

MOTOROLA, INC. BCS MEASUREMENT/TECHNICAL REPORT

FCC Part 15.247 and IC RSS-210 Report

Title:

For the

RCKT Wireless Audio Car Adapter, Model
WACA-d

Date: June 29, 2006

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AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

CERTIFICATE NO. 1250-01

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SUMMARY OF MEASUREMENT REPORT

PURPOSE

The purpose of testing was to verify compliance of the sample Model WACA-d to the FCC Part 15.247 and Industry Canada RSS-210 requirements.

ADMINISTRATIVE INFORMATION

EUT	RCKT Wireless Audio Car Adapter
	Model: WACA-d
	Prototype sample
MANUFACTURER	Motorola Connected Home Solutions
	101 Tournament Drive
	Horsham, Pennsylvania 19044
TEST LOCATION	Motorola Connected Home Solutions
	101 Tournament Drive
	Horsham, Pennsylvania 19044
TEST DATES	June 28-30, 2006
CONTRACTED BY	Howard Larson

RESULTS

The results contained within this report relate only to the sample provided. This report shall not be reproduced or modified without written approval by a member of Motorola's Connected Home Solutions Sector Compliance Engineering.

The RCKT Wireless Audio Car Adapter, Model WACA-d was tested to the emissions requirements of the FCC Title 47 Code of Federal Regulations Part 15, Radio Frequency Devices, Subpart 15.247 and the Industry Canada, RSS-210, Low-power Licence exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, using the measurement methods of ANSI C63.4 –2001. The following tests were performed yielding the indicated results:

<u>Section</u>	<u>Title</u>	<u>Result</u>
15.207	Conducted Limits (150 KHz to 30 MHz)	N/A
15.209	Radiated Emissions Limits (30 MHz to 24.8 GHz)	PASSED
15.247(b)	Maximum Peak Power Output	PASSED
15.247(d)	Antenna Conducted Spurious Emissions	PASSED
15.247(d)	Band Edge Measurement	PASSED
15.247(a)(1)	Carrier Frequency Separation	PASSED
15.247(a)(1)(ii)	20dB Bandwidth	PASSED
15.247(a)(1)(iii)	Hopping Characteristics	PASSED
15.247(a)(1)(iii)	Average Time of Occupancy	PASSED

GENERAL INFORMATION

EQUIPMENT UNDER TEST (EUT) MODES

The RCKT Wireless Audio Car Adapter, Model WACA-d is a FHSS Bluetooth wireless device. The device operates from 2402 to 2480MHz with 1 MHz separation between channels. Tests were performed in three orthogonal planes at 2402MHz, 2440MHz, and 2480MHz. Test software was used to continuously transmit during test.

TESTED SYSTEM DETAILS

The following is a list of equipment used to exercise the test sample during emission testing:

TABLE 1
EUT AND EXERCISER EQUIPMENT LIST FOR EMISSION TESTING

DESCRIPTION	MANUFACTURER	MODEL #	SERIAL #	CABLES/DESCRIPTION
Power Supply	Tektronix	PS282	TW50198	Supplied by manufacturer
Radio	Alpine	CDA-9851	N/A	Supplied by manufacturer
Computer	Dell	Latitude 600	CN-06P823-48155-25T-2315	RG45

RELATED SUBMITTAL(S) / GRANT(S)

This submission is a permissive change to American TCB ID ATCB003200. FCC ID# ACQWACA and IC: 3231A-WACA.

APPLICABLE STANDARD

The EUT was tested to the emissions requirements of the FCC Title 47 Code of Federal Regulations Part 15, Radio Frequency Devices, Subpart C Intentional Radiators, Section 15.247 and the Industry Canada, RSS-210, Low-power Licence exempt Radiocommunication Devices using the measurement methods of ANSI C63.4 –2001.

Radiated testing was performed at an antenna distance of 3 meters in frequency range of 30 MHz to 24.8 GHz.

LOCATION OF TEST SITE

The open area test site used to collect the radiated data is located Motorola, 101 Tournament Drive, Horsham, Pennsylvania. This site meets the requirements in Section 5 of ANSI C63.4-2001. Motorola Inc's accreditation is shown in the Laboratory Accreditation section.

EXERCISE SOFTWARE

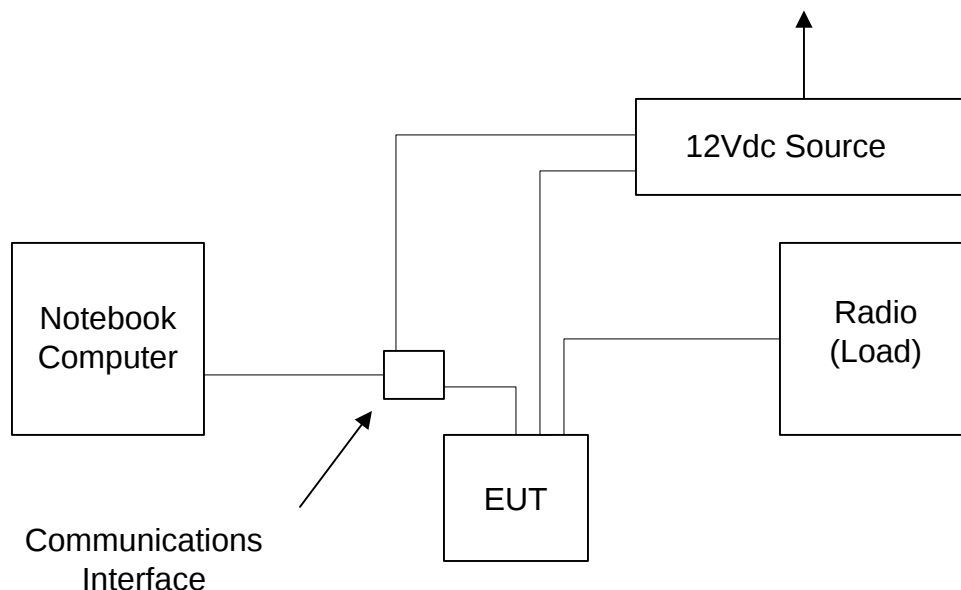
The software used to control the transmitter was CSR BlueTest3 version 1.0.1879.31349.

EUT MODIFICATIONS

No modification or engineering changes were require to achieve compliance.

TEST SETUP CONFIGURATION

FIGURE 1
CONFIGURATION OF SYSTEM UNDER TEST



CONDUCTED EMISSIONS FCC 15.207; RSS-210

SECTION 9

MEASUREMENT PROCEDURES

Power to the EUT is provided by 12Vdc from a car battery. Therefore this test is not applicable.

RADIATED EMISSIONS FCC 15.209; RSS-210

SECTION 6.2.1.

