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Report No.: SZEMO061102490RF  
Page: 1 of 32  
FCC ID: PZK-02300  
IC ID: 4400A-02300

## TEST REPORT

**Application No.** : SZEMO061102490RF  
**Applicant** : Summer Infant, Inc.  
**Manufacturer** : 1, New Honest Technologies Ltd. 2, Brain Assets Industries Ltd.  
**FCC ID** : PZK-02300  
**IC ID:** : 4400A-02300  
**Fundamental Frequency** : 2.405GHz to 2.470GHz  
**Equipment under Test (EUT):**  
Name : Baby Monitor  
Model : 02300  
**Standards** : FCC PART 15, SUBPART C and SUBPART B: 2006  
:RSS-210 Issue 6 2005  
**Date of Receipt** : 5 December 2006  
**Date of Test** : 5 December 2006  
**Date of Issue** : 6 December 2006

<b>Test Result :</b>	<b>PASS *</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo  
Laboratory Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf  
This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the SGS PRODUCT CERTIFICATION MARK.. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.  
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**2 Test Summary**

Test	Test Requirement	Standard Paragraph	Result
Occupied Bandwidth	FCC PART 15 :2006 RSS-210 Issue 6	Section 15.247 (a2) Section A8.2	PASS
Edges Measurement	FCC PART 15 2006 RSS-210 Issue 6	Section 15.247 Section A8.5	PASS
Maximum Peak Output Power	FCC PART 15 :2006 RSS-210 Issue 6	Section 15.247 (b) Section A8.4	PASS
Power Spectral Density Measurement	FCC PART 15 :2006 RSS-210 Issue 6	Section 15.247 (d) Section A8.2	PASS
Spurious Radiated Emission (30MHz to 25GHz)	FCC PART 15 :2006 RSS-210 Issue 6	Section 15.109 / 15.209 / 15.247 (C) Section A8.5	PASS
Conducted Emissions	FCC PART 15:2006 RSS-210 Issue 6	Section 15.107 / 15.207 Section 7.2.2(RSS-GEN)	PASS
Antenna requirement.	FCC PART 15:2006 RSS-210 Issue 6	Section 15.247 (b) Section 7.1.4(RSS-GEN)	PASS



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## **4 General Information**

### **4.1 Client Information**

Applicant:	Summer Infant, Inc.
Address of Applicant:	582 Great Road, North Smithfield, RI 02896, USA
Manufacturer:	1, New Honest Technologies Ltd. 2, Brain Assets Industries Ltd.
Address of Manufacturer:	1, Dong Shen Ko Li Industrial District, Tangxia, Dongguang. 2, No 19, Nan Ling Road, Xin Er Cun, Sha Jing Zhen, Bao An District, Shenzhen, Guangdong, China

### **4.2 Details of E.U.T.**

Name:	Baby Monitor
Model:	02300
Power Supply:	120V AC/ 60Hz
Operating Frequency	2400MHz to 2483.5MHz
Number of Channels	14 Channels
Type of Modulation	DSSS.
Antenna Type	Integral
Function Description:	2.4Ghz DSSS RF transceiver, the digital sound signal have been translate to 250kbps baseband signal and then spreading to 2Mchips/s and modulated by the 2.4Ghz RF carry frequency ,this RF signal have been amplified ,then via the low pass filter the RF signal have been send to the antenna .



**Verify the Frequency and Channel**

Channel	Frequency (GHz)
1	2.405
2	2.410
3	2.415
4	2.420
5	2.425
6	2.430
7	2.435
8	2.440
9	2.445
10	2.450
11	2.455
12	2.460
13	2.465
14	2.470

Note:

- Section 15.31(m): Measurements on intentional radiators or receivers shall be performed at three frequencies for operating frequency range over 10 MHz. The locations of these frequencies one near the top, one near the middle and one near the bottom.
- So all the items as followed in testing report are need to test these three frequencies:  
 Top: Channel 1: 2405 MHz.  
 Middle: Channel 7: 2435 MHz.  
 Bottom: Channel 14: 2470 MHz.

**4.3 Test Location**

No.198 Kezhu Road, Science Town Economic& Technology Development District Guangzhou, China 510663  
 Telephone: +86 (0) 20 8215 5555 Fax: +86 (0) 20 8207 5059

**4.4 Other Information Requested by the Customer**

None.



## 5 Test Results

### 5.1 Test Instruments

Test Equipment	Manufacturer	Model	Asset No.	Cal. Due Date
Temperature, Humidity & Barometer	Oregon Scientific	BA-888	EMC0003	25-07-2007
3m Semi- Anechoic Chamber	ETS	N/A	EMC0501	04-11-2007
EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	EMC0506	17-11-2007
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 30	EMC0521	22-12-2007
Bilog Type Antenna	Schaffner Chase	CBL6143	EMC0519	01-12-2007
Horn Antenna	ROHDE & SCHWARZ	HF906	EMC0517	01-04-2007
Peramplifier	Agilent	8449B	EMC0520	30-06-2007
Coaxial cable	SGS	N/A	EMC0514	04-11-2007
Shielding Room	Frankonia	12 x 4 x 4 m <sup>3</sup>	EMC0103	N/A
LISN	Schaffner Chase	MNZ050D11	1421	05-11-2007
EMI Test Receiver	Rohde & Schwarz	ESCS30	100086	17-11-2007
Coaxial Cable	SGS	2m	EMC0107	01-06-2007

### 5.2 E.U.T. Operation

Input voltage: 120V AC/ 60Hz

Operating Environment:

