56.4	+16.5	-27.8	+1.9	+1.2	+0.0	48.2	46.0	+2.2	Vert
						154				100
31 187.505M	36.5	+9.0	-27.3	+1.2	+0.7	+0.0	20.1	43.5	-23.4	Vert
QP						360				100
^ 187.573M	54.2	+9.0	-27.3	+1.2	+0.7	+0.0	37.8	43.5	-5.7	Vert
						360				100

CKC Laboratories Date: 11/1/2007 Time: 15:57:10 Synapse Product Development WO#: 87002 15:109 CLASS B Test Distance: 3 Meters Sequence#: 1 Polarity: Vert Notes: USB transfer mode





Customer: Synapse Product Development

Specification: 15.109 CLASS B

Work Order #:87002Date:11/1/2007Test Type:Radiated ScanTime:15:52:10Equipment:Wireless Music PlayerSequence#:2

Equipment: Wireless Music Player Sequence#: 2
Manufacturer: Synapse Tested By: Ryan Rutledge

Model: MW101AM

S/N: EG001002Y0000000142

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	S/N: MY46186330	10/03/2007	10/03/2009	AN02872
Bothell 5m Cable Set	S/N: P05444	04/26/2007	04/26/2009	ANP05444
20' RG-214 Coax	S/N: 16	11/09/2006	11/09/2008	ANP05360
HP 8447D PreAmp	S/N: 2944A08601	07/10/2006	07/10/2008	AN01517
Chase BILOG	S/N: 2458	01/31/2007	01/31/2009	AN01993

Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
Wireless Music Player*	Synapse	MW101AM	EG001002Y00000000142

#### Support Devices:

Tr Tr Tr Tr Tr			
Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PP11L	CN-0C4708-48643-5CC-
AC Adapter	Dell	HP-OQ065B83	1983 CN-0N2765-47890-4B4-
			4350

## Test Conditions / Notes:

USB transfer mode

#### Transducer Legend:

T1=ANT AN01993 25-1000MHz	T2=AMP-AN01517-071006
T3=CAB-ANP05444-042607 - CPC3 Cable Set	T4=CAB-ANP05360-110906

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

wieus	игетет Диш.	1/0	taumg ns	teu by ma	argin.		1 (	or Distance	e. o ividiciois		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	166.473M	53.8	+10.0	-27.3	+1.2	+0.7	+0.0	38.4	43.5	-5.1	Horiz
	QP						87				180
/	166.502M	56.5	+10.0	-27.3	+1.2	+0.7	+0.0	41.1	43.5	-2.4	Horiz
							87				180
3	3 599.993M	45.4	+19.7	-28.4	+2.2	+1.4	+0.0	40.3	46.0	-5.7	Horiz
	QP						174				154
/	599.987M	49.6	+19.7	-28.4	+2.2	+1.4	+0.0	44.5	46.0	-1.5	Horiz
							174				154
4	5 299.640M	51.5	+13.4	-27.0	+1.5	+0.9	+0.0	40.3	46.0	-5.7	Horiz
	QP						323				116
/	299.676M	55.2	+13.4	-27.0	+1.5	+0.9	+0.0	44.0	46.0	-2.0	Horiz
							323				116

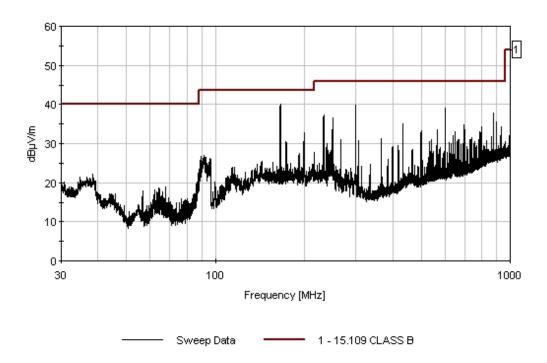
Page 57 of 170 Report No: FC07-071A



7	249.999M	50.5	+12.8	-27.0	+1.4	+0.9	+0.0	38.6	46.0	-7.4	Horiz
	QP						111				127
٨	249.943M	53.4	+12.8	-27.0	+1.4	+0.9	+0.0	41.5	46.0	-4.5	Horiz
							111				127
9	874.999M	38.8	+23.1	-27.9	+2.7	+1.9	+0.0	38.6	46.0	-7.4	Horiz
	QP						155				168
٨	874.997M	40.4	+23.1	-27.9	+2.7	+1.9	+0.0	40.2	46.0	-5.8	Horiz
							155				168
11	899.244M	35.4	+23.4	-27.9	+2.7	+1.9	+0.0	35.5	46.0	-10.5	Horiz
				_,,,	,						180
12	199.995M	49.1	+9.0	-27.4	+1.2	+0.8	+0.0	32.7	43.5	-10.8	Horiz
12	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	17.1	17.0	27	. 1.2	10.0	10.0	32.7	15.5	10.0	180
13	233.084M	48.3	+11.6	-27.0	+1.3	+0.9	+0.0	35.1	46.0	-10.9	Horiz
	OP	40.5	⊤11.0	-27.0	⊤1.5	±0.9	+0.0 98	33.1	40.0	-10.9	1111
^	233.086M	51.7	+11.6	-27.0	+1.3	+0.9	+0.0	38.5	46.0	-7.5	Horiz
	233.000W	31.7	+11.0	-27.0	+1.5	+0.9	+0.0 98	30.3	40.0	-1.5	110112
1.5	432.944M	43.3	116.6	-27.9	. 1.0	.1.2		35.1	46.0	-10.9	
15	432.944M	43.3	+16.6	-21.9	+1.9	+1.2	+0.0	33.1	40.0	-10.9	Horiz
1.0	600 250N	20.6	. 20. 7	20.4	. 2. 2	.1.6	. 0. 0	24.0	46.0	11.0	180
16	699.358M	38.6	+20.7	-28.4	+2.3	+1.6	+0.0	34.8	46.0	-11.2	Horiz
	<b>5</b> 00 0113 f	261	22.2	20.7		1.0	0.0	212	4.5.0		180
17	799.011M	36.1	+22.3	-28.5	+2.6	+1.8	+0.0	34.3	46.0	-11.7	Horiz
											180
18	929.659M	33.4	+23.7	-27.7	+2.8	+2.0	+0.0	34.2	46.0	-11.8	Horiz
											180
19	566.211M	39.4	+19.2	-28.5	+2.1	+1.4	+0.0	33.6	46.0	-12.4	Horiz
											180
20	896.109M	33.2	+23.4	-27.9	+2.7	+1.9	+0.0	33.3	46.0	-12.7	Horiz
											180
21	499.338M	40.2	+18.0	-28.2	+2.0	+1.2	+0.0	33.2	46.0	-12.8	Horiz
											180
22	799.325M	35.0	+22.3	-28.5	+2.6	+1.8	+0.0	33.2	46.0	-12.8	Horiz
											180
23	650.613M	37.7	+20.2	-28.6	+2.3	+1.5	+0.0	33.1	46.0	-12.9	Horiz
											180
24	790.723M	35.0	+22.2	-28.5	+2.6	+1.8	+0.0	33.1	46.0	-12.9	Horiz
			·								180
25	932.586M	32.1	+23.8	-27.7	+2.8	+2.0	+0.0	33.0	46.0	-13.0	Horiz
	752.500IVI	22.1	1 23.0	21.1	1 2.0	12.0	10.0	55.0	10.0	13.0	180
26	173.866M	46.4	+9.3	-27.2	+1.2	+0.7	+0.0	30.4	43.5	-13.1	Horiz
20	1/3.0001	40.4	<b>⊤</b> ⊅.3	-41.4	⊤1.∠	±0.7	+0.0	JU. <del>4</del>	45.5	-13.1	180
											100



CKC Laboratories Date: 11/1/2007 Time: 15:52:10 Synapse Product Development WO#: 87002 15:109 CLASS B Test Distance: 3 Meters Sequence#: 2 Polarity: Horiz Notes: USB transfer mode



Page 59 of 170 Report No: FC07-071A



Customer: Synapse Product Development

Specification: 15.109 CLASS B

Work Order #: 87002 Date: 11/1/2007
Test Type: Radiated Scan Time: 16:33:22
Equipment: Wireless Music Player Sequence#: 3

Manufacturer: Synapse Tested By: Ryan Rutledge

Model: MW101AM

S/N: EG001002Y0000000142

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	S/N: MY46186330	10/03/2007	10/03/2009	AN02872
60" Pasternack 40 GHz Coax	S/N: N/A	05/11/2006	05/11/2008	AN05423
30' Andrews Heliax 18 GHz	S/N: N/A	06/19/2006	06/19/2008	AN05545
HP 83017A .5 - 26.5 GHz	S/N: 3123A00464	10/02/2007	10/02/2009	AN01271
Pre-amp				
EMCO 3115 Horn Ant	S/N: 9606-4854	12/13/2005	12/13/2007	AN01412

Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
Wireless Music Player*	Synapse	MW101AM	EG001002Y00000000142

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PP11L	CN-0C4708-48643-5CC-
			1983
AC Adapter	Dell	HP-OQ065B83	CN-0N2765-47890-4B4-
			4350

## Test Conditions / Notes:

USB transfer mode. Highest operating frequency of EUT is 433 MHz.

## Transducer Legend:

T1=CAB-ANP05545-061906	T2=ANT-AN01412-121305
T3=CAB-ANP05423-051006	T4=AMP-AN01271-1002075-26.5 GHz

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

11100000	cincin Dana.										
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	1508.478M	51.6	+1.9	+26.2	+1.7	-34.3	+0.0	47.1	54.0	-6.9	Vert
2	1504.876M	51.5	+1.9	+26.2	+1.7	-34.3	+0.0	47.0	54.0	-7.0	Vert
3	1496.525M	50.6	+1.9	+26.2	+1.7	-34.3	+0.0	46.1	54.0	-7.9	Vert
4	1064.590M	54.8	+1.6	+23.9	+1.4	-35.8	+0.0	45.9	54.0	-8.1	Vert
5	1825.677M	49.2	+2.0	+26.2	+1.9	-33.7	+0.0	45.6	54.0	-8.4	Vert
6	1559.565M	49.8	+2.0	+26.2	+1.7	-34.2	+0.0	45.5	54.0	-8.5	Vert

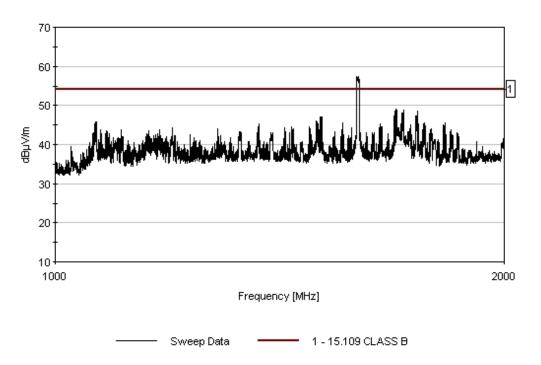
Page 60 of 170 Report No: FC07-071A



7 1767.294M	49.2	+2.0	+26.2	+1.9	-33.8	+0.0	45.5	54.0	-8.5	Vert
8 1650.322M	49.4	+2.0	+26.2	+1.8	-34.0	+0.0	45.4	54.0	-8.6	Vert
9 1368.808M	50.8	+1.8	+25.6	+1.7	-34.6	+0.0	45.3	54.0	-8.7	Vert
10 1732.017M	48.9	+2.0	+26.2	+1.9	-33.9	+0.0	45.1	54.0	-8.9	Vert
11 1480.970M	49.2	+1.9	+26.1	+1.7	-34.3	+0.0	44.6	54.0	-9.4	Vert
12 1440.035M	49.5	+1.8	+25.9	+1.7	-34.4	+0.0	44.5	54.0	-9.5	Vert
13 1596.057M Ave	47.4	+2.0	+26.2	+1.8	-34.2	+0.0 169	43.2	54.0	-10.8	Vert 100
^ 1596.035M	66.5	+2.0	+26.2	+1.8	-34.2	+0.0 169	62.3	54.0	+8.3	Vert 100
15 1330.070M Ave	36.1	+1.8	+25.4	+1.7	-34.7	+0.0 266	30.3	54.0	-23.7	Vert 100
^ 1330.004M	51.9	+1.8	+25.4	+1.7	-34.7	+0.0 266	46.1	54.0	-7.9	Vert 100
17 1396.558M Ave	34.6	+1.8	+25.7	+1.7	-34.5	+0.0 89	29.3	54.0	-24.7	Vert 100
^ 1396.475M	49.5	+1.8	+25.7	+1.7	-34.5	+0.0	44.2	54.0	-9.8	Vert 100
19 1706.875M Ave	28.7	+2.0	+26.2	+1.8	-33.9	+0.0	24.8	54.0	-29.2	Vert 100
^ 1706.848M	51.9	+2.0	+26.2	+1.8	-33.9	+0.0	48.0	54.0	-6.0	Vert
21 1693.213M Ave	28.6	+2.0	+26.2	+1.8	-33.9	+0.0	24.7	54.0	-29.3	Vert 100
^ 1693.176M	54.3	+2.0	+26.2	+1.8	-33.9	+0.0	50.4	54.0	-3.6	Vert 100
23 1712.883M Ave	28.3	+2.0	+26.2	+1.8	-33.9	+0.0	24.4	54.0	-29.6	Vert 100
^ 1712.831M	52.7	+2.0	+26.2	+1.8	-33.9	+0.0	48.8	54.0	-5.2	Vert
25 1688.197M Ave	28.0	+2.0	+26.2	+1.8	-33.9	+0.0	24.1	54.0	-29.9	Vert 100
^ 1688.281M	52.5	+2.0	+26.2	+1.8	-33.9	+0.0	48.6	54.0	-5.4	Vert
27 1749.496M Ave	27.4	+2.0	+26.2	+1.9	-33.8	+0.0	23.7	54.0	-30.3	Vert 100
^ 1749.552M	52.3	+2.0	+26.2	+1.9	-33.8	+0.0	48.6	54.0	-5.4	Vert



CKC Laboratories Date: 11/1/2007 Time: 16:33:22 Synapse Product Development WO#: 87002 15:109 CLASS B Test Distance: 3 Meters Sequence#: 3 Polarity: Vert Notes: USB transfer mode. Highest operating frequency of EUT is 433 MHz.



Page 62 of 170 Report No: FC07-071A



Customer: Synapse Product Development

Specification: 15.109 CLASS B

Work Order #: 87002 Date: 11/1/2007
Test Type: Radiated Scan Time: 16:43:52
Equipment: Wireless Music Player Sequence#: 4

Manufacturer: Synapse Tested By: Ryan Rutledge

Model: MW101AM

S/N: EG001002Y0000000142

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	S/N: MY46186330	10/03/2007	10/03/2009	AN02872
60" Pasternack 40 GHz Coax	S/N: N/A	05/11/2006	05/11/2008	AN05423
30' Andrews Heliax 18 GHz	S/N: N/A	06/19/2006	06/19/2008	AN05545
HP 83017A .5 - 26.5 GHz Pre-	S/N: 3123A00464	10/02/2007	10/02/2009	AN01271
amp				
EMCO 3115 Horn Ant	S/N: 9606-4854	12/13/2005	12/13/2007	AN01412

**Equipment Under Test (\* = EUT):** 

Function	Manufacturer	Model #	S/N
Wireless Music Player*	Synapse	MW101AM	EG001002Y00000000142

#### Support Devices:

Function	Manufacturer	Model #	S/N
Laptop PC	Dell	PP11L	CN-0C4708-48643-5CC-
			1983
AC Adapter	Dell	HP-OQ065B83	CN-0N2765-47890-4B4-
			4350

## Test Conditions / Notes:

USB transfer mode. Highest operating frequency of EUT is 433 MHz.

## Transducer Legend:

T1=CAB-ANP05545-061906	T2=ANT-AN01412-121305
T3=CAB-ANP05423-051006	T4=AMP-AN01271-1002075-26.5 GHz

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

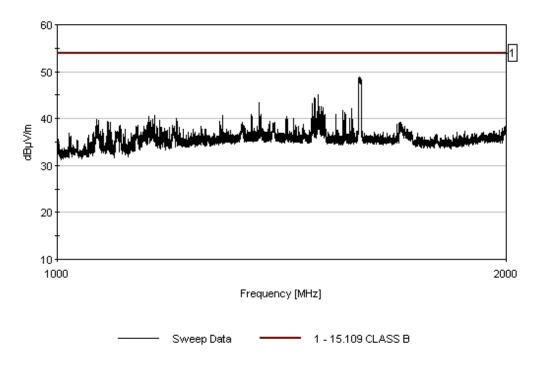
_	vicusu	remem Dam.	144	ading no	ica by mi	ai 5111.		1 (	ot Distance	o. o ivictors		
ſ	#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
		MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
Ī	1	1366.188M	49.0	+1.8	+25.6	+1.7	-34.6	+0.0	43.5	54.0	-10.5	Horiz
												100
Ī	2	1482.935M	47.7	+1.9	+26.1	+1.7	-34.3	+0.0	43.1	54.0	-10.9	Horiz
												100
Ī	3	1503.894M	47.1	+1.9	+26.2	+1.7	-34.3	+0.0	42.6	54.0	-11.4	Horiz
												100
Ī	4	1575.939M	46.4	+2.0	+26.2	+1.8	-34.2	+0.0	42.2	54.0	-11.8	Horiz
												100
Ī	5	1554.981M	46.0	+2.0	+26.2	+1.7	-34.2	+0.0	41.7	54.0	-12.3	Horiz
												100
Ī	6	1557.600M	45.6	+2.0	+26.2	+1.7	-34.2	+0.0	41.3	54.0	-12.7	Horiz
												100

Page 63 of 170 Report No: FC07-071A



7 1596.237M	39.8	+2.0	+26.2	+1.8	-34.2	+0.0	35.6	54.0	-18.4	Horiz
Ave						239				100
^ 1596.282M	58.3	+2.0	+26.2	+1.8	-34.2	+0.0	54.1	54.0	+0.1	Horiz
						239				100
9 1496.622M	28.0	+1.9	+26.2	+1.7	-34.3	+0.0	23.5	54.0	-30.5	Horiz
Ave										100
^ 1496.525M	49.5	+1.9	+26.2	+1.7	-34.3	+0.0	45.0	54.0	-9.0	Horiz
										100
11 1489.911M	27.6	+1.9	+26.2	+1.7	-34.3	+0.0	23.1	54.0	-30.9	Horiz
Ave										100
^ 1489.976M	48.8	+1.9	+26.2	+1.7	-34.3	+0.0	44.3	54.0	-9.7	Horiz
										100
13 1487.802M	27.7	+1.9	+26.1	+1.7	-34.3	+0.0	23.1	54.0	-30.9	Horiz
Ave										100
^ 1487.847M	49.0	+1.9	+26.1	+1.7	-34.3	+0.0	44.4	54.0	-9.6	Horiz
										100

CKC Laboratories Date: 11/1/2007 Time: 16:43:52 Synapse Product Development WO#: 87002 15:109 CLASS B Test Distance: 3 Meters Sequence#: 4 Polarity: Horiz Notes: USB transfer mode. Highest operating frequency of EUT is 433 MHz.