RADIATED TEST SET-UP

The Hewlett Packard, EMI Receiver was used as a measuring meter for the frequency range 30 to 24800 MHz. The EMI receiver was used in the quasi-peak detect mode at frequencies below 1000 MHz and peak and average detect mode at frequencies above 1000 MHz.

A bi-log antenna was used in frequency range 30 to 1000 MHz and horns were used above 1000 MHz as the receiving transducer. The EUT was placed on a non-conductive table 80 cm above the ground plane, which stands on the turntable. The turntable is remote controlled to permit EUT rotation over 360 degrees to determine the highest emission levels. The antenna mast allowed height variation of the antenna to maximize the emissions from 1 to 4 meters in height.

PRELIMINARY RADIATED TEST

Preliminary testing was done in a GTEM to identify source of the emission frequency and determine the predominant frequencies from the system and to investigate the EUT configuration that produced the maximum levels of emissions.

FINAL RADIATED TEST

The Motorola Compliance Engineering open field test site, located in Horsham, PA was used for radiated emission testing. This test site is setup according to the ANSI C63.4-2001 and the site attenuation data was filed with the FCC.

The bi-log and horn antennas were mounted on the antenna mast, which has a motor allowing antenna height control and polarization. The antenna height was then varied from 1 to 4 meter while the EUT is rotating to find the highest level of radiated emission at each frequency found during the preliminary test described above by utilizing the automated measurement system. The EUT was tested at a 3-meter distance.

If and when any frequency was found to be within 10 dB of the limits level, this frequency was recorded as a significant frequency. All significant frequencies were further examined carefully by operating the EMI receiver manually and the manual scan techniques at a reduced frequency span on the EMI receiver, while optimizing the cable and peripheral positions to maximize the emissions, and changing the antenna height and EUT orientation.

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal is detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide emission frequency from the EUT.

TABLE 2
RADIATED EMISSIONS TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Preamp	Hewlett Packard	83051A	3332A00319	9/01/05	1 year
Preamp	Hewlett Packard	83017A	3123A00360	9/01/05	1 year
EMI Receiver	Rohde & Schwarz	ESIB-26	836119/006	01/31/05	2 year
Horn Antenna	EMCO	3115	9705-5225	9/01/05	1 year
Horn Antenna	Hewlett Packard	84125-80008	514029	9/01/05	1 year
Bicon-Log Periodic Antenna	ETS Lindgren	3141	1198	7/12/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 3
RADIATED EMISSIONS TEST INFORMATION

EMI STANDARD	FCC Part 15.247 RSS-210	FIM	HP 8593EM Rohde & Schwarz
DATE	6/29/06	FIM BW	120 kHz
EUT	WACA-d	DETECTOR	QP, Pk, Avg
PERFORMED BY	A. Fanella	CLIMATE	Temp. 26.5° C / RH 42%
REQUESTED BY	H. Larson	S/N	Prototype
MEASUREMENT DIST.	3 meter	TEST MODE	2402MHz, 2440MHz, 2480MHz

TABLE 4
TEST RESULTS RADIATED EMISSIONS DIGITAL/RECEIVER

FREQ. MHZ	LIMIT dBμ V/M	FIELD STRENGTH dBμV/M (PEAKS)	FIELD STRENGTH dBμV/M (QP)	ANT. HEIGHT T (CM)	AZIM. DEG.	ANTENNA POLARITY	MARGIN dB	COMMENT
1.33E+08	43.52	37.983	28.321	113	299	V	-15.199	PASS
1.75E+08	43.52	32.366	29.257	339	261	V	-14.263	PASS
1.86E+08	43.52	34.437	27.4	101	261	V	-16.12	PASS
2.67E+08	46.02	40.389	33.16	334	29	H	-12.86	PASS
3.68E+08	46.02	35.05	33.591	99	262	V	-12.429	PASS
4.00E+08	46.02	39.736	33.07	134	349	V	-12.95	PASS
4.32E+08	46.02	33.138	29.779	137	217	H	-16.241	PASS
5.00E+08	46.02	32.009	24.194	104	358	V	-21.826	PASS
6.32E+08	46.02	30.879	25.281	131	254	V	-20.739	PASS
6.62E+08	46.02	40.892	39.941	392	186	H	-6.079	PASS
7.95E+08	46.02	42.056	31.819	124	334	V	-14.201	PASS
9.33E+08	46.02	41.317	33.377	149	328	V	-12.643	PASS

TABLE 5
TEST RESULTS RADIATED EMISSIONS HARMONIC/ SPURIOUS 2402MHZ

Frequenc y	PK Reading	AVG reading	Amp Gain	AF	AVG Level	Limit	Margin
4804	64	55.1	63	34	26.1	54	-27.9
7206	55	45.8	60	37	22.8	54	-31.2
9608	50	40.9	59	38	19.9	54	-34.1
12010	48	40	61	39	18	54	-36
14412	48	40	60	41	21	54	-33

TABLE 6**TEST RESULTS RADIATED EMISSIONS HARMONIC/ SPURIOUS 2440MHz**

Frequency	PK Reading	AVG reading	Amp Gain	AF	AVG Level	Limit	Margin
4880	62	55	63	33	25	54	-29
7320	52	48	60	37	25	54	-29
9760	50	44	59	38	23	54	-31
12200	48	39	61	39	17	54	-37
14640	48	39	60	41	20	54	-34

TABLE 7**TEST RESULTS RADIATED EMISSIONS HARMONIC/ SPURIOUS 2480MHz**

Frequency	PK Reading	AVG reading	Amp Gain	AF	AVG Level	Limit	Margin
4960	63	56.8	63	34	27.8	54	-26.2
7440	52	44.2	60	37	21.2	54	-32.8
9920	49	40.7	59	39	20.7	54	-33.3
12400	49	39.8	61	39	17.8	54	-36.2
14880	49	39	60	40	19	54	-35

MAXIMUM PEAK OUTPUT POWER FCC 15.247(B)(1); RSS-210 SECTION 6.6.2(o)

The HP 8593EM Spectrum analyzer was used to measure the peak output power of the Equipment Under Test. Output power was measured at 2402MHz, 2440MHz, and 2480MHz and compared to FCC and RSS-210 limits.

