

DATE: 05 June 2008

**I.T.L. (PRODUCT TESTING) LTD.**  
**FCC EMC/Radio Test Report**  
for  
**Hisense Ltd.**

**Equipment under test:**

**Baby Monitor Unit**

**Babysense6  
BS6 - OREZ 1**

Written by: Evan Ever

E. Ever, Documentation

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A. Sharabi, Test Engineer

Approved by: I. Raz

I. Raz, EMC Laboratory Manager

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This report relates only to items tested.

## Measurement/Technical Report for Hisense Ltd.

**Equipment under test:**  
**Baby Monitor Unit**

**FCC ID: V68BS-6-01**  
**DATE: 05 June 2008**

This report concerns:      Original Grant       Class II change

Class B verification       Class A verification       Class I change

Equipment type:      Radio Transmitter

Request Issue of Grant:

Immediately upon completion of review

Limits used:

CISPR 22       Part 15

Measurement procedure used is ANSI C63.4-2003.

Application for Certification

Applicant for this device:

prepared by:

(different from "prepared by")

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## 1. General Information

### 1.1 Administrative Information

Manufacturer:	Hisense Ltd.
Manufacturer's Address:	23, Becker Street Rishon Le Zion Israel 75359 Tel: 972-3-9566604 Fax: 972-3-9566607
Manufacturer's Representative:	Haim Shtalryd
Equipment Under Test (E.U.T):	Baby Monitor Unit
Equipment Model No.:	Babysense6 BS6 - OREZ 1
Equipment Serial No.:	Not Designated
Date of Receipt of E.U.T:	15.01.08
Start of Test:	15.01.08
End of Test:	04.03.08
Test Laboratory Location:	I.T.L (Product Testing) Ltd. Kfar Bin Nun, ISRAEL 99780
Test Specifications:	FCC Part 15, Subpart C

## 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.), Registration No. 90715.
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-1350, R-1285.
5. Industry Canada (Canada), File No. IC 4025.
6. TUV Product Services, England, ASLLAS No. 97201.
7. Nemko (Norway), Authorization No. ELA 207.

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**

The Hisense 'Babysense 6' is a sound and movement monitor for babies. It's consists of two units: a baby unit and a parent unit and is powered by AC/DC adaptors and batteries.

Movement, sound and temperature signals are transmitted from the baby unit to the parent unit.

The baby unit has a built-in night light and three modes of operation: sound only, movement only, sound+movement. A green flashing LED indicates movement.

The parent unit has an LCD display which shows temperature, battery **status** and transmission. A green flashing LED indicates movement.

### **1.4 Test Methodology**

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

### **1.5 Test Facility**

The radiated emissions tests were performed at I.T.L.'s testing facility at Kfar Bin-Nun, Israel. This site is a FCC listed test laboratory (FCC Registration No. 90715, date of listing August 22, 2006).

I.T.L.'s EMC Laboratory is also accredited by A2LA, certificate No. 1152.01.

### **1.6 Measurement Uncertainty**

#### **Radiated Emission**

The Open Site complies with the  $\pm 4$  dB Normalized Site Attenuation requirements of ANSI C63.4-2003. In accordance with Paragraph 5.4.6.1 of this standard, this tolerance includes instrumentation calibration errors, measurement technique errors, and errors due to site anomalies.

## 2. Product Labeling

**Baby Unit**  
Baby Movement Monitor  
BS6 – OREZ 1  
Use 9V adaptor and 4x1.5V  
AA alkaline battery / LR6.  
FCC ID: V68BS-6-01

Figure 1. FCC Label



Figure 2. Label Location on EUT

### 3. System Test Configuration

#### 3.1 *Justification*

To determine the E.U.T. antenna orientation for the spurious radiated emissions tests, the product carrier field level was measured with the E.U.T. in 3 orthogonal positions.

The horizontal position was selected as the worst case. This position is also the regular position of the E.U.T. in the baby's bed/crib.

#### 3.2 *EUT Exercise Software*

Manufacturing software was used for the tests.

#### 3.3 *Special Accessories*

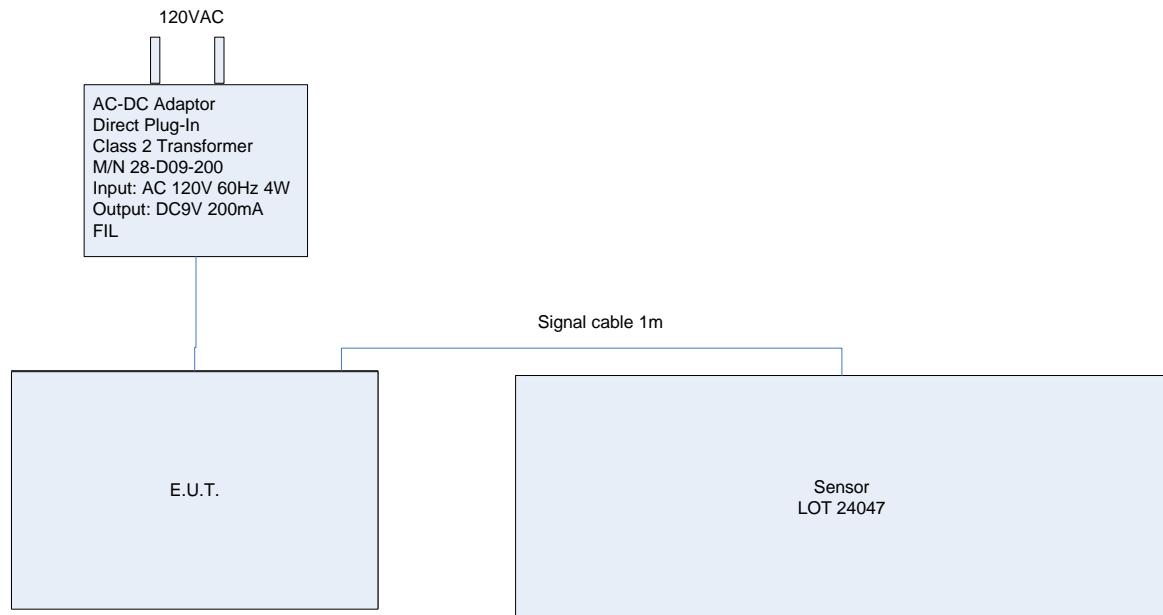
No special accessories were needed to achieve compliance.

