

EXHIBIT 4

Test Report

Test Report

ACS-F07134

APPLICATION FOR CERTIFICATION

On Behalf of

Qingdao Haier Intelligent Electronics Co., Ltd.

Smart Senteo

Model Number: 03-00098-20

Prepared for : Qingdao Haier Intelligent Electronics Co., Ltd.
No.99 Chongqing South Road, Qingdao, China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F07134
Date of Test : Feb. 06 ~ 10, 2007
Date of Report : Apr. 20, 2007

TABLE OF CONTENTS

Description	Page
FCC Test Report for Declaration of Conformity	
1. SUMMARY OF STANDARDS AND RESULTS.....	1-4
1.1. Description of Standards and Results	1-4
2. GENERAL INFORMATION	2-1
2.1. Description of Device (EUT).....	2-1
2.2. Test Facility	2-2
2.3. Measurement Uncertainty	2-2
3. POWER LINE CONDUCTED EMISSION TEST.....	3-1
4. RADIATED EMISSION TEST	4-1
4.1. Test Equipment	4-1
4.2. Block Diagram of Test Setup.....	4-1
4.3. Radiated Emission Limit.....	4-2
4.4. EUT Configuration on Test.....	4-2
4.5. Operating Condition of EUT.....	4-3
4.6. Test Procedure.....	4-3
4.7. Radiated Emission Test Results	4-3
5. 6DB BANDWIDTH TEST	5-1
5.1. Test Equipment	5-1
5.2. Test Information	5-1
5.3. Test Results	5-1
6. OUTPUT POWER TEST.....	6-1
6.1. Test Equipment	6-1
6.2. Test Information	6-1
6.3. Test Procedure.....	6-1
6.4. Test Results	6-1
7. BAND EDGE COMPLIANCE TEST.....	7-1
7.1. Test Equipment	7-1
7.2. Test Information	7-1
7.3. Test Results	7-1
8. POWER SPECTRAL DENSITY TEST	8-3
8.1. Test Equipment	8-3
8.2. Test Information	8-3
8.3. Test Procedure.....	8-3
8.4. Test Results	8-3
9. MPE ESTIMATION.....	9-1
9.1. Limit for General Population / Uncontrolled Exposures	9-1
9.2. Estimation Result	9-1
10. DEVIATION TO TEST SPECIFICATIONS.....	10-1
11. PHOTOGRAPH.....	11-1
11.1. Photos of Radiated Emission Test.....	11-1

TEST REPORT DECLARATION

Applicant : Qingdao Haier Intelligent Electronics Co., Ltd.
Manufacturer : Qingdao Haier Intelligent Electronics Co., Ltd.
EUT Description : Smart Senteo
(A) MODEL NO. : 03-00098-20
(B) SERIAL NO. : N/A
(C) POWER SUPPLY : DC 3V

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2006

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both radiated and conducted emissions.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

This report must not be used by the applicant to claim product endorsement by NVLAP or any agency of the U.S. Government.

Date of Test : Feb. 06 ~ 10, 2007

Prepared by : YoYo Wang / Assistant

Reviewer : Iceman Hu / Senior Engineer

Approved & Authorized Signer : Ken Lu / Deputy Manager

Name of the Representative of the Responsible Party :

Signature :

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003	N/A
Radiated Emission Test	FCC Part 15: 15.209 ANSI C63.4: 2003	PASS
6dB Bandwidth Test	FCC Part 15: 15.247	PASS
Output Power Test	FCC Part 15: 15.247	PASS
Band Edge Compliance Test	FCC Part 15: 15.247	PASS
Power Spectral Density Test	FCC Part 15: 15.247	PASS
MPE ESTIMATION	FCC Part 2: 2.1093	PASS
N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description	:	Smart Senteo
Model Number	:	03-00098-20
Operation frequency	:	2.4GHz-----2.4835GHz ISM Band
Channel Number	:	16
Channel frequency	:	$F = 2405 + 5 (k-11) \text{ MHz}$, $k=11, 12 \dots 26$
Radio Technology	:	IEEE 802.15.4(Zigbee)
Modulation Technology	:	DSSS modulation
Output power	:	-15.11dBm (measured)
Antenna	:	Integral antenna
Power	:	DC 3V (see note)
Antenna Assembly Gain	:	3dB (maximum)
Applicant	:	Qingdao Haier Intelligent Electronics Co., Ltd. No.99 Chongqing South Road, Qingdao, China
Manufacturer	:	Qingdao Haier Intelligent Electronics Co., Ltd. No.99 Chongqing South Road, Qingdao, China
Date of Test	:	Feb.06~10, 2007

Note: Each test was performed using new batteries

2.2. Test Facility

Site Description	
3m Anechoic Chamber	: Certified by FCC, USA Registration Number: 90454 Jun. 13, 2006
3m & 10m Anechoic Chamber	: Certified by FCC, USA Registration Number: 794232 Jan. 31, 2007
EMC Lab.	: Certified by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2004
	Certified by NVLAP, USA NVLAP Code: 200372-0 Apr. 01, 2006
	Certified by Nemko, Norway Aut. No.: ELA135 April. 22, 2004
	Certified by Industry Canada Registration Number: IC 5183 Jul. 28, 2004
Name of Firm	: Audix Technology (Shenzhen) Co., Ltd.
Site Location	: No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

2.3. Measurement Uncertainty

No.	Item	Uncertainty	Remark
1.	Uncertainty for Conducted Emission Test	1.22dB	
2.	Uncertainty for Radiated Emission Test	3.14dB	3m Chamber
3.	Uncertainty for Radiated Emission Test	3.18dB	10m Chamber
4.	Uncertainty for Power Clamp Test	1.38dB	

3. POWER LINE CONDUCTED EMISSION TEST

According to Paragraph (f) of FCC Part 15C , Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

4. RADIATED EMISSION TEST

4.1. Test Equipment

The following test equipments are used during the radiated emission test:

4.1.1. For Anechoic Chamber

Frequency rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Spectrum	HP	85422E	3625A00181	May 15, 06	1 Year
2.	Test Receiver	Rohde & Schwarz	ESVS20	830350/005	May 15, 06	1 Year
3.	Amplifier	HP	8447D	2944A07794	Mar.12, 07	1/2 Year
4.	Bilog Antenna	Schaffner	CBL6111C	2598	Feb.22, 07	1 Year
5.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.1	Jan. 18, 07	1/2 Year
6.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.2	Jan. 18, 07	1/2 Year
7.	RF Cable	FUJIKURAw	RG-55/U	3# Chamber No.3	Jan. 18, 07	1/2 Year
8.	RF Cable	FUJIKURA	RG-55/U	3# Chamber No.4	Jan. 18, 07	1/2 Year
9.	Coaxial Switch	Anritsu	MP59B	M73989	Jan. 18, 07	1/2 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 15, 06	1 Year
2.	Amp	HP	8449B	3008A00863	May 15, 06	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 15, 06	1 Year

4.2. Block Diagram of Test Setup

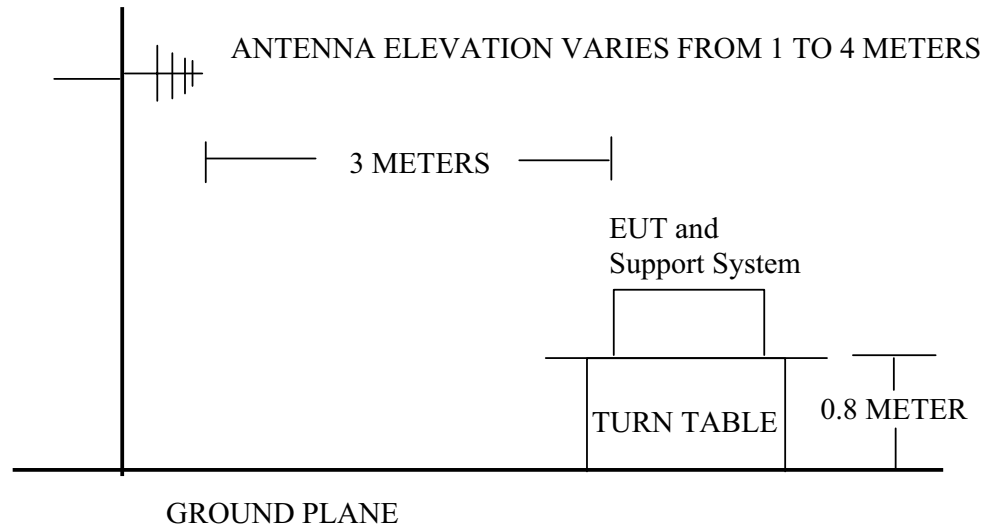
4.2.1. Block diagram of connection between the EUT and simulators



(EUT: Smart Senteo)

4.2.2. In Anechoic Chamber

ANTENNA TOWER



4.3. Radiated Emission Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

- Remark :
- (1) Emission level $\text{dB}\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.4.1. Smart Senteo (EUT)

Model Number : 03-00098-20
 Serial Number : N/A
 Manufacturer : Qingdao Haier Intelligent Electronics Co., Ltd.

4.5.Operating Condition of EUT

4.5.1.Setup the EUT as shown in Section 4.2..

4.5.2.Let the EUT work in test mode (TX) and test it.

4.6.Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it work normally, we use a keyboard test soft ware, let EUT working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position

The bandwidth of the EMI test receiver (R&S ESVS20) is set at 120kHz.

frequency range from 30MHz to 1000 MHz.

The bandwidth of the VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW 10Hz VBW for average emission above 1GHz

The frequency range from 30MHz to 10th harmonic are checked.

The test modes (TX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported with antenna in horizontal and vertical polarization on Section 4.7.

4.7.Radiated Emission Test Results

PASS.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

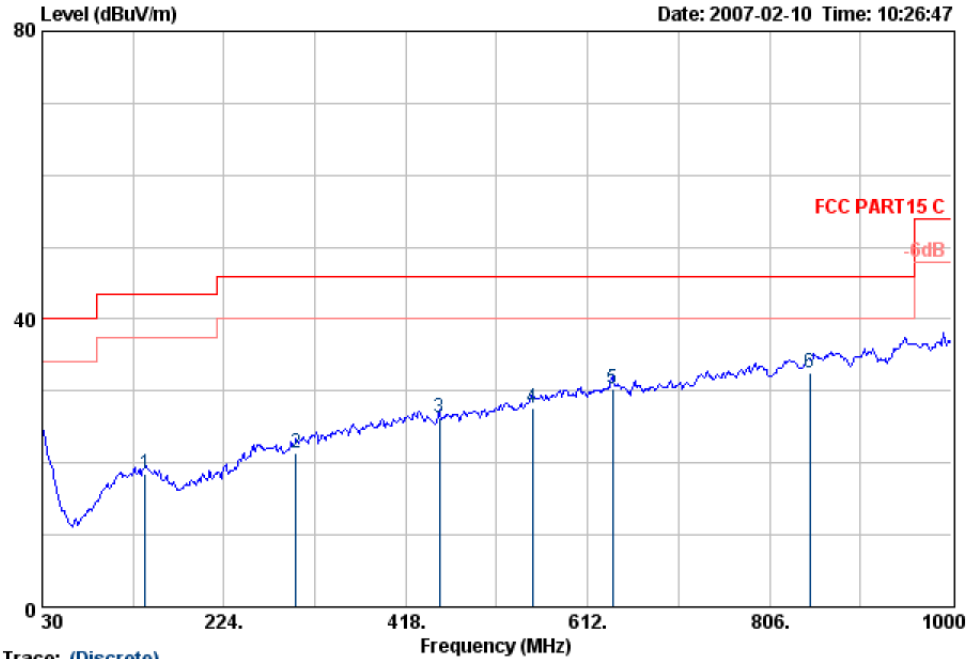
All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector with 10Hz VBW above 1GHz

All the emissions except fundamental from 18GHz~24GHz are at least 20dB below the limit, and do not record.