TABLE 8
PEAK OUTPUT POWER TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 9
PEAK OUTPUT POWER TEST INFORMATION

DATE	6/28/06	FIM BW	1.0 MHz
EUT	WACA-d	DETECTOR	Pk
PERFORMED BY	A. Fanella	CLIMATE	Temp. 22.9° C / RH 37%
REQUESTED BY	H. Larson	S/N	Prototype

TABLE 10
PEAK OUTPUT POWER TEST RESULTS

FREQUENCY (MHz)	PEAK POWER CONDUCTED OUTPUT (dBm)	PEAK POWER CONDUCTED OUTPUT (WATTS)
2402	3.27	.0051
2440	2.80	.0044
2480	2.07	.0032

ANTENNA CONDUCTED SPURIOUS EMISSIONS FCC 15.247(d); RSS-210 SECTION 6.6.2(o)

An HP 8593EM spectrum analyzer was used to measure the spurious emissions from the antenna terminal of the Equipment Under Test. The spectrum analyzer bandwidth was set to 100 kHz while separate scans were performed with the test sample transmitting at 2402MHz, 2440MHz, and 2480MHz. After the fundamental signal was measured all harmonic and spurious signals were compared to a limit of 20dB below the fundamental. Measurements were performed up to the 10th harmonic of the fundamental.

TABLE 11
ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 12
ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST INFORMATION

DATE	6/28/06	FIM BW	100 kHz
EUT	WACA-d	DETECTOR	Pk
PERFORMED BY	A. Fanella	CLIMATE	Temp. 22.9° C / RH 37%
REQUESTED BY	H. Larson	S/N	Prototype

TABLE 13
ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST RESULTS 2402MHz

Frequency (MHz)	Level (dBuV)	Limit	Margin
2402	110	--	--
801	56	110	-54
4804	62	110	-48

TABLE 14
ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST RESULTS 2440MHz

Frequency (MHz)	Level (dBuV)	Limit	Margin
2440	109	--	--
813.8	57	109	-52
4880	63	109	-46

TABLE 15
ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST RESULTS 2480MHz

Frequency (MHz)	Level (dBuV)	Limit	Margin
2480	109	--	--
829	53	109	-56
4960	64	109	-45

BAND EDGE MEASUREMENT FCC 15.247(d); RSS-210 SECTION 6.6.2(o)

The output of the transmitter was connected to the spectrum analyzer through a 50 ohm coaxial cable. The spectrum analyzer was set to 100 kHz bandwidth in the peak detector mode. The span was set to show the peak of the transmitted frequency and the edge of the permitted band. A plot was taken of the result. The test was conducted at 2402MHz and 2480MHz.

TABLE 16
ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 17
ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST INFORMATION

DATE	6/28/06	FIM BW	100 kHz
EUT	WACA-d	DETECTOR	Pk
PERFORMED BY	A. Fanella	CLIMATE	Temp. 22.9° C / RH 37%
REQUESTED BY	H. Larson	S/N	Prototype

FIGURE 2
LOWER BAND EDGE WITH 2402MHz SIGNAL.

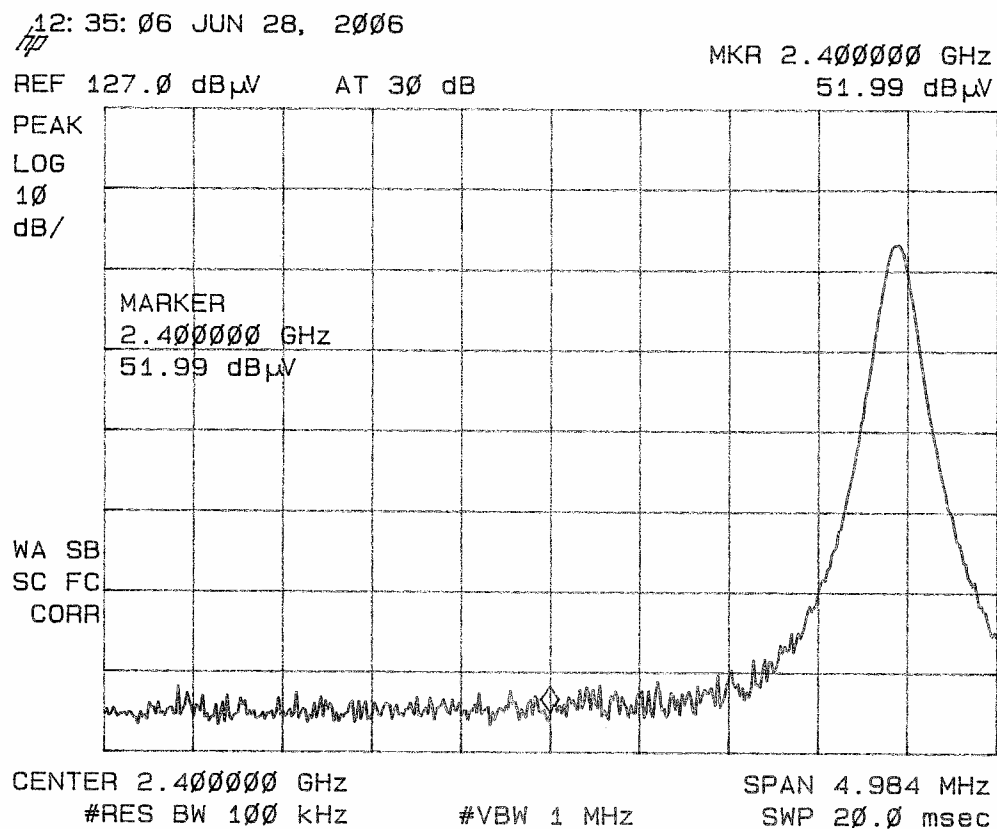
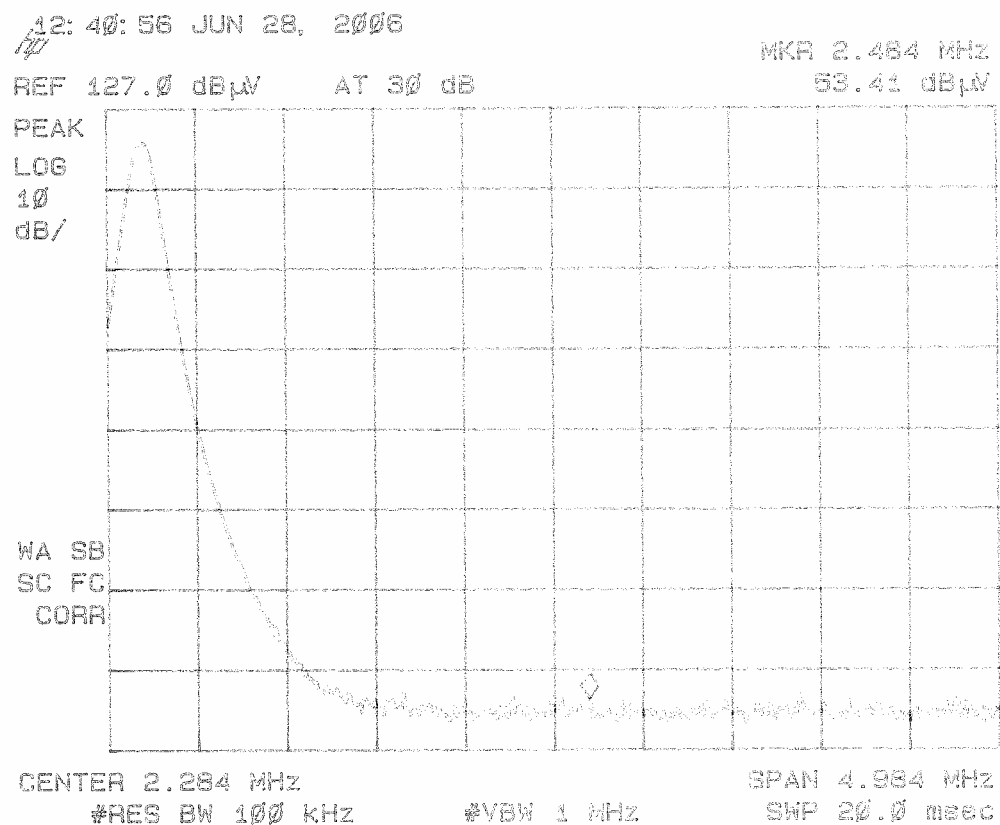