#### 3.4 *Equipment Modifications*

On Transmitter RF PCB the value of C7 was changed from 56pF to 1000pF.

### 3.5 Configuration of Tested System

The configuration of the tested system is described below.



**Figure 3. Configuration of Tested System**

## 4. Block Diagram

### 4.1 Schematic Block/Connection Diagram

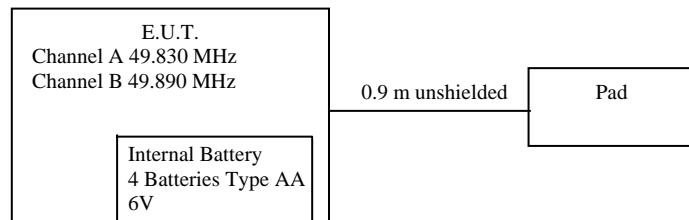


Figure 4. Block Diagram

## 4.2 *Theory of Operation*

The EUT is battery operated. The EUT was operated in simulated normal baby chest movements (no alarm mode).

1. Monitors breathing sensors level to initiate proper signal to receiver.
2. Detects and transmits audio signals to receiver.
3. Measures the ambient temperature and send the data to receiver.
4. Monitors the operating situation of the transmitter itself and send appropriate signal to receiver.

## 5. Conducted and Radiated Measurement Photos



**Figure 5. Conducted Emission Test**



**Figure 6. Radiated Emission Test**

## 6. Field Strength of Fundamental

### 6.1 ***Test Specification***

F.C.C., Part 15, Subpart C, Section 15.235

### 6.2 ***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 (49.83 MHz) and Average Detection.

The turntable and antenna were adjusted for maximum level reading on the EMI receiver. The loop antenna was rotated on its vertical axis. The antenna height (center of loop) was 1 meter.

### 6.3 ***Measured Data***

JUDGEMENT: Passed by 5.9 dB

The EUT met the FCC Part 15, Subpart C, Section 15.235 specification requirements.

The details of the highest emissions are given in *Figure 8*.

TEST PERSONNEL:

Tester Signature:  Date: 25.05.2008

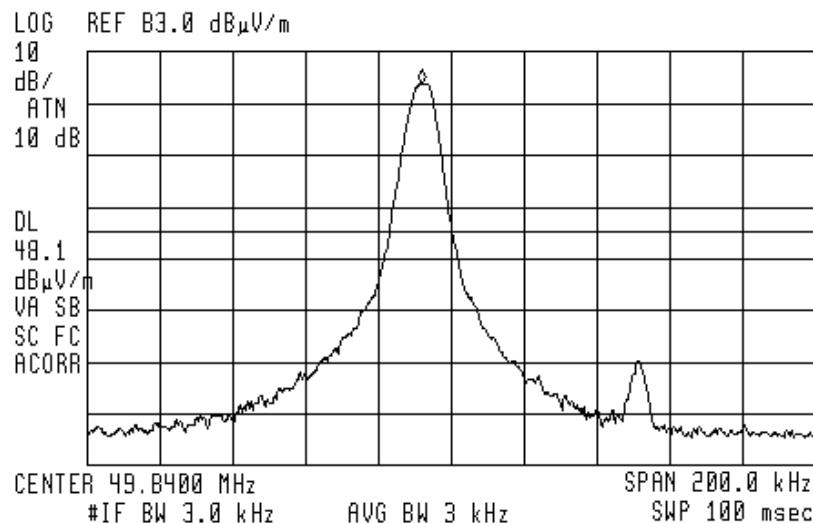
Typed/Printed Name: A. Sharabi

## Field Strength of Fundamental

E.U.T Description Baby Monitor Unit  
 Model Number Babysense6  
**BS6 - OREZ 1**  
 Serial Number: Not Designated

09:29:04 MAR 02, 2008

FREQ	49.83	MHz
PEAK	76.3	dB $\mu$ V/m
QP	NOT SELECTED	
AVG	74.1	dB $\mu$ V/m



**Figure 7. Field Strength of Fundamental  
 Detector: Peak**

## Field Strength of Fundamental

E.U.T Description      Baby Monitor Unit  
 Model Number           Babysense6  
**BS6 - OREZ 1**  
 Serial Number:          Not Designated

Specification: F.C.C., Part 15, Subpart C 15.235)

Test Distance: 3 meters      Detectors: Average

<b>Freq.</b> (MHz)	<b>Average Reading*</b> (dB $\mu$ V/m)	<b>Specification</b> (dB $\mu$ V/m)	<b>Margin</b> (dB)
49.83	74.1	80.0	-5.9

**Figure 8. Field Strength of Fundamental.**  
**Detector: Average**

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.

\* “Average Reading.” includes “Correction Factors.