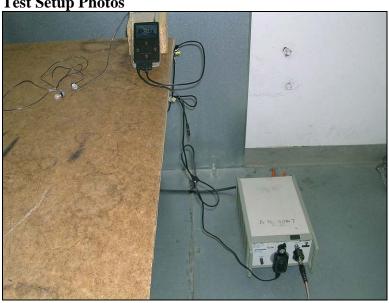




# FCC 15.207 – AC CONDUCTED EMISSIONS

ANALYZEI	ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE									
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING							
CONDUCTED EMISSIONS	450 kHz	30 MHz	9 kHz							

**Test Setup Photos** 









Testing 11/1/07



Testing 11/1/07



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.207 COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 05:02:54
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 51

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

**Equipment Under Test (\* = EUT):** 

	. ,			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N

## Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11b mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

# Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L1) Insertion Loss 00847 EMCO 3816/2NM

Measur	rement Data:	Re	eading lis	ted by ma	argin.	Test Lead: Black					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	416.157k	37.6	+0.2	+6.2	+0.1	+0.0	+0.0	44.1	47.5	-3.4	Black
	Ave										
^	416.157k	45.2	+0.2	+6.2	+0.1	+0.0	+0.0	51.7	47.5	+4.2	Black
3	694.677k	35.7	+0.2	+6.1	+0.1	+0.1	+0.0	42.2	46.0	-3.8	Black
4	720.857k	35.6	+0.1	+6.1	+0.1	+0.1	+0.0	42.0	46.0	-4.0	Black
5	1.081M	35.7	+0.1	+6.1	+0.0	+0.1	+0.0	42.0	46.0	-4.0	Black

Page 67 of 170 Report No: FC07-071A



6	867.752k	35.2	+0.1	+6.1	+0.0	+0.1	+0.0	41.5	46.0	-4.5	Black
7	362.344k	37.3	+0.2	+6.2	+0.1	+0.0	+0.0	43.8	48.7	-4.9	Black
8	591.414k	32.9	+0.2	+6.1	+0.1	+0.1	+0.0	39.4	46.0	-6.6	Black
^	Ave 591.414k	42.7	+0.2	+6.1	+0.1	+0.1	+0.0	49.2	46.0	+3.2	Black
10	5.157M	35.8	+0.1	+6.2	+0.2	+0.2	+0.0	42.5	50.0	-7.5	Black
11	5.571M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	50.0	-7.6	Black
12	373.252k	33.7	+0.2	+6.2	+0.1	+0.0	+0.0	40.2	48.4	-8.2	Black
13	237.507k	37.4	+0.2	+6.1	+0.1	+0.1	+0.0	43.9	52.2	-8.3	Black
	Ave	20.2	.0.0		.0.1	. 0.1	.0.0	26.0	46.2	0.7	DI I
14	480.655k Ave	30.2	+0.2	+6.2	+0.1	+0.1	+0.0	36.8	46.3	-9.5	Black
^	481.606k	42.9	+0.2	+6.2	+0.1	+0.1	+0.0	49.5	46.3	+3.2	Black
16	20.598M	32.0	+0.3	+6.1	+0.4	+1.3	+0.0	40.1	50.0	-9.9	Black
17	300.715k	33.1	+0.2	+6.2	+0.1	+0.1	+0.0	39.7	50.2	-10.5	Black
^	Ave 304.168k	42.9	+0.2	+6.2	+0.1	+0.1	+0.0	49.5	50.1	-0.6	Black
19	945.249k	29.2	+0.1	+6.1	+0.0	+0.1	+0.0	35.5	46.0	-10.5	Black
^	Ave 945.249k	42.4	+0.1	+6.1	+0.0	+0.1	+0.0	48.7	46.0	+2.7	Black
21	528.825k	28.3	+0.2	+6.2	+0.1	+0.1	+0.0	34.9	46.0	-11.1	Black
22	Ave 1.018M	28.4	+0.1	+6.1	+0.0	+0.1	+0.0	34.7	46.0	-11.3	Black
	Ave			10.1	10.0	10.1			10.0	11.5	Black
^	1.018M	43.6	+0.1	+6.1	+0.0	+0.1	+0.0	49.9	46.0	+3.9	Black
24	765.540k Ave	28.1	+0.1	+6.1	+0.1	+0.1	+0.0	34.5	46.0	-11.5	Black
^	764.489k	40.0	+0.1	+6.1	+0.1	+0.1	+0.0	46.4	46.0	+0.4	Black
26	1.119M	27.1	+0.1	+6.1	+0.0	+0.1	+0.0	33.4	46.0	-12.6	Black
^	Ave 1.120M	42.3	+0.1	+6.1	+0.0	+0.1	+0.0	48.6	46.0	+2.6	Black
28	1.549M	26.3	+0.1	+6.1	+0.1	+0.1	+0.0	32.7	46.0	-13.3	Black
^	Ave 1.549M	43.0	+0.1	+6.1	+0.1	+0.1	+0.0	49.4	46.0	+3.4	Black
1											

Page 68 of 170 Report No: FC07-071A



30	661.500k Ave	25.7	+0.2	+6.1	+0.1	+0.1	+0.0	32.2	46.0	-13.8	Black
^	660.499k	40.6	+0.2	+6.1	+0.1	+0.1	+0.0	47.1	46.0	+1.1	Black
32	842.100k Ave	25.7	+0.1	+6.1	+0.0	+0.1	+0.0	32.0	46.0	-14.0	Black
^	842.300k	43.2	+0.1	+6.1	+0.0	+0.1	+0.0	49.5	46.0	+3.5	Black
34	2.143M Ave	25.0	+0.1	+6.1	+0.1	+0.1	+0.0	31.4	46.0	-14.6	Black
^	2.149M	41.6	+0.1	+6.1	+0.1	+0.1	+0.0	48.0	46.0	+2.0	Black
36	1.382M Ave	24.9	+0.1	+6.1	+0.0	+0.1	+0.0	31.2	46.0	-14.8	Black
^	1.383M	41.5	+0.1	+6.1	+0.0	+0.1	+0.0	47.8	46.0	+1.8	Black
38	1.804M Ave	24.3	+0.1	+6.1	+0.1	+0.1	+0.0	30.7	46.0	-15.3	Black
^	1.804M	39.2	+0.1	+6.1	+0.1	+0.1	+0.0	45.6	46.0	-0.4	Black
40	2.576M Ave	24.0	+0.1	+6.2	+0.1	+0.2	+0.0	30.6	46.0	-15.4	Black
^	2.578M	45.0	+0.1	+6.2	+0.1	+0.2	+0.0	51.6	46.0	+5.6	Black
42	2.076M Ave	24.0	+0.1	+6.1	+0.1	+0.1	+0.0	30.4	46.0	-15.6	Black
^	2.076M	42.1	+0.1	+6.1	+0.1	+0.1	+0.0	48.5	46.0	+2.5	Black
44	2.741M Ave	23.2	+0.1	+6.2	+0.1	+0.2	+0.0	29.8	46.0	-16.2	Black
^	2.741M	44.0	+0.1	+6.2	+0.1	+0.2	+0.0	50.6	46.0	+4.6	Black
٨	2.748M	43.9	+0.1	+6.2	+0.1	+0.2	+0.0	50.5	46.0	+4.5	Black
47	541.237k Ave	22.6	+0.2	+6.1	+0.1	+0.1	+0.0	29.1	46.0	-16.9	Black
^	541.237k	38.7	+0.2	+6.1	+0.1	+0.1	+0.0	45.2	46.0	-0.8	Black
49	1.290M Ave	22.8	+0.1	+6.1	+0.0	+0.1	+0.0	29.1	46.0	-16.9	Black
^	1.294M	39.2	+0.1	+6.1	+0.0	+0.1	+0.0	45.5	46.0	-0.5	Black
51	2.838M Ave	21.7	+0.1	+6.2	+0.1	+0.2	+0.0	28.3	46.0	-17.7	Black
^	2.838M	41.0	+0.1	+6.2	+0.1	+0.2	+0.0	47.6	46.0	+1.6	Black
53	2.908M Ave	20.1	+0.1	+6.2	+0.1	+0.2	+0.0	26.7	46.0	-19.3	Black
^	2.914M	41.9	+0.1	+6.2	+0.1	+0.2	+0.0	48.5	46.0	+2.5	Black

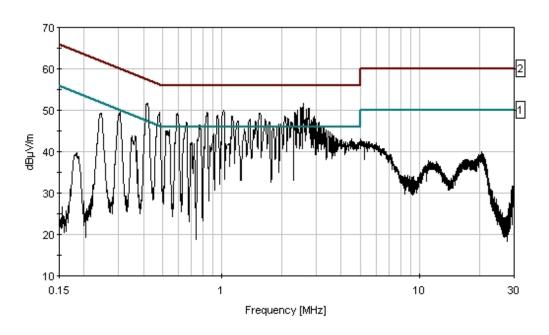
Page 69 of 170 Report No: FC07-071A



55	3.080M	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	Black
	Ave										
٨	3.080M	40.6	+0.1	+6.2	+0.1	+0.2	+0.0	47.2	46.0	+1.2	Black
57	3.012M	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	Black
	Ave										
٨	3.012M	38.2	+0.1	+6.2	+0.1	+0.2	+0.0	44.8	46.0	-1.2	Black
59	902.721k	19.7	+0.1	+6.1	+0.0	+0.1	+0.0	26.0	46.0	-20.0	Black
	Ave										
٨	902.721k	38.1	+0.1	+6.1	+0.0	+0.1	+0.0	44.4	46.0	-1.6	Black
61	3.425M	19.1	+0.1	+6.2	+0.2	+0.2	+0.0	25.8	46.0	-20.2	Black
	Ave										
٨	3.425M	38.3	+0.1	+6.2	+0.2	+0.2	+0.0	45.0	46.0	-1.0	Black
63	3.603M	19.0	+0.1	+6.2	+0.2	+0.2	+0.0	25.7	46.0	-20.3	Black
	Ave										
٨	3.603M	37.7	+0.1	+6.2	+0.2	+0.2	+0.0	44.4	46.0	-1.6	Black
65	3.782M	18.5	+0.1	+6.2	+0.2	+0.2	+0.0	25.2	46.0	-20.8	Black
	Ave										
٨	3.782M	36.7	+0.1	+6.2	+0.2	+0.2	+0.0	43.4	46.0	-2.6	Black
67	4.509M	16.6	+0.1	+6.2	+0.2	+0.2	+0.0	23.3	46.0	-22.7	Black
	Ave										
٨	4.509M	36.4	+0.1	+6.2	+0.2	+0.2	+0.0	43.1	46.0	-2.9	Black
	· <del>-</del>										
69	3.693M	16.2	+0.1	+6.2	+0.2	+0.2	+0.0	22.9	46.0	-23.1	Black
	Ave	~									
٨	3.693M	37.0	+0.1	+6.2	+0.2	+0.2	+0.0	43.7	46.0	-2.3	Black
71	245.264k	21.9	+0.2	+6.1	+0.1	+0.1	+0.0	28.4	51.9	-23.5	Black
	Ave										
٨	245.264k	42.7	+0.2	+6.1	+0.1	+0.1	+0.0	49.2	51.9	-2.7	Black



CKC Laboratories, Inc. Date: 9/15/2007 Time: 05:02:54 Synapse Product Development, LLC WO#: 86173 FCC 15.207 COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 51



——— Sweep Data 1 - FCC 15.207 COND [AVE] 2 - FCC 15.207 COND [QP]



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.207 COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 05:21:34
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 52

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

## Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

#### **Equipment Under Test (\* = EUT):**

	- /-			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N

## Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11b mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

# Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L2) Insertion Loss 00847 EMCO 3816/2NM

Measur	ement Data:	Re	eading lis	ted by ma	argin.	Test Lead: White					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	3.795M	36.7	+0.1	+6.2	+0.2	+0.2	+0.0	43.4	46.0	-2.6	White
2	2.034M	36.9	+0.1	+6.1	+0.1	+0.1	+0.0	43.3	46.0	-2.7	White
3	3.433M	36.6	+0.1	+6.2	+0.2	+0.2	+0.0	43.3	46.0	-2.7	White
4	4.262M	36.6	+0.1	+6.2	+0.2	+0.2	+0.0	43.3	46.0	-2.7	White
5	551.417k	36.7	+0.2	+6.1	+0.1	+0.1	+0.0	43.2	46.0	-2.8	White

Page 72 of 170 Report No: FC07-071A



6	4.475M	36.4	+0.1	+6.2	+0.2	+0.2	+0.0	43.1	46.0	-2.9	White
7	865.570k	36.7	+0.1	+6.1	+0.0	+0.1	+0.0	43.0	46.0	-3.0	White
8	1.902M	36.6	+0.1	+6.1	+0.1	+0.1	+0.0	43.0	46.0	-3.0	White
9	3.773M	36.3	+0.1	+6.2	+0.2	+0.2	+0.0	43.0	46.0	-3.0	White
10	4.811M	36.3	+0.1	+6.2	+0.2	+0.2	+0.0	43.0	46.0	-3.0	White
11	507.784k	36.2	+0.2	+6.2	+0.1	+0.1	+0.0	42.8	46.0	-3.2	White
12	820.483k	36.4	+0.1	+6.1	+0.1	+0.1	+0.0	42.8	46.0	-3.2	White
13	4.067M	36.1	+0.1	+6.2	+0.2	+0.2	+0.0	42.8	46.0	-3.2	White
14	4.101M	35.9	+0.1	+6.2	+0.2	+0.2	+0.0	42.6	46.0	-3.4	White
15	4.866M	35.8	+0.1	+6.2	+0.2	+0.2	+0.0	42.5	46.0	-3.5	White
16	1.456M	36.1	+0.1	+6.1	+0.0	+0.1	+0.0	42.4	46.0	-3.6	White
17	3.756M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	46.0	-3.6	White
18	4.288M	35.6	+0.1	+6.2	+0.2	+0.2	+0.0	42.3	46.0	-3.7	White
19	548.508k	35.7	+0.2	+6.1	+0.1	+0.1	+0.0	42.2	46.0	-3.8	White
20	1.877M	35.8	+0.1	+6.1	+0.1	+0.1	+0.0	42.2	46.0	-3.8	White
21	4.913M	35.5	+0.1	+6.2	+0.2	+0.2	+0.0	42.2	46.0	-3.8	White
22	423.428k	36.9	+0.2	+6.2	+0.1	+0.1	+0.0	43.5	47.4	-3.9	White
23	1.039M	35.7	+0.1	+6.1	+0.0	+0.1	+0.0	42.0	46.0	-4.0	White
24	3.939M	35.3	+0.1	+6.2	+0.2	+0.2	+0.0	42.0	46.0	-4.0	White
25	421.247k	36.7	+0.2	+6.2	+0.1	+0.1	+0.0	43.3	47.4	-4.1	White
26	4.211M	35.2	+0.1	+6.2	+0.2	+0.2	+0.0	41.9	46.0	-4.1	White
27	4.679M	35.2	+0.1	+6.2	+0.2	+0.2	+0.0	41.9	46.0	-4.1	White
28	4.237M	35.1	+0.1	+6.2	+0.2	+0.2	+0.0	41.8	46.0	-4.2	White
29	4.637M	35.1	+0.1	+6.2	+0.2	+0.2	+0.0	41.8	46.0	-4.2	White
30	818.301k	35.3	+0.1	+6.1	+0.1	+0.1	+0.0	41.7	46.0	-4.3	White

Page 73 of 170 Report No: FC07-071A



31	4.573M	35.0	+0.1	+6.2	+0.2	+0.2	+0.0	41.7	46.0	-4.3	White
32	4.309M	34.9	+0.1	+6.2	+0.2	+0.2	+0.0	41.6	46.0	-4.4	White
33	4.373M	34.9	+0.1	+6.2	+0.2	+0.2	+0.0	41.6	46.0	-4.4	White
34	4.696M	34.9	+0.1	+6.2	+0.2	+0.2	+0.0	41.6	46.0	-4.4	White
35	3.973M	34.8	+0.1	+6.2	+0.2	+0.2	+0.0	41.5	46.0	-4.5	White
36	4.973M	34.8	+0.1	+6.2	+0.2	+0.2	+0.0	41.5	46.0	-4.5	White
37	1.498M	35.0	+0.1	+6.1	+0.1	+0.1	+0.0	41.4	46.0	-4.6	White
38	1.817M	35.0	+0.1	+6.1	+0.1	+0.1	+0.0	41.4	46.0	-4.6	White
39	4.501M	34.7	+0.1	+6.2	+0.2	+0.2	+0.0	41.4	46.0	-4.6	White
40	630.682k	34.8	+0.2	+6.1	+0.1	+0.1	+0.0	41.3	46.0	-4.7	White
41	853.934k	35.0	+0.1	+6.1	+0.0	+0.1	+0.0	41.3	46.0	-4.7	White
42	1.957M	34.9	+0.1	+6.1	+0.1	+0.1	+0.0	41.3	46.0	-4.7	White
43	3.701M	34.6	+0.1	+6.2	+0.2	+0.2	+0.0	41.3	46.0	-4.7	White
44	776.123k	34.8	+0.1	+6.1	+0.1	+0.1	+0.0	41.2	46.0	-4.8	White
45	1.417M	34.9	+0.1	+6.1	+0.0	+0.1	+0.0	41.2	46.0	-4.8	White
46	3.854M	34.4	+0.1	+6.2	+0.2	+0.2	+0.0	41.1	46.0	-4.9	White
47	278.600k	27.6	+0.2	+6.1	+0.1	+0.1	+0.0	34.1	50.9	-16.8	White
^	Ave 282.351k	43.3	+0.2	+6.1	+0.1	+0.1	+0.0	49.8	50.7	-0.9	White
49	2.493M	21.7	+0.1	+6.2	+0.1	+0.2	+0.0	28.3	46.0	-17.7	White
٨	Ave 2.493M	42.9	+0.1	+6.2	+0.1	+0.2	+0.0	49.5	46.0	+3.5	White
51	2.595M Ave	21.4	+0.1	+6.2	+0.1	+0.2	+0.0	28.0	46.0	-18.0	White
٨	2.595M	42.2	+0.1	+6.2	+0.1	+0.2	+0.0	48.8	46.0	+2.8	White
53	481.350k Ave	21.0	+0.2	+6.2	+0.1	+0.1	+0.0	27.6	46.3	-18.7	White
٨	478.696k	39.4	+0.2	+6.2	+0.1	+0.1	+0.0	46.0	46.4	-0.4	White

Page 74 of 170 Report No: FC07-071A



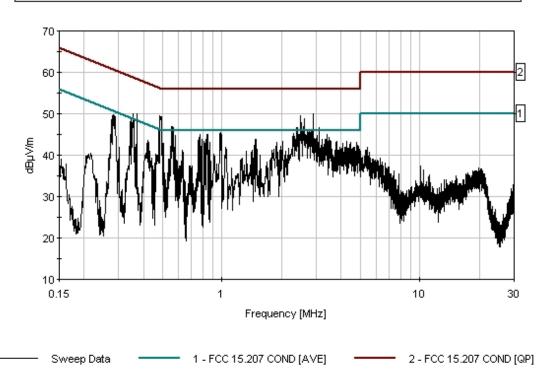
55	2.391M Ave	20.6	+0.1	+6.2	+0.1	+0.2	+0.0	27.2	46.0	-18.8	White
^	2.391M	40.1	+0.1	+6.2	+0.1	+0.2	+0.0	46.7	46.0	+0.7	White
57	2.606M Ave	20.5	+0.1	+6.2	+0.1	+0.2	+0.0	27.1	46.0	-18.9	White
58	2.469M Ave	20.5	+0.1	+6.2	+0.1	+0.2	+0.0	27.1	46.0	-18.9	White
59	2.880M	19.4	+0.1	+6.2	+0.1	+0.2	+0.0	26.0	46.0	-20.0	White
٨	Ave 2.880M	43.3	+0.1	+6.2	+0.1	+0.2	+0.0	49.9	46.0	+3.9	White
61	2.310M	19.1	+0.1	+6.2	+0.1	+0.2	+0.0	25.7	46.0	-20.3	White
^	Ave 2.310M	38.7	+0.1	+6.2	+0.1	+0.2	+0.0	45.3	46.0	-0.7	White
63	349.879k	21.6	+0.2	+6.2	+0.1	+0.1	+0.0	28.2	49.0	-20.8	White
^	Ave 347.072k	42.4	+0.2	+6.2	+0.1	+0.1	+0.0	49.0	49.0	+0.0	White
65	3.374M	17.5	+0.1	+6.2	+0.2	+0.2	+0.0	24.2	46.0	-21.8	White
^	Ave 3.374M	37.0	+0.1	+6.2	+0.2	+0.2	+0.0	43.7	46.0	-2.3	White
67	556.507k	17.6	+0.2	+6.1	+0.1	+0.1	+0.0	24.1	46.0	-21.9	White
^	Ave 556.507k	40.4	+0.2	+6.1	+0.1	+0.1	+0.0	46.9	46.0	+0.9	White
69	3.029M	17.4	+0.1	+6.2	+0.1	+0.2	+0.0	24.0	46.0	-22.0	White
^	Ave 3.029M	38.1	+0.1	+6.2	+0.1	+0.2	+0.0	44.7	46.0	-1.3	White
71	3.399M	17.0	+0.1	+6.2	+0.2	+0.2	+0.0	23.7	46.0	-22.3	White
72	491.059k	17.2	+0.2	+6.2	+0.1	+0.1	+0.0	23.8	46.1	-22.3	White
^	491.059k	42.7	+0.2	+6.2	+0.1	+0.1	+0.0	49.3	46.1	+3.2	White
74	3.399M	16.8	+0.1	+6.2	+0.2	+0.2	+0.0	23.5	46.0	-22.5	White
^ A	Ave 3.399M	38.2	+0.1	+6.2	+0.2	+0.2	+0.0	44.9	46.0	-1.1	White
76	3.097M Ave	16.0	+0.1	+6.2	+0.1	+0.2	+0.0	22.6	46.0	-23.4	White
٨	3.097M	40.1	+0.1	+6.2	+0.1	+0.2	+0.0	46.7	46.0	+0.7	White
78	353.298k Ave	17.6	+0.2	+6.2	+0.1	+0.1	+0.0	24.2	48.9	-24.7	White
^	355.798k	43.3	+0.2	+6.2	+0.1	+0.1	+0.0	49.9	48.8	+1.1	White

Page 75 of 170 Report No: FC07-071A



80	983.523k	10.7	+0.1	+6.1	+0.0	+0.1	+0.0	17.0	46.0	-29.0	White
1	Ave										
٨	983.523k	39.2	+0.1	+6.1	+0.0	+0.1	+0.0	45.5	46.0	-0.5	White
82	1.473M	9.1	+0.1	+6.1	+0.0	+0.1	+0.0	15.4	46.0	-30.6	White
1	Ave										
٨	1.481M	37.6	+0.1	+6.1	+0.0	+0.1	+0.0	43.9	46.0	-2.1	White
^	1.464M	37.5	+0.1	+6.1	+0.0	+0.1	+0.0	43.8	46.0	-2.2	White
٨	1.473M	36.9	+0.1	+6.1	+0.0	+0.1	+0.0	43.2	46.0	-2.8	White
86	369.615k	6.0	+0.2	+6.2	+0.1	+0.1	+0.0	12.6	48.5	-35.9	White
1	Ave										
٨	369.615k	43.3	+0.2	+6.2	+0.1	+0.1	+0.0	49.9	48.5	+1.4	White

CKC Laboratories, Inc. Date: 9/15/2007 Time: 05:21:34 Synapse Product Development, LLC WO#: 86173 FCC 15.207 COND [AVE] Test Lead: White 110V 60Hz Sequence#: 52



Page 76 of 170 Report No: FC07-071A



Customer: Synapse Product Development, LLC

Specification: FCC 15.207 COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 06:02:53
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 54