FIGURE 3
UPPER BAND EDGE WITH 2480MHz SIGNAL.



CARRIER FREQUENCY SEPARATION FCC 15.247(A)(1)

Frequency hopping systems shall have a hopping channel carrier separated by the greater of a minimum of 25 kHz or the 20dB bandwidth of the hopping channel. The separation was determined to be 1MHz.

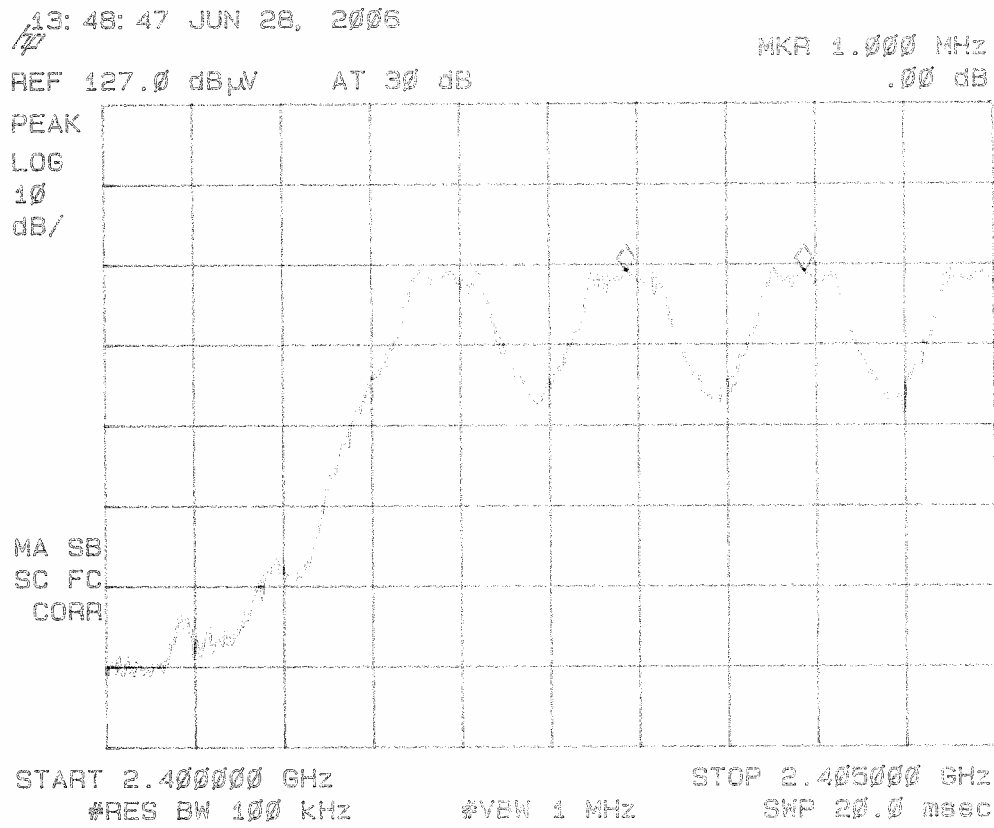
TABLE 18
CARRIER FREQUENCY SEPARATION TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 19
CARRIER FREQUENCY SEPARATION TEST INFORMATION

DATE	6/28/06	FIM BW	100 kHz
EUT	WACA-d	DETECTOR	Pk
PERFORMED BY	A. Fanella	CLIMATE	Temp. 22.9° C / RH 37%
REQUESTED BY	H. Larson	S/N	Prototype

CARRIER FREQUENCY SEPARATION TEST RESULTS



20dB BANDWIDTH FCC 15.247(A)(1)(II); RSS-210

SECTION 5.9.1

An HP 8593EM spectrum analyzer was used to measure the 20dB bandwidth from the antenna terminal of the Equipment Under Test. The spectrum analyzer bandwidth was set to 100 kHz. Measurements were performed with channels selected at 2402MHz, 2440MHz, and 2480MHz. Measurements were performed by placing the spectrum analyzer delta marker 20dB above and below the carrier peak.

TABLE 20
CARRIER FREQUENCY SEPARATION TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 21
CARRIER FREQUENCY SEPARATION TEST INFORMATION

DATE	6/28/06	FIM BW	100 kHz
EUT	WACA-d	DETECTOR	Pk
PERFORMED BY	A. Fanella	CLIMATE	Temp. 22.9° C / RH 37%
REQUESTED BY	H. Larson	S/N	Prototype