“Correction Factors” = Antenna Correction Factor + Cable Loss.

#### 6.4 **Test Instrumentation Used, Field Strength of Fundamental**

Instrument	Manufacturer	Model	Serial Number	Last Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 12, 2007	1 year
EMI Receiver Filter Section	HP	85420E	3705A00248	November 12, 2007	1 year
Antenna-Log Periodic	A.H.System	SAS-200/511	253	February 4, 2007	2 years
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	ThinkJet 2225	2738508357.0	N/A	N/A

## 7. Band Edge Spectrum

[In Accordance with section 15.235]

### 7.1 Test procedure

The spectrum analyzer was connected to an auxiliary antenna receiving the E.U.T. signal.

The E.U.T. was operated at maximum power.

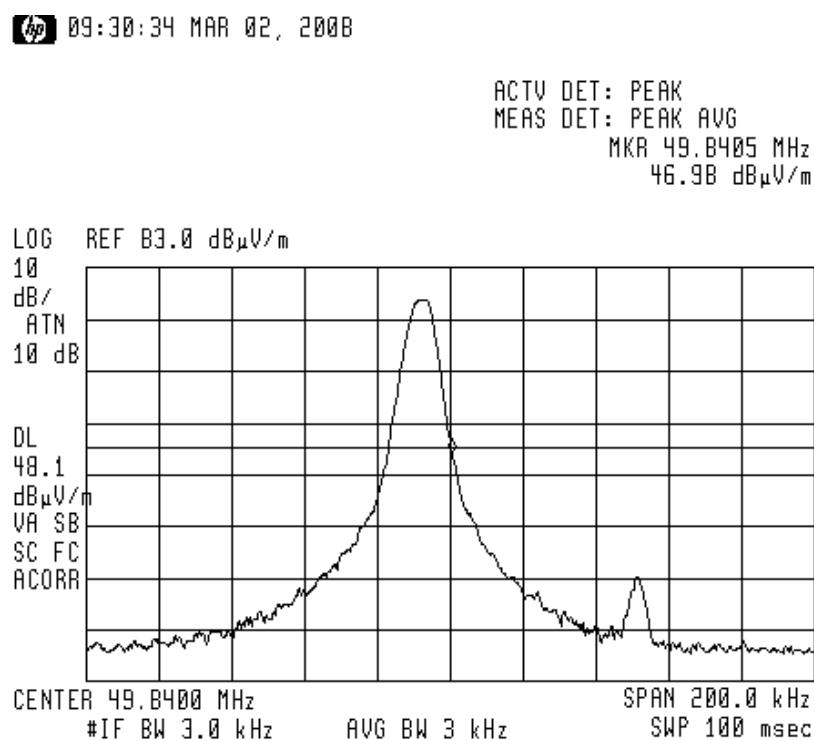


Figure 9 —Upper Limit of the Signal

09:29:56 MAR 02, 2008

ACTV DET: PEAK  
MEAS DET: PEAK AVG  
MKR 49.8230 MHz  
47.54 dB $\mu$ V/m

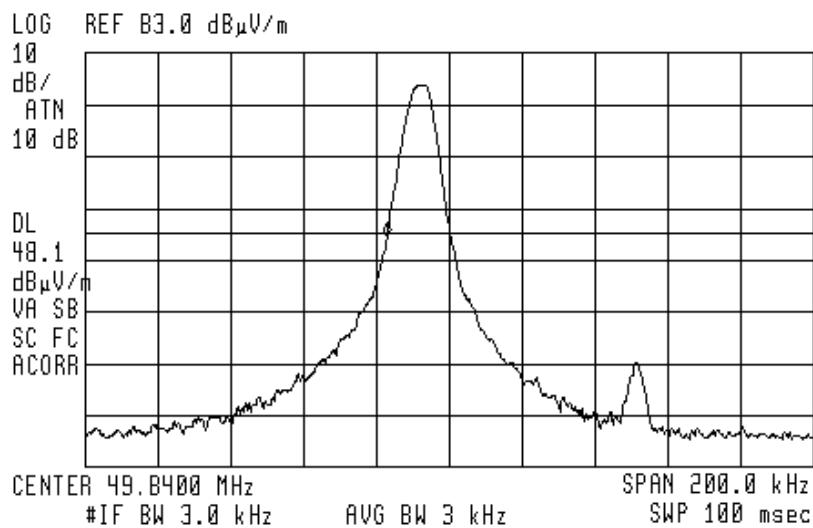


Figure 10 —Lower Limit of the Signal

## 7.2 Results table

E.U.T. Description: Baby Monitor Unit  
 Model No.: Babysense6  
 BS6 - OREZ 1  
 Serial Number: Not designated  
 Specification: F.C.C. Part 15, Subpart C (15.235)

Operation Frequency (MHz)	Band Edge Frequency (MHz)	Spectrum Level (dB $\mu$ V/m)	Specification* (dB $\mu$ V/m)	Margin (dB)
49.83	49.8405	46.98	48.1	-1.12
49.83	49.8230	47.54	48.1	-0.56

**Figure 11 Band Edge Spectrum**

\*Note: Average (74.1dB $\mu$ V/m) – 26 = 48.1

JUDGEMENT: Passed by 0.56 dB

TEST PERSONNEL:

Tester Signature:  Date: 25.05.2008

Typed/Printed Name: A. Sharabi

## 7.3 Test Equipment Used.

Band edge Spectrum

Instrument	Manufacturer	Model	Serial/Part Number	Calibration	
				Last Calibr.	Period
Spectrum Analyzer	HP	8593EM	3536A00120	February 26, 2008	1 year
Antenna- Log Periodic	A.H.System	SAS- 200/511	253	February 4, 2007	2 years

**Figure 12 Test Equipment Used**

## 8. Conducted Emission Test Data

### 8.1 Test Specification

0.15 - 30 MHz, FCC Part 15, Subpart C

### 8.2 Test Procedure

The E.U.T operation mode and test configuration are as described in Sections 3 and 4. In order to minimize background noise interference, the conducted emission testing was performed inside a shielded room, with the E.U.T placed on an 0.8 meter high wooden table, 0.4 meter from the room's vertical wall.