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou, ShenZhen, GuangDong, China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 2 File: D:\2007 Report\Z\Zigbee\Zigbee.EMI (12)



Trace: (Discrete)

Site no. : Audix 3# Chamber Data no. : 2
Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : HORIZONTAL
Limit : FCC PART15 C
Env. / Ins. : 25°C/55% ESVS20 Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : Tx mode

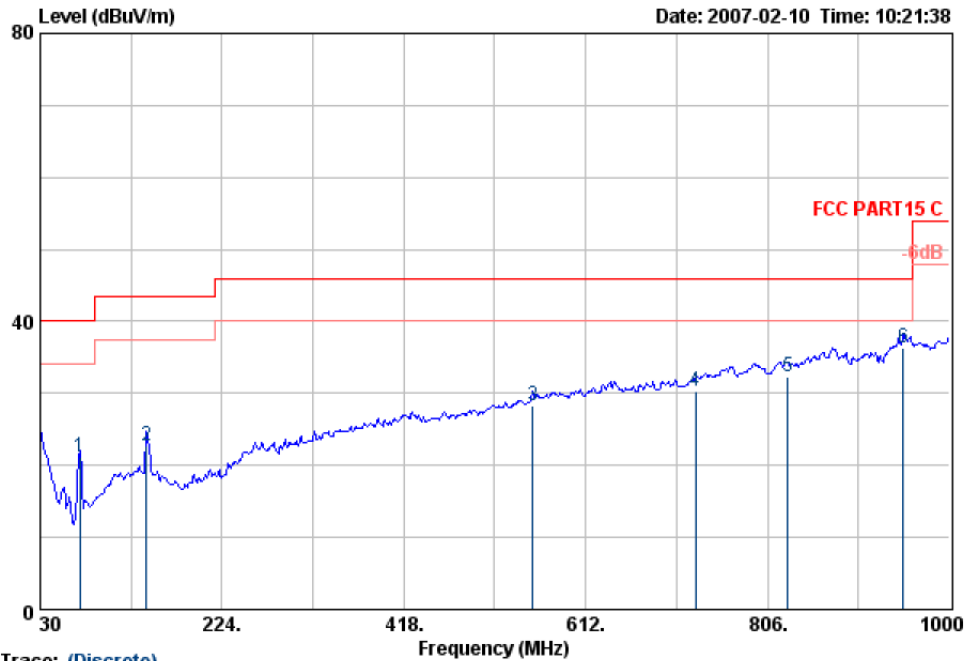
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission			Remark
					Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	139.61	12.10	2.81	3.60	18.51	43.50	24.99	QP
2	300.63	13.80	4.13	3.48	21.41	46.00	24.59	QP
3	453.89	17.16	5.13	4.11	26.40	46.00	19.60	QP
4	552.83	18.88	5.69	2.98	27.55	46.00	18.45	QP
5	638.19	20.24	6.03	3.96	30.23	46.00	15.77	QP
6	848.68	22.76	6.92	2.83	32.51	46.00	13.49	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 1 File: D:\2007 Report\Z\Zigbee\Zigbee.EMI (12)



Trace: (Discrete)

Site no. : Audix 3# Chamber Data no. : 1
Dis. / Ant. : 3m 2769FACTOR3M Ant. pol. : VERTICAL
Limit : FCC PART15 C
Env. / Ins. : 25°C/55% ESVS20 Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : Tx mode

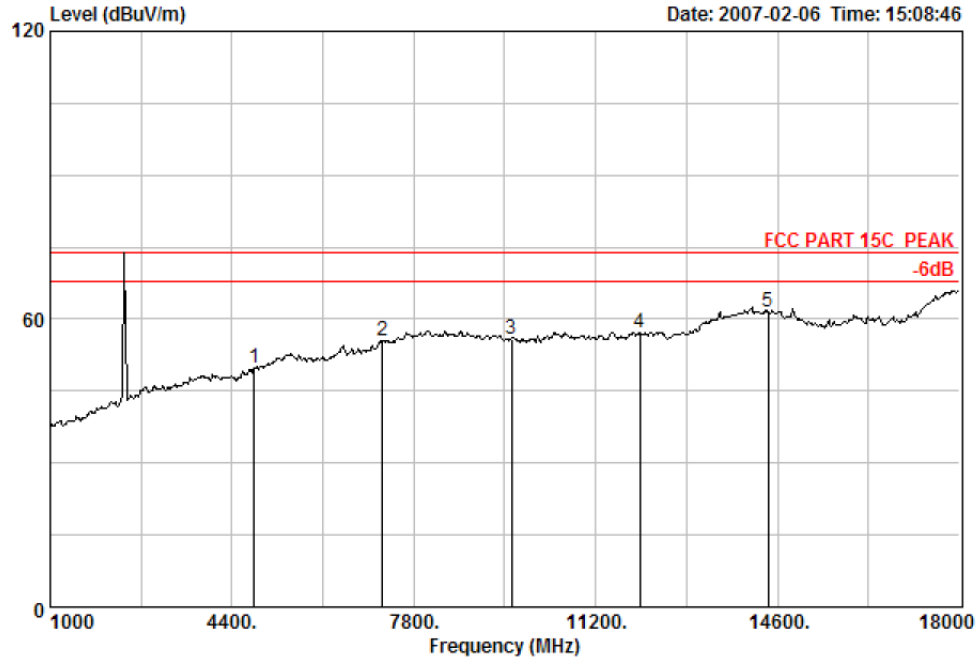
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission			Margin	Remark
					Level (dBuV/m)	Limits (dBuV/m)	(dB)		
1	72.68	6.84	1.93	12.37	21.14	40.00	18.86	QP	
2	143.49	11.90	2.82	7.99	22.71	43.50	20.79	QP	
3	555.74	19.08	5.71	3.47	28.26	46.00	17.74	QP	
4	729.37	21.25	6.80	2.18	30.23	46.00	15.77	QP	
5	827.34	22.20	7.38	2.76	32.34	46.00	13.66	QP	
6	950.53	24.22	8.01	4.14	36.37	46.00	9.63	QP	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 1 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 1
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1

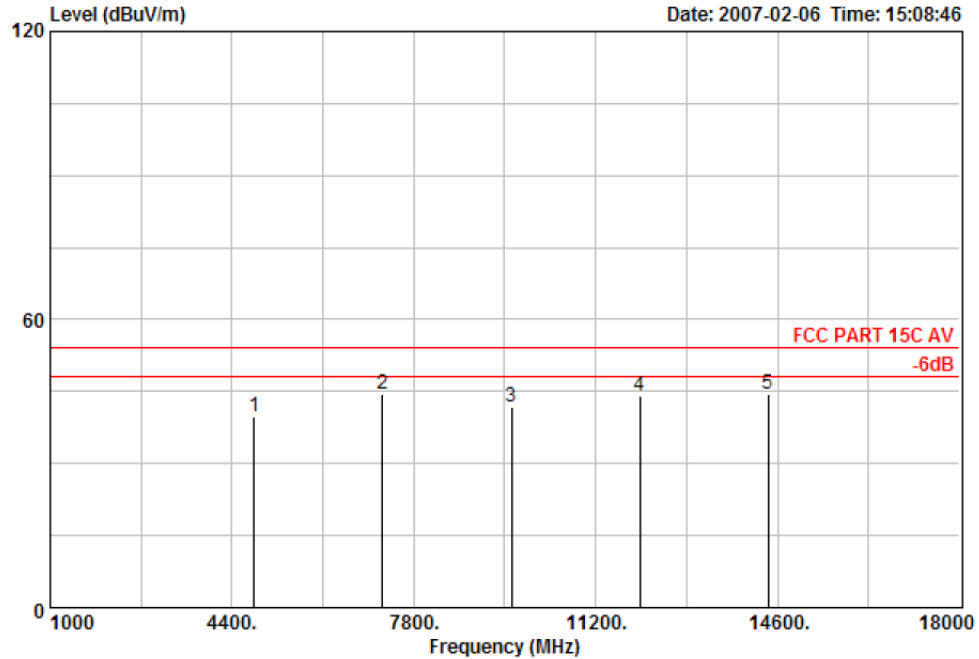
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4810.00	33.98	9.55	34.50	40.83	49.86	74.00	24.14	Peak
2	7215.00	37.36	10.77	34.44	41.81	55.50	74.00	18.50	Peak
3	9620.00	38.13	11.54	35.90	42.14	55.91	74.00	18.09	Peak
4	12025.00	39.55	11.84	36.39	42.04	57.04	74.00	16.96	Peak
5	14430.00	42.24	12.42	35.49	42.34	61.51	74.00	12.49	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 35 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 35
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1

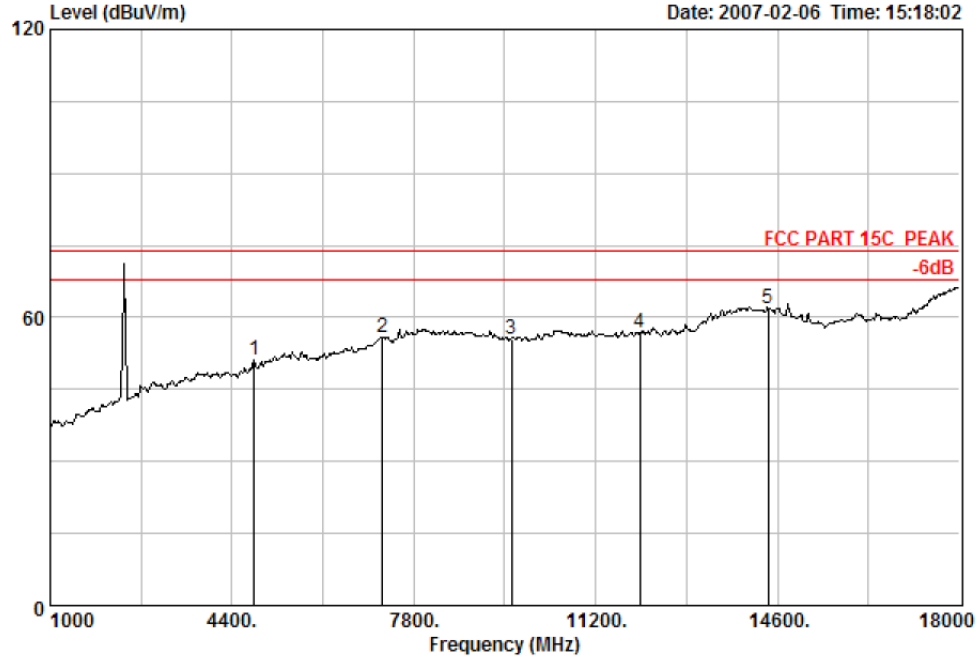
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4810.00	33.98	9.55	34.50	30.83	39.86	54.00	14.14	Average
2	7215.00	37.36	10.77	34.44	30.81	44.50	54.00	9.50	Average
3	9620.00	38.13	11.54	35.90	28.14	41.91	54.00	12.09	Average
4	12025.00	39.55	11.84	36.39	29.04	44.04	54.00	9.96	Average
5	14430.00	42.24	12.42	35.49	25.34	44.51	54.00	9.49	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 2 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 2
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1