Player

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

# Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

**Equipment Under Test (\* = EUT):** 

(	- ,-			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N

# Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11g mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

# Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L1) Insertion Loss 00847 EMCO 3816/2NM

Measurement Data: Reading listed by margin. Test Lead: Black T4 Freq Dist Corr Spec Polar Rdng T1 T2 T3 Margin MHz dBμV dΒ dB dΒ dΒ Table  $dB\mu V/m$   $dB\mu V/m$ dΒ Ant 4.445M 35.3 +0.1+6.2+0.2+0.2+0.042.0 46.0 -4.0Black 445.245k +0.2+0.047.0 36.3 +6.2+0.1+0.042.8 -4.2 Black 37.4 383.432k +0.2+6.2+0.0+0.043.9 48.2 -4.3 Black +0.1313.620k 38.9 +0.2+6.2+0.045.5 49.9 -4.4 Black +0.1+0.1

> Page 77 of 170 Report No: FC07-071A



5 484.207k Ave	34.9	+0.2	+6.2	+0.1	+0.1	+0.0	41.5	46.3	-4.8	Black
^ 479.423k	44.8	+0.2	+6.2	+0.1	+0.1	+0.0	51.4	46.3	+5.1	Black
7 344.823k Ave	37.7	+0.2	+6.2	+0.1	+0.1	+0.0	44.3	49.1	-4.8	Black
8 476.321k Ave	35.0	+0.2	+6.2	+0.1	+0.1	+0.0	41.6	46.4	-4.8	Black
9 482.351k Ave	34.8	+0.2	+6.2	+0.1	+0.1	+0.0	41.4	46.3	-4.9	Black
10 343.209k Ave	36.8	+0.2	+6.2	+0.1	+0.1	+0.0	43.4	49.1	-5.7	Black
11 485.799k Ave	33.8	+0.2	+6.2	+0.1	+0.1	+0.0	40.4	46.2	-5.8	Black
12 347.395k Ave	36.5	+0.2	+6.2	+0.1	+0.0	+0.0	43.0	49.0	-6.0	Black
13 346.495k Ave	36.3	+0.2	+6.2	+0.1	+0.0	+0.0	42.8	49.0	-6.2	Black
14 346.495k Ave	36.1	+0.2	+6.2	+0.1	+0.0	+0.0	42.6	49.0	-6.4	Black
15 346.495k Ave	36.0	+0.2	+6.2	+0.1	+0.0	+0.0	42.5	49.0	-6.5	Black
^ 343.209k	45.2	+0.2	+6.2	+0.1	+0.1	+0.0	51.8	49.1	+2.7	Black
^ 348.526k	45.0	+0.2	+6.2	+0.1	+0.0	+0.0	51.5	49.0	+2.5	Black
18 760.852k Ave	32.0	+0.1	+6.1	+0.1	+0.1	+0.0	38.4	46.0	-7.6	Black
^ 760.852k	43.1	+0.1	+6.1	+0.1	+0.1	+0.0	49.5	46.0	+3.5	Black
20 276.476k Ave	36.7	+0.2	+6.1	+0.1	+0.1	+0.0	43.2	50.9	-7.7	Black
21 347.395k Ave	34.5	+0.2	+6.2	+0.1	+0.0	+0.0	41.0	49.0	-8.0	Black
22 970.765k Ave	31.0	+0.1	+6.1	+0.0	+0.1	+0.0	37.3	46.0	-8.7	Black
^ 970.765k	44.6	+0.1	+6.1	+0.0	+0.1	+0.0	50.9	46.0	+4.9	Black
24 746.910k Ave	30.1	+0.1	+6.1	+0.1	+0.1	+0.0	36.5	46.0	-9.5	Black
25 2.468M Ave	28.3	+0.1	+6.2	+0.1	+0.2	+0.0	34.9	46.0	-11.1	Black
^ 2.468M	44.5	+0.1	+6.2	+0.1	+0.2	+0.0	51.1	46.0	+5.1	Black
27 2.051M Ave	28.4	+0.1	+6.1	+0.1	+0.1	+0.0	34.8	46.0	-11.2	Black
^ 2.051M	41.7	+0.1	+6.1	+0.1	+0.1	+0.0	48.1	46.0	+2.1	Black

Page 78 of 170 Report No: FC07-071A



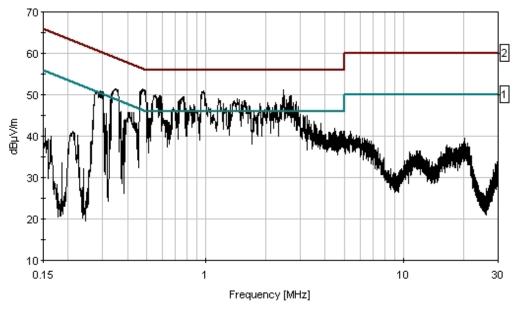
29	1.651M Ave	28.2	+0.1	+6.1	+0.1	+0.1	+0.0	34.6	46.0	-11.4	Black
^		40.9	+0.1	+6.1	+0.1	+0.1	+0.0	47.3	46.0	+1.3	Black
31	1.430M Ave	27.1	+0.1	+6.1	+0.0	+0.1	+0.0	33.4	46.0	-12.6	Black
^		42.7	+0.1	+6.1	+0.0	+0.1	+0.0	49.0	46.0	+3.0	Black
33	2.238M Ave	26.7	+0.1	+6.2	+0.1	+0.2	+0.0	33.3	46.0	-12.7	Black
^		41.5	+0.1	+6.2	+0.1	+0.2	+0.0	48.1	46.0	+2.1	Black
35	2.693M Ave	26.7	+0.1	+6.2	+0.1	+0.2	+0.0	33.3	46.0	-12.7	Black
٨		43.1	+0.1	+6.2	+0.1	+0.2	+0.0	49.7	46.0	+3.7	Black
37	1.766M Ave	26.5	+0.1	+6.1	+0.1	+0.1	+0.0	32.9	46.0	-13.1	Black
^		38.7	+0.1	+6.1	+0.1	+0.1	+0.0	45.1	46.0	-0.9	Black
39	2.863M Ave	23.9	+0.1	+6.2	+0.1	+0.2	+0.0	30.5	46.0	-15.5	Black
^	2.863M	41.8	+0.1	+6.2	+0.1	+0.2	+0.0	48.4	46.0	+2.4	Black
41	1.745M Ave	23.3	+0.1	+6.1	+0.1	+0.1	+0.0	29.7	46.0	-16.3	Black
^		39.2	+0.1	+6.1	+0.1	+0.1	+0.0	45.6	46.0	-0.4	Black
43	869.933k Ave	20.8	+0.1	+6.1	+0.0	+0.1	+0.0	27.1	46.0	-18.9	Black
٨		41.3	+0.1	+6.1	+0.0	+0.1	+0.0	47.6	46.0	+1.6	Black
45	462.698k Ave	19.8	+0.2	+6.2	+0.1	+0.1	+0.0	26.4	46.6	-20.2	Black
^		44.0	+0.2	+6.2	+0.1	+0.1	+0.0	50.6	46.6	+4.0	Black
47	328.892k Ave	21.2	+0.2	+6.2	+0.1	+0.1	+0.0	27.8	49.5	-21.7	Black
^		42.1	+0.2	+6.2	+0.1	+0.1	+0.0	48.7	49.5	-0.8	Black
49	503.421k Ave	16.8	+0.2	+6.2	+0.1	+0.1	+0.0	23.4	46.0	-22.6	Black
^		41.4	+0.2	+6.2	+0.1	+0.1	+0.0	48.0	46.0	+2.0	Black
^	507.784k	37.1	+0.2	+6.2	+0.1	+0.1	+0.0	43.7	46.0	-2.3	Black
52	576.869k Ave	15.1	+0.2	+6.1	+0.1	+0.1	+0.0	21.6	46.0	-24.4	Black
^		42.8	+0.2	+6.1	+0.1	+0.1	+0.0	49.3	46.0	+3.3	Black

Page 79 of 170 Report No: FC07-071A



54	722.310k	14.3	+0.1	+6.1	+0.1	+0.1	+0.0	20.7	46.0	-25.3	Black
A	Ave										
٨	722.310k	40.8	+0.1	+6.1	+0.1	+0.1	+0.0	47.2	46.0	+1.2	Black
56	595.049k	12.4	+0.2	+6.1	+0.1	+0.1	+0.0	18.9	46.0	-27.1	Black
A	Ave										
٨	595.049k	43.0	+0.2	+6.1	+0.1	+0.1	+0.0	49.5	46.0	+3.5	Black
58	364.001k	14.5	+0.2	+6.2	+0.1	+0.0	+0.0	21.0	48.6	-27.6	Black
A	Ave										
٨	363.070k	39.6	+0.2	+6.2	+0.1	+0.0	+0.0	46.1	48.7	-2.6	Black
60	301.258k	10.5	+0.2	+6.2	+0.1	+0.1	+0.0	17.1	50.2	-33.1	Black
A	Ave										
^	301.258k	44.2	+0.2	+6.2	+0.1	+0.1	+0.0	50.8	50.2	+0.6	Black

CKC Laboratories, Inc. Date: 9/15/2007 Time: 06:02:53 Synapse Product Development, LLC WO#: 86173 FCC 15.207 COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 54





Customer: Synapse Product Development, LLC

Specification: FCC 15.207 COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 05:43:46
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 53

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

# Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

**Equipment Under Test (\* = EUT):** 

	. ,			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N

# Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receive in 802.11g mode, middle channel. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

# Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L2) Insertion Loss 00847 EMCO 3816/2NM

Measur	ement Data:	Re	eading lis	ted by ma	ırgin.	Test Lead: White					
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	3.165M	36.9	+0.1	+6.2	+0.1	+0.2	+0.0	43.5	46.0	-2.5	White
2	3.710M	36.7	+0.1	+6.2	+0.2	+0.2	+0.0	43.4	46.0	-2.6	White
3	304.895k	40.8	+0.2	+6.2	+0.1	+0.1	+0.0	47.4	50.1	-2.7	White
4	4.109M	36.3	+0.1	+6.2	+0.2	+0.2	+0.0	43.0	46.0	-3.0	White
5	1.137M	36.6	+0.1	+6.1	+0.0	+0.1	+0.0	42.9	46.0	-3.1	White

Page 81 of 170 Report No: FC07-071A



6	1.379M	36.3	+0.1	+6.1	+0.0	+0.1	+0.0	42.6	46.0	-3.4	White
7	1.617M	36.2	+0.1	+6.1	+0.1	+0.1	+0.0	42.6	46.0	-3.4	White
8	4.849M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	46.0	-3.6	White
9	4.552M	35.4	+0.1	+6.2	+0.2	+0.2	+0.0	42.1	46.0	-3.9	White
10	4.364M	35.2	+0.1	+6.2	+0.2	+0.2	+0.0	41.9	46.0	-4.1	White
11	659.044k	35.3	+0.2	+6.1	+0.1	+0.1	+0.0	41.8	46.0	-4.2	White
12	4.666M	35.1	+0.1	+6.2	+0.2	+0.2	+0.0	41.8	46.0	-4.2	White
13	2.259M	34.7	+0.1	+6.2	+0.1	+0.2	+0.0	41.3	46.0	-4.7	White
14	1.081M	34.3	+0.1	+6.1	+0.0	+0.1	+0.0	40.6	46.0	-5.4	White
15	4.909M	33.9	+0.1	+6.2	+0.2	+0.2	+0.0	40.6	46.0	-5.4	White
16	515.057k	33.9	+0.2	+6.2	+0.1	+0.1	+0.0	40.5	46.0	-5.5	White
17	4.883M	33.6	+0.1	+6.2	+0.2	+0.2	+0.0	40.3	46.0	-5.7	White
18	360.890k	36.0	+0.2	+6.2	+0.1	+0.1	+0.0	42.6	48.7	-6.1	White
19	1.783M	33.5	+0.1	+6.1	+0.1	+0.1	+0.0	39.9	46.0	-6.1	White
20	5.148M	37.2	+0.1	+6.2	+0.2	+0.2	+0.0	43.9	50.0	-6.1	White
21	5.024M	36.8	+0.1	+6.2	+0.2	+0.2	+0.0	43.5	50.0	-6.5	White
22	5.562M	36.8	+0.1	+6.2	+0.2	+0.2	+0.0	43.5	50.0	-6.5	White
23	1.677M	33.0	+0.1	+6.1	+0.1	+0.1	+0.0	39.4	46.0	-6.6	White
24	5.743M	36.4	+0.1	+6.2	+0.2	+0.2	+0.0	43.1	50.0	-6.9	White
25	6.094M	36.2	+0.1	+6.2	+0.2	+0.3	+0.0	43.0	50.0	-7.0	White
26	1.200M	32.6	+0.1	+6.1	+0.0	+0.1	+0.0	38.9	46.0	-7.1	White
27	5.202M	35.9	+0.1	+6.2	+0.2	+0.2	+0.0	42.6	50.0	-7.4	White
28	1.736M	32.1	+0.1	+6.1	+0.1	+0.1	+0.0	38.5	46.0	-7.5	White
29	715.766k	32.0	+0.1	+6.1	+0.1	+0.1	+0.0	38.4	46.0	-7.6	White
30	5.382M	35.7	+0.1	+6.2	+0.2	+0.2	+0.0	42.4	50.0	-7.6	White
1											

Page 82 of 170 Report No: FC07-071A



31	5.508M	35.6	+0.1	+6.2	+0.2	+0.2	+0.0	42.3	50.0	-7.7	White
32	6.274M	35.5	+0.1	+6.2	+0.2	+0.3	+0.0	42.3	50.0	-7.7	White
33	2.634M Ave	20.7	+0.1	+6.2	+0.1	+0.2	+0.0	27.3	46.0	-18.7	White
^	2.634M	44.4	+0.1	+6.2	+0.1	+0.2	+0.0	51.0	46.0	+5.0	White
35	477.324k	21.0	+0.2	+6.2	+0.1	+0.1	+0.0	27.6	46.4	-18.8	White
^	Ave 480.152k	41.0	+0.2	+6.2	+0.1	+0.1	+0.0	47.6	46.3	+1.3	White
^	477.324k	37.5	+0.2	+6.2	+0.1	+0.1	+0.0	44.1	46.4	-2.3	White
38	271.045k	25.7	+0.2	+6.1	+0.1	+0.1	+0.0	32.2	51.1	-18.9	White
^	Ave 271.045k	42.3	+0.2	+6.1	+0.1	+0.1	+0.0	48.8	51.1	-2.3	White
40	2.510M Ave	20.5	+0.1	+6.2	+0.1	+0.2	+0.0	27.1	46.0	-18.9	White
^	2.510M	44.4	+0.1	+6.2	+0.1	+0.2	+0.0	51.0	46.0	+5.0	White
42	477.324k Ave	20.7	+0.2	+6.2	+0.1	+0.1	+0.0	27.3	46.4	-19.1	White
43	480.152k Ave	20.3	+0.2	+6.2	+0.1	+0.1	+0.0	26.9	46.3	-19.4	White
44	2.812M Ave	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	White
^	2.812M	39.3	+0.1	+6.2	+0.1	+0.2	+0.0	45.9	46.0	-0.1	White
46	2.931M Ave	17.8	+0.1	+6.2	+0.1	+0.2	+0.0	24.4	46.0	-21.6	White
٨	2.931M	42.0	+0.1	+6.2	+0.1	+0.2	+0.0	48.6	46.0	+2.6	White
48	2.872M Ave	17.7	+0.1	+6.2	+0.1	+0.2	+0.0	24.3	46.0	-21.7	White
۸	2.872M	39.1	+0.1	+6.2	+0.1	+0.2	+0.0	45.7	46.0	-0.3	White
50	3.467M Ave	17.6	+0.1	+6.2	+0.2	+0.2	+0.0	24.3	46.0	-21.7	White
٨	3.467M	40.3	+0.1	+6.2	+0.2	+0.2	+0.0	47.0	46.0	+1.0	White
52	3.233M Ave	17.0	+0.1	+6.2	+0.1	+0.2	+0.0	23.6	46.0	-22.4	White
٨	3.233M	39.6	+0.1	+6.2	+0.1	+0.2	+0.0	46.2	46.0	+0.2	White
54	4.067M Ave	16.4	+0.1	+6.2	+0.2	+0.2	+0.0	23.1	46.0	-22.9	White
٨	4.067M	39.4	+0.1	+6.2	+0.2	+0.2	+0.0	46.1	46.0	+0.1	White

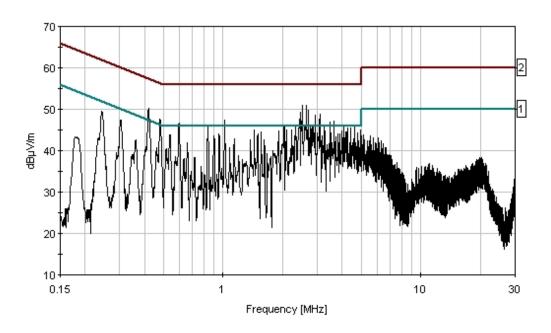
Page 83 of 170 Report No: FC07-071A



56	4.250M	16.3	+0.1	+6.2	+0.2	+0.2	+0.0	23.0	46.0	-23.0	White
	Ave										
٨	4.250M	38.7	+0.1	+6.2	+0.2	+0.2	+0.0	45.4	46.0	-0.6	White
	250111	30.7	10.1	10.2	10.2	10.2	10.0	10.1	10.0	0.0	***************************************
58	3.650M	16.3	+0.1	+6.2	+0.2	+0.2	+0.0	23.0	46.0	-23.0	White
		10.3	+0.1	+0.2	+0.2	+0.2	+0.0	23.0	40.0	-23.0	wnite
	Ave										
^	3.650M	40.4	+0.1	+6.2	+0.2	+0.2	+0.0	47.1	46.0	+1.1	White
60	3.110M	15.8	+0.1	+6.2	+0.1	+0.2	+0.0	22.4	46.0	-23.6	White
	Ave										
٨	3.110M	42.1	+0.1	+6.2	+0.1	+0.2	+0.0	48.7	46.0	+2.7	White
	3.110111	72.1	10.1	10.2	10.1	10.2	10.0	40.7	40.0	12.7	vv inte
	555.0501	15.7	0.0	1	0.1	0.1	0.0	22.2	460	22.0	XX71 *.
62	557.058k	15.7	+0.2	+6.1	+0.1	+0.1	+0.0	22.2	46.0	-23.8	White
	Ave										
63	953.754k	15.0	+0.1	+6.1	+0.0	+0.1	+0.0	21.3	46.0	-24.7	White
	Ave										
٨	953.754k	37.8	+0.1	+6.1	+0.0	+0.1	+0.0	44.1	46.0	-1.9	White
	755.754K	37.0	10.1	10.1	10.0	10.1	10.0	77.1	40.0	1.7	Willie
	2.02014	140	. 0. 1	1	. 0.1	. 0.1	. 0. 0	21.2	46.0	24.0	XX71 *.
65	2.038M	14.8	+0.1	+6.1	+0.1	+0.1	+0.0	21.2	46.0	-24.8	White
	Ave										
٨	2.038M	39.5	+0.1	+6.1	+0.1	+0.1	+0.0	45.9	46.0	-0.1	White
67	619.111k	12.2	+0.2	+6.1	+0.1	+0.1	+0.0	18.7	46.0	-27.3	White
	Ave			. 0.1	. 0.1	. 011	. 0.0	1017		27.10	*** 11100
68	1.018M	12.2	+0.1	+6.1	+0.0	+0.1	+0.0	18.5	46.0	-27.5	White
		12.2	+0.1	+0.1	+0.0	+0.1	+0.0	16.3	46.0	-21.3	wille
	Ave										
^	1.018M	41.2	+0.1	+6.1	+0.0	+0.1	+0.0	47.5	46.0	+1.5	White
70	420.521k	12.7	+0.2	+6.2	+0.1	+0.1	+0.0	19.3	47.4	-28.1	White
	Ave							-,			
٨	420.521k	43.6	+0.2	+6.2	+0.1	+0.1	+0.0	50.2	47.4	+2.8	White
``	420.321K	43.0	+0.2	+0.2	+0.1	+0.1	+0.0	30.2	4/.4	+4.0	wille
									4.1.0	• • • •	
72	561.457k	11.2	+0.2	+6.1	+0.1	+0.1	+0.0	17.7	46.0	-28.3	White
	Ave										
73	837.210k	10.4	+0.1	+6.1	+0.0	+0.1	+0.0	16.7	46.0	-29.3	White
	Ave										
٨	837.210k	39.7	+0.1	+6.1	+0.0	+0.1	+0.0	46.0	46.0	+0.0	White
	031.21UK	37.1	10.1	10.1	10.0	10.1	10.0	+0.0	+0.0	10.0	** 11110
7.	507.0501	0.0	.0.0	1	. 0. 1	. 0.1	. 0. 0	14.5	46.0	21.5	XX 71 *.
75	597.959k	8.0	+0.2	+6.1	+0.1	+0.1	+0.0	14.5	46.0	-31.5	White
	Ave										
^	597.959k	40.1	+0.2	+6.1	+0.1	+0.1	+0.0	46.6	46.0	+0.6	White



CKC Laboratories, Inc. Date: 9/15/2007 Time: 05:43:46 Synapse Product Development, LLC WO#: 86173 FCC 15.207 COND [AVE] Test Lead: White 110V 60Hz Sequence#: 53