The E.U.T was powered from 115 V AC / 60 Hz via 50 Ohm / 50  $\mu$ Hn Line Impedance Stabilization Network (LISN) on the phase and neutral lines. The LISN's were grounded to the shielded room ground plane (floor), and were kept at least 0.8 meters from the nearest boundary of the E.U.T

The center of the E.U.T.'s AC cable was folded back and forth, in order to form a bundle less than 0.40 meters and a total cable length of 1 meter.

The effect of varying the position of the cables was investigated to find the configuration that produces maximum emission. The configuration tested is shown in the photograph, *Figure 5. Conducted Emission Test*.

The emission voltages at the LISN's outputs were measured using a computerized receiver, complying to CISPR 16 requirements. The specification limits are loaded to the receiver via a 3.5" floppy disk and are displayed on the receiver's spectrum display.

A frequency scan between 0.15 and 30 MHz was performed at 9 kHz I.F. band width, using peak detection.

The spectral components having the highest level on each line were measured using a quasi-peak and average detector.

### 8.3 Test Data

JUDGEMENT: Passed by 22.1 dB

The E.U.T met the requirements of the FCC Part 15, Sub-part C specification.

The margin between the emission levels and the specification limit is, in the worst case, 37.8 dB for the phase line at 25.17 MHz and 22.1 dB at 16.61 MHz for the neutral line.

The details of the highest emissions are given in *Figure 13* to *Figure 16*.

TEST PERSONNEL:

Tester Signature: 

Date: 25.05.2008

Typed/Printed Name: A. Sharabi

## Conducted Emission

E.U.T Description Baby Monitor Unit

Type Babysense6  
BS6 - OREZ 1

Serial Number: Not Designated

Specification: FCC Part 15, Sub-part C

Lead: Phase

Detectors: Peak, Quasi-peak, Average

Signal Number	Frequency (MHz)	Peak (dBuV)	QP (dBuV)	QP Delta L 1 (dB)	Avg (dBuV)	Av Delta L 2 (dB)	Corr (dB)
1	3.999920	11.6	8.9	-47.0	6.9	-39.1	0.0
2	16.610500	26.8			10.8	-39.2	0.0
3	16.610500	26.7	10.9	-49.2			0.0
4	23.069495	13.5	11.9	-48.1	11.1	-38.9	0.0
5	23.592000	11.1	6.6	-53.4	3.1	-46.9	0.0
6	25.165765	14.2	12.9	-47.1	12.2	-37.8	0.0
7	25.689775	10.8	9.1	-50.9	8.0	-42.0	0.0

**Figure 13. Detectors: Peak, AVERAGE .**

*Note: QP Delta/Av Delta refer 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.*

## Conducted Emission

E.U.T Description: Baby Monitor Unit  
 Type: Babysense6  
 BS6 - OREZ 1  
 Serial Number: Not Designated

Specification: FCC Part 15, Sub-part C

Lead: Phase

Detectors: Peak, Quasi-peak, Average

09:30:42 MAR 04, 2008

ACTV DET: PEAK  
 MEAS DET: PEAK QP AVG  
 MKR 29.58 MHz  
 10.06 dB $\mu$ V

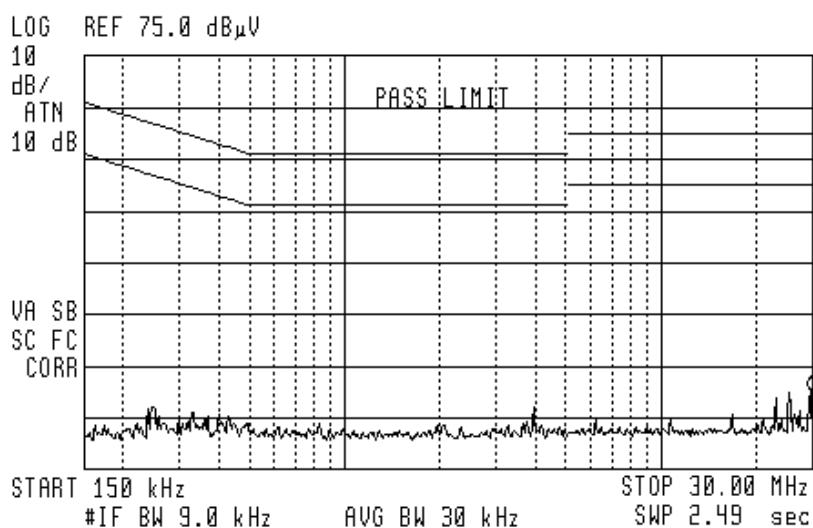


Figure 14. Detectors: Peak, Quasi-peak, Average

## Conducted Emission

E.U.T Description: Baby Monitor Unit  
 Type: Babysense6  
 Serial Number: Not Designated