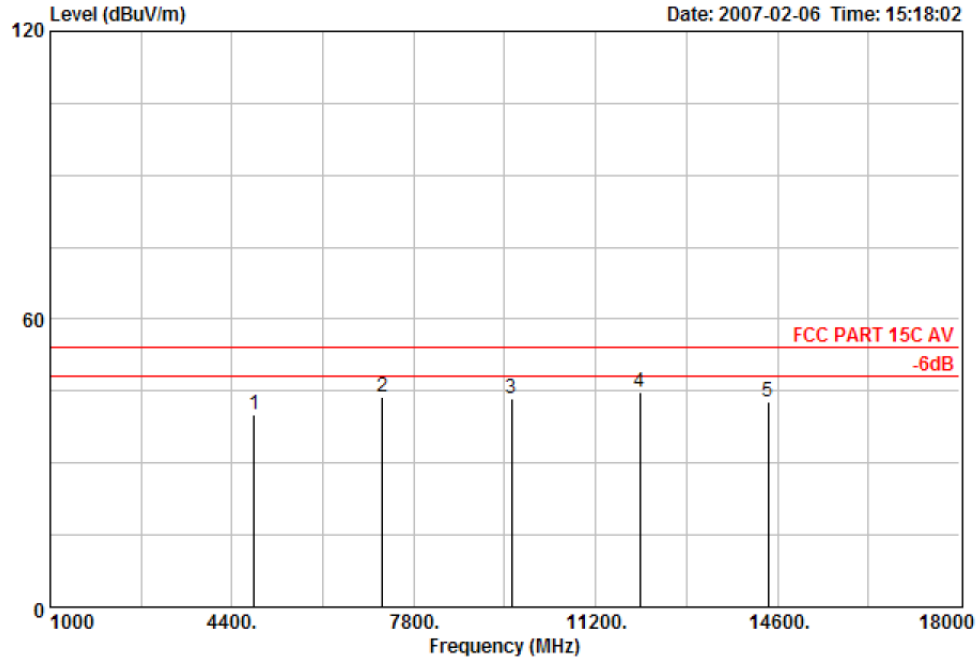
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4810.00	33.98	9.55	34.50	42.05	51.08	74.00	22.92	Peak
2	7215.00	37.36	10.77	34.44	42.09	55.78	74.00	18.22	Peak
3	9620.00	38.13	11.54	35.90	41.83	55.60	74.00	18.40	Peak
4	12025.00	39.55	11.84	36.39	41.69	56.69	74.00	17.31	Peak
5	14430.00	42.24	12.42	35.49	42.75	61.92	74.00	12.08	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 36 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 36
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1

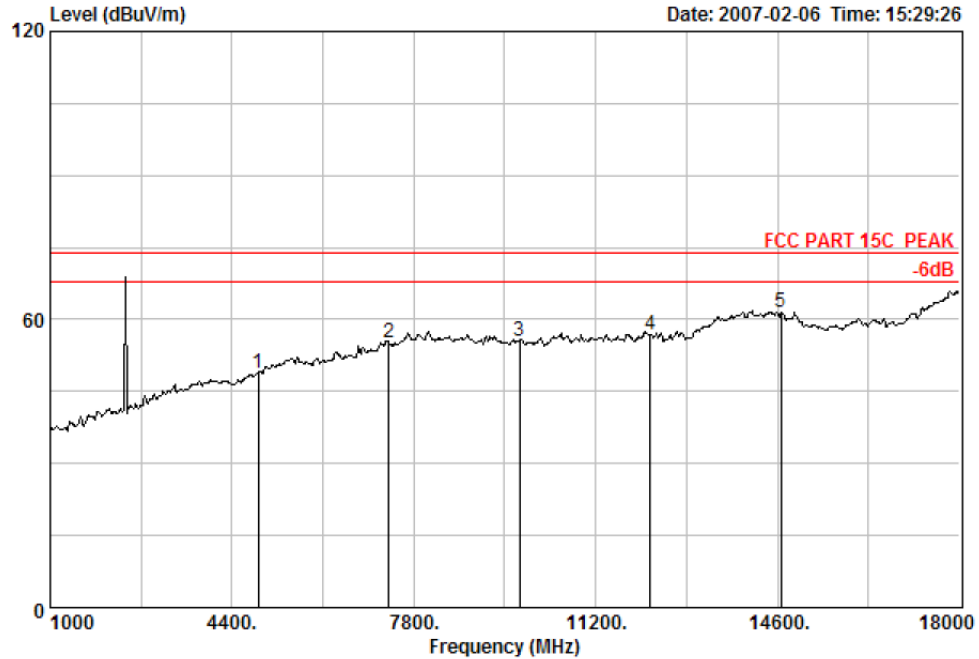
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4810.00	33.98	9.55	34.50	31.05	40.08	54.00	13.92	Average
2	7215.00	37.36	10.77	34.44	30.09	43.78	54.00	10.22	Average
3	9620.00	38.13	11.54	35.90	29.83	43.60	54.00	10.40	Average
4	12025.00	39.55	11.84	36.39	29.69	44.69	54.00	9.31	Average
5	14430.00	42.24	12.42	35.49	23.75	42.92	54.00	11.08	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 4 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 4
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9

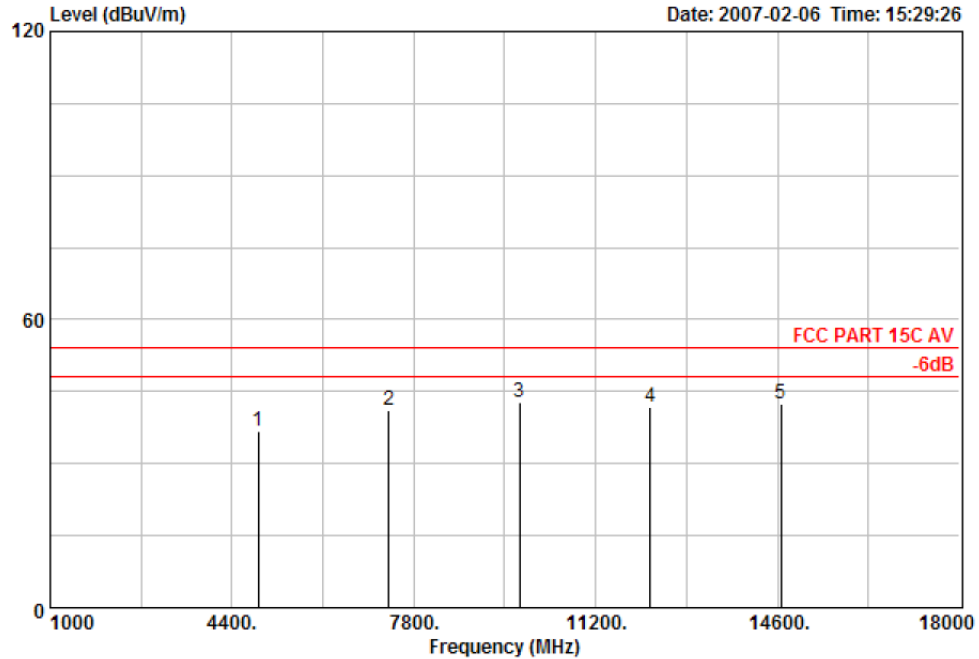
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4890.00	34.20	9.71	34.48	39.46	48.89	74.00	25.11	Peak
2	7335.00	37.55	10.83	34.47	41.27	55.18	74.00	18.82	Peak
3	9780.00	38.01	11.55	36.02	42.11	55.65	74.00	18.35	Peak
4	12225.00	39.47	11.70	36.32	42.00	56.85	74.00	17.15	Peak
5	14670.00	41.78	12.28	35.36	42.83	61.53	74.00	12.47	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode: 518057

Data: 38 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 38
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9

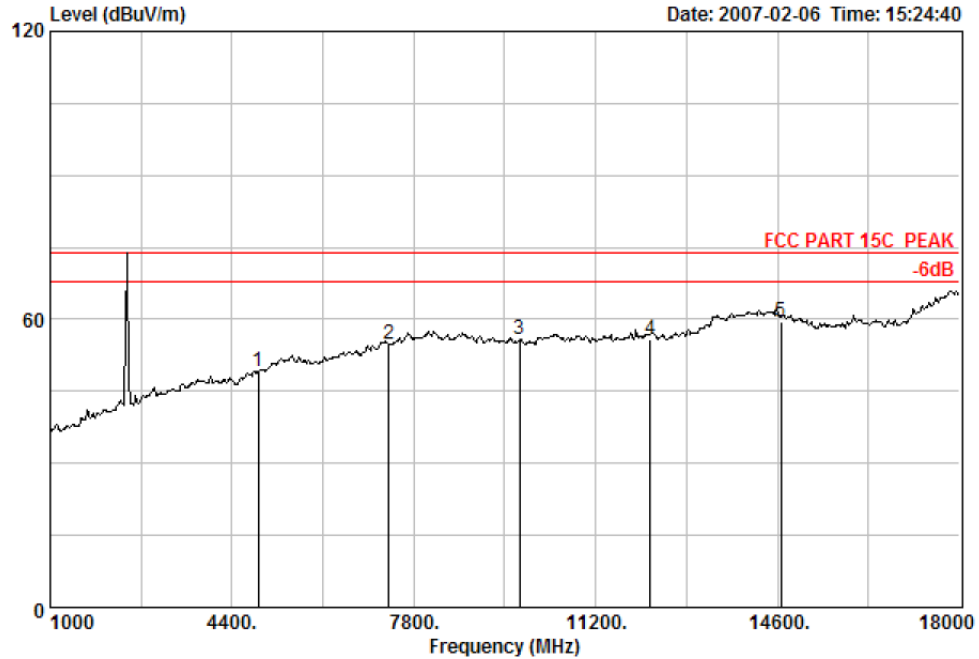
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4890.00	34.20	9.71	34.48	27.46	36.89	54.00	17.11	Average
2	7335.00	37.55	10.83	34.47	27.27	41.18	54.00	12.82	Average
3	9780.00	38.01	11.55	36.02	29.11	42.65	54.00	11.35	Average
4	12225.00	39.47	11.70	36.32	27.00	41.85	54.00	12.15	Average
5	14670.00	41.78	12.28	35.36	23.83	42.53	54.00	11.47	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 3 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 3
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9