TABLE 22
CARRIER FREQUENCY SEPARATION TEST RESULTS

Frequency (MHz)	20dB Bandwidth (kHz)
2402	440
2440	430
2480	430

FIGURE 5
20dB BANDWIDTH 2402 MHz

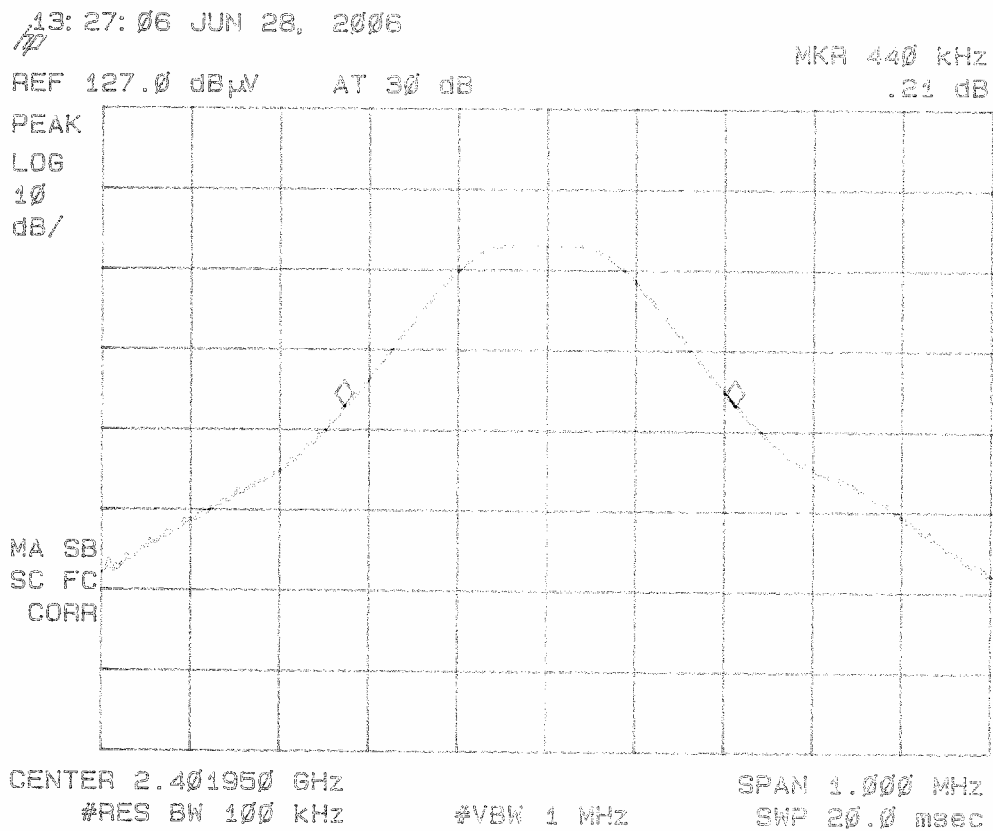


FIGURE 6
20dB BANDWIDTH 2440 MHz

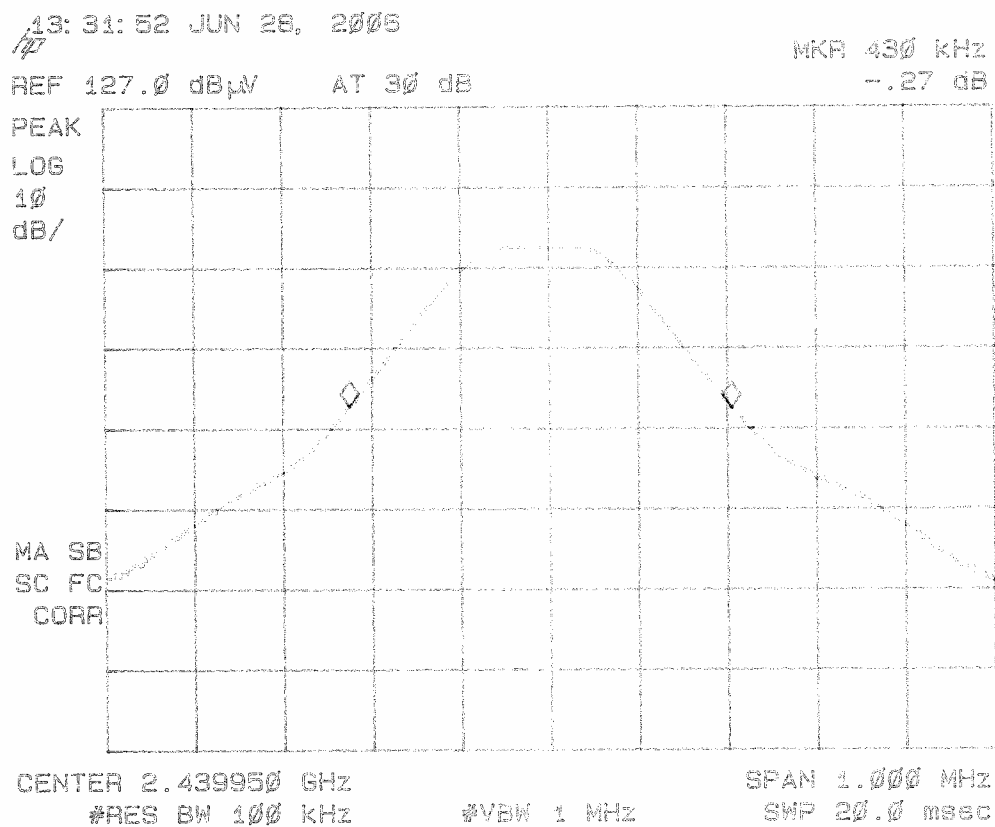
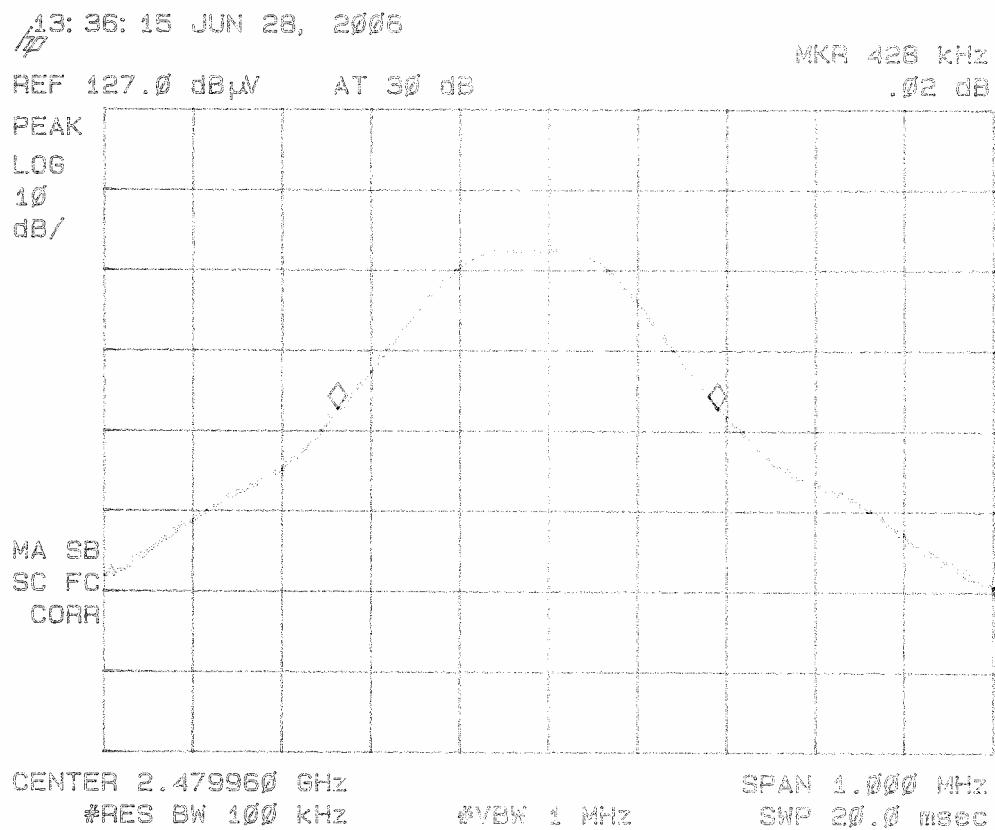