Specification: FCC Part 15, Sub-part C

Lead: Neutral

Detectors: Peak, Quasi-peak, Average

Signal Number	Frequency (MHz)	Peak (dBuV)	QP (dBuV)	QP Delta L 1 (dB)	Avg (dBuV)	Av Delta L 2 (dB)	Corr (dB)
1	4.001285	12.3	8.9	-47.2	6.9	-39.1	0.0
2	16.610250	28.7			27.9	-22.1	0.0
3	16.610250	28.8	28.2	-31.8			0.0
4	23.069155	14.4	13.0	-47.0	12.4	-37.6	0.0
5	25.165270	16.0	15.1	-44.9	14.6	-35.4	0.0
6	25.166090	16.3	15.1	-44.9	14.7	-35.3	0.0
7	25.690690	13.4	11.7	-48.3	11.0	-39.0	0.0

**Figure 15. Detectors: Peak, AVERAGE**

*Note: QP Delta/Av Delta refer 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.*

## Conducted Emission

E.U.T Description: Baby Monitor Unit  
 Type: Babysense6  
 Serial Number: Not Designated

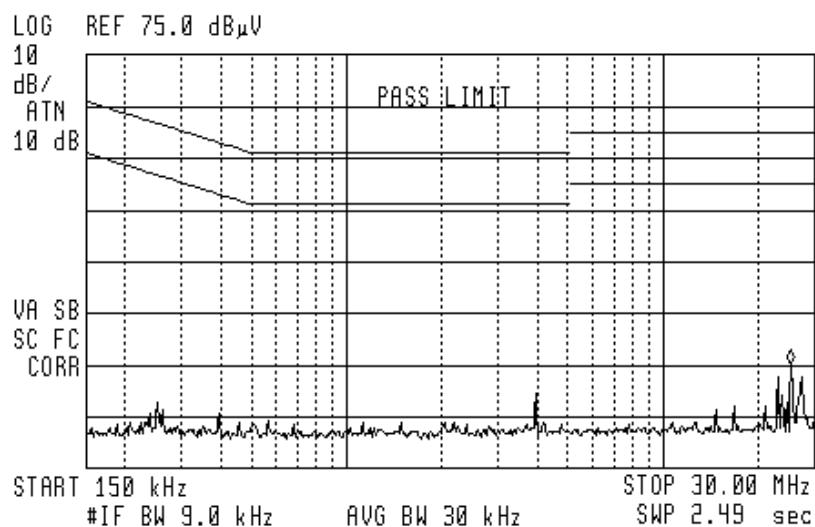
Specification: FCC Part 15, Sub-part C

Lead: Neutral

Detectors: Peak, Quasi-peak, Average

10:10:26 MAR 04, 2008

ACTV DET: PEAK  
 MEAS DET: PEAK QP AVG  
 MKR 25.13 MHz  
 14.95 dB $\mu$ V



**Figure 16 Conducted Emission: NEUTRAL**  
**Detectors: Peak, Quasi-peak, Average**

#### **8.4 Test Instrumentation Used, Conducted Measurement**

Instrument	Manufacturer	Model	Serial No.	Calibration	Period
LISN	Fischer	FCC-LISN-2A	127	March 8, 2008	1 Year
LISN	Fischer	FCC-LISN-2A	128	March 8, 2008	1 Year
EMI Receiver	HP	85422E	3906A00276	November 12, 2007	1 Year
RF Filter Section	HP	85420E	3705A00248	November 12, 2007	1 Year
Printer	HP	LaserJet 2200	JPKGC19982	N/A	N/A

## 9. Spurious Radiated Emission 30MHz-1000 MHz

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*.

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

The emissions were measured using a computerized EMI receiver complying to 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 30-1000 MHz, 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.

During this test the E.U.T. was operated in continuous transmission to enable better detection of signals.

### 9.1 Measured Data

JUDGEMENT: Passed by 9.1 dB

The results for both horizontal and vertical polarizations were the same.

The margin between the emission level and the specification limit is 9.1 dB in the worst case at the frequency of 37.19 MHz, vertical polarization.

The EUT met the requirements of the F.C.C. Part 15, Subparts B; C, Section 15.235 specification.

TEST PERSONNEL:

Tester Signature: 

Date: 25.05.2008

Typed/Printed Name: A. Sharabi

## Radiated Emission

E.U.T Description Baby Monitor Unit  
 Type Babysense6  
 BS6 - OREZ 1  
 Serial Number: Not Designated

Specification: FCC Part 15, Subpart C

Antenna Polarization: Horizontal  
 Antenna: 3 meters distance

Frequency range: 30 MHz to 1000 MHz  
 Detectors: Peak, Quasi-peak

Signal Number	Frequency (MHz)	Peak dBuV/m	QP dBuV/m	QP Delta L 1 (dB)	Avg dBuV/m	Av Delta L 2 (dB)	Corr (dB)
1	31.957700	30.1	24.8	-15.2			15.5
2	33.872200	34.5	24.3	-15.7			14.9
3	45.215700	27.5	21.2	-18.8			12.4