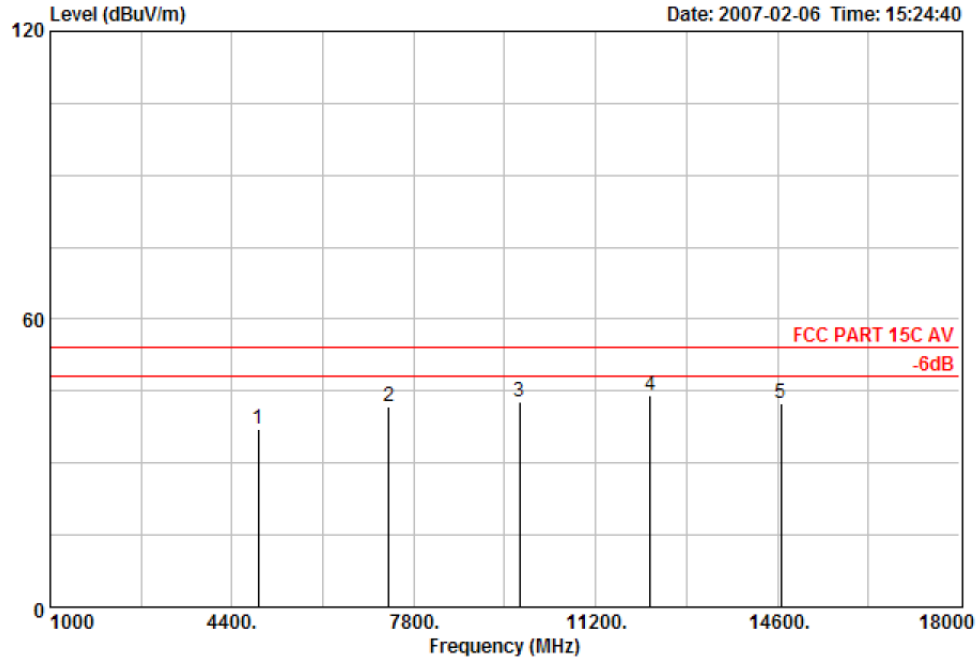
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4890.00	34.20	9.71	34.48	39.73	49.16	74.00	24.84	Peak
2	7335.00	37.55	10.83	34.47	40.93	54.84	74.00	19.16	Peak
3	9780.00	38.01	11.55	36.02	42.17	55.71	74.00	18.29	Peak
4	12225.00	39.47	11.70	36.32	41.12	55.97	74.00	18.03	Peak
5	14670.00	41.78	12.28	35.36	40.76	59.46	74.00	14.54	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 37 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 37
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9

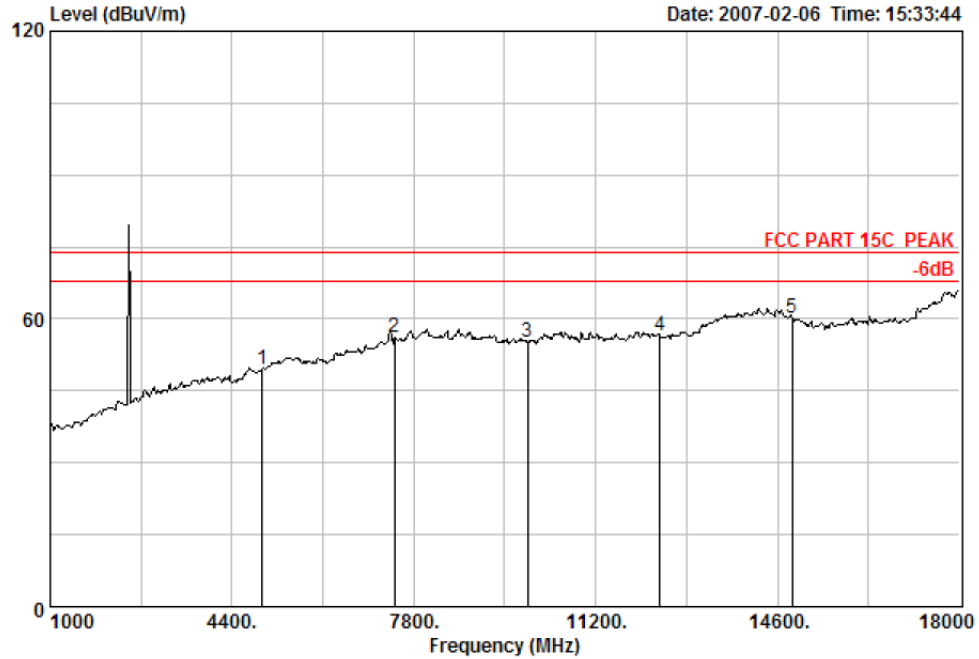
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4890.00	34.20	9.71	34.48	27.73	37.16	54.00	16.84	Average
2	7335.00	37.55	10.83	34.47	27.93	41.84	54.00	12.16	Average
3	9780.00	38.01	11.55	36.02	29.17	42.71	54.00	11.29	Average
4	12225.00	39.47	11.70	36.32	29.12	43.97	54.00	10.03	Average
5	14670.00	41.78	12.28	35.36	23.76	42.46	54.00	11.54	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 5 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 5
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

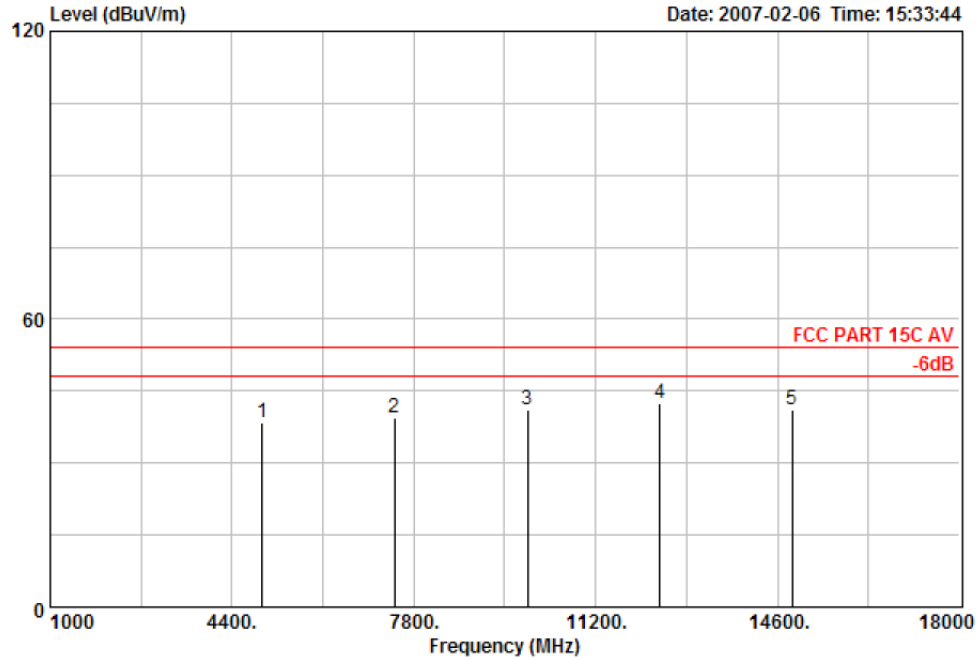
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	34.38	9.86	34.46	39.77	49.55	74.00	24.45	Peak
2	7440.00	37.72	10.90	34.49	42.17	56.30	74.00	17.70	Peak
3	9920.00	37.89	11.56	36.14	41.85	55.16	74.00	18.84	Peak
4	12400.00	39.38	11.58	36.26	41.79	56.49	74.00	17.51	Peak
5	14880.00	41.15	12.14	35.26	42.16	60.19	74.00	13.81	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 39 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 39
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

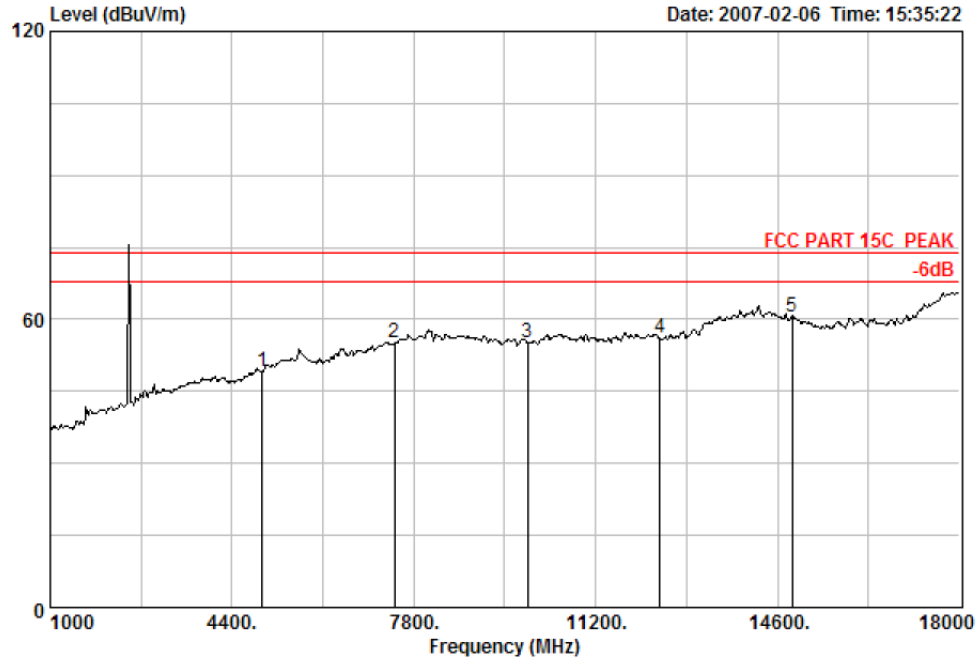
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	34.38	9.86	34.46	28.77	38.55	54.00	15.45	Average
2	7440.00	37.72	10.90	34.49	25.17	39.30	54.00	14.70	Average
3	9920.00	37.89	11.56	36.14	27.85	41.16	54.00	12.84	Average
4	12400.00	39.38	11.58	36.26	27.79	42.49	54.00	11.51	Average
5	14880.00	41.15	12.14	35.26	23.16	41.19	54.00	12.81	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode:518057

Data: 6 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 6
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

