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TESTING Cert No.1152.01

DATE: 05 November 2014

I.T.L. (PRODUCT TESTING) LTD.

FCC Radio Test Report

for

Activocal LTD

Equipment under test:

Around - Voice Activated Speakerphone

Cordless Handset

Written by: _____
R. Pinchuck, Documentation

Approved by: _____
M. Zohar, Test Engineer

Approved by: _____
I. Raz, EMC Laboratory Manager

Measurement/Technical Report for Activocal LTD

Equipment under test:

Around - Voice Activated Speakerphone Cordless Handset

FCC ID: 2ADI5-AROUND

This report concerns:	Original Grant:	X
	Class I change:	
	Class II change:	
Equipment type:	Digital Transmission System	
Limits used:	47CFR15 Section 15.249 (a-b)	

Measurement procedure used is KDB 558074 D01 v03r02 and ANSI C63.4-2003.

Application for Certification prepared by:

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Applicant for this device: (different from "prepared by")

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1. General Information

1.1 Administrative Information

Manufacturer:	Activocal LTD
Manufacturer's Address:	PO Box 102 Rehovot, 761002 Israel
Manufacturer's Representative:	Nir Dvash
Equipment Under Test (E.U.T):	Around - Voice Activated Speakerphone
Equipment Model No.:	Cordless Handset
Equipment Serial No.:	Not designated
Date of Receipt of E.U.T:	01.10.14
Start of Test:	01.10.14
End of Test:	26.10.14
Test Laboratory Location:	I.T.L (Product Testing) Ltd. 1 Batsheva St., Lod ISRAEL 7120101
Test Specifications:	FCC Part 15, Subpart C, Section 15.249

1.2 List of Accreditations

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), FCC Designation Number US1004.
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) (Japan), Registration Numbers: C-3006, R-2729, T-1877, G-245.
5. Industry Canada (Canada), IC File No.: 46405-4025; Site No. IC 4025A-1.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

1.3 Product Description

Around – Voice Activated Environmental Phone

- Total voice activation – answering and placing calls, menus etc. – no buttons needed.
- Speakerphone mode, wireless Handset and wired Headset.
- Remote dialing from any PC. No hardware is needed on the PC side. Can enable any existing PC software (i.e. mouse eye tracking) to dial the phone
- Can be used to remotely activate other appliances in the house.
- Has a big button, backlighted keyboard.
- Includes a talking clock and alarm clock
- Talking Caller ID with name and/or number announcement.
- USB connection to the PC for backup and code upgrades.
- Extremely bright LED stripe for visual notifications
- Can be easily configured for any one or more disability including low vision, blindness, hard of hearing, dexterity, physically challenged and old age.

1.4 Test Methodology

Radiated testing were performed according to the procedures in KDB 558074 D01v03r02 and ANSI C63.4: 2003. Radiated testing was performed at an antenna to EUT distance of 3 meters.

1.5 Test Facility

Radiated emissions tests were performed at I.T.L.'s testing facility in Lod, Israel. I.T.L.'s EMC Laboratory is accredited by A2LA, certificate No. 1152.01 and its FCC Designation Number is US1004.

1.6 Measurement Uncertainty

Radiated Emission

Radiated Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4) for open site 30-1000MHz:

Expanded Uncertainty (95% Confidence, K=2):

± 4.96 dB

2. System Test Configuration

2.1 Justification

Unit was tested in 3 positions; the worst case position was evaluated for compliance. The base unit and the cordless handset contain the identical radio. See customer's Declaration on following page.

2.2 EUT Exercise Software

No special exercise software was needed to achieve compliance.

2.3 Special Accessories

No special exercise software was needed to achieve compliance

2.4 Equipment Modifications

No equipment modifications were needed to achieve compliance.