FIGURE 7
20dB BANDWIDTH 2480 MHz



HOPPING CHARACTERISTICS FCC

15.247(A)(1)(III); RSS-210 SECTION 6.2.2.2(o)

An HP 8593EM spectrum analyzer was used to measure the frequency hopping characteristics of the test sample. The resolution bandwidth was set to 100 kHz and the span was set wide enough to capture all the channels. Per the specification, at least 15 channels shall be employed with the average time of occupancy for any channel being not greater than 0.4 seconds and a period of 0.4 seconds.

79 channels were measured from 2400 MHz to 2483.5 MHz.

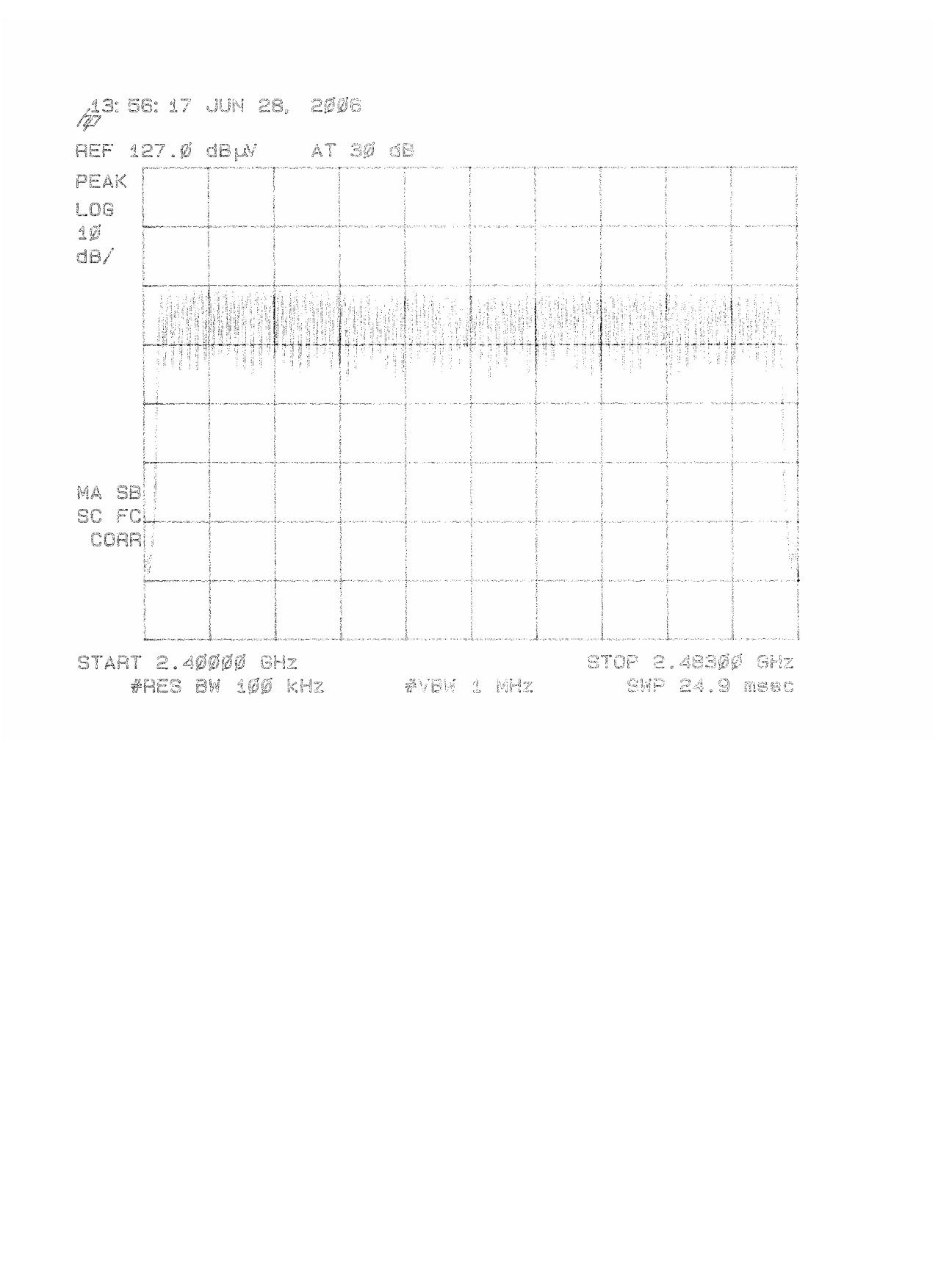
TABLE 23
HOPPING CHARACTERISTICS TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 24
HOPPING CHARACTERISTICS TEST INFORMATION

DATE	6/28/06	FIM BW	100 kHz
EUT	WACA-d	DETECTOR	Pk
PERFORMED BY	A. Fanella	CLIMATE	Temp. 22.9° C / RH 37%
REQUESTED BY	H. Larson	S/N	Prototype

FIGURE 8
HOPPING CHARACTERISTICS NUMBER OF CHANNELS



AVERAGE TIME OF OCCUPANCY FCC 15.247(A)(1)(III)

An HP 8593EM spectrum analyzer was used to measure the average time of occupancy characteristics of the test sample. The spectrum analyzer was set to a 20ms sweep and 0 span in order to capture the pulses and measure the dwell time. The sweep was then set to 5 seconds and the number of pulses were measured.

The measured number of pulses within 5 seconds were 50. Therefore in a period of 31.6 seconds there were 316 pulses. With the pulse period of 400 us, and 316 pulses, the average time of occupancy is 126.4 ms. Which is below the limit of 400ms.