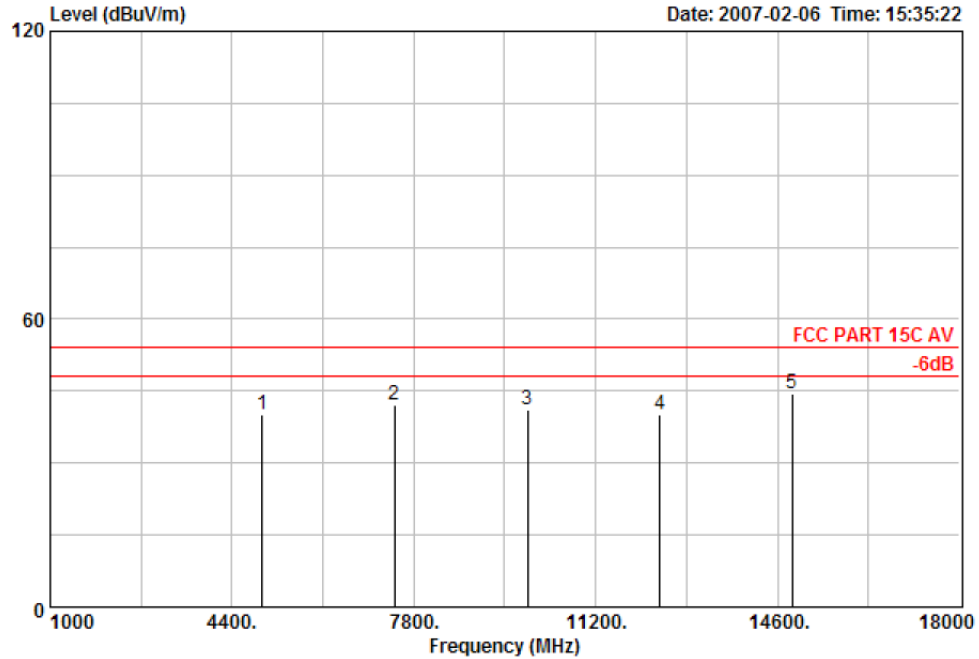
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	34.38	9.86	34.46	39.20	48.98	74.00	25.02	Peak
2	7440.00	37.72	10.90	34.49	40.89	55.02	74.00	18.98	Peak
3	9920.00	37.89	11.56	36.14	41.77	55.08	74.00	18.92	Peak
4	12400.00	39.38	11.58	36.26	41.32	56.02	74.00	17.98	Peak
5	14880.00	41.15	12.14	35.26	42.55	60.58	74.00	13.42	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1;ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode: 518057

Data: 40 File: D:\2007 Report\Zigbee\20HRE.EMI (40)



Site no. : Audix No.1 Chamber Data no. : 40
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

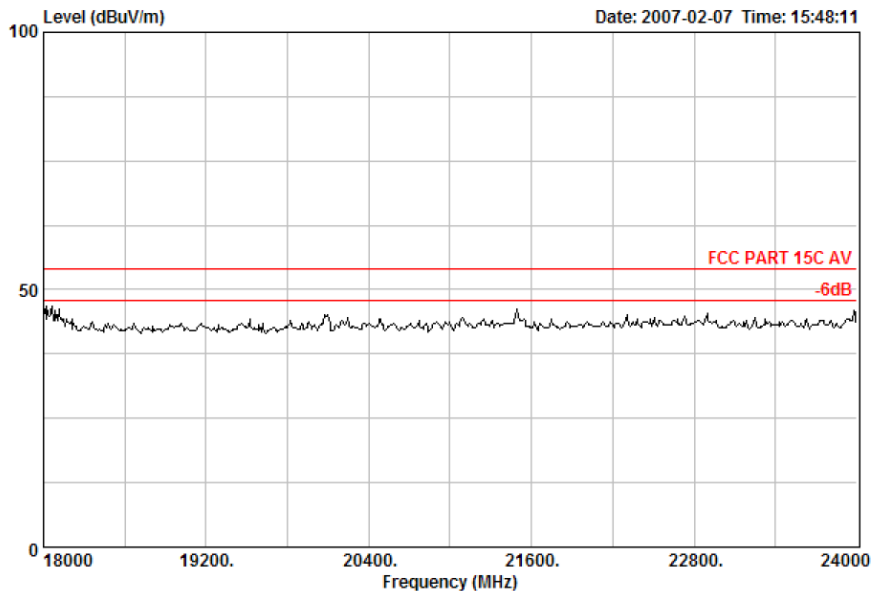
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4960.00	34.38	9.86	34.46	30.20	39.98	54.00	14.02	Average
2	7440.00	37.72	10.90	34.49	27.89	42.02	54.00	11.98	Average
3	9920.00	37.89	11.56	36.14	27.77	41.08	54.00	12.92	Average
4	12400.00	39.38	11.58	36.26	25.32	40.02	54.00	13.98	Average
5	14880.00	41.15	12.14	35.26	26.55	44.58	54.00	9.42	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



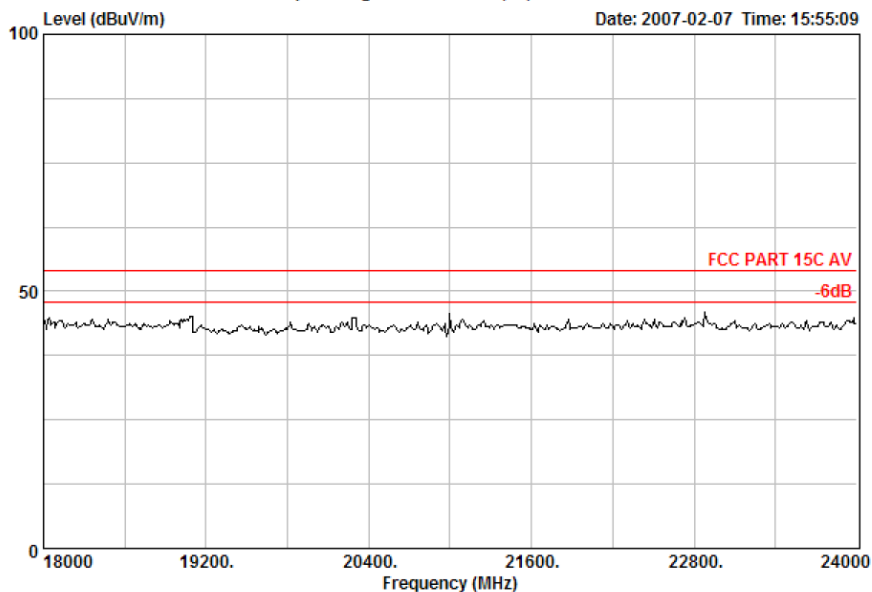
No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 13 File: D:\2007 Report\Zigbee\20HRE.EMI (48) Date: 2007-02-07 Time: 15:48:11



Site no. : 1# Chamber Data no. : 13
Dis. / Ant. : 3m 3115FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1

Data: 14 File: D:\2007 Report\Zigbee\20HRE.EMI (48) Date: 2007-02-07 Time: 15:55:09



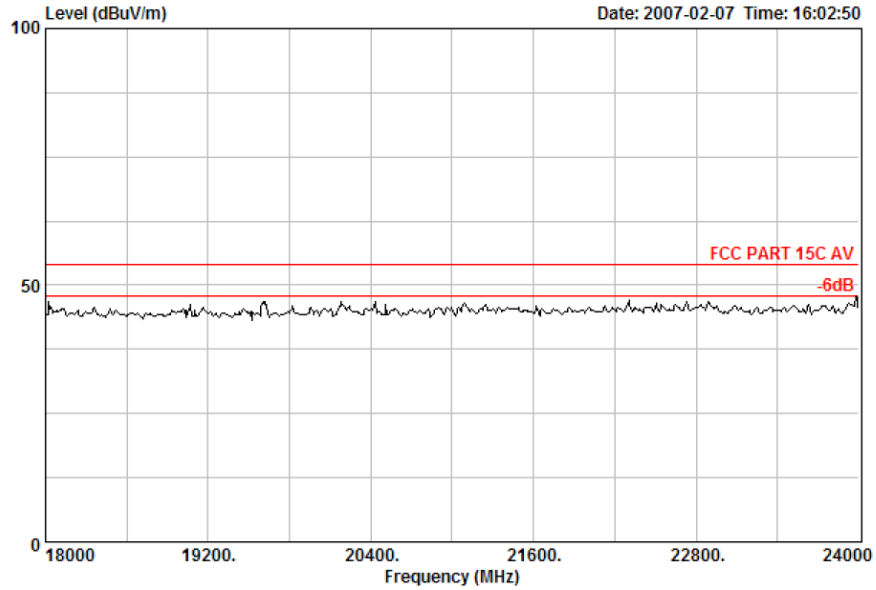
Site no. : 1# Chamber Data no. : 14
Dis. / Ant. : 3m 3115FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 15 File: D:\2007 Report\Zigbee\20HRE.EMI (48)

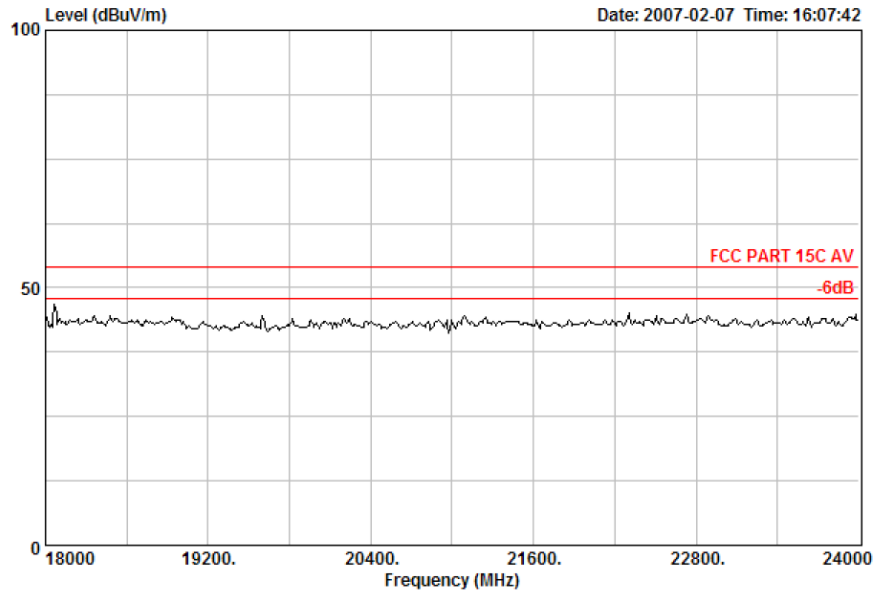
Date: 2007-02-07 Time: 16:02:50



Site no. : 1# Chamber Data no. : 15
Dis. / Ant. : 3m 3115FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9

Data: 16 File: D:\2007 Report\Zigbee\20HRE.EMI (48)

Date: 2007-02-07 Time: 16:07:42



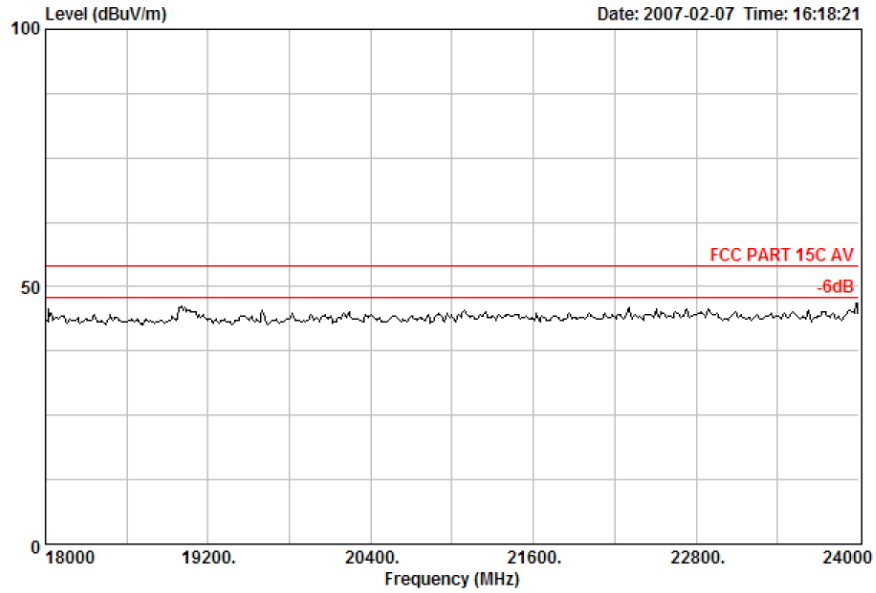
Site no. : 1# Chamber Data no. : 16
Dis. / Ant. : 3m 3115FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 17 File: D:\2007 Report\Zigbee\20HRE.EMI (48)