——— Sweep Data ——— 1 - FCC 15.207 COND [AVE] ———— 2 - FCC 15.207 COND [QP]



Customer: Synapse Product Development, LLC

Specification: FCC 15.207 COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 07:16:27
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 55

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

*Equipment Under Test* (\* = EUT):

	. ,			
Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N

# Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receives. Hopping, transmit audio data in Bluetooth signal. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

# Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L1) Insertion Loss 00847 EMCO 3816/2NM

Measu	rement Data:	Re	eading lis	ted by ma	ırgin.	n. Test Lead: Black					
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	388.331k	31.9	+0.2	+6.2	+0.1	+0.0	+0.0	38.4	48.1	-9.7	Black
	Ave										
2	398.703k	30.0	+0.2	+6.2	+0.1	+0.0	+0.0	36.5	47.9	-11.4	Black
	Ave										
٨	398.704k	43.0	+0.2	+6.2	+0.1	+0.0	+0.0	49.5	47.9	+1.6	Black
4	444.926k	28.7	+0.2	+6.2	+0.1	+0.0	+0.0	35.2	47.0	-11.8	Black
	Ave										
5	616.433k	26.8	+0.2	+6.1	+0.1	+0.1	+0.0	33.3	46.0	-12.7	Black
	Ave										

Page 86 of 170 Report No: FC07-071A



6 Av	742.672k	26.5	+0.1	+6.1	+0.1	+0.1	+0.0	32.9	46.0	-13.1	Black
	742.672k	41.4	+0.1	+6.1	+0.1	+0.1	+0.0	47.8	46.0	+1.8	Black
8 Av	622.683k	24.7	+0.2	+6.1	+0.1	+0.1	+0.0	31.2	46.0	-14.8	Black
	622.683k	40.4	+0.2	+6.1	+0.1	+0.1	+0.0	46.9	46.0	+0.9	Black
10 Av	388.331k	26.4	+0.2	+6.2	+0.1	+0.0	+0.0	32.9	48.1	-15.2	Black
	388.331k	45.0	+0.2	+6.2	+0.1	+0.0	+0.0	51.5	48.1	+3.4	Black
٨	384.159k	42.8	+0.2	+6.2	+0.1	+0.0	+0.0	49.3	48.2	+1.1	Black
13 Av	384.159k	26.1	+0.2	+6.2	+0.1	+0.0	+0.0	32.6	48.2	-15.6	Black
14 Av	2.765M	23.3	+0.1	+6.2	+0.1	+0.2	+0.0	29.9	46.0	-16.1	Black
٨	2.765M	41.8	+0.1	+6.2	+0.1	+0.2	+0.0	48.4	46.0	+2.4	Black
16 Av	2.778M	23.0	+0.1	+6.2	+0.1	+0.2	+0.0	29.6	46.0	-16.4	Black
٨	2.778M	42.5	+0.1	+6.2	+0.1	+0.2	+0.0	49.1	46.0	+3.1	Black
18 Av	2.591M	23.0	+0.1	+6.2	+0.1	+0.2	+0.0	29.6	46.0	-16.4	Black
٨	2.591M	43.8	+0.1	+6.2	+0.1	+0.2	+0.0	50.4	46.0	+4.4	Black
20 Av	439.427k	23.3	+0.2	+6.2	+0.1	+0.0	+0.0	29.8	47.1	-17.3	Black
	439.427k	42.7	+0.2	+6.2	+0.1	+0.0	+0.0	49.2	47.1	+2.1	Black
۸	437.973k	42.1	+0.2	+6.2	+0.1	+0.0	+0.0	48.6	47.1	+1.5	Black
23 Av	1.468M	21.8	+0.1	+6.1	+0.0	+0.1	+0.0	28.1	46.0	-17.9	Black
٨	1.468M	42.2	+0.1	+6.1	+0.0	+0.1	+0.0	48.5	46.0	+2.5	Black
25 Av	1.103M	21.3	+0.1	+6.1	+0.0	+0.1	+0.0	27.6	46.0	-18.4	Black
٨	1.103M	41.1	+0.1	+6.1	+0.0	+0.1	+0.0	47.4	46.0	+1.4	Black
27 Av	552.144k ve	20.9	+0.2	+6.1	+0.1	+0.1	+0.0	27.4	46.0	-18.6	Black
	552.144k	42.5	+0.2	+6.1	+0.1	+0.1	+0.0	49.0	46.0	+3.0	Black
29 Av	3.063M ve	20.7	+0.1	+6.2	+0.1	+0.2	+0.0	27.3	46.0	-18.7	Black
٨	3.063M	40.0	+0.1	+6.2	+0.1	+0.2	+0.0	46.6	46.0	+0.6	Black

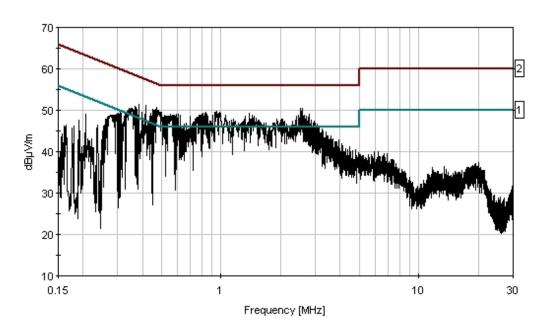
Page 87 of 170 Report No: FC07-071A



31	1.919M Ave	20.0	+0.1	+6.1	+0.1	+0.1	+0.0	26.4	46.0	-19.6	Black
٨	1.919M	41.4	+0.1	+6.1	+0.1	+0.1	+0.0	47.8	46.0	+1.8	Black
22	052 4001	20.0	. 0. 1	1	.00	. 0.1	.0.0	26.2	46.0	10.7	D11.
33	852.480k Ave	20.0	+0.1	+6.1	+0.0	+0.1	+0.0	26.3	46.0	-19.7	Black
۸	852.480k	42.3	+0.1	+6.1	+0.0	+0.1	+0.0	48.6	46.0	+2.6	Black
35	797.212k Ave	19.5	+0.1	+6.1	+0.1	+0.1	+0.0	25.9	46.0	-20.1	Black
٨	797.212k	42.7	+0.1	+6.1	+0.1	+0.1	+0.0	49.1	46.0	+3.1	Black
37	415.429k Ave	20.6	+0.2	+6.2	+0.1	+0.0	+0.0	27.1	47.5	-20.4	Black
^		44.6	+0.2	+6.2	+0.1	+0.0	+0.0	51.1	47.5	+3.6	Black
39	591.413k Ave	18.7	+0.2	+6.1	+0.1	+0.1	+0.0	25.2	46.0	-20.8	Black
^		42.5	+0.2	+6.1	+0.1	+0.1	+0.0	49.0	46.0	+3.0	Black
41	365.979k Ave	20.7	+0.2	+6.2	+0.1	+0.0	+0.0	27.2	48.6	-21.4	Black
^		44.0	+0.2	+6.2	+0.1	+0.0	+0.0	50.5	48.6	+1.9	Black
43	605.957k Ave	16.8	+0.2	+6.1	+0.1	+0.1	+0.0	23.3	46.0	-22.7	Black
۸		42.6	+0.2	+6.1	+0.1	+0.1	+0.0	49.1	46.0	+3.1	Black
45	512.148k Ave	14.2	+0.2	+6.2	+0.1	+0.1	+0.0	20.8	46.0	-25.2	Black
^	512.148k	41.7	+0.2	+6.2	+0.1	+0.1	+0.0	48.3	46.0	+2.3	Black



CKC Laboratories, Inc. Date: 9/15/2007 Time: 07:16:27 Synapse Product Development, LLC WO#: 86173 FCC 15.207 COND [AVE] Test Lead: Black 110V 60Hz Sequence#: 55



—— Sweep Data —— 1 - FCC 15.207 COND [AVE] —— 2 - FCC 15.207 COND [QP]



Customer: Synapse Product Development, LLC

Specification: FCC 15.207 COND [AVE]

Work Order #: 86173 Date: 9/15/2007
Test Type: Conducted Emissions Time: 07:36:37
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 56

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101AM 110V 60Hz

S/N: NA

# Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
LISN	1104	11/10/2006	11/10/2008	00847
6dB Attenuator	None	11/21/2006	11/21/2008	P05611
150kHz HPF	G7755	01/30/2006	01/30/2008	02610
Conducted Emission	Cable #21	05/09/2006	05/09/2008	P04358
Cable				

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	
WiFi and Bluetooth	Haier America LLC	MW101AM	NA	
Enabled Media Player*				

#### Support Devices:

Function	Manufacturer	Model #	S/N
1 1 1 1 1			

# Test Conditions / Notes:

The EUT is placed on the wooden table. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit and receives. Hopping, transmit audio data in Bluetooth signal. Display and hard drives are exercised. 23°C, 49% relative humidity. Cost reduced Power supply design.

# Transducer Legend:

T1=150kHz HPF Asset 02610	T2=6dB Attenuator P05611
T3=Cable #21 Conducted Site A 050908	T4=(L2) Insertion Loss 00847 EMCO 3816/2NM

Measu	rement Data:	Re	eading lis	ted by ma	ırgin.	Test Lead: White					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	159.859k	32.6	+0.6	+6.2	+0.1	+0.2	+0.0	39.7	55.5	-15.8	White
	Ave										
٨	159.859k	48.0	+0.6	+6.2	+0.1	+0.2	+0.0	55.1	55.5	-0.4	White
3	2.621M	19.6	+0.1	+6.2	+0.1	+0.2	+0.0	26.2	46.0	-19.8	White
	Ave										
^	2.621M	39.7	+0.1	+6.2	+0.1	+0.2	+0.0	46.3	46.0	+0.3	White

Page 90 of 170 Report No: FC07-071A



5	2.472M Ave	18.9	+0.1	+6.2	+0.1	+0.2	+0.0	25.5	46.0	-20.5	White
٨	2.472M	39.1	+0.1	+6.2	+0.1	+0.2	+0.0	45.7	46.0	-0.3	White
7	510.693k Ave	17.2	+0.2	+6.2	+0.1	+0.1	+0.0	23.8	46.0	-22.2	White
^	510.693k	41.1	+0.2	+6.2	+0.1	+0.1	+0.0	47.7	46.0	+1.7	White
9	2.668M Ave	17.1	+0.1	+6.2	+0.1	+0.2	+0.0	23.7	46.0	-22.3	White
^	2.668M	42.5	+0.1	+6.2	+0.1	+0.2	+0.0	49.1	46.0	+3.1	White
11	621.956k Ave	14.1	+0.2	+6.1	+0.1	+0.1	+0.0	20.6	46.0	-25.4	White
٨	621.956k	41.0	+0.2	+6.1	+0.1	+0.1	+0.0	47.5	46.0	+1.5	White
13	472.151k	14.4	+0.2	+6.2	+0.1	+0.1	+0.0	21.0	46.5	-25.5	White
^	Ave 472.151k	46.7	+0.2	+6.2	+0.1	+0.1	+0.0	53.3	46.5	+6.8	White
٨	474.333k	39.6	+0.2	+6.2	+0.1	+0.1	+0.0	46.2	46.4	-0.2	White
16	1.115M	13.9	+0.1	+6.1	+0.0	+0.1	+0.0	20.2	46.0	-25.8	White
^	Ave 1.115M	41.4	+0.1	+6.1	+0.0	+0.1	+0.0	47.7	46.0	+1.7	White
18	484.514k Ave	13.5	+0.2	+6.2	+0.1	+0.1	+0.0	20.1	46.3	-26.2	White
19	792.122k Ave	13.1	+0.1	+6.1	+0.1	+0.1	+0.0	19.5	46.0	-26.5	White
٨	792.122k	40.4	+0.1	+6.1	+0.1	+0.1	+0.0	46.8	46.0	+0.8	White
21	745.581k	12.5	+0.1	+6.1	+0.1	+0.1	+0.0	18.9	46.0	-27.1	White
٨	Ave 745.581k	43.3	+0.1	+6.1	+0.1	+0.1	+0.0	49.7	46.0	+3.7	White
23	484.514k	12.5	+0.2	+6.2	+0.1	+0.1	+0.0	19.1	46.3	-27.2	White
^	Ave 484.514k	45.3	+0.2	+6.2	+0.1	+0.1	+0.0	51.9	46.3	+5.6	White
25	2.748M Ave	11.8	+0.1	+6.2	+0.1	+0.2	+0.0	18.4	46.0	-27.6	White
٨	2.748M	38.8	+0.1	+6.2	+0.1	+0.2	+0.0	45.4	46.0	-0.6	White
27	4.207M	11.5	+0.1	+6.2	+0.2	+0.2	+0.0	18.2	46.0	-27.8	White
٨	Ave 4.207M	39.1	+0.1	+6.2	+0.2	+0.2	+0.0	45.8	46.0	-0.2	White

Page 91 of 170 Report No: FC07-071A



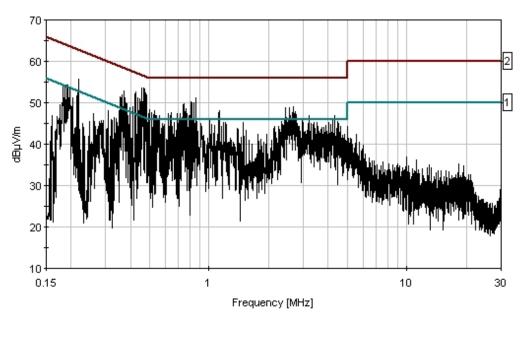
29 4.330M Ave	11.0	+0.1	+6.2	+0.2	+0.2	+0.0	17.7	46.0	-28.3	White
^ 4.330M	40.3	+0.1	+6.2	+0.2	+0.2	+0.0	47.0	46.0	+1.0	White
31 371.070k Ave	12.3	+0.2	+6.2	+0.1	+0.1	+0.0	18.9	48.5	-29.6	White
^ 371.070k	46.2	+0.2	+6.2	+0.1	+0.1	+0.0	52.8	48.5	+4.3	White
^ 371.070k	39.8	+0.2	+6.2	+0.1	+0.1	+0.0	46.4	48.5	-2.1	White
34 811.029k Ave	10.0	+0.1	+6.1	+0.1	+0.1	+0.0	16.4	46.0	-29.6	White
^ 811.029k	43.9	+0.1	+6.1	+0.1	+0.1	+0.0	50.3	46.0	+4.3	White
36 686.677k Ave	9.6	+0.2	+6.1	+0.1	+0.1	+0.0	16.1	46.0	-29.9	White
^ 686.677k	41.0	+0.2	+6.1	+0.1	+0.1	+0.0	47.5	46.0	+1.5	White
38 456.880k Ave	10.1	+0.2	+6.2	+0.1	+0.1	+0.0	16.7	46.7	-30.0	White
^ 456.880k	46.9	+0.2	+6.2	+0.1	+0.1	+0.0	53.5	46.7	+6.8	White
40 821.210k Ave	8.6	+0.1	+6.1	+0.1	+0.1	+0.0	15.0	46.0	-31.0	White
^ 821.210k	43.6	+0.1	+6.1	+0.1	+0.1	+0.0	50.0	46.0	+4.0	White
42 840.117k Ave	8.4	+0.1	+6.1	+0.0	+0.1	+0.0	14.7	46.0	-31.3	White
^ 840.118k	43.8	+0.1	+6.1	+0.0	+0.1	+0.0	50.1	46.0	+4.1	White
44 544.145k Ave	7.6	+0.2	+6.1	+0.1	+0.1	+0.0	14.1	46.0	-31.9	White
^ 544.145k	40.5	+0.2	+6.1	+0.1	+0.1	+0.0	47.0	46.0	+1.0	White
^ 540.509k	39.1	+0.2	+6.1	+0.1	+0.1	+0.0	45.6	46.0	-0.4	White
47 424.156k Ave	8.7	+0.2	+6.2	+0.1	+0.1	+0.0	15.3	47.4	-32.1	White
^ 424.156k	46.0	+0.2	+6.2	+0.1	+0.1	+0.0	52.6	47.4	+5.2	White
49 362.343k Ave	9.3	+0.2	+6.2	+0.1	+0.1	+0.0	15.9	48.7	-32.8	White
^ 362.343k	45.3	+0.2	+6.2	+0.1	+0.1	+0.0	51.9	48.7	+3.2	White
51 4.475M Ave	5.1	+0.1	+6.2	+0.2	+0.2	+0.0	11.8	46.0	-34.2	White
^ 4.475M	38.8	+0.1	+6.2	+0.2	+0.2	+0.0	45.5	46.0	-0.5	White
53 4.475M Ave	5.1	+0.1	+6.2	+0.2	+0.2	+0.0	11.8	46.0	-34.2	White

Page 92 of 170 Report No: FC07-071A



54	197.995k	7.6	+0.2	+6.1	+0.1	+0.2	+0.0	14.2	53.7	-39.5	White
A	Ave										
٨	197.995k	46.7	+0.2	+6.1	+0.1	+0.2	+0.0	53.3	53.7	-0.4	White
٨	196.540k	46.6	+0.2	+6.1	+0.1	+0.2	+0.0	53.2	53.8	-0.6	White
57	192.904k	7.2	+0.2	+6.1	+0.1	+0.2	+0.0	13.8	53.9	-40.1	White
A	Ave										
٨	192.904k	47.7	+0.2	+6.1	+0.1	+0.2	+0.0	54.3	53.9	+0.4	White
59	186.359k	6.8	+0.2	+6.1	+0.1	+0.2	+0.0	13.4	54.2	-40.8	White
A	Ave										
٨	186.359k	47.3	+0.2	+6.1	+0.1	+0.2	+0.0	53.9	54.2	-0.3	White
٨	181.996k	47.2	+0.3	+6.1	+0.1	+0.2	+0.0	53.9	54.4	-0.5	White

CKC Laboratories, Inc. Date: 9/15/2007 Time: 07:36:37 Synapse Product Development, LLC WO#: 86173 FCC 15.207 COND [AVE] Test Lead: White 110V 60Hz Sequence#: 56





# FCC 15.209/15.247(d) – ANTENNA CONDUCTED SPURIOUS EMISSIONS

**Test Setup Photos** 



Page 94 of 170 Report No: FC07-071A



#### **Test Data Sheets**

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.247(d) Conducted Spurious Emissions

Work Order #: 86173 Date: 9/4/2007
Test Type: Conducted Emissions Time: 10:13:35
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 12

**Player** 

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101 110V 60Hz

S/N: NA

# Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #	
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672	
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183	

#### Equipment Under Test (\* = EUT):

=quipilient citue: zest (			-
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

#### Support Devices:

Function Manufacturer	Model #	S/N	
-----------------------	---------	-----	--

#### Test Conditions / Notes:

The EUT is placed on the test bench, USB port is connected to an AC power supply. The EUT is operating on Max power. RF emission profile evaluated at the internal antenna connector. Mode: Transmit. Digital power setting code = 20. Modulation: 802.11g (54 mbs OFDM-64QAM). Modulation: 802.11b (11mbs QPSK). Frequency: 2412 MHz, 2437MHz, 2462MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions were detected, noise floor level recorded.

#### Transducer Legend:

# T1=SMA-cable W 05183-011109-26GHz

Med	asurement Data:	Re	eading lis	ted by ma	argin.			Test Lead	d: Antenna	Terminal	
#	Freq	Rdng	T1				Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
	1 4877.800M	53.8	+2.0				+0.0	55.8	88.7	-32.9	Anten
	2 4837.700M	51.8	+2.0				+0.0	53.8	88.7	-34.9	Anten
	3 4922.700M	52.1					+0.0	52.1	88.7	-36.6	Anten
	4 4873.000M	46.3	+2.0				+0.0	48.3	88.7	-40.4	Anten
	5 4821.000M	45.3	+2.0				+0.0	47.3	88.7	-41.4	Anten
	6 4849.300M	43.1	+2.0				+0.0	45.1	88.7	-43.6	Anten

Page 95 of 170 Report No: FC07-071A



Customer: Synapse Product Development, LLC

Specification: FCC 15.247(d) Conducted Spurious Emissions

Work Order #: 86173 Date: 9/4/2007
Test Type: Conducted Emissions Time: 16:42:40
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 12

Player

Manufacturer: Haier America LLC Tested By: E. Wong Model: MW101 110V 60Hz

S/N: NA

# Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N	
WiFi and Bluetooth	Haier America LLC	MW101	NA	
Enabled Media Player*				
AC Power Supply	Haier America LLC	LSD-D03	NA	

#### Support Devices:

Function	Manufacturer	Model #	S/N	

#### Test Conditions / Notes:

The EUT is placed on the test bench. USB port is connected to an AC power supply. The EUT is operating on Max power. RF emission profile evaluated at the internal antenna connector. Mode: Transmit. Digital power setting code = 63. Frequency: 2402 MHz, 2441MHz, 2480MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions were detected, noise floor level recorded.