TABLE 25
AVERAGE TIME OF OCCUPANCY TEST EQUIPMENT LIST

EQUIPMENT	MANUFACTURER	MODEL	SERIAL #	LAST CAL. DATE	CAL. INTERVAL
EMI Receiver	Hewlett Packard	8593EM	3710A00214	8/30/05	1 year
Temp./RH Meter	Control Company	06-662-4	240136936	5/04/06	1 year

TABLE 26
AVERAGE TIME OF OCCUPANCY TEST INFORMATION

DATE	6/28/06	FIM BW	varied
EUT	WACA-d	DETECTOR	Pk
PERFORMED BY	A. Fanella	CLIMATE	Temp. 22.9° C / RH 37%
REQUESTED BY	H. Larson	S/N	Prototype

FIGURE 9
TIME OF OCCUPANCY (DWELL TIME)

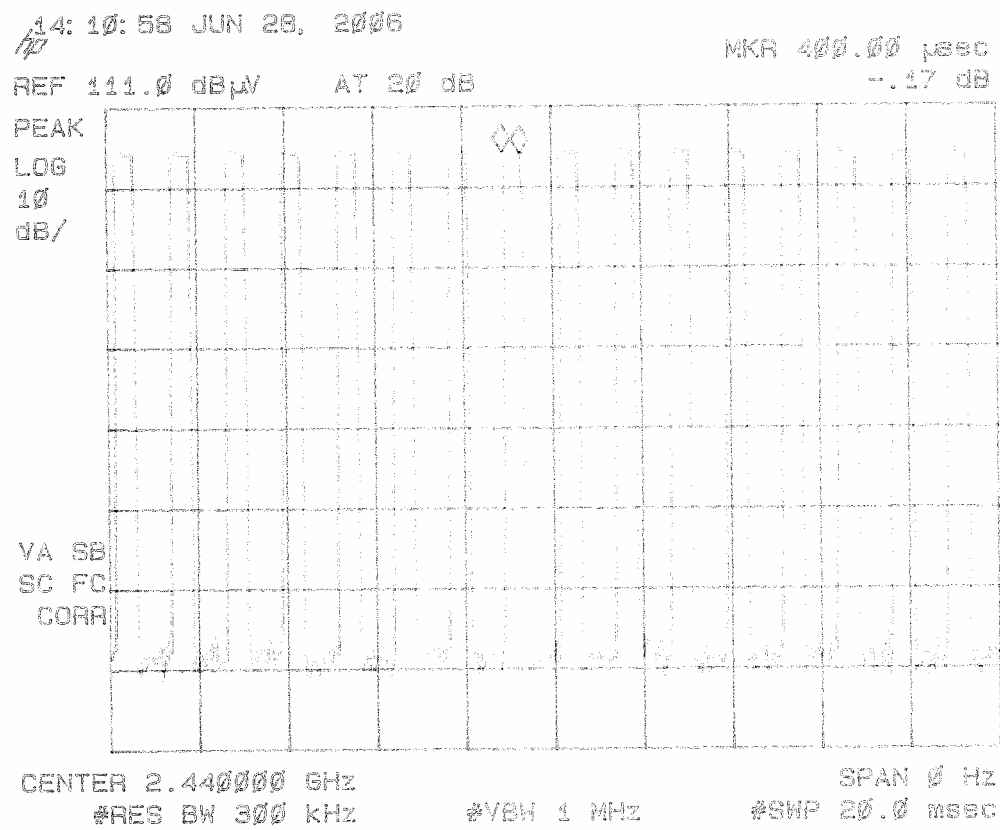
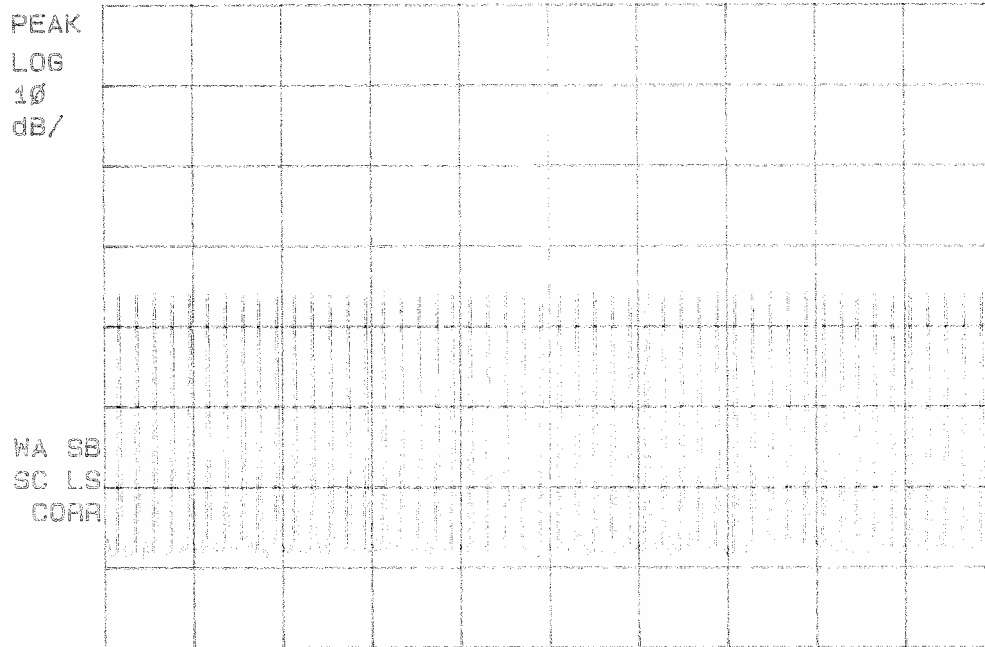


FIGURE 10
TIME OF OCCUPANCY (SWEEP)