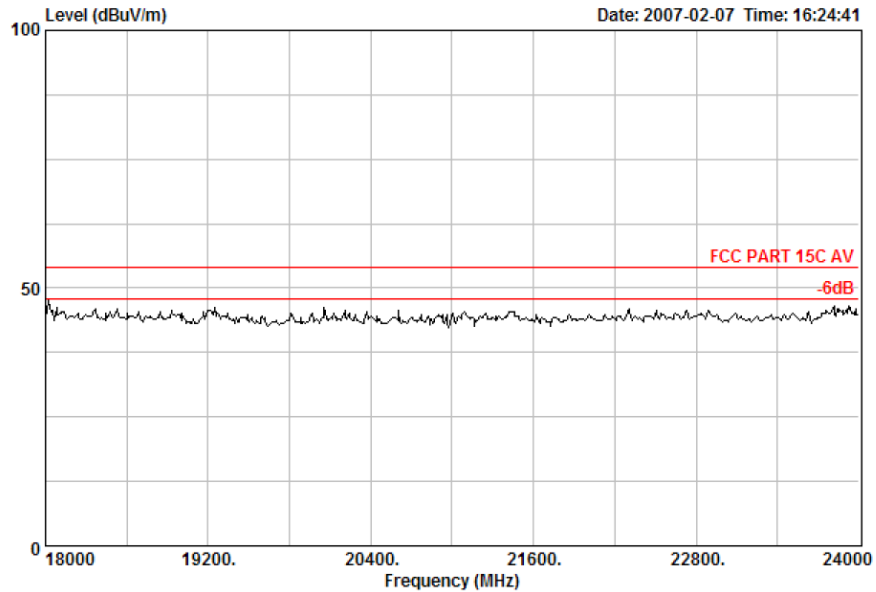
Date: 2007-02-07 Time: 16:18:21



Site no. : 1# Chamber Data no. : 17
Dis. / Ant. : 3m 3115FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

Data: 18 File: D:\2007 Report\Zigbee\20HRE.EMI (48)

Date: 2007-02-07 Time: 16:24:41



Site no. : 1# Chamber Data no. : 18
Dis. / Ant. : 3m 3115FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

5. 6DB BANDWIDTH TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 15, 06	1 Year
2.	Amp	HP	8449B	3008A00863	May 15, 06	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 15, 06	1 Year

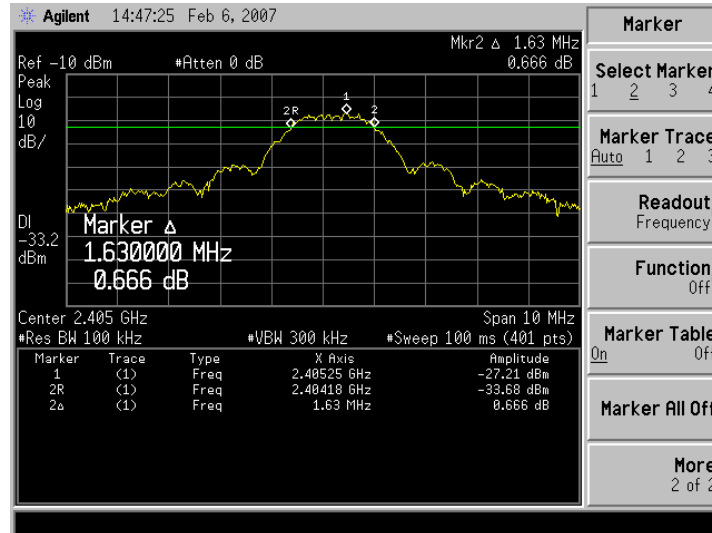
5.2. Test Information

EUT:	Smart Senteo
M/N:	03-00098-20
Test Date:	Feb.06, 2007
Ambient Temperature:	24°C
Relative Humidity:	54%
Test standard:	FCC PART 15C: 15.247
Test mode:	Transmitting
Test Frequency:	CH1: 2405MHz CH9: 2445MHz CH16: 2480MHz
Test By:	Jamy

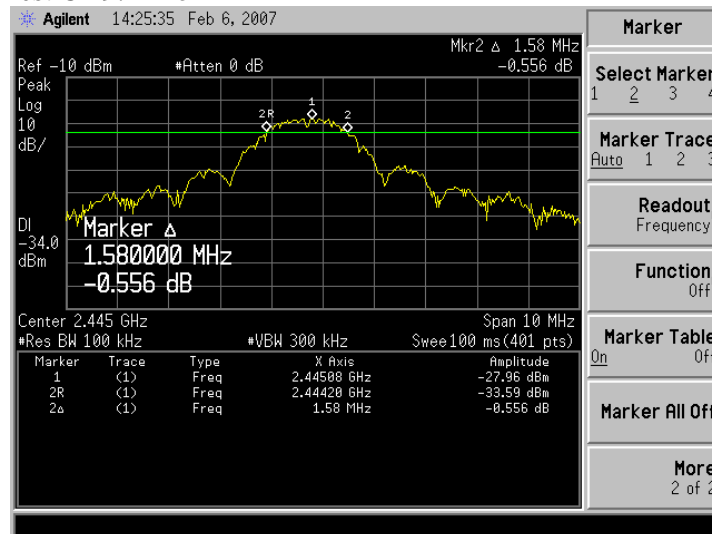
5.3. Test Results

CH	6dB Bandwidth (MHz)	Limit	Conclusion
1	1.63	>500	PASS
9	1.58	>500	PASS
16	1.65	>500	PASS

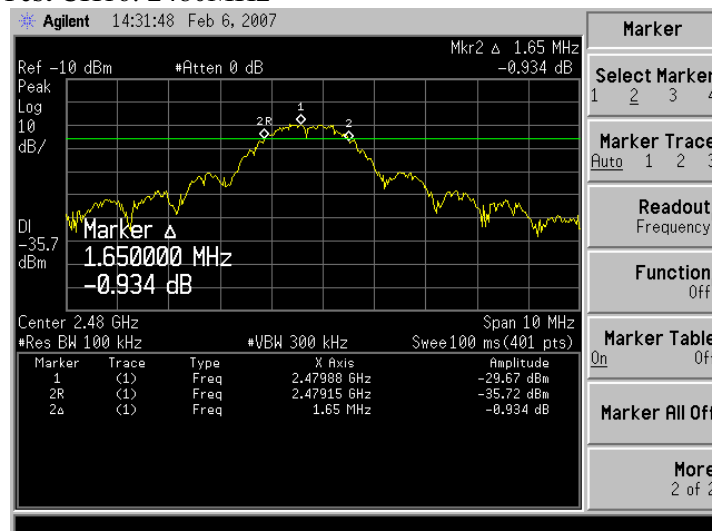
Test CH1: 2405MHz



Test CH9: 2445MHz



Test CH16: 2480MHz



6. OUTPUT POWER TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 15, 06	1 Year
2.	Amp	HP	8449B	3008A00863	May 15, 06	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 15, 06	1 Year

6.2. Test Information

EUT:	Smart Senteo
M/N:	03-00098-20
Test Date:	Feb.06, 2007
Ambient Temperature:	24°C
Relative Humidity:	54%
Test standard:	FCC PART 15C: 15.247
Test mode:	Transmitting
Test Frequency:	CH1: 2405MHz CH9: 2445MHz CH16: 2480MHz
Test By:	Jamy

6.3. Test Procedure

Measure the transmitter output power (dBμV/m) at 3m with spectrum analyzer using 2MHz RBW and 3MHz VBW

This test was performed with EUT in X, Y, Z position and with antenna on vertical and horizontal polarization, record the worse cases for final output power calculate

6.4. Test Results

CH	Field Strength at a distance of 3 meters (FS) (dBμV/m)	Output power (OP) (dBm)	Limit (dBm)	Conclusion
1	83.13	-15.11	30	PASS
9	78.70	-19.54	30	PASS
16	78.84	-19.40	30	PASS

Note: The following formula may be used to convert field strength (FS) in volts/m to transmitter output power (OP) in watts:

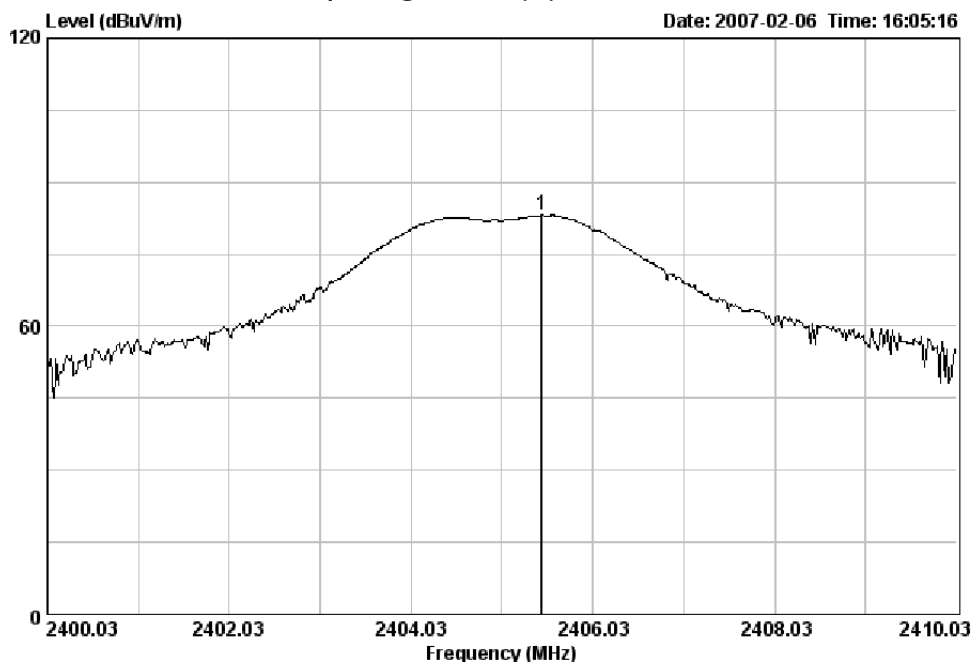
$$OP = (FS \cdot D)^2 / 30 \cdot G$$

D is the distance in meters between the two antennas and G is the antenna numerical gain.