#### Transducer Legend:

# T1=SMA-cable\_W\_05183-011109-26GHz

Meas	Measurement Data: Reading listed by marg					. Test Lead: Antenna Terminal					
#	Freq	Rdng	T1				Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
	1 4804.000M	52.5	+2.0				+0.0	54.5	88.7	-34.2	Anten
	2 4881.670M	51.3	+2.0				+0.0	53.3	88.7	-35.4	Anten
	3 4960.000M	50.2	+2.1				+0.0	52.3	88.7	-36.4	Anten

Page 96 of 170 Report No: FC07-071A



# FCC 15.209/15.247(d) – OATS RADIATED SPURIOUS EMISSIONS

**Test Setup Photos** 









# **Test Data Sheets**

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

 Work Order #:
 86173
 Date:
 8/31/2007

 Test Type:
 Radiated Scan
 Time:
 09:58:44

Equipment: WiFi and Bluetooth Enabled Media Sequence#: 5

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

Page 98 of 170 Report No: FC07-071A



# Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

#### Support Devices:

Function	Manufacturer	Model #	S/N

#### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 20. Modulation: 802.11g (54 mbs OFDM-64QAM). Frequency: 2412MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

# Transducer Legend:

T1=Preamp 8447D 060108	T2=Bilog AN01995 020208 Chase
T3=Cable #10 051609	T4=Cable #15, Site A, 010509
T5=Pre amp 1- 26GHz 071908	T6=54' Heliax Cable 091808 P05565
T7=Horn 00849_062908	T8=Filter 3GHz HPF AN02744
T9=SMA-cable_W_05183-011109-26GHz	

Measur	ement Data:	Reading listed by margin.				Test Distance: 3 Meters					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	•	· ·	T5	T6	T7	T8			1	· ·	
			T9								
	MHz	$dB\mu V$	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1 4	4824.920M	39.8	+0.0	+0.0	+0.0	+0.0	+0.0	42.8	54.0	-11.2	Horiz
			-37.7	+5.3	+33.1	+0.3					
			+2.0								
2	141.500M	45.8	-27.7	+11.3	+0.2	+2.1	+0.0	31.7	43.5	-11.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	166.380M	46.7	-27.7	+9.9	+0.3	+2.3	+0.0	31.5	43.5	-12.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
4	239.980M	46.5	-27.7	+11.8	+0.3	+2.8	+0.0	33.7	46.0	-12.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
5	120.336M	45.1	-27.6	+11.3	+0.3	+2.0	+0.0	31.1	43.5	-12.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
6	651.774M	34.8	-27.1	+20.4	+0.5	+4.9	+0.0	33.5	46.0	-12.5	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
7	188.158M	46.8	-27.6	+8.9	+0.2	+2.5	+0.0	30.8	43.5	-12.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 99 of 170 Report No: FC07-071A



8	266.350M	44.6	-27.7	+12.7	+0.3	+3.0	+0.0	32.9	46.0	-13.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
9	161.200M	45.4	-27.7	+10.1	+0.2	+2.3	+0.0	30.3	43.5	-13.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
10	178.809M	45.5	-27.7	+9.1	+0.3	+2.4	+0.0	29.6	43.5	-13.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
11	4824.920M	37.0	+0.0	+0.0	+0.0	+0.0	+0.0	40.0	54.0	-14.0	Vert
			-37.7	+5.3	+33.1	+0.3					
			+2.0								
12	832.030M	29.9	-27.1	+22.8	+0.6	+5.6	+0.0	31.8	46.0	-14.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
13	173.880M	44.4	-27.7	+9.5	+0.3	+2.4	+0.0	28.9	43.5	-14.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
14	400.000M	39.1	-27.8	+15.8	+0.4	+3.7	+0.0	31.2	46.0	-14.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
15	299.980M	41.0	-27.6	+13.2	+0.2	+3.2	+0.0	30.0	46.0	-16.0	Vert
			+0.0	+0.0	+0.0	+0.0					
1.5	27.5.0203.5	20.0	+0.0	10.6	0.2			2.5.0	460	10.1	** .
16	256.030M	38.8	-27.7	+12.6	+0.3	+2.9	+0.0	26.9	46.0	-19.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
17	422.0003.4	22.4	+0.0	.167	. 0. 4	. 2.0	. 0. 0	267	16.0	10.2	X7 .
1/	433.980M	33.4	-27.7	+16.7	+0.4	+3.9	+0.0	26.7	46.0	-19.3	Vert
			+0.0	+0.0	+0.0	+0.0					
10	400 42014	21.4	+0.0	. 17.0	.0.2	. 1.2	. 0. 0	26.2	46.0	10.0	<b>X7</b> 4
18	490.430M	31.4	-27.6	+17.9	+0.3	+4.2	+0.0	26.2	46.0	-19.8	Vert
			+0.0	+0.0	+0.0	+0.0					
10	417.800M	32.4	+0.0	+16.3	+0.4	+3.8	+0.0	25.2	46.0	-20.8	Vert
19	41/.8UUW	32.4	-27.7 +0.0	+16.3 $+0.0$	+0.4	+3.8 +0.0	+0.0	23.2	40.0	-20.8	vert
			+0.0 +0.0	+0.0	+0.0	+0.0					
20	171.788M	37.0	-27.7	+9.6	+0.3	+2.4	+0.0	21.6	43.5	-21.9	Horiz
20	1/1./88IVI	37.0	-27.7 +0.0	+9.6 +0.0			+0.0	21.0	43.3	-21.9	попи
				+0.0	+0.0	+0.0					
			+0.0								



Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

 Work Order #:
 86173
 Date:
 8/31/2007

 Test Type:
 Radiated Scan
 Time:
 10:55:49

Equipment: WiFi and Bluetooth Enabled Media Sequence#: 4

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

#### Equipment Under Test (\* = EUT):

Equipment enter rest (			
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

# Support Devices:

. 11			
Function	Manufacturer	Model #	S/N

#### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 20. Modulation: 802.11g (54 mbs OFDM-64QAM). Frequency: 2437MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 101 of 170 Report No: FC07-071A



*Transducer Legend:*T1=Preamp 8447D 060108 T3=Cable #10 051609 T5=Pre amp 1- 26GHz 071908 T7=Horn 00849\_062908 T9=SMA-cable\_W\_05183-011109-26GHz

T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

	rement Data:			ted by ma	_				e: 3 Meters		
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9								
	MHz	dΒμV	dB	dB	dB	dB	Table		$dB\mu V/m$	dB	Ant
1	102.1101.1	50.9	-27.7	+10.8	+0.2	+2.2	+0.0	36.4	43.5	-7.1	Horiz
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0								
٨	152.113M	52.6	-27.7	+10.8	+0.2	+2.2	+0.0	38.1	43.5	-5.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	851.367M	34.4	-27.1	+23.3	+0.6	+5.7	+0.0	36.9	46.0	-9.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0						4.1.0	100	
4	736.030M	35.5	-27.0	+21.8	+0.5	+5.2	+0.0	36.0	46.0	-10.0	Vert
			+0.0	+0.0	+0.0	+0.0					
	1 (1 0 7 0 ) 1	40.5	+0.0	10.1			0.0		40.7	10.1	** .
5	161.050M	48.5	-27.7	+10.1	+0.2	+2.3	+0.0	33.4	43.5	-10.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
	145 20014	167	+0.0	. 11 1	.0.2	. 2 2	. 0. 0	20.5	42.5	11.0	TT
6	145.280M	46.7	-27.7	+11.1	+0.2	+2.2	+0.0	32.5	43.5	-11.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
7	4875.580M	20.6	+0.0	ι Ο Ο	ι Ο Ο	+0.0	+0.0	12.9	540	-11.2	Homia
/	4875.380IVI	39.6	+0.0 -37.7	$+0.0 \\ +5.4$	+0.0 +33.2	+0.0 +0.3	+0.0	42.8	54.0	-11.2	Horiz
			+2.0	+3.4	+33.2	+0.3					
Q	4875.300M	39.4	+0.0	+0.0	+0.0	+0.0	+0.0	42.6	54.0	-11.4	Vert
o	4673.300W	37.4	-37.7	+5.4	+33.2	+0.0	+0.0	42.0	34.0	-11.4	Vert
			+2.0	13.4	133.2	10.5					
9	174.100M	47.0	-27.7	+9.4	+0.3	+2.4	+0.0	31.4	43.5	-12.1	Horiz
,	1/4.100W	47.0	+0.0	+0.0	+0.0	+0.0	+0.0	31.4	43.3	-12.1	110112
			+0.0	10.0	10.0	10.0					
10	832.030M	30.6	-27.1	+22.8	+0.6	+5.6	+0.0	32.5	46.0	-13.5	Vert
10	032.030111	50.0	+0.0	+0.0	+0.0	+0.0	10.0	32.3	10.0	15.5	, 611
			+0.0	. 0.0	. 0.0	. 0.0					
11	120.330M	42.8	-27.6	+11.3	+0.3	+2.0	+0.0	28.8	43.5	-14.7	Vert
		0	+0.0	+0.0	+0.0	+0.0	. 0.0	_0.0		- ***	. 510
			+0.0	•							
12	399.970M	39.0	-27.8	+15.8	+0.4	+3.7	+0.0	31.1	46.0	-14.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
13	433.680M	37.0	-27.7	+16.7	+0.4	+3.9	+0.0	30.3	46.0	-15.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 102 of 170 Report No: FC07-071A



14	465.580M	35.9	-27.6	+17.4	+0.4	+4.1	+0.0	30.2	46.0	-15.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
15	505.850M	34.5	-27.6	+18.3	+0.3	+4.2	+0.0	29.7	46.0	-16.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
16	444.280M	35.9	-27.6	+17.0	+0.4	+4.0	+0.0	29.7	46.0	-16.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
17	134.600M	40.8	-27.6	+11.4	+0.3	+2.1	+0.0	27.0	43.5	-16.5	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
18	650.627M	30.5	-27.1	+20.4	+0.5	+4.9	+0.0	29.2	46.0	-16.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
19	538.030M	31.8	-27.4	+19.3	+0.5	+4.4	+0.0	28.6	46.0	-17.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
20	490.220M	33.2	-27.6	+17.9	+0.3	+4.2	+0.0	28.0	46.0	-18.0	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0					• • • •			
21	528.220M	31.7	-27.5	+19.0	+0.4	+4.4	+0.0	28.0	46.0	-18.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0					• • • •		100	
22	417.820M	35.2	-27.7	+16.3	+0.4	+3.8	+0.0	28.0	46.0	-18.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
	200 02014	20.0	+0.0	. 12.2	. 0. 2	. 2. 2	. 0. 0	27.0	16.0	10.1	X7 .
23	300.020M	38.9	-27.6	+13.2	+0.2	+3.2	+0.0	27.9	46.0	-18.1	Vert
			+0.0	+0.0	+0.0	+0.0					
24	220 150M	27.2	+0.0	+140	.0.2	+2.4	. 0. 0	27.2	46.0	10.7	Vt
24	329.150M	37.2	-27.6	+14.0	+0.3	+3.4	+0.0	27.3	46.0	-18.7	Vert
			+0.0 +0.0	+0.0	+0.0	+0.0					
25	261 100M	26.2		+14.9	10.2	12.5	+0.0	27.2	46.0	10.7	Uoriz
25	361.100M	36.3	-27.6 +0.0	$+14.8 \\ +0.0$	$+0.3 \\ +0.0$	+3.5 +0.0	+0.0	27.3	46.0	-18.7	Horiz
			+0.0 +0.0	+0.0	+0.0	+0.0					
26	278.520M	38.3	-27.7	+12.9	+0.3	+3.0	+0.0	26.8	46.0	-19.2	Horiz
20	210.32UIVI	30.3			+0.3		+0.0	20.0	40.0	-17.2	HOHZ
			$+0.0 \\ +0.0$	+0.0	+0.0	+0.0					
27	354.120M	35.8	-27.6	+14.6	+0.3	+3.5	+0.0	26.6	46.0	-19.4	Horiz
	JJ4.1201VI	55.0	+0.0	+14.0 +0.0	+0.3	+0.0	+0.0	20.0	40.0	-17. <del>4</del>	110112
			+0.0	10.0	10.0	10.0					
28	412.470M	33.9	-27.7	+16.1	+0.4	+3.8	+0.0	26.5	46.0	-19.5	Horiz
20	-712.7/UIVI	33.9	+0.0	+0.0	+0.4	+0.0	10.0	20.3	70.0	-17.5	HOHE
			+0.0	10.0	10.0	10.0					
29	474.230M	31.7	-27.6	+17.6	+0.4	+4.1	+0.0	26.2	46.0	-19.8	Vert
	17 1.230141	51.7	+0.0	+0.0	+0.0	+0.0	10.0	20.2	10.0	17.0	, 011
			+0.0	. 0.0	1 0.0	. 5.0					
<u> </u>			10.0								

Page 103 of 170 Report No: FC07-071A



30	240.000M	38.6	-27.7	+11.8	+0.3	+2.8	+0.0	25.8	46.0	-20.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
31	465.530M	30.7	-27.6	+17.4	+0.4	+4.1	+0.0	25.0	46.0	-21.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
32	458.520M	30.7	-27.6	+17.3	+0.4	+4.0	+0.0	24.8	46.0	-21.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 104 of 170 Report No: FC07-071A



Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

Work Order #: 86173 Date: 8/31/2007
Test Type: Radiated Scan Time: 11:32:08
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 3

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

# Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

#### Equipment Under Test (\* = EUT):

(			
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

# Support Devices:

T I			
Function	Manufacturer	Model #	S/N

#### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 20. Modulation: 802.11g (54 mbs OFDM-64QAM). Frequency: 2462MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 105 of 170 Report No: FC07-071A



*Transducer Legend:*T1=Preamp 8447D 060108 T3=Cable #10 051609 T5=Pre amp 1- 26GHz 071908 T7=Horn 00849\_062908 T9=SMA-cable\_W\_05183-011109-26GHz

T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

	ement Data:		eading lis	ted by ma	argin.			est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Pola
			T5	T6	T7	T8					
	MHz	dDV	T9 dB	dB	dB	dB	Toblo	dD. U/m	dD. W/m	dB	A
1	161.220M	dBμV 53.0	-27.7	+10.1	+0.2	+2.3	Table	37.9	dBμV/m 43.5	-5.6	Ant Hori
1	101.220W	33.0	+0.0	+10.1 +0.0	+0.2 +0.0	+2.5	+0.0	37.9	43.3	-3.0	поп
			+0.0	10.0	10.0	10.0					
2	120.370M	49.8	-27.6	+11.3	+0.3	+2.0	+0.0	35.8	43.5	-7.7	Hor
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	152.167M	49.9	-27.7	+10.8	+0.2	+2.2	+0.0	35.4	43.5	-8.1	Hor
(	QР		+0.0	+0.0	+0.0	+0.0					
			+0.0								
٨	152.167M	52.8	-27.7	+10.8	+0.2	+2.2	+0.0	38.3	43.5	-5.2	Hor
			+0.0	+0.0	+0.0	+0.0					
	1000 0000		+0.0								
5	4930.000M	39.4	+0.0	+0.0	+0.0	+0.0	+0.0	42.9	54.0	-11.1	Ve
			-37.7	+5.4	+33.4	+0.3					
6	832.030M	32.9	+2.1 -27.1	+22.8	+0.6	+5.6	+0.0	34.8	46.0	-11.2	Hor
U	632.030W	32.9	+0.0	+22.8 $+0.0$	+0.0	+0.0	+0.0	34.0	40.0	-11.2	1101
			+0.0	10.0	10.0	10.0					
7	166.430M	47.4	-27.7	+9.8	+0.3	+2.3	+0.0	32.1	43.5	-11.4	Hor
•	1001.001.1	.,	+0.0	+0.0	+0.0	+0.0	. 0.0	02.1			1101
			+0.0								
8	4923.830M	37.9	+0.0	+0.0	+0.0	+0.0	+0.0	41.2	54.0	-12.8	Hor
			-37.7	+5.4	+33.3	+0.3					
			+2.0								
9	173.930M	45.8	-27.7	+9.5	+0.3	+2.4	+0.0	30.3	43.5	-13.2	Hor
			+0.0	+0.0	+0.0	+0.0					
10	506 050 <b>M</b>	26.0	+0.0	. 10.2	.0.2	. 1.0	. 0. 0	22.1	46.0	12.0	17.
10	506.050M	36.9	-27.6	+18.3	+0.3	+4.2	+0.0	32.1	46.0	-13.9	Ve
			+0.0 +0.0	+0.0	+0.0	+0.0					
11	400.020M	39.5	-27.8	+15.8	+0.4	+3.7	+0.0	31.6	46.0	-14.4	Ve
11	400.020W	37.3	+0.0	+0.0	+0.0	+0.0	10.0	31.0	40.0	-17.7	<b>V</b> C.
			+0.0	10.0	10.0	10.0					
12	538.180M	32.6	-27.4	+19.3	+0.5	+4.4	+0.0	29.4	46.0	-16.6	Hor
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
13	433.630M	35.9	-27.7	+16.7	+0.4	+3.9	+0.0	29.2	46.0	-16.8	Ve
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 106 of 170 Report No: FC07-071A



14	417.870M	36.4	-27.7	+16.3	+0.4	+3.8	+0.0	29.2	46.0	-16.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
15	511.520M	33.1	-27.6	+18.5	+0.3	+4.3	+0.0	28.6	46.0	-17.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
16	300.000M	39.1	-27.6	+13.2	+0.2	+3.2	+0.0	28.1	46.0	-17.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
17	136.320M	39.5	-27.6	+11.3	+0.3	+2.1	+0.0	25.6	43.5	-17.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
18	506.300M	32.8	-27.6	+18.3	+0.3	+4.2	+0.0	28.0	46.0	-18.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
19	479.180M	32.7	-27.6	+17.7	+0.3	+4.1	+0.0	27.2	46.0	-18.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
20	240.000M	40.0	-27.7	+11.8	+0.3	+2.8	+0.0	27.2	46.0	-18.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
21	265.550M	38.6	-27.7	+12.7	+0.3	+3.0	+0.0	26.9	46.0	-19.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
22	429.130M	33.1	-27.7	+16.6	+0.4	+3.9	+0.0	26.3	46.0	-19.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
23	401.870M	33.1	-27.8	+15.9	+0.4	+3.7	+0.0	25.3	46.0	-20.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
24	278.500M	36.4	-27.7	+12.9	+0.3	+3.0	+0.0	24.9	46.0	-21.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
25	232.870M	33.5	-27.6	+11.3	+0.2	+2.8	+0.0	20.2	46.0	-25.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								



Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

Work Order #: 86173 Date: 8/31/2007
Test Type: Radiated Scan Time: 13:38:16
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 6

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

# Test Equipment:

z cot z quipinent				
Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05205
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

# Equipment Under Test (\* = EUT):

- /-		
Manufacturer	Model #	S/N
Haier America LLC	MW101	NA
Haier America LLC	LSD-D03	NA
	Haier America LLC	Haier America LLC MW101

#### Support Devices:

Function Manufacturer Model # S/N	
runction Manufacturer Model # 5/N	

#### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 20. Modulation: 802.11b (11mbs QPSK). Frequency: 2412MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 108 of 170 Report No: FC07-071A



T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

	rement Data:			ted by ma				est Distance			
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dΒμV	T9 dB	dB	dB	dB	Table	dBμV/m	dBuV/m	dB	Ant
1	4824.170M	40.9	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Horiz
1	4024.170IVI	40.9	-37.7	+5.3	+33.1	+0.0	+0.0	43.7	34.0	-10.1	110112
			+2.0	13.3	133.1	10.3					
2	141.600M	45.7	-27.7	+11.3	+0.2	+2.1	+0.0	31.6	43.5	-11.9	Horiz
			+0.0	+0.0	+0.0	+0.0				,	
			+0.0								
3	538.020M	36.9	-27.4	+19.3	+0.5	+4.4	+0.0	33.7	46.0	-12.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
4	208.930M	46.0	-27.6	+9.5	+0.2	+2.6	+0.0	30.7	43.5	-12.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
5	146.980M	44.3	-27.7	+11.1	+0.2	+2.2	+0.0	30.1	43.5	-13.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
6	506.270M	37.2	-27.6	+18.3	+0.3	+4.2	+0.0	32.4	46.0	-13.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
7	4824.170M	37.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.3	54.0	-13.7	Vert
			-37.7	+5.3	+33.1	+0.3					
			+2.0								
8	120.320M	42.7	-27.6	+11.3	+0.3	+2.0	+0.0	28.7	43.5	-14.8	Vert
			+0.0	+0.0	+0.0	+0.0					
	122 (00) /	26.0	+0.0	.167	. 0. 4	.20	. 0. 0	20.1	46.0	15.0	<b>37</b> ,
9	433.680M	36.8	-27.7	+16.7	+0.4	+3.9	+0.0	30.1	46.0	-15.9	Vert
			+0.0	+0.0	+0.0	+0.0					
10	528.100M	33.4	+0.0	+19.0	+0.4	+4.4	+0.0	29.7	46.0	-16.3	Horiz
10	326.100M	33.4	+0.0	+19.0	+0.4 +0.0	+4.4	+0.0	29.1	40.0	-10.3	поп
			+0.0	+0.0	+0.0	+0.0					
11	444.180M	35.8	-27.6	+17.0	+0.4	+4.0	+0.0	29.6	46.0	-16.4	Vert
11	777.100IVI	33.0	+0.0	+0.0	+0.0	+0.0	10.0	27.0	40.0	-10.4	V CI t
			+0.0	10.0	10.0	10.0					
12	161.230M	42.1	-27.7	+10.1	+0.2	+2.3	+0.0	27.0	43.5	-16.5	Horiz
12	101.230111	12.1	+0.0	+0.0	+0.0	+0.0	. 0.0	27.0	13.3	10.5	11011
			+0.0	. 0.0	. 0.0	. 0.0					
13	297.330M	39.4	-27.6	+13.2	+0.2	+3.2	+0.0	28.4	46.0	-17.6	Horiz
		-/	+0.0	+0.0	+0.0	+0.0		_0			