2.5 Configuration of Tested System

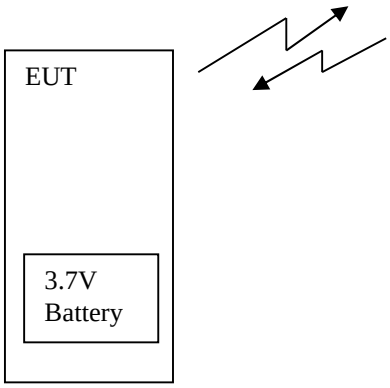

Figure 1. Configuration of Tested System

ActiVocal

Tel: +972-3-3746618
4 Ha-Yarden st.,
Yavne P.O. Box 102,
Rehovot 76100 Israel

Date December 4, 2014

DECLARATION

I HEREBY DECLARE THAT THE RADIO PARTS IN THE AROUND – VOICE ACTIVATED SPEAKERPHONE, BASE UNIT AND CORDLESS HANDSET ARE IDENTICAL.

Thank you,
Signature: _____
Printed Name: Nir Dvash
R&D Manager Activocal LTD

www.activocal.com

3. Radiated Measurement Test Set-up Photo

Figure 2. Radiated Emission Test

Figure 3. Radiated Emission Test

Figure 4. Radiated Emission Test

4. Field Strength of Fundamental

4.1 Test Specification

F.C.C., Part 15, Subpart C, Section 15.249(a)

4.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3. The E.U.T. was placed on a non-conductive table, 0.8 meters above the O.A.T.S. ground plane.

The EMI receiver was set to the E.U.T. Fundamental Frequency (low, mid and high) and Peak Detection. The turntable and antenna mast were adjusted for maximum level reading on the EMI receiver. The measurement was performed for vertical and horizontal polarizations of the test antenna.

4.3 Measured Data

JUDGEMENT: Passed by 13.5 dB

The EUT met the FCC Part 15, Subpart C, Section 15.249(a) specification requirements.

The details of the highest emissions are given in *Figure 5*.

TEST PERSONNEL:

Tester Signature: _____ Date: 30.11.14

Typed/Printed Name: M. Zohar

Field Strength of Fundamental

E.U.T Description	Around - Voice Activated Speakerphone
Model Number	Cordless Handset
Serial Number:	Not designated

Specification: F.C.C., Part 15, Subpart C 15.249(a)

Antenna Polarization: Horizontal/Vertical

Test Distance: 3 meters Detector: Peak

Freq.	Pol.	Peak Reading	PEAK Specification	Avg. Factor	Avg. Result	AVg Specification	Margin
(MHz)	V/H	(dBµV/m)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
2406	H	89.8	114.0	11.1	78.7	94.0	-15.3
2406	V	91.6	114.0	11.1	80.5	94.0	-13.5
2442	H	89.0	114.0	11.1	77.9	94.0	-16.1
2442	V	88.6	114.0	11.1	77.5	94.0	-16.5
2478	H	85.9	114.0	11.1	74.8	94.0	-19.2
2478	V	88.5	114.0	11.1	77.4	94.0	-16.6

Figure 5. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL/VERTICAL. Detector: Peak

Note: Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

* "Peak Amp." includes "Correction Factors.

"Correction Factors" = Antenna Correction Factor + Cable Loss.

Field Strength of Fundamental

E.U.T Description	Around - Voice Activated Speakerphone
Model Number	Cordless Handset
Serial Number:	Not designated

Specification: F.C.C., Part 15, Subpart C 15.249(a)

Antenna Polarization: Horizontal/Vertical
Operation Frequency: Low/Mid/High
Test Distance: 3 meters
Detector: Peak