**Figure 17. Radiated Emission. Antenna Polarization: HORIZONTAL.  
 Detectors: Peak, Quasi-peak**

*Note: QP Delta 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.*

## Radiated Emission

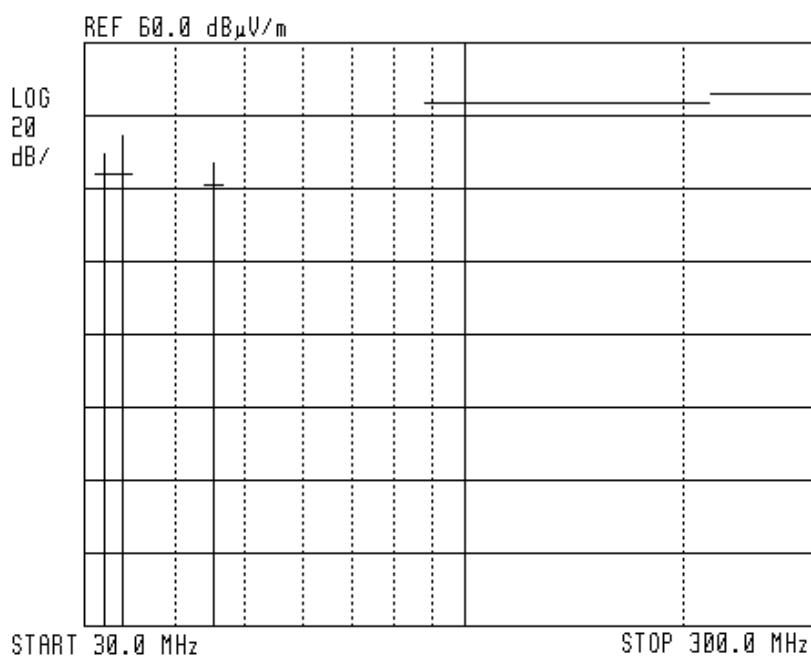
E.U.T Description Baby Monitor Unit  
 Type Babysense6  
 BS6 - OREZ 1  
 Serial Number: Not Designated

Specification: FCC Part 15, Subpart C

Antenna Polarization: Horizontal  
 Antenna: 3 meters distance

Frequency range: 30 MHz to 1000 MHz  
 Detectors: Peak, Quasi-peak

⌚ 10:22:54 MAR 02, 2008



**Figure 18. Radiated Emission. Antenna Polarization: HORIZONTAL  
 Detectors: Peak, Quasi-peak**

*Note:*

1. Horizontal axis shows logarithmic frequency scale.
2. The vertical axis shows amplitude (in dB  $\mu$ V/m).
3. Peak detection is designated by the top of each vertical line.
4. Quasi-peak detection is designated by the first dash mark (from the top) of each vertical line.

## Radiated Emission

E.U.T Description Baby Monitor Unit  
 Type Babysense6  
 BS6 - OREZ 1  
 Serial Number: Not Designated

Specification: FCC Part 15, Subpart C

Antenna Polarization: Vertical  
 Antenna: 3 meters distance

Frequency range: 30 MHz to 1000 MHz  
 Detectors: Peak, Quasi-peak

Signal Number	Frequency (MHz)	Peak dBuV/m	QP dBuV/m	QP Delta L 1 (dB)	Avg dBuV/m	Av Delta L 2 (dB)	Corr (dB)
1	35.993900	36.9	28.0	-12.1			14.4
2	37.190950	34.5	31.0	-9.1			14.1
3	74.184550	26.7	20.0	-20.0			10.3

**Figure 19. Radiated Emission. Antenna Polarization: VERTICAL.  
 Detectors: Peak, Quasi-peak**

*Note: QP Delta 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.*

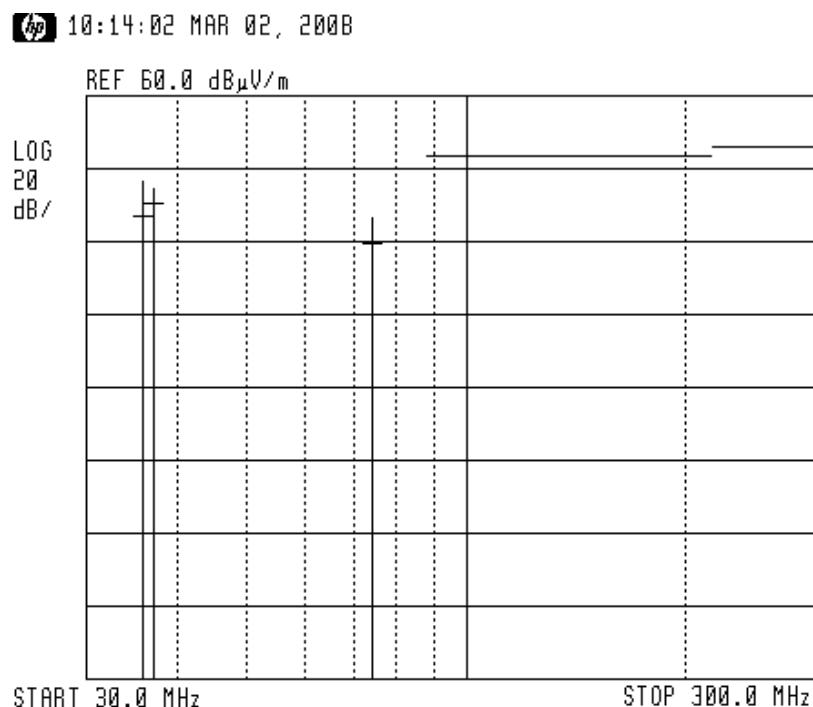
## Radiated Emission

E.U.T Description	Baby Monitor Unit
Type	Babysense6
	BS6 - OREZ 1
Serial Number:	Not Designated

## Specification: FCC Part 15, Subpart C

Antenna Polarization: Vertical  
Antenna: 3 meters distance

Frequency range: 30 MHz to 1000 MHz  
Detectors: Peak, Quasi-peak



**Figure 20. Radiated Emission. Antenna Polarization: VERTICAL  
Detectors: Peak, Quasi-peak**

*Note:*

1. Horizontal axis shows logarithmic frequency scale.
2. The vertical axis shows amplitude (in dB  $\mu$ V/m).
3. Peak detection is designated by the top of each vertical line.
4. Quasi-peak detection is designated by the first dash mark (from the top) of each vertical line.