+0.0

Page 109 of 170 Report No: FC07-071A



14	300.030M	38.4	-27.6	+13.2	+0.2	+3.2	+0.0	27.4	46.0	-18.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
15	265.430M	38.7	-27.7	+12.7	+0.3	+3.0	+0.0	27.0	46.0	-19.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
16	240.030M	39.2	-27.7	+11.8	+0.3	+2.8	+0.0	26.4	46.0	-19.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
17	401.770M	34.0	-27.8	+15.8	+0.4	+3.7	+0.0	26.1	46.0	-19.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
18	532.870M	29.3	-27.5	+19.2	+0.4	+4.4	+0.0	25.8	46.0	-20.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
19	428.420M	32.6	-27.7	+16.6	+0.4	+3.9	+0.0	25.8	46.0	-20.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
20	417.880M	32.5	-27.7	+16.3	+0.4	+3.8	+0.0	25.3	46.0	-20.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
21	401.970M	33.1	-27.8	+15.9	+0.4	+3.7	+0.0	25.3	46.0	-20.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
22	417.470M	30.9	-27.7	+16.3	+0.4	+3.8	+0.0	23.7	46.0	-22.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
23	232.820M	33.6	-27.6	+11.3	+0.2	+2.8	+0.0	20.3	46.0	-25.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 110 of 170 Report No: FC07-071A



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

Work Order #: 86173 Date: 8/31/2007
Test Type: Radiated Scan Time: 14:12:36
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 7

Player

Manufacturer: Haier America LLC

Model: MW101 S/N: NA

### Test Equipment:

1 cst Equipment.				
Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

Tested By: E. Wong

### Equipment Under Test (\* = EUT):

Equipment enter rest (			
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

### Support Devices:

Function	Manufacturer	Model #	S/N

### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 20. Modulation: 802.11b (11mbs QPSK). Frequency: 2437MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 111 of 170 Report No: FC07-071A



T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

Measu	rement Data:	Re	eading lis	ted by ma	argin.		Te	est Distance	e: 3 Meters	S	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9								
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	125.750M	51.5	-27.6	+11.5	+0.3	+2.0	+0.0	37.7	43.5	-5.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
2	141.530M	51.0	-27.7	+11.3	+0.2	+2.1	+0.0	36.9	43.5	-6.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	120.332M	50.4	-27.6	+11.3	+0.3	+2.0	+0.0	36.4	43.5	-7.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
4	152.330M	48.6	-27.7	+10.8	+0.2	+2.2	+0.0	34.1	43.5	-9.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
5	157.570M	48.2	-27.7	+10.4	+0.2	+2.3	+0.0	33.4	43.5	-10.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
6	120.510M	47.2	-27.6	+11.3	+0.3	+2.0	+0.0	33.2	43.5	-10.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
7	139.920M	46.6	-27.7	+11.3	+0.2	+2.1	+0.0	32.5	43.5	-11.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
8	4872.500M	37.2	+0.0	+0.0	+0.0	+0.0	+0.0	40.3	54.0	-13.7	Vert
			-37.7	+5.3	+33.2	+0.3					
_			+2.0					• • • •		10.5	
9	115.050M	44.2	-27.6	+11.0	+0.3	+1.9	+0.0	29.8	43.5	-13.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
10	4072 00014	267	+0.0	0.0	0.0	0.0	0.0	20.0	7.4.0	112	TT '
10	4873.000M	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	39.8	54.0	-14.2	Horiz
			-37.7	+5.3	+33.2	+0.3					
1.1	400,0003.4	20.6	+2.0	. 17.0	. 0. 4	. 2.7		21.7	46.0	142	<b>T7</b> .
11	400.000M	39.6	-27.8	+15.8	+0.4	+3.7	+0.0	31.7	46.0	-14.3	Vert
			+0.0	+0.0	+0.0	+0.0					
10	022 0203 4	20.7	+0.0	. 22 0	.0.6		. 0. 0	21.6	46.0	1 / /	<b>T</b> 74
12	832.020M	29.7	-27.1	+22.8	+0.6	+5.6	+0.0	31.6	46.0	-14.4	Vert
			+0.0	+0.0	+0.0	+0.0					
1			+0.0								

Page 112 of 170 Report No: FC07-071A



13	433.720M	37.1	-27.7	+16.7	+0.4	+3.9	+0.0	30.4	46.0	-15.6	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
14	538.080M	33.5	-27.4	+19.3	+0.5	+4.4	+0.0	30.3	46.0	-15.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
15	136.150M	40.7	-27.6	+11.3	+0.3	+2.1	+0.0	26.8	43.5	-16.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
16	528.250M	32.8	-27.5	+19.0	+0.4	+4.4	+0.0	29.1	46.0	-16.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
17	299.980M	39.5	-27.6	+13.2	+0.2	+3.2	+0.0	28.5	46.0	-17.5	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0					<b>-</b>			
18	465.660M	33.9	-27.6	+17.4	+0.4	+4.1	+0.0	28.2	46.0	-17.8	Vert
			+0.0	+0.0	+0.0	+0.0					
10	11100035	20.5	+0.0	11.0	0.2	1.0	0.0	27.2	42.7	10.0	**
19	114.990M	39.6	-27.6	+11.0	+0.3	+1.9	+0.0	25.2	43.5	-18.3	Vert
			+0.0	+0.0	+0.0	+0.0					
20	120 0701/	20.0	+0.0	. 11 4	.0.2	. 0.1	. 0. 0	25.1	12.5	10.4	3.7
20	130.970M	38.9	-27.6	+11.4	+0.3	+2.1	+0.0	25.1	43.5	-18.4	Vert
			+0.0	+0.0	+0.0	+0.0					
21	490.490M	32.4	+0.0	+17.9	+0.3	+4.2	+0.0	27.2	46.0	-18.8	Vert
21	490.490IVI	32.4	+0.0	+17.9	+0.3	+0.0	+0.0	21.2	40.0	-10.0	ven
			+0.0 +0.0	+0.0	+0.0	+0.0					
22	417.790M	33.9	-27.7	+16.3	+0.4	+3.8	+0.0	26.7	46.0	-19.3	Vert
22	417.770101	33.7	+0.0	+0.0	+0.0	+0.0	10.0	20.7	40.0	17.5	VCIt
			+0.0	. 0.0	. 0.0	. 0.0					
23	320.020M	35.0	-27.6	+13.7	+0.2	+3.3	+0.0	24.6	46.0	-21.4	Vert
	230.020111	22.3	+0.0	+0.0	+0.0	+0.0	. 0.0	<b>-</b>			
			+0.0								
24	280.000M	35.3	-27.7	+12.9	+0.3	+3.0	+0.0	23.8	46.0	-22.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
25	254.020M	33.9	-27.7	+12.6	+0.3	+2.9	+0.0	22.0	46.0	-24.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
26	161.490M	34.1	-27.7	+10.1	+0.2	+2.3	+0.0	19.0	43.5	-24.5	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	369.840M	29.5	-27.7	+15.0	+0.3	+3.6	+0.0	20.7	46.0	-25.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 113 of 170 Report No: FC07-071A



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

Work Order #: 86173 Date: 8/31/2007
Test Type: Radiated Scan Time: 14:43:07
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 8

Player

Manufacturer: Haier America LLC

Model: MW101 S/N: NA

### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

Tested By: E. Wong

### Equipment Under Test (\* = EUT):

Equipment Chaci I cat (	- <b>20 2</b> )•		
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

### Support Devices:

T I			
Function	Manufacturer	Model #	S/N

### **Test Conditions / Notes:**

The EUT is placed on the wooden table with10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 20. Modulation: 802.11b (11mbs QPSK). Frequency: 2462MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 114 of 170 Report No: FC07-071A



T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

Measu	rement Data:	Re	eading lis	ted by ma	argin.		Te	est Distance	e: 3 Meters	3	
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5 T9	T6	T7	Т8					
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\mu V/m$	dB	Ant
1	4927.300M	39.4	+0.0	+0.0	+0.0	+0.0	+0.0	42.8	54.0	-11.2	Horiz
			-37.7	+5.4	+33.3	+0.3					
			+2.1								
2	4926.900M	38.8	+0.0	+0.0	+0.0	+0.0	+0.0	42.2	54.0	-11.8	Vert
			-37.7	+5.4	+33.3	+0.3					
			+2.1								
3	556.570M	35.2	-27.4	+19.7	+0.5	+4.5	+0.0	32.5	46.0	-13.5	Vert
			+0.0	+0.0	+0.0	+0.0					
	401 7403 4	20.0	+0.0	15.0	0.4	2.7	0.0	21.0	46.0	111	TT .
4	401.740M	39.8	-27.8	+15.8	+0.4	+3.7	+0.0	31.9	46.0	-14.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
	422 050M	20.5	+0.0	.167	+0.4	+2.0	.00	21.0	46.0	14.2	Hanin
5	433.950M	38.5	-27.7 +0.0	$+16.7 \\ +0.0$	$+0.4 \\ +0.0$	+3.9 +0.0	+0.0	31.8	46.0	-14.2	Horiz
			+0.0 +0.0	+0.0	+0.0	+0.0					
6	417.660M	38.9	-27.7	+16.3	+0.4	+3.8	+0.0	31.7	46.0	-14.3	Horiz
0	417.000W	30.9	+0.0	+0.0	+0.4	+0.0	+0.0	31.7	40.0	-14.5	110112
			+0.0	10.0	10.0	10.0					
7	396.480M	39.7	-27.8	+15.7	+0.4	+3.7	+0.0	31.7	46.0	-14.3	Horiz
,	370.10014	37.1	+0.0	+0.0	+0.0	+0.0	10.0	31.7	10.0	1 1.5	HOHE
			+0.0								
8	538.000M	34.5	-27.4	+19.3	+0.5	+4.4	+0.0	31.3	46.0	-14.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
9	401.690M	37.7	-27.8	+15.8	+0.4	+3.7	+0.0	29.8	46.0	-16.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
10	506.250M	34.0	-27.6	+18.3	+0.3	+4.2	+0.0	29.2	46.0	-16.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
11	350.030M	36.9	-27.6	+14.5	+0.3	+3.5	+0.0	27.6	46.0	-18.4	Vert
			+0.0	+0.0	+0.0	+0.0					
12	200 0103 5	20.7	+0.0		0.0	2.2	0.0	27.5	46.0	10.5	X7 .
12	300.010M	38.5	-27.6	+13.2	+0.2		+0.0	27.5	46.0	-18.5	Vert
			+0.0	+0.0	+0.0	+0.0					
1.2	412 4603 4	24.0	+0.0	.161	.0.4	120	.0.0	27.4	46.0	10.6	II
13	412.460M	34.8	-27.7	+16.1	+0.4		+0.0	27.4	46.0	-18.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 115 of 170 Report No: FC07-071A



14	538.230M	30.3	-27.4	+19.3	+0.5	+4.4	+0.0	27.1	46.0	-18.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
15	506.140M	31.7	-27.6	+18.3	+0.3	+4.2	+0.0	26.9	46.0	-19.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
16	120.379M	38.4	-27.6	+11.3	+0.3	+2.0	+0.0	24.4	43.5	-19.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
17	320.880M	37.1	-27.6	+13.8	+0.2	+3.3	+0.0	26.8	46.0	-19.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
18	144.050M	38.4	-27.7	+11.2	+0.2	+2.2	+0.0	24.3	43.5	-19.2	Vert
			+0.0	+0.0	+0.0	+0.0					
10	450 2203 5	22.5	+0.0	15.0	0.4	4.0		2	460	10.1	**
19	458.330M	32.5	-27.6	+17.3	+0.4	+4.0	+0.0	26.6	46.0	-19.4	Vert
			+0.0	+0.0	+0.0	+0.0					
20	417.00014	22.5	+0.0	.160	. 0. 4	. 2.0	. 0. 0	26.2	46.0	10.7	X7 .
20	417.800M	33.5	-27.7	+16.3	+0.4	+3.8	+0.0	26.3	46.0	-19.7	Vert
			+0.0	+0.0	+0.0	+0.0					
21	400 200M	20.9	+0.0	+17.0	ı O 2	+4.2	+0.0	25.6	46.0	20.4	Vont
21	490.290M	30.8	-27.6 +0.0	$+17.9 \\ +0.0$	$+0.3 \\ +0.0$	+4.2 +0.0	+0.0	23.0	46.0	-20.4	Vert
			+0.0	+0.0	+0.0	+0.0					
22	610.890M	27.7	-27.3	+19.9	+0.5	+4.7	+0.0	25.5	46.0	-20.5	Horiz
22	010.090W	21.1	+0.0	+0.0	+0.0	+0.0	+0.0	23.3	40.0	-20.3	HOHZ
			+0.0	+0.0	+0.0	+0.0					
23	239.994M	38.2	-27.7	+11.8	+0.3	+2.8	+0.0	25.4	46.0	-20.6	Vert
23	237.77-111	30.2	+0.0	+0.0	+0.0	+0.0	10.0	23.4	40.0	20.0	VCIT
			+0.0	. 0.0		. 0.0					
24	320.030M	35.1	-27.6	+13.7	+0.2	+3.3	+0.0	24.7	46.0	-21.3	Vert
	020.0001.1	00.1	+0.0	+0.0	+0.0	+0.0	. 0.0			-110	, 610
			+0.0								
25	288.050M	35.5	-27.6	+13.0	+0.2	+3.1	+0.0	24.2	46.0	-21.8	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
26	344.100M	33.5	-27.6	+14.4	+0.3	+3.5	+0.0	24.1	46.0	-21.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	279.990M	35.2	-27.7	+12.9	+0.3	+3.0	+0.0	23.7	46.0	-22.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
28	114.910M	35.1	-27.6	+11.0	+0.3	+1.9	+0.0	20.7	43.5	-22.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
29	392.520M	30.9	-27.8	+15.6	+0.4	+3.7	+0.0	22.8	46.0	-23.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								



	255 2003 5	21.5	27.6	116	0.2	2.5	0.0	22.2	460	22.7	X 7 .
30	355.200M	31.5	-27.6	+14.6	+0.3	+3.5	+0.0	22.3	46.0	-23.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
31	362.520M	31.1	-27.7	+14.8	+0.3	+3.6	+0.0	22.1	46.0	-23.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
32	256.480M	32.5	-27.7	+12.6	+0.3	+2.9	+0.0	20.6	46.0	-25.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 117 of 170 Report No: FC07-071A



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

Work Order #: 86173 Date: 8/29/2007
Test Type: Radiated Scan Time: 13:55:04
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 11

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

## Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

### Equipment Under Test (\* = EUT):

=quipinent entre: 1 cst (			
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

### Support Devices:

T I			
Function	Manufacturer	Model #	S/N

### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 63 Modulation: Bluetooth. Frequency: 2402MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 118 of 170 Report No: FC07-071A



T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

Measu	rement Data:	Re	eading lis	ted by ma	argin.		Тє	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9								
	MHz	dΒμV	dB	dB	dB	dB		$dB\muV/m$		dB	Ant
1	141.584M	51.8	-27.7	+11.3	+0.2	+2.1	+0.0	37.7	43.5	-5.8	Horiz
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0								
٨	141.584M	56.0	-27.7	+11.3	+0.2	+2.1	+0.0	41.9	43.5	-1.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
	150 00015	<b>71.</b> 0	+0.0	10.0	0.2		0.0	26.7	10.7	<b></b>	** .
3	152.200M	51.0	-27.7	+10.8	+0.2	+2.2	+0.0	36.5	43.5	-7.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
4	157.400M	49.8	+0.0	+10.4	+0.2	+2.3	+0.0	35.0	43.5	-8.5	II a mi m
4	137.400M	49.8	-27.7 +0.0	+10.4	+0.2	+2.3	+0.0	33.0	43.3	-8.5	Horiz
			+0.0 +0.0	+0.0	+0.0	+0.0					
5	146.884M	48.9	-27.7	+11.1	+0.2	+2.2	+0.0	34.7	43.5	-8.8	Horiz
	QP	40.7	+0.0	+0.0	+0.2	+0.0	+0.0	34.7	43.3	-0.0	110112
	Qī		+0.0	10.0	10.0	10.0					
٨	146.884M	54.0	-27.7	+11.1	+0.2	+2.2	+0.0	39.8	43.5	-3.7	Horiz
	1 10.00 1111	31.0	+0.0	+0.0	+0.0	+0.0	10.0	37.0	13.3	3.7	HOHE
			+0.0	10.0	10.0	10.0					
7	161.150M	49.1	-27.7	+10.1	+0.2	+2.3	+0.0	34.0	43.5	-9.5	Horiz
		.,	+0.0	+0.0	+0.0	+0.0				,	
			+0.0								
8	139.909M	47.1	-27.7	+11.3	+0.2	+2.1	+0.0	33.0	43.5	-10.5	Horiz
	QP		+0.0	+0.0	+0.0	+0.0					
			+0.0								
^	139.909M	51.3	-27.7	+11.3	+0.2	+2.1	+0.0	37.2	43.5	-6.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
10	120.442M	46.5	-27.6	+11.3	+0.3	+2.0	+0.0	32.5	43.5	-11.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
11	145.175M	45.6	-27.7	+11.1	+0.2	+2.2	+0.0	31.4	43.5	-12.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
10	1002 7001 1	20.0	+0.0	0.0	0.0	0.0	0.0	41.0	540	10.1	<b>T</b> 7 .
12	4803.700M	38.9	+0.0	+0.0	+0.0	+0.0	+0.0	41.9	54.0	-12.1	Vert
			-37.7	+5.3	+33.1	+0.3					
13	136.208M	44.8	+2.0	+11.3	+0.3	+2.1	+0.0	30.9	43.5	-12.6	Horiz
13	130.208WI	44.8	-27.6 +0.0	+11.5	+0.3	+2.1 +0.0	+0.0	50.9	43.3	-12.0	попи
			+0.0	+0.0	+0.0	+0.0					
L			+0.0								