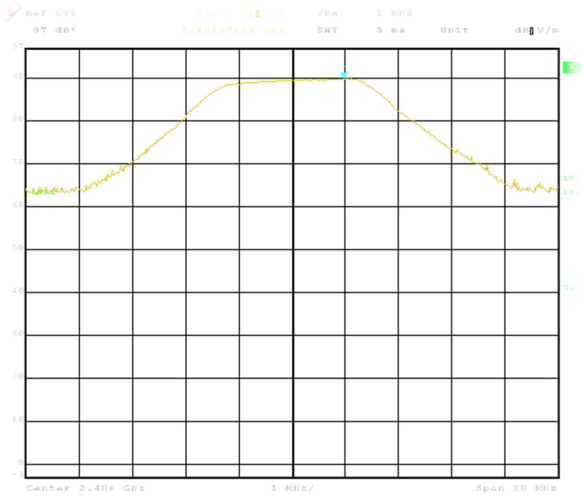

Figure 6. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL FREQ: Low

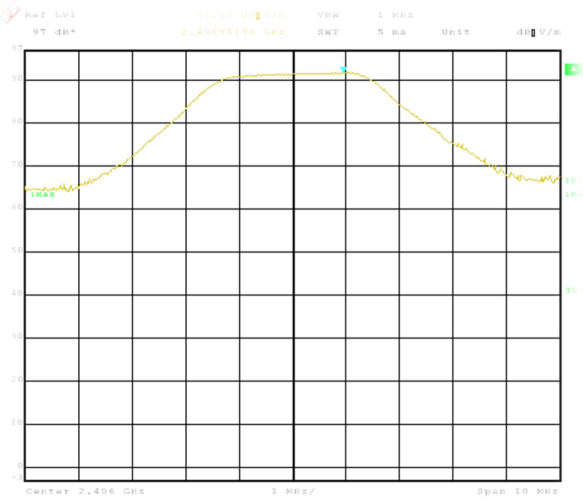

Figure 7. Field Strength of Fundamental. Antenna Polarization: VERTICAL FREQ: Low

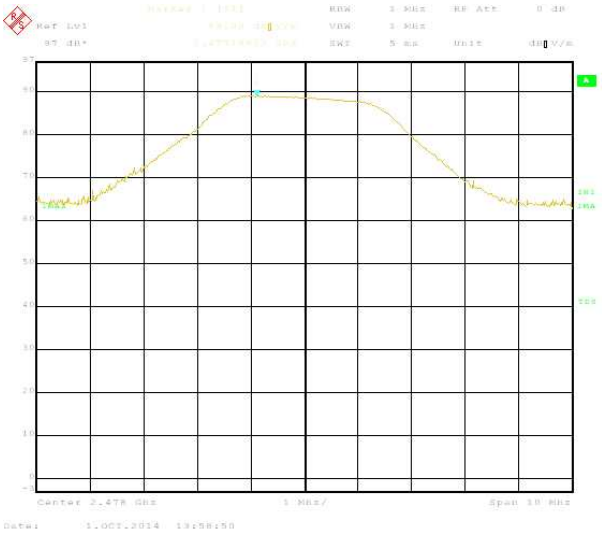

Figure 8. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL FREQ: Mid

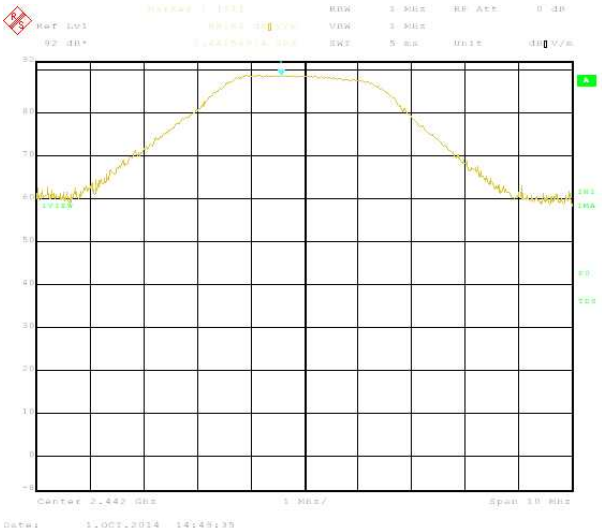

Figure 9. Field Strength of Fundamental. Antenna Polarization: VERTICAL FREQ: Mid