## 9.2 **Test Instrumentation Used, Radiated Measurements**

Instrument	Manufacturer	Model	Serial Number	Last Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 12, 2007	1 year
RF Filter Section	HP	85420E	3705A00248	November 12, 2007	1 year
Antenna Bioconical	ARA	BCD 235/B	1041	March 23, 2008	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	November 22, 2007	1 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A

### 9.3 **Field Strength Calculation**

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

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

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

## 10. Photographs of Tested E.U.T.



**Figure 21** Front View



**Figure 22** Rear View



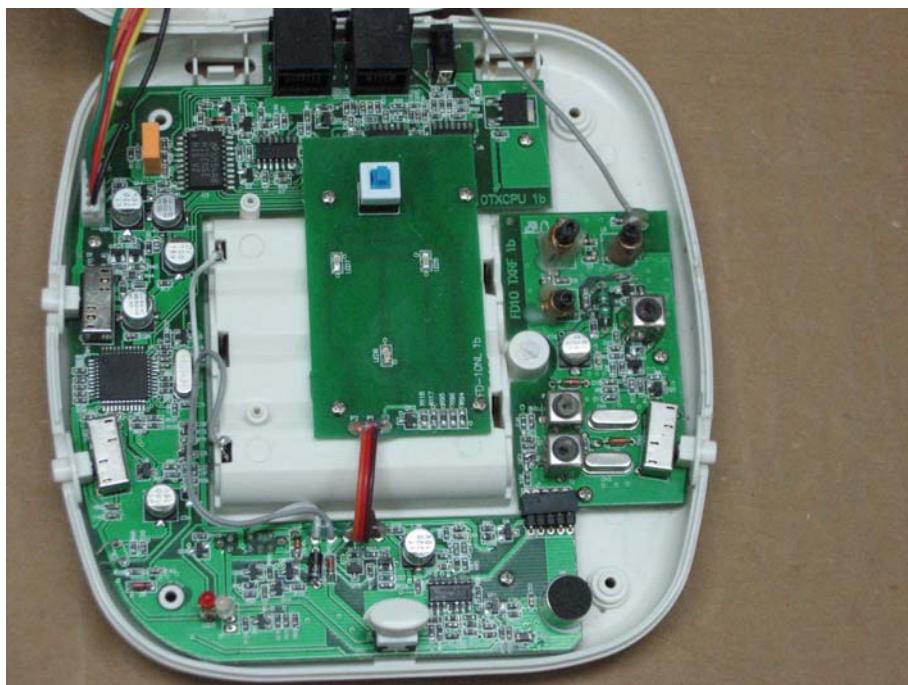
**Figure 23 Top View**



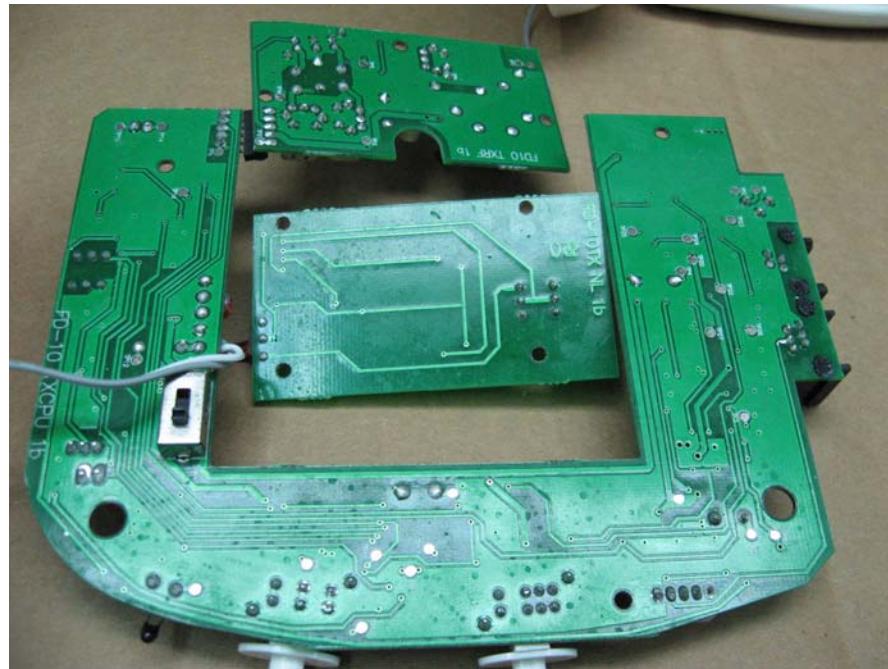
**Figure 24 Bottom View**



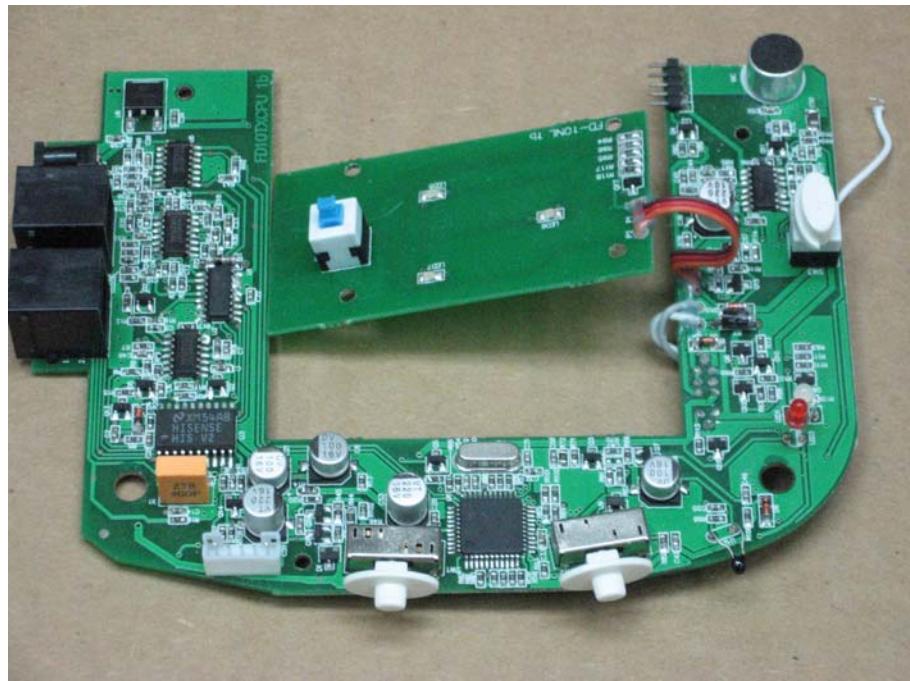
**Figure 25 Front Cover Internal View**



**Figure 26 PCB in Case**



**Figure 27 PCB Side 1**



**Figure 28 PCB Side 2**

## 11. APPENDIX A - CORRECTION FACTORS

### 11.1 Correction factors for

### CABLE

**from EMI receiver  
to test antenna  
at 3 meter range.**

FREQUENCY (MHz)	CORRECTION FACTOR (dB)	FREQUENCY (MHz)	CORRECTION FACTOR (dB)
10.0	0.5	1200.0	7.5
20.0	0.7	1400.0	8.2
30.0	1.0	1600.0	9.0
40.0	1.2	1800.0	9.6
50.0	1.3	2000.0	10.7
60.0	1.5	2300.0	11.1
70.0	1.6	2600.0	11.8
80.0	1.7	2900.0	12.8
90.0	1.8		
100.0	1.9		
150.0	2.4		
200.0	2.7		
250.0	3.0		
300.0	3.3		
350.0	3.7		
400.0	4.0		
450.0	4.3		
500.0	4.7		
600.0	4.9		
700.0	5.4		
800.0	5.8		
900.0	6.3		
1000.0	6.7		

### NOTES:

1. The cable type is RG-214.
2. The overall length of the cable is 27 meters.
3. The above data is located in file 27MO3MO.CBL on the disk marked "Radiated Emission Tests EMI Receiver".

## 11.2 Correction factors for

### CABLE

from EMI receiver  
to test antenna  