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou, ShenZhen, GuangDong, China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 8 File: D:\2007 Report\Zigbee\20.EMI (18)



Site no. : Audix No.1 Chamber Data no. : 8
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit :
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1

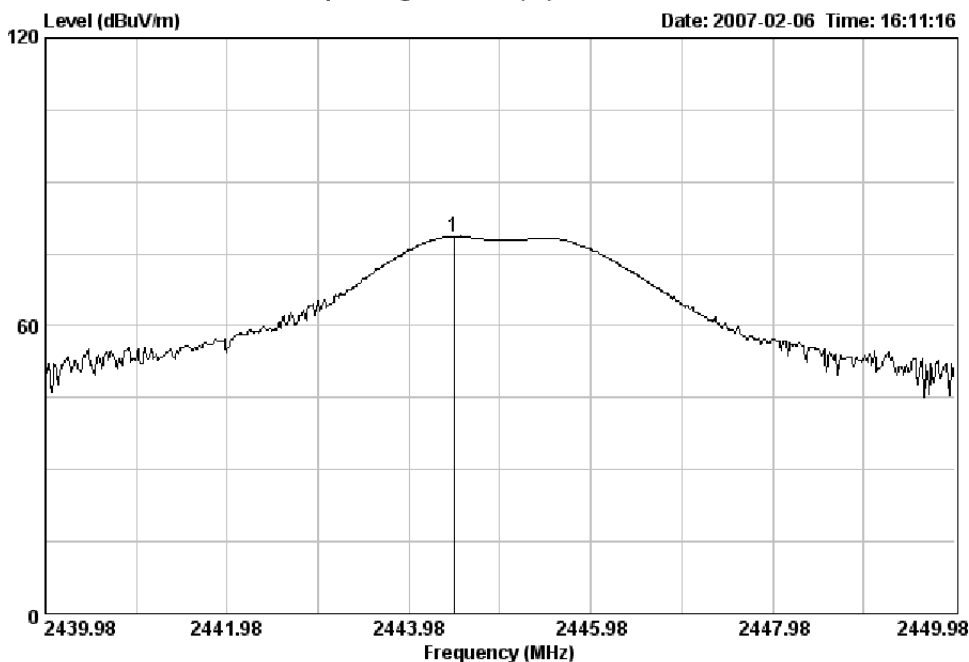
	Freq.	Ant.	Cable	Amp	Emission				
	(MHz)	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2405.47	29.03	6.20	35.18	83.08	83.13	500.00	416.87	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official
limit are not reported.



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou, ShenZhen, GuangDong, China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode: 518057

Data: 9 File: D:\2007 Report\Zigbee\20.EMI (18)



Site no. : Audix No.1 Chamber Data no. : 9
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit :
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9

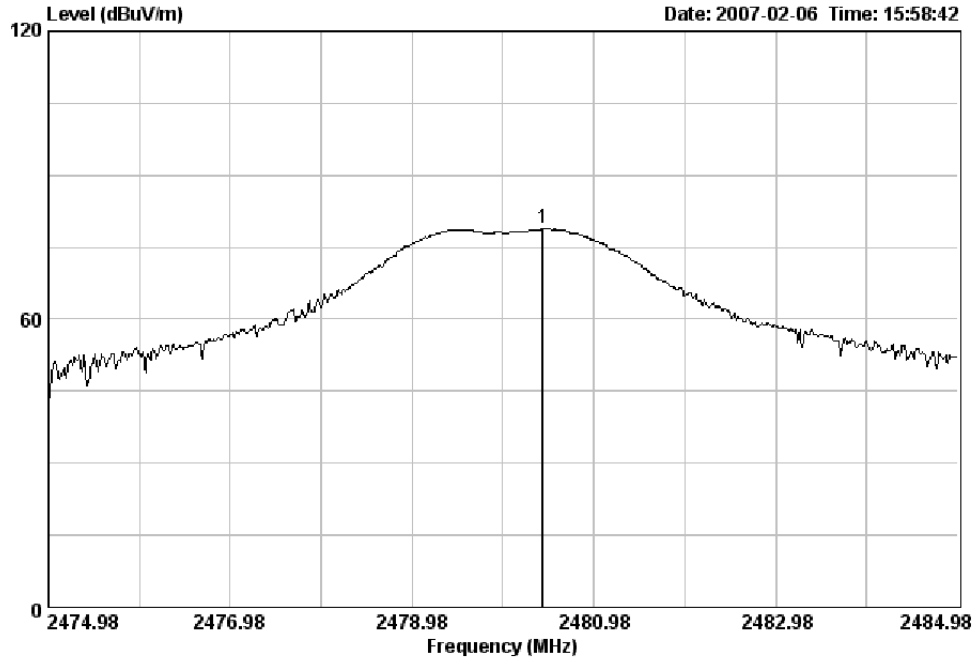
	Freq. (MHz)	Ant.	Cable	Amp	Emission				Remark
		Factor (dB/m)	Loss (dB)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2444.47	29.11	6.25	35.17	78.51	78.70	500.00	421.30	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official
limit are not reported.



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou, ShenZhen, GuangDong, China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode: 518057

Data: 7 File: D:\2007 Report\Zigbee\20.EMI (18)



Site no. : Audix No.1 Chamber Data no. : 7
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit :
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

	Freq. (MHz)	Ant.	Cable	Amp	Emission				Remark
		Factor (dB/m)	Loss (dB)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2480.42	29.19	6.30	35.16	78.51	78.84	500.00	421.16	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

7. BAND EDGE COMPLIANCE TEST

7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 15, 06	1 Year
2.	Amp	HP	8449B	3008A00863	May 15, 06	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 15, 06	1 Year

7.2. Test Information

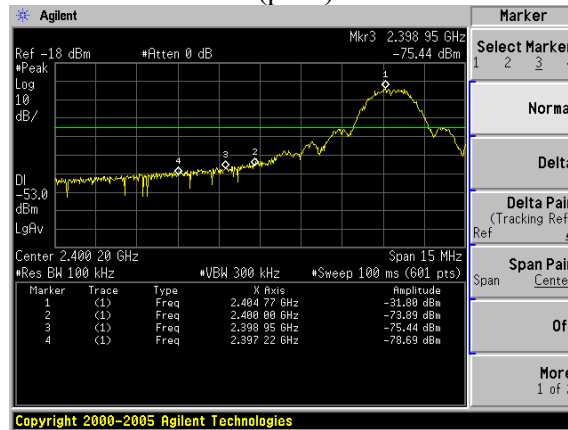
EUT:	Smart Senteo
M/N:	03-00098-20
Test Date:	Feb.06, 2007
Ambient Temperature:	24°C
Relative Humidity:	54%
Test standard:	FCC PART 15C: 15.247
Test mode:	Transmitting
Test Frequency:	CH1: 2405MHz CH9: 2445MHz CH16: 2480MHz
Test By:	Jamy

NOTE: This test was performed with antenna in horizontal and the maximum value would obtained in the position.

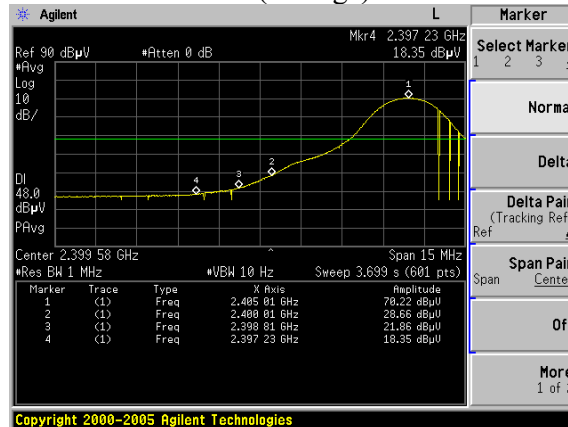
7.3. Test Results

Pass

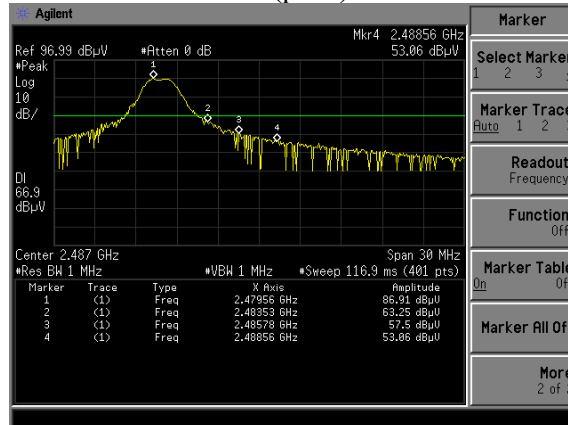
Test CH1: 2405MHz(peak)



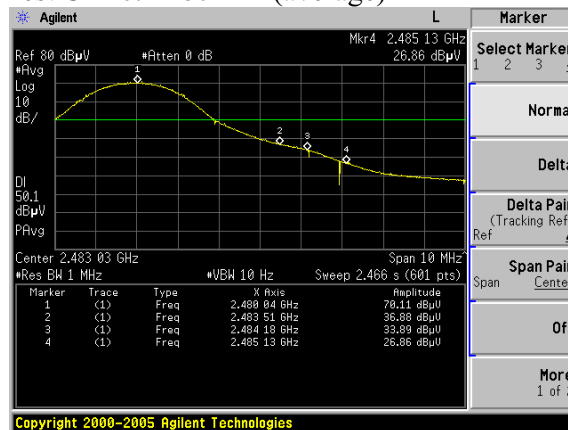
Test CH1: 2405MHz(average)



Test CH16: 2480MHz(peak)



Test CH16: 2480MHz(average)



8. POWER SPECTRAL DENSITY TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 15, 06	1 Year
2.	Amp	HP	8449B	3008A00863	May 15, 06	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 15, 06	1 Year

8.2. Test Information

EUT:	Smart Senteo
M/N:	03-00098-20
Test Date:	Feb.06, 2007
Ambient Temperature:	24°C
Relative Humidity:	54%
Test standard:	FCC PART 15C: 15.247
Test mode:	Transmitting
Test Frequency:	CH1: 2405MHz CH9: 2445MHz CH16: 2480MHz
Test By:	Jamy

8.3. Test Procedure

- (1). Measure the transmitter power spectral at a distance of 3 meters with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time= span/3kHz
- (2). Use the following formula to convert measured power spectral density (dBμV/m*3kHz) to transmitter output power spectral density

$$PD = (MPD * D)^2 / 30 * G$$

PD is the transmitter output power spectral density. MPD is the measured power spectral density at 3m. D is the distance between the EUT antenna and test antenna, D in here is 3m. G is the antenna numerical gain.