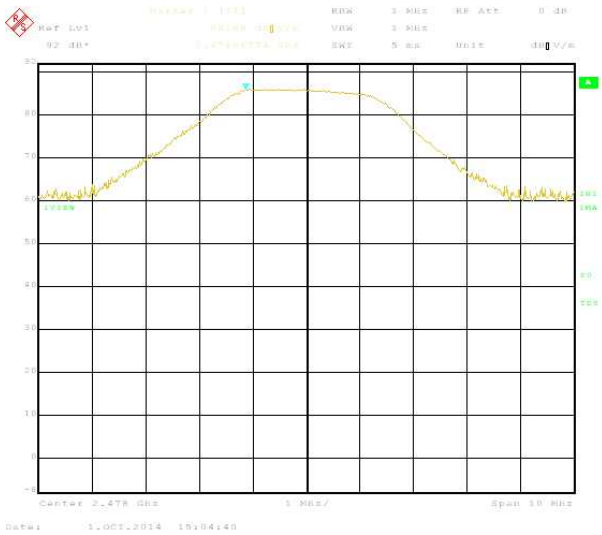

Figure 10. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL FREQ: High

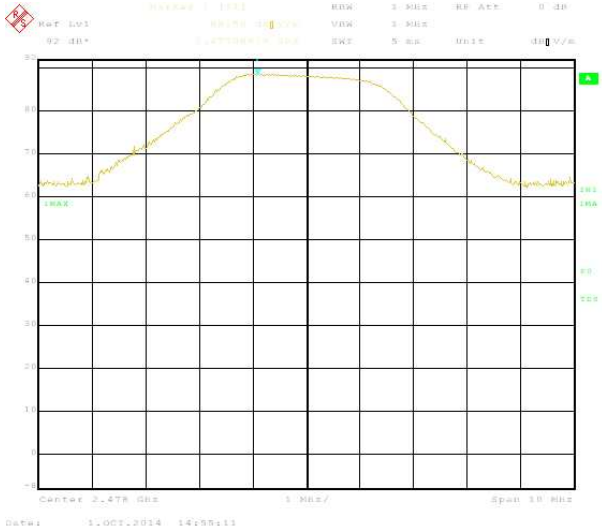

Figure 11. Field Strength of Fundamental. Antenna Polarization: VERTICAL FREQ: High

4.4 Test Instrumentation Used; Field Strength of Fundamental

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	R&S	ESCI7	100724	December 17, 2013	1 Year
EMI Receiver	R&S	ESIB7	100120	December 19, 2013	1 Year
Horn Antenna	ETS	3115	6142	March 14, 2012	3 Years
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Table Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

Figure 12 Test Equipment Used

5. Radiated Emission, 9 kHz – 30 MHz

5.1 Test Specification

9 kHz-30 MHz, FCC, Part 15, Subpart C, Section 209

5.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3.

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The configuration tested is shown in Figure 3.1.

The frequency range 9 kHz-30 MHz was scanned.

The emissions were measured using a computerized EMI receiver complying with CISPR 16 requirements. The specification limits and applicable correction factors are loaded to the receiver via a 3.5" floppy disk.

In the frequency range 9 kHz-30MHz, the loop antenna was rotated on its vertical axis. The antenna height (center of loop) was 1 meter at a distance of 3 meters.

The E.U.T. was operated at the frequency Low, Mid and High.

5.3 Measured Data

JUDGEMENT: Passed

The EUT met the requirements of the F.C.C. Part 15, Subpart C, Section 209 specification.

No results were detected in the range of 9 kHz-30 MHz.

TEST PERSONNEL:

Tester Signature: _____ Date: 30.11.14

Typed/Printed Name: M. Zohar

5.4 Test Instrumentation Used; Radiated Measurements

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	R&S	ESIB7	100120	December 19, 2013	1 Year
Active Loop Antenna	EMCO	6502	9506-2950	November 4, 2013	1 year
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Table Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

Figure 13 Test Equipment Used

5.5 Field Strength Calculation

The field strength is calculated directly by the EMI Receiver software, and a "Correction Factors" data disk, using the following equation:

$$FS = RA + AF + CF$$

FS:	Field Strength [dBµv/m]
RA:	Receiver Amplitude [dBµv]
AF:	Receiving Antenna Correction Factor [dB/m]
CF:	Cable Attenuation Factor [dB]

Example: FS = 30.7 dBµV (RA) + 14.0 dB (AF) + 0.9 dB (CF) = 45.6 dBµV

No external pre-amplifiers are used.