14:26:17 JUN 28, 2006

REF 140.0 dBμV AT 50 dB

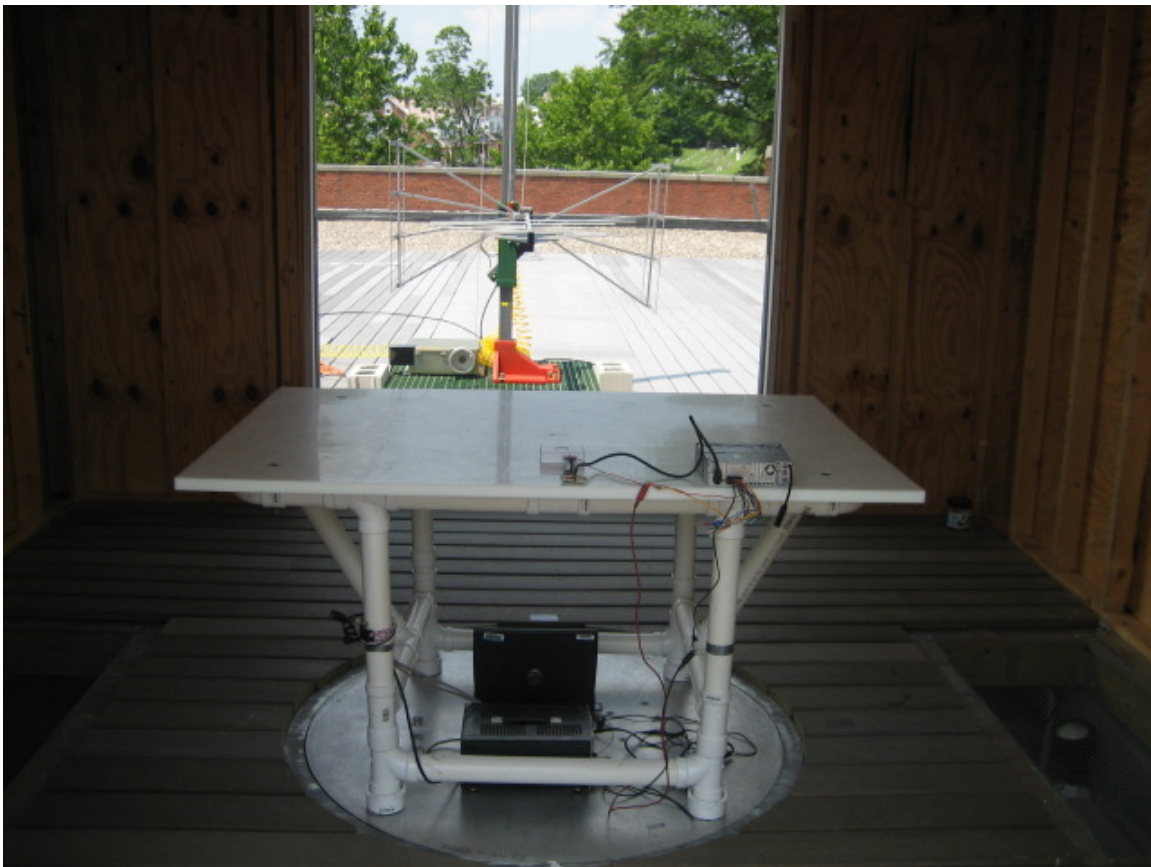


CENTER 2.440000 GHz
 #RES BW 100 kHz

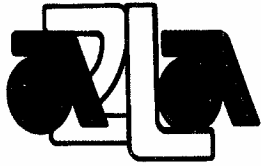
#VBW 1 MHz

SPAN 0 Hz
 SWP 0.00 sec

FIGURE 11
PHOTOGRAPH TEST SETUP



LABORATORY ACCREDITATION



THE AMERICAN
ASSOCIATION
FOR LABORATORY
ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

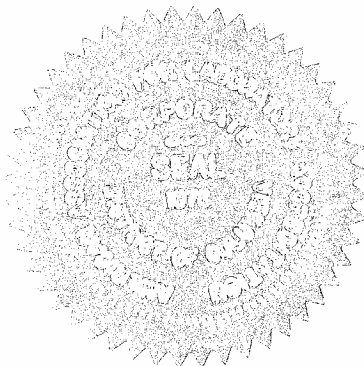
MOTOROLA INC.
Horsham, PA

for technical competence in the field of

Electrical Testing

The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC 17025 - 1999 "General Requirements for the Competence of Testing and Calibration Laboratories" and any additional program requirements in the identified field of testing.

Presented this 27th day of July 2005.



President
For the Accreditation Council
Certificate Number 1250.01
Valid to May 31, 2007

For tests or types of tests to which this accreditation applies,
please refer to the laboratory's Electrical Scope of Accreditation.



American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC 17025-1999

MOTOROLA, INC.¹
Connected Home Solutions
101 Tournament Drive
Horsham, PA 19044
Joseph J. DiBiase Phone: 215 323 2480

ELECTRICAL (EMC)

Valid to: May 31, 2007

Certificate Number: 1250.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electromagnetic compatibility tests:

<u>Tests:</u>	<u>Standard(s):</u>
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Electromagnetic Compatibility

Generic Emission Standards EN 61000-6-3, AS/NZS 4251.1

Generic Immunity Standards EN 61000-6-2, AS/NZS 4252.1

Product Specific Standards EN 50083-2 (excluding section 4.3.2.3), CISPR 24, EN 55024, AS/NZS CISPR 24, ETSI EN 300 386

Radiated Emissions
(3m & 10 m to 25 GHz) Code of Federal Regulation (CFR) 47, FCC Part 15 using ANSI C63.4; CISPR 22; EN 55022; AS/NZS CISPR 22; CISPR 13; EN 55013; CAN/CSA- CEI/IEC CISPR 22-02; AS/NZS CISPR 13; CNS 13438; CNS 13439; BETS-7 (Section 3.6); FCC Part 15.247

Conducted Emissions
(Single Phase) Code of Federal Regulation (CFR) 47, FCC Part 15 using ANSI C63.4; CISPR 22; EN 55022; AS/NZS CISPR 22; CISPR 13; EN 55013; CAN/CSA- CEI/IEC CISPR 22-02; AS/NZS CISPR 13; CNS 13438; CNS 13439; BETS-7 (Section 3.6)

Electrostatic Discharge (ESD) EN 61000-4-2; IEC 61000-4-2

Radiated Immunity
(up to 1GHz) EN 61000-4-3; IEC 61000-4-3; EN 55020(sections 4.7.1 and 4.7.2); CISPR 20 (sections 4.7.1 and 4.7.2); EN 50083-2, Section 4.3.1.2 – In-band immunity (for equipment operating below 950 MHz)

Electrical Fast Transient/Burst EN 61000-4-4; IEC 61000-4-4

¹ Note: All testing except Wireless can also be performed at the satellite laboratory located at 970 High Street, Pottstown, PA.

(A2LA Cert. No. 1250.01) 07/27/05

5301 Buckeystown Pike, Suite 350 • Frederick, MD 21704-8373 • Phone: 301-644 3248 • Fax: 301-662 2974

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<u>Tests:</u>	<u>Standard(s):</u>
Surge	EN 61000-4-5; IEC 61000-4-5
Conducted Immunity	EN 61000-4-6; IEC 61000-4-6; CISPR 20 (section 4.6); EN 55020 (section 4.6)
Power Line Magnetic Field	EN 61000-4-8, IEC 61000-4-8
Voltage Dips, Short Interruptions, and Line Voltage Variations	EN 61000-4-11: 1995; IEC 61000-4-11: 1994
Current Harmonics	EN 61000-3-2; IEC 61000-3-2
Voltage Fluctuations & Flicker	EN 61000-3-3; IEC 61000-3-3
Disturbance Power	CISPR 13; EN 55013
Wireless testing	CFR 47, FCC Part 15.247

On materials and products related to the following:

Information Technology Equipment (ITE), Television Interface Devices, Professional Cable Broadcast System Equipment.

Kayanne M. Robinson