Page 119 of 170 Report No: FC07-071A



15 4803.830M   37.9												
15 4803.830M   37.9   +0.0   +0.0   +0.0   +0.0   +0.0   +0.0   40.9   54.0   -13.1   Horiz	14	490.300M	38.3	-27.6	+17.9	+0.3	+4.2	+0.0	33.1	46.0	-12.9	Vert
15 4803.830M 37.9 +0.0 +0.0 +0.0 +0.0 +0.0 40.9 54.0 -13.1 Horiz -37.7 +5.3 +33.1 +0.3 +0.3 +0.0 16 714.950M 32.6 -27.1 +21.1 +0.5 +5.2 +0.0 32.3 46.0 -13.7 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.				+0.0	+0.0	+0.0	+0.0					
-37.7 +5.3 +33.1 +0.3 +2.0  16 714.950M 32.6 -27.1 +21.1 +0.5 +5.2 +0.0 32.3 46.0 -13.7 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.												
+2.0  16 714.950M 32.6 -27.1 +21.1 +0.5 +5.2 +0.0 32.3 46.0 -13.7 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	15	4803.830M	37.9					+0.0	40.9	54.0	-13.1	Horiz
16       714.950M       32.6       -27.1       +21.1       +0.5       +5.2       +0.0       32.3       46.0       -13.7       Horiz         17       537.975M       35.2       -27.4       +19.3       +0.5       +4.4       +0.0       32.0       46.0       -14.0       Vert         18       433.367M       38.7       -27.7       +16.7       +0.4       +3.9       +0.0       32.0       46.0       -14.0       Vert         19       506.200M       35.4       -27.6       +18.3       +0.3       +4.2       +0.0       30.6       46.0       -15.4       Vert         20       474.533M       35.9       -27.6       +17.6       +0.3       +4.1       +0.0       30.3       46.0       -15.7       Vert         40.0       +0.0       +0.0       +0.0       +0.0       +0.0       -0.0       -15.7       Vert         21       465.492M       35.6       -27.6       +17.4       +0.4       +4.1       +0.0       29.9       46.0       -16.1       Vert         22       174.042M       42.0       -27.7       +9.4       +0.3       +2.4       +0.0       26.4       43.5       -17.1       Horiz<					+5.3	+33.1	+0.3					
+0.0												
17 537.975M 35.2 -27.4 +19.3 +0.5 +4.4 +0.0 32.0 46.0 -14.0 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.	16	714.950M	32.6					+0.0	32.3	46.0	-13.7	Horiz
17 537.975M 35.2 -27.4 +19.3 +0.5 +4.4 +0.0 32.0 46.0 -14.0 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0					+0.0	+0.0	+0.0					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$												
18   433.367M   38.7   -27.7   +16.7   +0.4   +3.9   +0.0   32.0   46.0   -14.0   Vert   +0.0   +0.0   +0.0   +0.0   +0.0   +0.0   +0.0     +0.0	17	537.975M	35.2					+0.0	32.0	46.0	-14.0	Vert
18       433.367M       38.7       -27.7       +16.7       +0.4       +3.9       +0.0       32.0       46.0       -14.0       Vert         19       506.200M       35.4       -27.6       +18.3       +0.3       +4.2       +0.0       30.6       46.0       -15.4       Vert         20       474.533M       35.9       -27.6       +17.6       +0.3       +4.1       +0.0       30.3       46.0       -15.7       Vert         21       465.492M       35.6       -27.6       +17.4       +0.4       +4.1       +0.0       29.9       46.0       -16.1       Vert         22       174.042M       42.0       -27.7       +9.4       +0.3       +2.4       +0.0       26.4       43.5       -17.1       Horiz         23       177.075M       42.0       -27.7       +9.2       +0.3       +2.4       +0.0       26.2       43.5       -17.3       Horiz         +0.0       +0.0       +0.0       +0.0       +0.0       +0.0       +0.0       +0.0       +0.0       +0.0       +17.5       Horiz         4       976.050M       32.2       -27.2       +24.6       +0.7       +6.2       +0.0       36.5 <th></th> <td></td> <td></td> <td></td> <td>+0.0</td> <td>+0.0</td> <td>+0.0</td> <td></td> <td></td> <td></td> <td></td> <td></td>					+0.0	+0.0	+0.0					
+0.0	10	100.0573.5	20.5		1.5	0.4		0.0	22.0	460	110	**
+0.0  19 506.200M 35.4 -27.6 +18.3 +0.3 +4.2 +0.0 30.6 46.0 -15.4 Vert +0.0 +0.0 +0.0 +0.0 +0.0  20 474.533M 35.9 -27.6 +17.6 +0.3 +4.1 +0.0 30.3 46.0 -15.7 Vert +0.0 +0.0 +0.0 +0.0 +0.0  21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0  22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	18	433.367M	38.7					+0.0	32.0	46.0	-14.0	Vert
19 506.200M 35.4 -27.6 +18.3 +0.3 +4.2 +0.0 30.6 46.0 -15.4 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  20 474.533M 35.9 -27.6 +17.6 +0.3 +4.1 +0.0 30.3 46.0 -15.7 Vert +0.0 +0.0 +0.0 +0.0  21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0  22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.					+0.0	+0.0	+0.0					
+0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  20 474.533M 35.9 -27.6 +17.6 +0.3 +4.1 +0.0 30.3 46.0 -15.7 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	10	50C 200M	25.4		110.2	.0.2	. 4.2	.0.0	20.7	46.0	15 4	<b>V</b> I4
+0.0  20 474.533M 35.9 -27.6 +17.6 +0.3 +4.1 +0.0 30.3 46.0 -15.7 Vert +0.0 +0.0 +0.0 +0.0 +0.0 21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	19	506.200M	35.4					+0.0	30.6	46.0	-15.4	Vert
20 474.533M 35.9 -27.6 +17.6 +0.3 +4.1 +0.0 30.3 46.0 -15.7 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 29.9 46.0 -15.7 Vert  21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0  22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.					+0.0	+0.0	+0.0					
+0.0 +0.0 +0.0 +0.0 +0.0 +0.0  21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	20	474 522M	25.0		176	+0.2	+ 4 1	+ O O	20.2	46.0	15 7	Vont
+0.0  21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	20	4/4.333WI	33.9					+0.0	30.3	40.0	-13.7	vert
21 465.492M 35.6 -27.6 +17.4 +0.4 +4.1 +0.0 29.9 46.0 -16.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0  24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.					+0.0	+0.0	+0.0					
+0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	21	465 402M	35.6		±17 <i>1</i>	±0.4	<i>⊥</i> / 1	±0.0	20.0	46.0	16.1	Vort
+0.0  22 174.042M	21	403.472IVI	33.0					10.0	27.7	<del>-10.0</del>	-10.1	VCIT
22 174.042M 42.0 -27.7 +9.4 +0.3 +2.4 +0.0 26.4 43.5 -17.1 Horiz +0.0 +0.0 +0.0 +0.0 +0.0  23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0  24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0					10.0	10.0	10.0					
+0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	22	174 042M	42.0		+9 4	+0.3	+2.4	+0.0	26.4	43.5	-17 1	Horiz
+0.0  23 177.075M		17 110 12111	12.0					10.0	20.1	13.5	17.1	HOHE
23 177.075M 42.0 -27.7 +9.2 +0.3 +2.4 +0.0 26.2 43.5 -17.3 Horiz +0.0 +0.0 +0.0 +0.0 24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0												
+0.0 +0.0 +0.0 +0.0 +0.0 24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0	23	177.075M	42.0		+9.2	+0.3	+2.4	+0.0	26.2	43.5	-17.3	Horiz
+0.0  24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0 +0.0												
24 976.050M 32.2 -27.2 +24.6 +0.7 +6.2 +0.0 36.5 54.0 -17.5 Horiz +0.0 +0.0 +0.0 +0.0 +0.0				+0.0								
+0.0	24	976.050M	32.2	-27.2	+24.6	+0.7	+6.2	+0.0	36.5	54.0	-17.5	Horiz
				+0.0	+0.0	+0.0	+0.0					
25 304.033M 39.4 -27.6 +13.3 +0.2 +3.2 +0.0 28.5 46.0 -17.5 Vert				+0.0								
	25	304.033M	39.4	-27.6	+13.3	+0.2	+3.2	+0.0	28.5	46.0	-17.5	Vert
+0.0 +0.0 +0.0 +0.0					+0.0	+0.0	+0.0					
+0.0												
26 115.050M 38.3 -27.6 +11.0 +0.3 +1.9 +0.0 23.9 43.5 -19.6 Horiz	26	115.050M	38.3					+0.0	23.9	43.5	-19.6	Horiz
+0.0 +0.0 +0.0 +0.0					+0.0	+0.0	+0.0					
+0.0												
27 295.900M 37.3 -27.6 +13.1 +0.2 +3.2 +0.0 26.2 46.0 -19.8 Vert	27	295.900M	37.3					+0.0	26.2	46.0	-19.8	Vert
+0.0 +0.0 +0.0 +0.0					+0.0	+0.0	+0.0					
+0.0		201 (222 5	2: -	+0.0	40=			0.0	20	4.5.0		**
	28	224.492M	34.6					+0.0	20.6	46.0	-25.4	Vert
28 224.492M 34.6 -27.6 +10.7 +0.2 +2.7 +0.0 20.6 46.0 -25.4 Vert					+0.0	+0.0	+0.0					
28 224.492M 34.6 -27.6 +10.7 +0.2 +2.7 +0.0 20.6 46.0 -25.4 Vert +0.0 +0.0 +0.0 +0.0				+0.0								

Page 120 of 170 Report No: FC07-071A



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

Work Order #: 86173 Date: 8/29/2007
Test Type: Radiated Scan Time: 14:58:10
Equipment: WiFi and Bluetooth Enabled Media Sequence#: 10

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

### Equipment Under Test (\* = EUT):

(			
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

### Support Devices:

Function	Manufacturer	Model #	S/N	
AC Power Supply	Haier America LLC	LSD-D03	NA	

### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material.. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 63. Modulation: Bluetooth. Frequency: 2441MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 121 of 170 Report No: FC07-071A



T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

Data:	Reading lis	sted by m	argin.		Te	est Distance	e: 3 Meters	3	
l Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	T5	T6	T7	T8					
	T9								
	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\mu V/m$	dB	Ant
30M 49.8		+10.8	+0.2	+2.2	+0.0	35.3	43.5	-8.2	Horiz
		+0.0	+0.0	+0.0					
30M 49.6					+0.0	34.5	43.5	-9.0	Horiz
		+0.0	+0.0	+0.0					
50M 48.5					+0.0	34.4	43.5	-9.1	Horiz
		+0.0	+0.0	+0.0					
50M 49.5					+0.0	34.1	43.5	-9.4	Horiz
		+0.0	+0.0	+0.0					
30M 40.4					+0.0	35.9	46.0	-10.1	Vert
		+0.0	+0.0	+0.0					
50M 36.6					+0.0	35.7	46.0	-10.3	Vert
		+0.0	+0.0	+0.0					
10M 38.3					+0.0	35.4	46.0	-10.6	Vert
		+0.0	+0.0	+0.0					
503.5 45.0		11.0	0.2	2.1	0.0	21.2	40.5	10.0	TT .
00M 45.3					+0.0	31.2	43.5	-12.3	Horiz
		+0.0	+0.0	+0.0					
70) ( 27 (		0.0	0.0	0.0	0.0	40.0	<b>740</b>	10.1	X7 .
/0M 37.6					+0.0	40.9	54.0	-13.1	Vert
		+5.4	+33.3	+0.3					
	+2.0								
50N/L 45.0	27.7	+0.4	.0.2	+2.4	. 0. 0	20.2	12.5	12.2	II.
50M 45.9		+9.4	+0.3	+2.4	+0.0	30.3	43.5	-13.2	Horiz
50M 45.9	+0.0	+9.4 +0.0	+0.3 +0.0	+2.4 +0.0	+0.0	30.3	43.5	-13.2	Horiz
	$+0.0 \\ +0.0$	+0.0	+0.0	+0.0					
50M 45.9 50M 35.2	+0.0 +0.0 -27.4	+0.0	+0.0	+0.0	+0.0	30.3	43.5	-13.2 -13.5	Horiz Vert
	+0.0 +0.0 -27.4 +0.0	+0.0	+0.0	+0.0					
50M 35.2	+0.0 +0.0 -27.4 +0.0 +0.0	+0.0 +19.7 +0.0	+0.0 +0.5 +0.0	+0.0 +4.5 +0.0	+0.0	32.5	46.0	-13.5	Vert
	+0.0 +0.0 -27.4 +0.0 +0.0	+0.0 +19.7 +0.0 +22.8	+0.0 +0.5 +0.0 +0.6	+0.0 +4.5 +0.0 +5.6					
50M 35.2	+0.0 +0.0 -27.4 +0.0 +0.0 -27.1 +0.0	+0.0 +19.7 +0.0	+0.0 +0.5 +0.0	+0.0 +4.5 +0.0	+0.0	32.5	46.0	-13.5	Vert
50M 35.2 80M 30.0	+0.0 +0.0 -27.4 +0.0 +0.0 -27.1 +0.0 +0.0	+0.0 +19.7 +0.0 +22.8 +0.0	+0.0 +0.5 +0.0 +0.6 +0.0	+0.0 +4.5 +0.0 +5.6 +0.0	+0.0	32.5	46.0	-13.5	Vert Vert
50M 35.2	+0.0 +0.0 -27.4 +0.0 +0.0 -27.1 +0.0 +0.0	+0.0 +19.7 +0.0 +22.8	+0.0 +0.5 +0.0 +0.6	+0.0 +4.5 +0.0 +5.6	+0.0	32.5	46.0	-13.5	Vert
[2] 3 [3] 4 [4] 4	q Rdng  (z dBμV  30M 49.8  80M 49.6  50M 48.5  50M 49.5  30M 40.4  50M 36.6  10M 38.3	Rdng   T1   T5   T9     Iz   dBμV   dB     30M   49.8   -27.7   +0.0     +0.0   +0.0     50M   48.5   -27.7   +0.0     +0.0   +0.0     50M   49.5   -27.7     +0.0   +0.0     30M   40.4   -27.6     +0.0   +0.0     50M   36.6   -27.1     +0.0   +0.0     10M   38.3   -27.4     +0.0   +0.0     50M   45.3   -27.7     +0.0   +0.0     70M   37.6   +0.0     -37.7	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	q         Rdng         T1         T2         T3         T4         Dist         Corr         Spec         Margin           Iz         dBμV         dB         dB         dB         dB         dB         Table         dBμV/m         dBμV/m         dBμV/m         dB           30M         49.8         -27.7         +10.8         +0.0         +0.0         +0.0         +0.0         35.3         43.5         -8.2           80M         49.6         -27.7         +10.1         +0.2         +2.3         +0.0         34.5         43.5         -9.0           50M         48.5         -27.7         +11.3         +0.2         +2.1         +0.0         34.4         43.5         -9.0           50M         49.5         -27.7         +11.3         +0.2         +2.1         +0.0         34.4         43.5         -9.1           50M         49.5         -27.7         +9.6         +0.3         +2.4         +0.0         34.1         43.5         -9.4           +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0         +0.0					

Page 122 of 170 Report No: FC07-071A



<ul><li>Vert</li><li>Vert</li><li>Vert</li><li>Horiz</li></ul>	-15.1 -15.2 -15.5	46.0	30.9	+0.0	+5.6 +0.0	+0.6 +0.0	+22.4 +0.0	-27.1 +0.0	29.4	816.100M	14
<ul><li>Vert</li><li>Vert</li><li>Horiz</li></ul>			30.8	+0.0		+0.0	+0.0				
<ul><li>Vert</li><li>Vert</li><li>Horiz</li></ul>			30.8	+0.0	. 7.0						
<ul><li>Vert</li><li>Vert</li><li>Horiz</li></ul>			30.8	+0.0		10.4	1222	+0.0	20 5	900 040M	1.5
7 Vert  7 Horiz	-15.5				+5.9	$+0.4 \\ +0.0$	+23.2	-27.2 +0.0	28.5	899.960M	15
7 Vert  7 Horiz	-15.5				+0.0	+0.0	+0.0	+0.0 +0.0			
7 Vert  7 Horiz	13.5	46.0	30.5	+0.0	+3.2	+0.2	+13.2	-27.6	41.5	300.000M	16
7 Horiz		10.0	50.5	10.0	+0.0	+0.0	+0.0	+0.0	.1.5	200.000111	10
7 Horiz								+0.0			
	-15.7	43.5	27.8	+0.0	+2.6	+0.2	+9.3	-27.6	43.3	206.280M	17
					+0.0	+0.0	+0.0	+0.0			
								+0.0			
9 Horiz	-15.7	46.0	30.3	+0.0	+2.8	+0.3	+11.8	-27.7	43.1	240.000M	18
9 Horiz					+0.0	+0.0	+0.0	+0.0			
9 Horiz	150	46.0	20.1	.0.0	. 2 2	.0.2	. 10.0	+0.0	41.1	200 0003 5	10
	-15.9	46.0	30.1	+0.0	+3.2	+0.2	+13.2	-27.6	41.1	300.000M	19
					+0.0	+0.0	+0.0	$+0.0 \\ +0.0$			
4 Vert	-16.4	46.0	29.6	+0.0	+4.2	+0.3	+18.3	-27.6	34.4	506.060M	20
+ VEIL	-10.4	40.0	29.0	+0.0					34.4	300.000WI	20
					10.0	10.0	10.0				
5 Vert	-16.5	46.0	29.5	+0.0	+4.5	+0.5	+19.7		32.2	556.900M	21
					+0.0	+0.0	+0.0	+0.0			
								+0.0			
8 Vert	-16.8	46.0	29.2	+0.0	+4.4	+0.5	+19.3	-27.4	32.4	538.130M	22
					+0.0	+0.0	+0.0	+0.0			
8 Vert	-16.8	46.0	29.2	+0.0					32.7	532.610M	23
					+0.0	+0.0	+0.0				
1 Horiz	17.1	12.5	26.4	+0.0	+2.4	+0.2	+0.2		42.2	177.050M	24
1 ПОПЕ	-1/.1	43.3	20.4	+0.0					42.2	177.030WI	24
					10.0	10.0	10.0				
7 Horiz	-17.7	46.0	28.3	+0.0	+4.2	+0.3	+18.3		33.1	506.050M	25
, 110112	2,,,		20.0	. 0.0					00.1	200.0201.1	
								+0.0			
2 Vert	-19.2	46.0	26.8	+0.0	+3.7	+0.4	+15.9	-27.8	34.6	401.920M	26
					+0.0	+0.0	+0.0	+0.0			
								+0.0			
3 Vert	-19.3	46.0	26.7	+0.0					34.1	412.470M	27
					+0.0	+0.0	+0.0				
A \$7	10.4	46.0	26.6	.00	. 4.1	.0.4	. 17. 4		22.2	465 (00 <b>)</b> #	20
4 Vert	-19.4	46.0	26.6	+0.0					32.3	465.680M	28
					+0.0	+0.0	+0.0				
	-194	46.0	26.6	+0.0	+4 4	+0.5	+19 3		29.8	538 280M	29
4 Horiz	17.4	70.0	20.0	10.0					27.0	550.200IVI	<i>∆ y</i>
4 Horiz						. 0.0	. 0.0				
4 Horiz			26.6	+0.0	+4.3	+0.4	+18.7	-27.5	30.7	517.020M	30
	-19.4	46.0	20.0	10.0							-
	-19.4	46.0	20.0	10.0	+0.0	+0.0	+0.0	+0.0			
5 8 1 7 2 3	-16.5 -16.8 -16.8 -17.1	46.0 46.0 46.0 43.5 46.0 46.0 46.0	29.5 29.2 29.2 26.4 28.3 26.8 26.7	+0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0	+0.0 +4.5 +0.0 +4.4 +0.0 +4.4 +0.0 +2.4 +0.0 +3.7 +0.0 +3.8 +0.0 +4.1 +0.0 +4.4 +0.0	+0.0 +0.5 +0.0 +0.5 +0.0 +0.4 +0.0 +0.4 +0.0 +0.4 +0.0 +0.4 +0.0 +0.5 +0.0	+0.0 +19.7 +0.0 +19.3 +0.0 +19.2 +0.0 +18.3 +0.0 +15.9 +0.0 +16.1 +0.0 +17.4 +0.0 +19.3 +0.0	+0.0 +0.0 -27.4 +0.0 -27.4 +0.0 -27.5 +0.0 -27.7 +0.0 -27.6 +0.0 -27.8 +0.0 -27.8 +0.0 -27.7 +0.0 -27.7 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.8 +0.0 +0.0 -27.7 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.8 +0.0 +0.0 -27.7 +0.0 +0.0 -27.8 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.7 +0.0 +0.0 -27.6 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0	32.2 32.4 32.7 42.2 33.1 34.6 34.1 32.3	556.900M 538.130M 532.610M 177.050M 506.050M	21 22 23 24 25 26 27 28

Page 123 of 170 Report No: FC07-071A



31 256.010M 37.3 -27.7 +12.6 +0.3 +2.9 +0.0 25.4 46.0 -20.6 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  32 429.120M 32.0 -27.7 +16.6 +0.4 +3.9 +0.0 25.2 46.0 -20.8 Vert +0.0 +0.0 +0.0 +0.0 +0.0  33 274.990M 36.4 -27.7 +12.9 +0.3 +3.0 +0.0 24.9 46.0 -21.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0  34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.
+0.0  32 429.120M 32.0 -27.7 +16.6 +0.4 +3.9 +0.0 25.2 46.0 -20.8 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  33 274.990M 36.4 -27.7 +12.9 +0.3 +3.0 +0.0 24.9 46.0 -21.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0
32 429.120M 32.0 -27.7 +16.6 +0.4 +3.9 +0.0 25.2 46.0 -20.8 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0    33 274.990M 36.4 -27.7 +12.9 +0.3 +3.0 +0.0 24.9 46.0 -21.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0    34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.
+0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0   +0.0   33 274.990M   36.4   -27.7   +12.9   +0.3   +3.0   +0.0   24.9   46.0   -21.1   Vert   +0.0   +0.0   +0.0   +0.0   +0.0    +0.0     34 444.120M   29.9   -27.6   +17.0   +0.4   +4.0   +0.0   23.7   46.0   -22.3   Vert   +0.0   +0.0   +0.0   +0.0   +0.0   +0.0     35 329.000M   33.4   -27.6   +14.0   +0.3   +3.4   +0.0   23.5   46.0   -22.5   Vert   +0.0   +0.0   +0.0   +0.0   +0.0   +0.0   +0.0   +0.0     35 329.000M   33.4   -27.6   -14.0   +0.3   +3.4   +0.0  23.5   46.0   -22.5   Vert   +0.0  +0.0  +0.0  +0.0   +0.0
+0.0  33 274.990M 36.4 -27.7 +12.9 +0.3 +3.0 +0.0 24.9 46.0 -21.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0
33 274.990M 36.4 -27.7 +12.9 +0.3 +3.0 +0.0 24.9 46.0 -21.1 Vert +0.0 +0.0 +0.0 +0.0 +0.0  34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0  35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0
+0.0 +0.0 +0.0 +0.0 +0.0 34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0  35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0
+0.0  34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0 +0.0  35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0
34 444.120M 29.9 -27.6 +17.0 +0.4 +4.0 +0.0 23.7 46.0 -22.3 Vert +0.0 +0.0 +0.0 +0.0 +0.0  35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0
+0.0 +0.0 +0.0 +0.0 +0.0 35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0
+0.0 35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0
35 329.000M 33.4 -27.6 +14.0 +0.3 +3.4 +0.0 23.5 46.0 -22.5 Vert +0.0 +0.0 +0.0 +0.0 +0.0 +0.0
+0.0 +0.0 +0.0 +0.0 +0.0
+0.0
36 249.960M 35.2 -27.7 +12.5 +0.3 +2.9 +0.0 23.2 46.0 -22.8 Vert
+0.0 +0.0 +0.0 +0.0
+0.0
37 4882.500M 27.4 +0.0 +0.0 +0.0 +0.0 +0.0 30.7 54.0 -23.3 Horiz
Ave $-37.7 +5.4 +33.3 +0.3$
+2.0
^ 4882.500M 39.5 +0.0 +0.0 +0.0 +0.0 +0.0 42.8 54.0 -11.2 Horiz
-37.7 +5.4 +33.3 +0.3
+2.0
39 265.440M 32.5 -27.7 +12.7 +0.3 +3.0 +0.0 20.8 46.0 -25.2 Vert
+0.0 +0.0 +0.0 +0.0
+0.0



Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer: Synapse Product Development, LLC

Specification: FCC 15.247 (d) (FCC 15.209)

 Work Order #:
 86173
 Date:
 8/29/2007

 Test Type:
 Radiated Scan
 Time:
 16:03:06

Equipment: WiFi and Bluetooth Enabled Media Sequence#: 9

Player

Manufacturer: Haier America LLC Tested By: E. Wong

Model: MW101 S/N: NA

### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
Bilog Antenna	2451	02/02/2006	02/02/2008	01995
Pre amp to SA Cable	Cable #10	05/16/2007	05/16/2009	P05050
Cable	Cable15	01/05/2007	01/05/2009	P05198
Pre Amp	1937A02548	06/01/2006	06/01/2008	00309
Horn Antenna	6246	06/29/2006	06/29/2008	00849
Microwave Pre-amp	3123A00281	07/19/2006	07/19/2008	00786
Heliax Antenna Cable	P5565	09/18/2006	09/18/2008	P05565
18-26GHz Horn	3643A00027	11/27/2006	11/27/2008	02112
Loop Antenna	2014	06/14/2006	06/14/2008	00314
3.0 GHz HPF	1	03/08/2006	03/08/2008	02744
24" SMA Cable	1-26GHz_white	01/11/2007	01/11/2009	P05183

### Equipment Under Test (\* = EUT):

Equipment church rest (	201).		
Function	Manufacturer	Model #	S/N
WiFi and Bluetooth	Haier America LLC	MW101	NA
Enabled Media Player*			
AC Power Supply	Haier America LLC	LSD-D03	NA

### Support Devices:

. 11			
Function	Manufacturer	Model #	S/N

### Test Conditions / Notes:

The EUT is placed on the wooden table with 10 cm of Styrofoam material. A set of earphones is connected to the Audio port. Docking port is connected to a section of unterminated cable. USB port is connected to an AC power supply. The EUT is operating on Max power. Mode: Transmit. Digital power setting code = 63. Modulation: Bluetooth. Frequency: 2480MHz. Frequency range of measurement = 9 kHz - 25 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 25,000 MHz RBW=1 MHz, VBW=1 MHz. The emission profile of all three orthogonal orientations was investigated. Worst case is EUT placed up right. 23°C, 49% relative humidity. No emissions beyond 1 GHz were detected, noise floor level recorded.