6. Spurious Radiated Emission 30 MHz – 25 GHz

6.1 Test Specification

F.C.C., Part 15, Subpart C, Section 15.249(b)

The E.U.T. operation mode and test set-up are as described in Section 3.

See Section 3.1 Justification of the System Test Configuration concerning the E.U.T. orientation for this test.

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The configuration tested is shown in Figure 1.

The frequency range 30 MHz-1000 MHz was scanned and the list of the highest emissions was verified and updated accordingly.

The levels of the emissions within the frequency ranges of the restricted bands (Section 15.205 of FCC Part 15) were compared to the limits of the table in Section 15.209 (a), General Requirements.

In the frequency range 30 MHz – 7 GHz, the emissions were measured using a computerized EMI receiver complying with CISPR 16 requirements. The specification limits and applicable correction factors are loaded to the receiver via a 3.5" floppy disk.

In the frequency range 7 - 25 GHz, a spectrum analyzer including a low noise amplifier was used. During average measurements, the IF bandwidth was 1 MHz and the video bandwidth was 100Hz. During peak measurements, the IF bandwidth was 1 MHz and the video bandwidth was 3 MHz.
The test distance was 3 meters.
The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.
Verification of the E.U.T emissions was based on the following methods: turning the E.U.T on and off; using a frequency span less than 10 MHz; observation of the signal level during turntable rotation. (Background noise is not affected by the rotation of the E.U.T.)

6.2 Measured Data

JUDGEMENT: Passed

The margin between the emission level and the specification limit was 3.8 dB in the worst case at the frequency of 4812MHz, vertical polarization.

The EUT met the requirements of the F.C.C. Part 15, Subpart C, Section 15.249 specification.

TEST PERSONNEL:

Tester Signature: _____ Date: 30.11.14

Typed/Printed Name: M. Zohar

Spurious Radiated Emission 30 MHz – 25 GHz

E.U.T Description	Around - Voice Activated Speakerphone
Type	Cordless Handset
Serial Number:	Not designated

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical
Frequency range: 30 MHz to 25.0 GHz
Test Distance: 3 meters
Detector: Peak
Operation Frequency: Low/Mid/High

Freq. (MHz)	Polarity (H/V)	Peak Amp (dBµV/m)	Peak. Specification (dB µV/m)	Peak. Margin (dB)
2390.0	H	59.3	74.0	-14.7
2390.0	V	61.1	74.0	-12.9
2483.5	H	60.6	74.0	-13.4
2483.5	V	61.3	74.0	-12.7
4812.0	H	60.4	74.0	-13.6
4812.0	V	61.3	74.0	-12.7
4884.0	H	59.7	74.0	-14.3
4884.0	V	60.0	74.0	-14.0
4956.0	H	59.6	74.0	-14.4
4956.0	V	60.0	74.0	-14.0

Figure 14. Radiated Emission. Antenna Polarization: HORIZONTAL / VERTICAL. Detector: Peak

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

"Peak Amp" includes correction factor.

* "Correction Factor" = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

Radiated Emission Above 1.0 GHz

E.U.T Description	Around - Voice Activated Speakerphone
Type	Cordless Handset
Serial Number:	Not designated

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical
Frequency range: 30 MHz to 25.0 GHz
Test Distance: 3 meters
Detector: peak
Operation Frequency: Low/Mid/High

Freq.	Polarity	Avg Factor	Average Amp	Average Specification	AVg. Margin
(MHz)	(H/V)	(dB)	(dBµV/m)	(dB µV/m)	(dB)
2390.0	H	11.1	48.2	54.0	-5.8
2390.0	V	11.1	50.0	54.0	-4.0
2483.5	H	11.1	49.5	54.0	-4.5
2483.5	V	11.1	50.2	54.0	-3.8
4812.0	H	11.1	49.3	54.0	-4.7
4812.0	V	11.1	50.2	54.0	-3.8
4884.0	H	11.1	48.6	54.0	-5.4
4884.0	V	11.1	49.9	54.0	-4.1
4956.0	H	11.1	48.5	54.0	-5.5
4956.0	V	11.1	48.9	54.0	-5.1

Figure 15. Radiated Emission. Antenna Polarization: HORIZONTAL / VERTICAL. Detector: peak

Notes:

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

"Average Amp" includes correction factor.