at 3 meter range.

FREQUENCY CORRECTION FACTOR	
(GHz)	(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.

### 11.3 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.

#### 11.4 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	11.4
400.0	14.5
500.0	15.2
600.0	17.3
700.0	19.0
850.0	20.1
1000.0	22.2

##### Distance of 10 meters

FREQUENCY (MHz)	AFE (dB/m)
200.0	9.0
250.0	10.1
300.0	11.2
400.0	14.4
500.0	15.2
600.0	17.2
700.0	19.0
850.0	20.1
1000.0	22.1

##### NOTES:

1. Antenna serial number is 1038.
2. The above lists are located in file number 38M30.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".

## 11.5 Correction factors for

### LOG PERIODIC ANTENNA

Type SAS-200/511  
at 3 meter range.

FREQUENCY (GHz)	ANTENNA FACTOR (dB)
1.0	24.9
1.5	27.8
2.0	29.9
2.5	31.2
3.0	32.8
3.5	33.6
4.0	34.3
4.5	35.2
5.0	36.2
5.5	36.7
6.0	37.2
6.5	38.1

FREQUENCY (GHz)	ANTENNA FACTOR (dB)
7.0	38.6
7.5	39.2
8.0	39.9
8.5	40.4
9.0	40.8
9.5	41.1
10.0	41.7
10.5	42.4
11.0	42.5
11.5	43.1
12.0	43.4
12.5	44.4
13.0	44.6

#### NOTES:

1. Antenna serial number is 253.
2. The above lists are located in file number SAS3M0.ANT for a 3 meter range.
3. The files mentioned above are located on the disk marked "Antenna Factors".

**11.6 Correction factors for**

**BICONICAL ANTENNA**  
**Type BCD-235/B,**  
**at 3 meter range**

FREQUENCY (MHz)	AFE (dB/m)
20.0	19.4
30.0	14.8
40.0	11.9
50.0	10.2
60.0	9.1
70.0	8.5
80.0	8.9
90.0	9.6
100.0	10.3
110.0	11.0
120.0	11.5
130.0	11.7
140.0	12.1
150.0	12.6
160.0	12.8
170.0	13.0
180.0	13.5
190.0	14.0
200.0	14.8
210.0	15.3
220.0	15.8
230.0	16.2
240.0	16.6
250.0	17.6
260.0	18.2
270.0	18.4
280.0	18.7
290.0	19.2
300.0	19.9
310	20.7
320	21.9
330	23.4
340	25.1
350	27.0

*NOTES:*

1. Antenna serial number is 1041.
2. The above list is located in file 19BC10M1.ANT on the disk marked "Radiated Emissions Tests EMI Receiver".