Page 125 of 170 Report No: FC07-071A



T2=Bilog AN01995 020208 Chase T4=Cable #15, Site A, 010509 T6=54' Heliax Cable 091808 P05565 T8=Filter 3GHz HPF AN02744

	rement Data:		eading lis		_	Test Distance: 3 Meters					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5 T9	T6	T7	Т8					
	MHz	dΒμV	dB	dB	dB	dB	Table	dBμV/m	dBµV/m	dB	Ant
1	141.570M	51.6	-27.7	+11.3	+0.2	+2.1	+0.0	37.5	43.5	-6.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
2	759.660M	35.7	-27.0	+22.1	+0.5	+5.3	+0.0	36.6	46.0	-9.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	130.920M	47.3	-27.6	+11.4	+0.3	+2.1	+0.0	33.5	43.5	-10.0	Vert
			+0.0	+0.0	+0.0	+0.0					
4	152.210M	47.3	+0.0	+10.8	+0.2	+2.2	+0.0	32.8	43.5	-10.7	Hori
4	132.210W	47.3	+0.0	+10.8	+0.2	+2.2	+0.0	32.8	43.3	-10.7	поп
			+0.0	+0.0	+0.0	+0.0					
5	161.180M	47.2	-27.7	+10.1	+0.2	+2.3	+0.0	32.1	43.5	-11.4	Hori
3	101.10011	77.2	+0.0	+0.0	+0.0	+0.0	10.0	32.1	43.3	11.4	11011
			+0.0	. 0.0	. 0.0	. 0.0					
6	329.170M	43.7	-27.6	+14.0	+0.3	+3.4	+0.0	33.8	46.0	-12.2	Hori
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
7	206.440M	46.8	-27.6	+9.3	+0.2	+2.6	+0.0	31.3	43.5	-12.2	Hori
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
8	836.640M	31.7	-27.1	+22.9	+0.6	+5.6	+0.0	33.7	46.0	-12.3	Ver
			+0.0	+0.0	+0.0	+0.0					
-	120 0001 5	44.2	+0.0	11.4	0.2	2.1	0.0	20.5	40.5	12.0	TT .
9	130.880M	44.3	-27.6	+11.4	+0.3	+2.1	+0.0	30.5	43.5	-13.0	Hori
			+0.0 +0.0	+0.0	+0.0	+0.0					
10	4960.530M	37.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.8	54.0	-13.2	Hori
10	4900.330W	31.3	-37.7	+5.4	+33.4	+0.3	+0.0	40.0	34.0	-13.2	11011
			+2.1	13.4	133.4	10.5					
11	174.120M	45.9	-27.7	+9.4	+0.3	+2.4	+0.0	30.3	43.5	-13.2	Hori
	171120111	15.5	+0.0	+0.0	+0.0	+0.0	10.0	50.5	13.5	13.2	11011
			+0.0								
12	4960.070M	37.2	+0.0	+0.0	+0.0	+0.0	+0.0	40.7	54.0	-13.3	Ver
			-37.7	+5.4	+33.4	+0.3					
			+2.1								
13	429.150M	39.3	-27.7	+16.6	+0.4	+3.9	+0.0	32.5	46.0	-13.5	Hori
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 126 of 170 Report No: FC07-071A



14	350.020M	41.4	-27.6	+14.5	+0.3	+3.5	+0.0	32.1	46.0	-13.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
15	207.840M	45 O	+0.0	+0.4	10.2	126	+0.0	20.6	12.5	12.0	Цота
15	207.84UM	45.0	-27.6 +0.0	+9.4 +0.0	$+0.2 \\ +0.0$	+2.6 +0.0	+0.0	29.6	43.5	-13.9	Horiz
			+0.0 +0.0	+0.0	+0.0	+0.0					
16	192.020M	45.6	-27.6	+8.9	+0.2	+2.5	+0.0	29.6	43.5	-13.9	Horiz
10	1,2.020111	15.0	+0.0	+0.0	+0.0	+0.0	. 0.0	->.0	13.5	13.7	110112
			+0.0								
17	448.050M	37.5	-27.6	+17.1	+0.4	+4.0	+0.0	31.4	46.0	-14.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
18	404.170M	39.1	-27.8	+15.9	+0.4	+3.7	+0.0	31.3	46.0	-14.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
4.0	220 0003 5	44.0	+0.0	11.0	0.2	2.0	0.0	21.2	46.0	110	TT '
19	239.980M	44.0	-27.7	+11.8	+0.3	+2.8	+0.0	31.2	46.0	-14.8	Horiz
			+0.0 +0.0	+0.0	+0.0	+0.0					
20	915.270M	28.1		+23.7	+0.5	+6.0	+0.0	31.1	46.0	-14.9	Vert
20	913.4/UNI	20.1	-27.2 +0.0	+23.7	+0.5	+0.0 +0.0	+0.0	31.1	40.0	-14.9	vert
			+0.0	+0.0	+0.0	+0.0					
21	517.080M	34.9	-27.5	+18.7	+0.4	+4.3	+0.0	30.8	46.0	-15.2	Vert
	3		+0.0	+0.0	+0.0	+0.0			. 3.0	- <b></b> -	
			+0.0								
22	433.720M	37.5	-27.7	+16.7	+0.4	+3.9	+0.0	30.8	46.0	-15.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
23	506.410M	35.5	-27.6	+18.3	+0.3	+4.2	+0.0	30.7	46.0	-15.3	Vert
			+0.0	+0.0	+0.0	+0.0					
2.4	265 01034	40.2	+0.0	110.7	10.2	120	100	20.6	460	15 4	II'
	265.810M	42.3	-27.7	+12.7	+0.3	+3.0	+0.0	30.6	46.0	-15.4	Horiz
,	QP		+0.0 +0.0	+0.0	+0.0	+0.0					
٨	265.810M	54.5	-27.7	+12.7	+0.3	+3.0	+0.0	42.8	46.0	-3.2	Horiz
	202.010141	5 1.5	+0.0	+0.0	+0.0	+0.0	, 0.0	.2.0	10.0	5.2	110112
			+0.0								
26	177.020M	43.2	-27.7	+9.2	+0.3	+2.4	+0.0	27.4	43.5	-16.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	399.990M	37.8	-27.8	+15.8	+0.4	+3.7	+0.0	29.9	46.0	-16.1	Vert
			+0.0	+0.0	+0.0	+0.0					
	207.272.5	40.0	+0.0	10.5	6.5		0.0	20.0	450	4	** .
28	297.370M	40.8	-27.6	+13.2	+0.2	+3.2	+0.0	29.8	46.0	-16.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
29	206.370M	42.4	+0.0	+9.3	+0.2	+2.6	+0.0	26.9	43.5	-16.6	Vert
29	200.3 /UNI	42.4	-27.6 +0.0	+9.3 +0.0	+0.2	+2.6 +0.0	+0.0	∠0.9	43.3	-10.0	vert
			+0.0	10.0	10.0	10.0					
30	141.560M	40.9	-27.7	+11.3	+0.2	+2.1	+0.0	26.8	43.5	-16.7	Vert
50	111.500141	10.7	+0.0	+0.0	+0.0	+0.0	10.0	20.0	13.3	10.7	, 011
			+0.0	. 0.0	. 3.0						

Page 127 of 170 Report No: FC07-071A



31	417.830M	36.3	-27.7	+16.3	+0.4	+3.8	+0.0	29.1	46.0	-16.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
32	538.070M	32.3	-27.4	+19.3	+0.5	+4.4	+0.0	29.1	46.0	-16.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
33	401.460M	36.5	-27.8	+15.8	+0.4	+3.7	+0.0	28.6	46.0	-17.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
34	465.650M	33.5	-27.6	+17.4	+0.4	+4.1	+0.0	27.8	46.0	-18.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
35	161.240M	39.1	-27.7	+10.1	+0.2	+2.3	+0.0	24.0	43.5	-19.5	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
36	401.730M	32.8	-27.8	+15.8	+0.4	+3.7	+0.0	24.9	46.0	-21.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
37	255.990M	36.7	-27.7	+12.6	+0.3	+2.9	+0.0	24.8	46.0	-21.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
38	412.720M	31.1	-27.7	+16.1	+0.4	+3.8	+0.0	23.7	46.0	-22.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								

Page 128 of 170 Report No: FC07-071A



# FCC Part 15.247(a)(1) Channel Frequency Separation

**Test Equipment** 

Equipment	Asset #	Manufacturer	Model	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	010307	010309
24" SMA Cable (White)	P05183	Pasterneck	35591-48	1-40GHz_white	011107	011109

**Test Conditions:** The EUT is placed on the test bench, USB port is connected to an AC power supply. The EUT is operating on Max power. RF emission profile evaluated at the internal antenna connector.

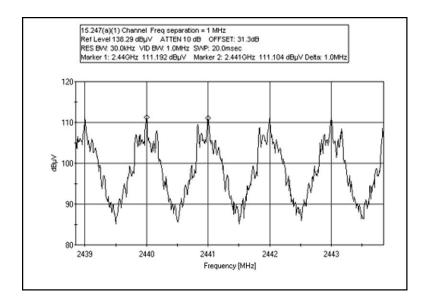
**Test Setup Photos** 



Page 129 of 170 Report No: FC07-071A



# **Test Plots**



Page 130 of 170 Report No: FC07-071A



# FCC Part 15.247(a)(1) Occupied Bandwidth

**Test Equipment** 

Equipment	Asset #	Manufacturer	Model	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	010307	010309
24" SMA Cable (White)	P05183	Pasterneck	35591-48	1-40GHz_white	011107	011109

**Test Conditions:** The EUT is placed on the test bench, USB port is connected to an AC power supply. The EUT is operating on Max power. RF emission profile evaluated at the internal antenna connector.

**Test Setup Photos** 

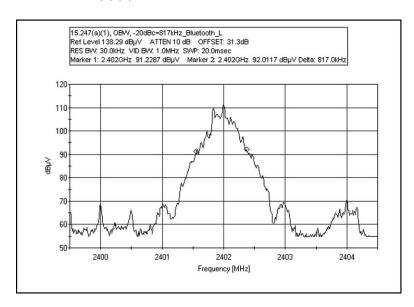


Page 131 of 170 Report No: FC07-071A

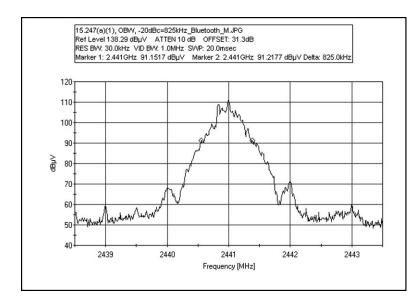


## **Test Plots**

## FCC 15.247(a)(1) OCCUPIED BANDWIDTH - BLUETOOTH LOW



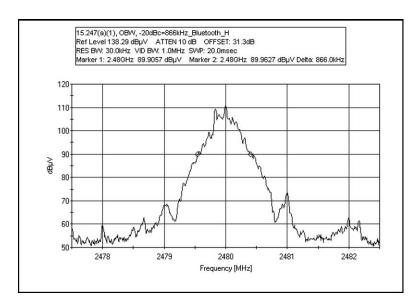
## FCC 15.247(a)(1) OCCUPIED BANDWIDTH - BLUETOOTH MID



Page 132 of 170 Report No: FC07-071A



# FCC 15.247(a)(1) OCCUPIED BANDWIDTH - BLUETOOTH HIGH



Page 133 of 170 Report No: FC07-071A



# FCC Part 15.247(a)(1) 20dB Bandwidth

**Test Equipment** 

Equipment	Asset #	Manufacturer	Model	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	010307	010309
24" SMA Cable (White)	P05183	Pasterneck	35591-48	1-40GHz_white	011107	011109

**Test Conditions:** The EUT is placed on the test bench, USB port is connected to an AC power supply. The EUT is operating on Max power. RF emission profile evaluated at the internal antenna connector.

**Test Setup Photos** 

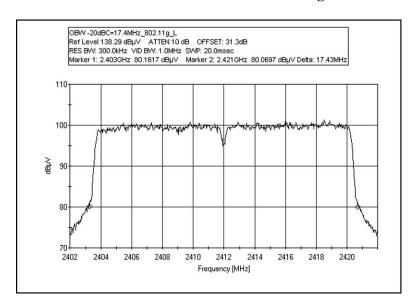


Page 134 of 170 Report No: FC07-071A

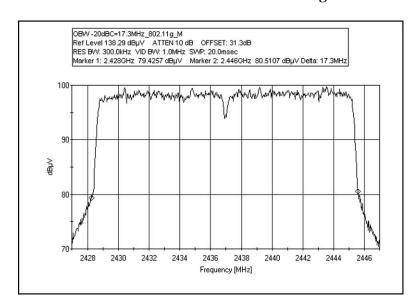


## **Test Plots**

# OCCUPIED BANDWIDTH -20dBc - 802.11g LOW - 17.4 MHz



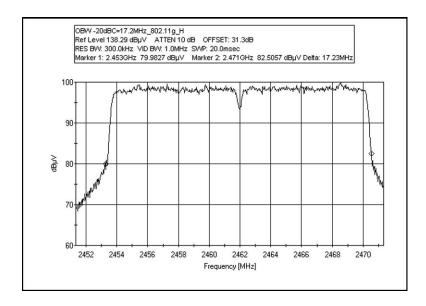
# OCCUPIED BANDWIDTH -20dBc - 802.11g MIDDLE - 17.3 MHz



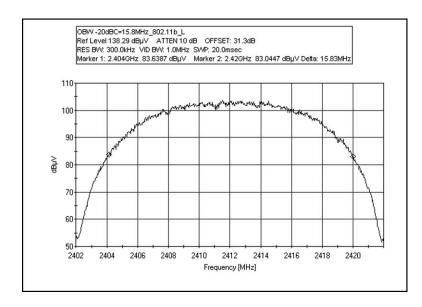
Page 135 of 170 Report No: FC07-071A



# OCCUPIED BANDWIDTH -20dBc - 802.11g HIGH - 17.2 MHz



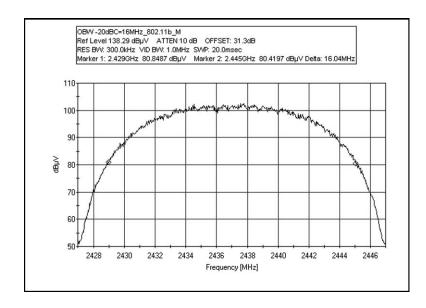
## OCCUPIED BANDWIDTH -20dBc - 802.11b LOW - 15.8 MHz



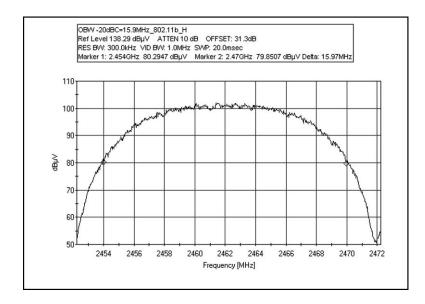
Page 136 of 170 Report No: FC07-071A



## OCCUPIED BANDWIDTH -20dBc - 802.11b MIDDLE - 16 MHz



## OCCUPIED BANDWIDTH -20dBc - 802.11b HIGH - 15.9 MHz



Page 137 of 170 Report No: FC07-071A



## FCC Part 15.247(a)(1)(iii) Average Time of Occupancy

**Test Equipment** 

Equipment	Asset #	Manufacturer	Model	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	010307	010309
24" SMA Cable (White)	P05183	Pasterneck	35591-48	1-40GHz_white	011107	011109

**Test Conditions:** The EUT is placed on the test bench, USB port is connected to an AC power supply. The EUT is operating on Max power. RF emission profile evaluated at the internal antenna connector.

**Test Setup Photos** 



15.247 (a)(1)(iii) Time of Occupancy FHSS

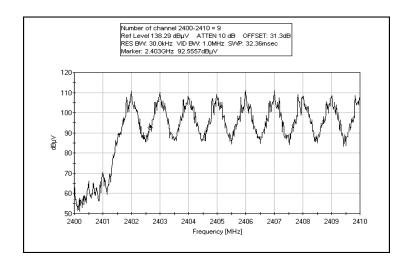
§15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

(iii) Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

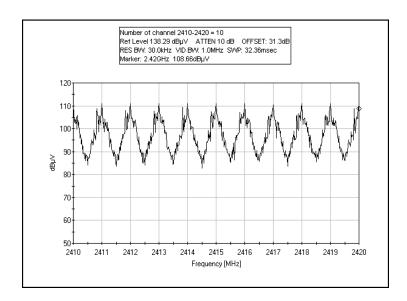
Page 138 of 170 Report No: FC07-071A



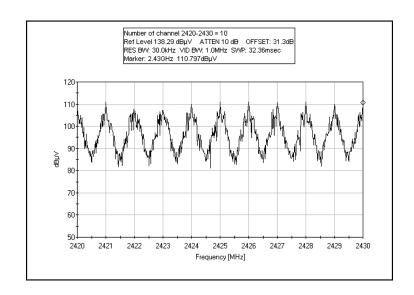
# **Test Plots**

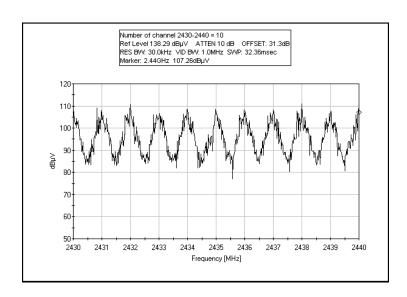


## 9channels

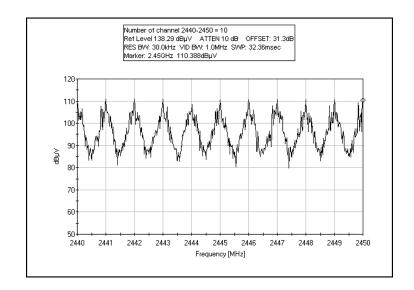


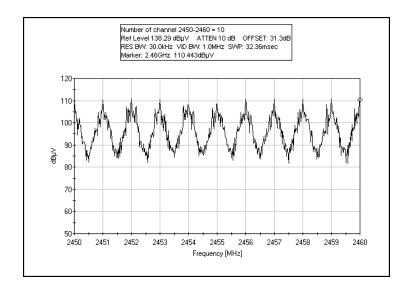




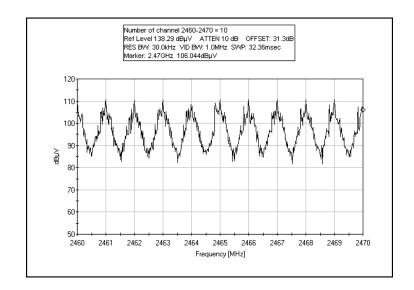


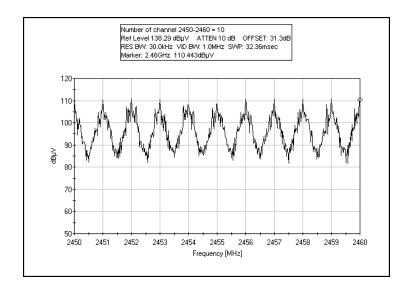




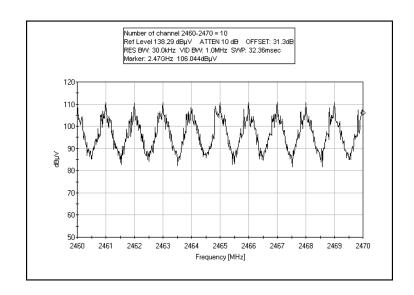


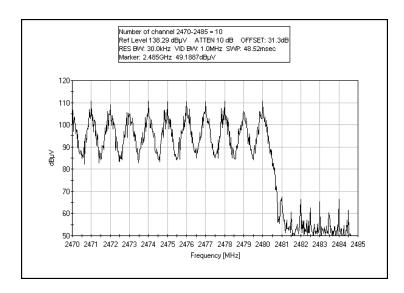












Total of 79 Channels from 2402-2480 MHz.