* Correction Factor = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

Avg. Factor Calculation

1. Pulse period = 1 (worst scenario)
2. Pulse duration = 1 (worst scenario)
3. Burst duration = 0.6msec
4. Time between bursts = 18.6msec
5. $$\text{Average Factor} = 20\log\left[\frac{\text{Pulse duration}}{\text{Pulse period}} \times \frac{\text{burst duration}}{100\text{msec}} \times \text{Num of burst within } 100\text{msec}\right]$$

$$\text{Average Factor} = 20\log\left[1 * \frac{0.6}{100} * 6\right] = 11.1dB$$

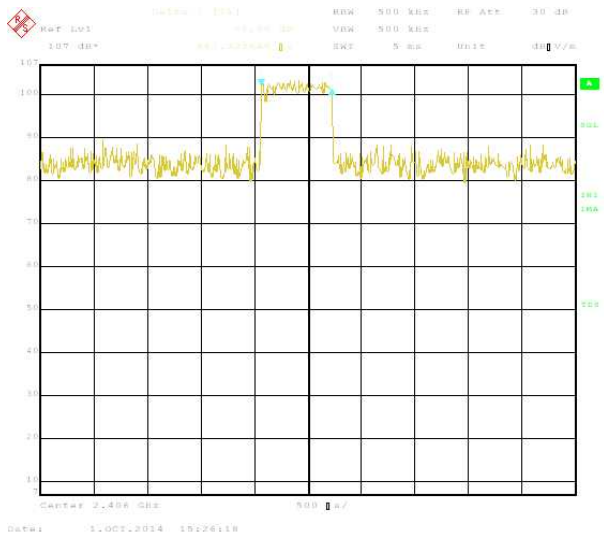

Figure 16. Transmission Burst Duration = 0.6 msec

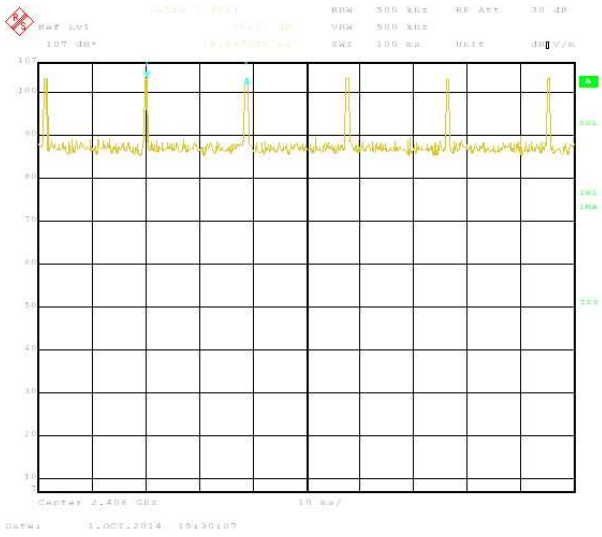

Figure 17. Time between Transmissions 18.6 msec

6 bursts in 100msec

6.3 Test Instrumentation Used

Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Period
EMI Receiver	Rohde & Schwarz	ESIB7	100120	December 19, 2013	1 year
EMC Analyzer	HP	HP8593	3536A00120	March 6, 2014	1 year
Biconilog Antenna	EMCO	3142B	1250	May 22, 2014	2 years
Horn Antenna	ETS	3115	6142	March 14, 2012	3 years
Horn Antenna	ARA	SWH-28	1007	March 30, 2014	3 years
Low Noise Amplifier	DBS MICROWAVE	LNA-DBS-0411N313	013	August 22, 2014	1 year
Low Noise Amplifier	Sophia Wireless	LNA 28-B	232	August 29, 2014	1 year
Spectrum Analyzer	HP	8592L	3826A01204	February 28, 2014	1 year
Spectrum Analyzer	HP	8564E	3442A00275	March 2, 2014	1 year
Antenna Mast	ETS	2070-2	9608-1497	N/A	N/A
Turntable	ETS	2087	-	N/A	N/A
Mast & Table Controller	ETS/EMCO	2090	9608-1456	N/A	N/A