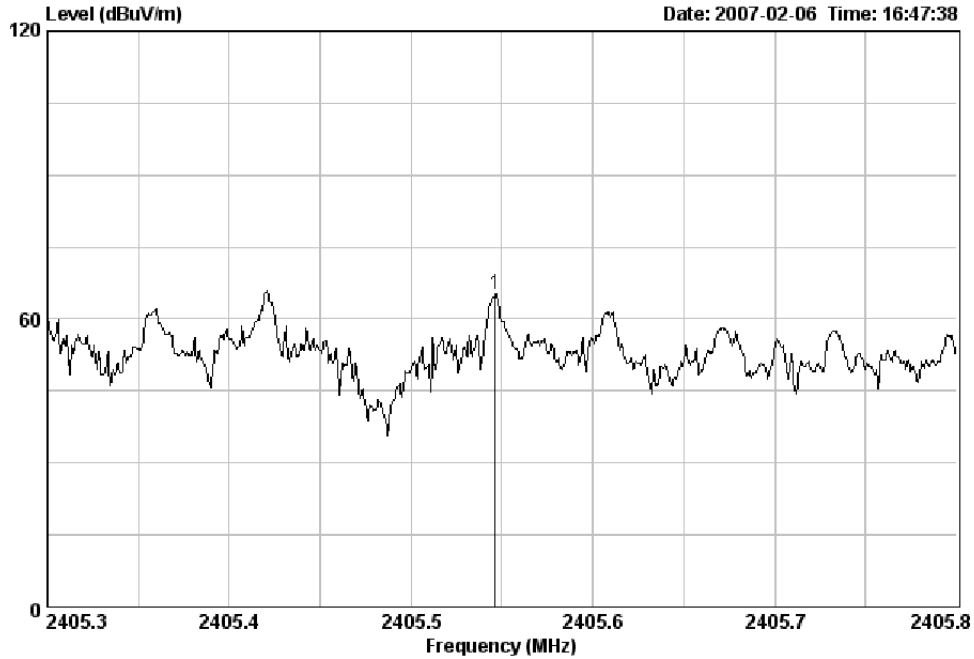
8.4. Test Results

CH	Measured power spectral density at 3m (dBμV/m*3kHz)	Antenna numerical gain	Power spectral density (dBm/3kHz)	Limit (dBm/3kHz)	Conclusion
1	65.27	2	-32.97	8	PASS
9	62.01	2	-36.23	8	PASS
16	62.84	2	-35.40	8	PASS



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou, ShenZhen, GuangDong, China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 12 File: D:\2007 Report\Zigbee\20.EMI (18)



Site no. : Audix No.1 Chamber Data no. : 12
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit :
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH1

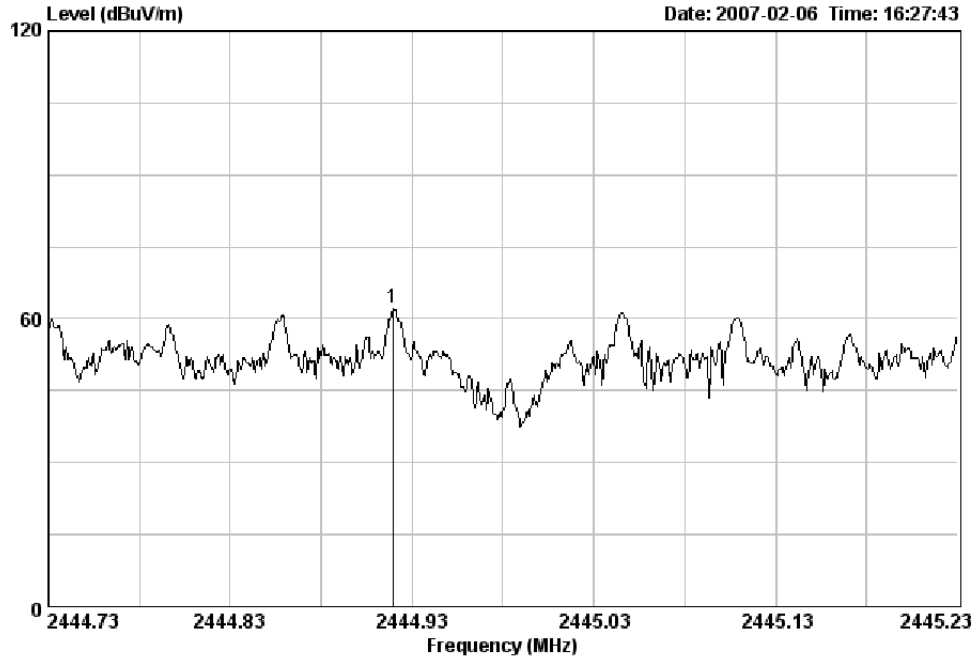
Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				Margin	Remark
				Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)			
1 2405.55	29.03	6.20	35.18	65.22	65.27	500.00	434.73		Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou, ShenZhen, GuangDong, China
Tel: +86-755-26639495-7
Fax: +86-755-26632877
Postcode: 518057

Data: 10 File: D:\2007 Report\Zigbee\20.EMI (18)



Site no. : Audix No.1 Chamber Data no. : 10
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit :
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH9

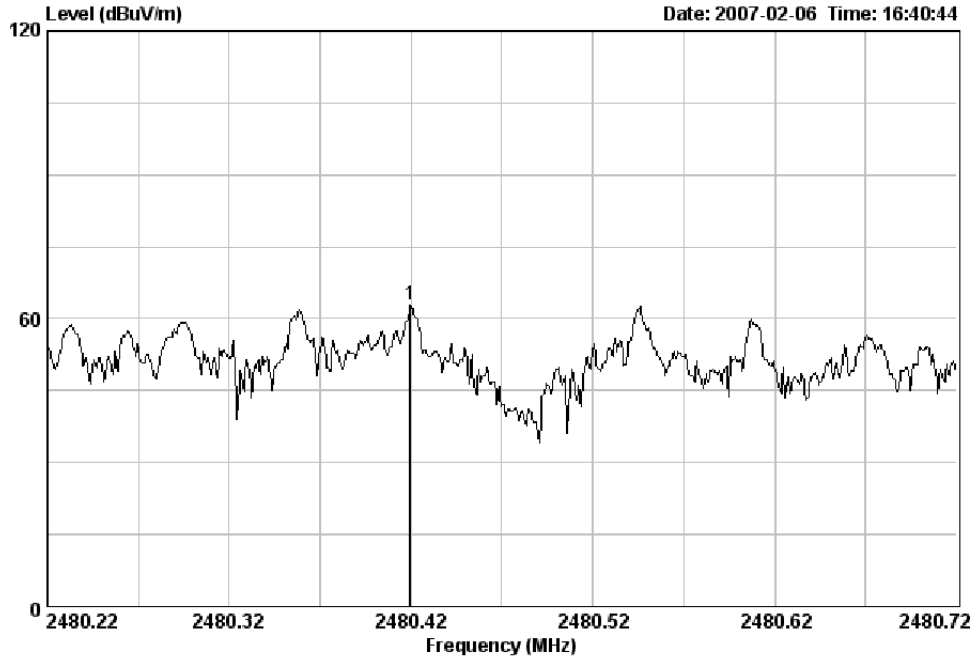
	Freq. (MHz)	Ant.	Cable	Amp	Emission				Remark
		Factor (dB/m)	Loss (dB)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2444.92	29.11	6.25	35.17	61.82	62.01	500.00	437.99	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



No.6 Ke Feng Road,B1:ck 52,
ShenZhen Science & Industry Park
Noutou, ShenZhen, GuangDong, China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 11 File: D:\2007 Report\Zigbee\20.EMI (18)



Site no. : Audix No.1 Chamber Data no. : 11
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit :
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Smart Senteo M/N:03-00098-20
Power Rating : Battery 3V
Test Mode : TX Mode CH16

	Freq. (MHz)	Ant.	Cable	Amp	Emission				Remark
		Factor (dB/m)	Loss (dB)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2480.42	29.19	6.30	35.16	62.51	62.84	500.00	437.16	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official
limit are not reported.

9. MPE ESTIMATION

9.1.Limit for General Population / Uncontrolled Exposures

Frequency	Power density (mW/cm ²)	Averaging time (minutes)
300MHz~1.5GHz	F/1500	30
1.5GHz~100GHz	1.0	30

Frequency (MHz)	Power density (mW/cm ²)	Averaging time (minutes)
2405	1.0	30
2445	1.0	30
2480	1.0	30

Note: F = Frequency in MHz

9.2.Estimation Result

CH	Frequency (MHz)	Peak output power (dBm)	Antenna gain (dBi)	Antenna gain (Linear)
1	2405	-15.11	3	2
9	2445	-19.54	3	2
16	2480	-19.40	3	2

CH	Frequency (MHz)	Peak output power to antenna (mW)	Power density at 20cm (mW/ cm ²)
1	2405	0.0308	1.23×10^{-5}
9	2445	0.0111	4.38×10^{-6}
16	2480	0.0115	4.58×10^{-6}

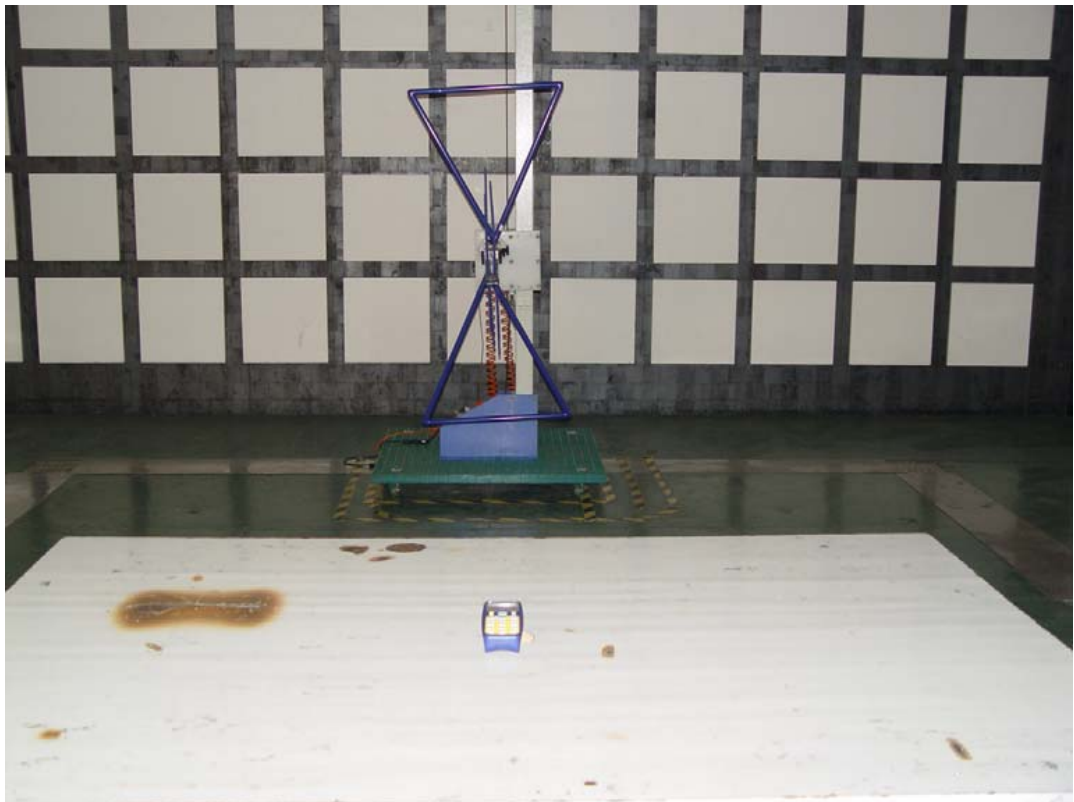
10.DEVIATION TO TEST SPECIFICATIONS

[NONE]

11.PHOTOGRAPH

11.1.Photos of Radiated Emission Test

30-1000MHz



Above 1000MHz