Figure 18 Test Equipment Used

6.4 Field Strength Calculation

The field strength is calculated directly by the EMI Receiver software, and a "Correction Factors" data disk, using the following equation:

$$[dB\mu v/m]\ \ FS = RA + AF + CF$$

FS: Field Strength [dBµv/m]
RA: Receiver Amplitude [dBµv]
AF: Receiving Antenna Correction Factor [dB/m]
CF: Cable Attenuation Factor [dB]

7. Antenna Gain/Information

3.3 dBi

2.4 GHz Inverted F Antenna - Texas Instruments Design Note DN0007

8. R.F Exposure/Safety

Typical use of the E.U.T. is as a handset for a voice activated phone.

The typical placement of the E.U.T. is in the base or being held by person using telephone.

The typical distance between the E.U.T. and the user in the worst case application, is 0.25 cm.

Calculation of Maximum Permissible Exposure (MPE)

Based on Section 1.1310 Requirements

(a) FCC limits at 2406 MHz is:

$$1\frac{mW}{cm^2}$$

Using table 1 of Section 1.1310 limit for general population/uncontrolled exposures, the above level is an average over 30 minutes.

(b) The power density produced by the E.U.T. is

P_t- Transmitted Power 91.6 dBuV/m (Peak) = 0.44 mW

$$S = \frac{P_t G_t}{4\pi R^2}$$

*G_T- Antenna Gain,

*Note – because antenna is integral and tests were conducted radiated, the transmitted power, P_t, takes the antenna gain into account

R- Distance from Transmitter using 0.25cm worst case

(c) The peak power density is:

$$S_p = \frac{0.44}{4\pi (0.25)^2} = 0.56\frac{mW}{cm^2}$$

(e) This is below the FCC limit.

9. APPENDIX A - CORRECTION FACTORS

9.1 Correction factors for CABLE

from EMI receiver to test antenna at 3 meter range.

Frequency (MHz)	Cable Loss (dB)	Frequency (MHz)	Cable Loss (dB)
0.010	0.4	50.00	1.2
0.015	0.2	100.00	0.7
0.020	0.2	150.00	20.1
0.030	0.3	200.00	2.3
0.050	0.3	300.00	2.9
0.075	0.3	500.00	3.8
0.100	0.2	750.00	4.8
0.150	0.2	1000.00	5.4
0.200	0.3	1500.00	6.7
0.500	0.4	2000.00	9.0
1.00	0.4	2500.00	9.4
1.50	0.5	3000.00	9.9
2.00	0.5	3500.00	10.2
5.00	0.6	4000.00	11.2
10.00	0.8	4500.00	12.1
15.00	0.9	5000.00	13.1
20.00	0.8	5500.00	13.5
		6000.00	14.5

NOTES:

1. The cable type is SPUMA400 RF-11N(X2) and 39m long

2. The cable is manufactured by Huber + Suhner

9.2 Correction factors for CABLE

from EMI receiver to test antenna at 3 meter range.

FREQUENCY (GHz)	CORRECTION FACTOR (dB)
1.0	1.2
2.0	1.6
3.0	2.0
4.0	2.4
5.0	3.0
6.0	3.4
7.0	3.8
8.0	4.2
9.0	4.6
10.0	5.0
12.0	5.8

NOTES:

1. The cable type is RG-8.

2. The overall length of the cable is 10 meters.

9.3 Correction factors for CABLE

from spectrum analyzer to test antenna above 2.9 GHz

FREQUENCY (GHz)	CORRECTION FACTOR (dB)	FREQUENCY (GHz)	CORRECTION FACTOR (dB)
1.0	1.9	14.0	9.1
2.0	2.7	15.0	9.5
3.0	3.5	16.0	9.9
4.0	4.2	17.0	10.2
5.0	4.9	18.0	10.4
6.0	5.5	19.0	10.7
7.0	6.0	20.0	10.9
8.0	6.5	21.0	11.2
9.0	7.0	22.0	11.6
10.0	7.5	23.0	11.9
11.0	7.9	24.0	12.3
12.0	8.3	25.0	12.6
13.0	8.7	26.0	13.0

NOTES:

1. The cable type is SUCOFLEX 104 E manufactured by SUHNER.

2. The cable is used for measurements above 2.9 GHz.

3. The overall length of the cable is 10 meters.

8.4 Correction factors for LOG PERIODIC ANTENNA

Type LPD 2010/A
at 3 and 10 meter ranges.

Distance of 3 meters

FREQUENCY (MHz)	AFE (dB/m)
200.0	9.1
250.0	10.2
300.0	12.5
400.0	15.4
500.0	16.1
600.0	19.2
700.0	19.4
800.0	19.9
900.0	21.2
1000.0	23.5

Distance of 10 meters

FREQUENCY (MHz)	AFE (dB/m)
200.0	9.0
250.0	10.1
300.0	11.8
400.0	15.3
500.0	15.6
600.0	18.7
700.0	19.1
800.0	20.2
900.0	21.1
1000.0	23.2

NOTES:

1. *Antenna serial number is 1038.*
2. *The above lists are located in file number 38M3O.ANT for a 3 meter range, and file number 38M100.ANT for a 10 meter range.*
3. *The files mentioned above are located on the disk marked "Radiated Emission Test EMI Receiver".*

9.6 Correction factors for Double-Ridged Waveguide Horn

Model: 3115, S/N 29845
at 3 meter range.

FREQUENCY (GHz)	ANTENNA FACTOR (dB 1/m)	ANTENNA Gain (dBi)	FREQUENCY (GHz)	ANTENNA FACTOR (dB 1/m)	ANTENNA Gain (dBi)
1.0	24.8	5.4	10.0	38.8	11.4
1.5	26.1	7.6	10.5	38.9	11.8
2.0	28.6	7.7	11.0	39.0	12.1
2.5	29.8	8.4	11.5	39.6	11.8
3.0	31.4	8.4	12.0	39.8	12.0
3.5	32.4	8.7	12.5	39.6	12.5
4.0	33.7	8.6	13.0	40.0	12.5
4.5	33.4	9.9	13.5	39.8	13.0
5.0	34.5	9.7	14.0	40.2	13.0
5.5	35.1	9.9	14.5	40.6	12.9
6.0	35.4	10.4	15.0	41.3	12.4
6.5	35.6	10.8	15.5	39.5	14.6
7.0	36.2	10.9	16.0	38.8	15.5
7.5	37.3	10.4	16.5	40.0	14.6
8.0	37.7	10.6	17.0	41.4	13.4
8.5	38.3	10.5	17.5	44.8	10.3
9.0	38.5	10.8	18.0	47.2	8.1
9.5	38.7	11.1			

9.7 Correction factors for Horn Antenna

Model: SWH-28
at 1 meter range.

FREQUENCY (GHz)	AFE (dB /m)	Gain (dB1)
18.0	40.3	16.1
19.0	40.3	16.3
20.0	40.3	16.1
21.0	40.3	16.3
22.0	40.4	16.8
23.0	40.5	16.4
24.0	40.5	16.6
25.0	40.5	16.7
26.0	40.6	16.4

9.8 Correction factors for ACTIVE LOOP ANTENNA

Model 6502
S/N 9506-2950

FREQUENCY (MHz)	Magnetic Antenna Factor (dB)	Electric Antenna Factor (dB)
.009	-35.1	16.4
.010	-35.7	15.8
.020	-38.5	13.0
.050	-39.6	11.9
.075	-39.8	11.8
.100	-40.0	11.6
.150	-40.0	11.5
.250	-40.0	11.6
.500	-40.0	11.5
.750	-40.1	11.5
1.000	-39.9	11.7
2.000	-39.5	12.0
3.000	-39.4	12.1
4.000	-39.7	11.9
5.000	-39.7	11.8
10.000	40.2	11.3
15.000	-40.7	10.8
20.000	-40.5	11.0
25.000	-41.3	10.2
30.000	42.3	9.2