Temperature: 24.0 °C  
Humidity: 52 % RH  
Atmospheric Pressure: 10015 mbar



### 5.3 Test Procedure & Measurement Data

#### 5.3.1 Conducted Emissions

Test Requirement: FCC Part15 B &RSS-GEN  
Test Method: ANSI C63.4  
Test Date: 5 December 2006  
Frequency Range: 150KHz to 30MHz  
Class / Severity: Class B  
Detector: Peak for pre-scan (9kHz Resolution Bandwidth)  
Operating Environment:  
Temperature: 24.0 °C Humidity: 52% RH Atmospheric Pressure: 1015 Mbar  
EUT Operation: Test in normal mode. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

##### 5.3.1.1 Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

The following Quasi-Peak and Average measurements were performed on the EUT.:



1. For EUT On Mode Channel-1.

Live Line

Frequency (MHz)	Cable Loss (dB)	LISN Factor (dB)	Read Level (dBuV)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.171	-0.05	-0.05	47.77	47.67	64.91	-17.24	QP
0.171	-0.05	-0.05	44.62	44.52	54.91	-10.39	Average
0.325	0.00	-0.04	36.02	35.98	59.58	-23.60	QP
0.325	0.00	-0.04	32.22	32.18	49.58	-17.40	Average
0.406	0.00	-0.04	37.70	37.66	57.73	-20.07	QP
0.406	0.00	-0.04	35.68	35.64	47.73	-12.09	Average
0.499	0.00	-0.04	40.06	40.02	56.02	-16.00	QP
0.499	0.00	-0.04	36.52	36.48	46.02	-9.54	Average
0.668	0.00	-0.05	40.41	40.36	56.00	-15.64	QP
0.668	0.00	-0.05	36.58	36.53	46.00	-9.47	Average
0.830	0.05	-0.05	35.49	35.49	56.00	-20.51	QP
0.830	0.05	-0.05	30.56	30.56	46.00	-15.44	Average

Neutral Line

Frequency (MHz)	Cable Loss (dB)	LISN Factor (dB)	Read Level (dBuV)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.165	-0.03	-0.04	43.90	43.83	65.21	-21.38	QP
0.165	-0.03	-0.04	40.81	40.74	55.21	-14.47	Average
0.332	0.00	-0.04	41.56	41.52	59.40	-17.88	QP
0.332	0.00	-0.04	38.35	38.31	49.40	-11.09	Average
0.402	0.00	-0.04	37.35	37.31	57.81	-20.50	QP
0.402	0.00	-0.04	35.18	35.14	47.81	-12.67	Average
0.499	0.00	-0.04	40.60	40.56	56.02	-15.46	QP
0.499	0.00	-0.04	37.06	37.02	46.02	-9.00	Average
0.716	0.01	-0.04	41.11	41.08	56.00	-14.92	QP
0.716	0.01	-0.04	38.35	38.32	46.00	-7.68	Average
2.690	0.10	-0.07	38.41	38.44	56.00	-17.56	QP
2.690	0.10	-0.07	32.25	32.28	46.00	-13.72	Average

TEST RESULTS: The unit does meet the FCC requirements.





1. For EUT On Mode Channel-7.

Live Line

Frequency (MHz)	Cable Loss (dB)	LISN Factor (dB)	Read Level (dBuV)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.161	-0.03	-0.05	35.45	35.37	55.41	-20.04	Average
0.161	-0.03	-0.05	58.04	57.96	65.41	-7.45	QP
0.198	-0.10	-0.05	37.63	37.48	53.71	-16.23	Average
0.198	-0.10	-0.05	55.41	55.26	63.71	-8.45	QP
0.503	0.00	-0.04	49.11	49.07	56.00	-6.93	QP
0.503	0.00	-0.04	36.32	36.28	46.00	-9.72	Average
0.817	0.04	-0.05	46.01	46.00	56.00	-10.00	QP
0.817	0.04	-0.05	27.24	27.23	46.00	-18.77	Average
1.550	0.10	-0.06	44.51	44.55	56.00	-11.45	QP
1.550	0.10	-0.06	29.74	29.78	46.00	-16.22	Average
14.060	0.26	-0.47	31.82	31.61	60.00	-28.39	QP
14.060	0.26	-0.47	26.17	25.96	50.00	-24.04	Average

Neutral Line

Frequency (MHz)	Cable Loss (dB)	LISN Factor (dB)	Read Level (dBuV)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.206	-0.09	-0.04	54.83	54.70	63.37	-8.67	QP
0.206	-0.09	-0.04	36.15	36.02	53.37	-17.35	Average
0.494	0.00	-0.04	41.67	41.63	56.10	-14.47	QP
0.494	0.00	-0.04	33.65	33.61	46.10	-12.49	Average
0.809	0.04	-0.04	45.32	45.32	56.00	-10.68	QP
0.809	0.04	-0.04	26.54	26.54	46.00	-19.46	Average
1.300	0.10	-0.05	42.19	42.24	56.00	-13.76	QP
1.300	0.10	-0.05	36.45	36.50	46.00	-9.50	Average
2.120	0.10	-0.06	41.00	41.04	56.00	-14.96	QP
2.120	0.10	-0.06	32.80	32.84	46.00	-13.16	Average
8.500	0.18	-0.25	26.41	26.34	50.00	-23.66	Average
8.500	0.18	-0.25	30.12	30.05	60.00	-29.95	QP

TEST RESULTS: The unit does meet the FCC requirements.



1. For EUT On Mode Channel-14.

Live Line

Frequency (MHz)	Cable Loss (dB)	LISN Factor (dB)	Read Level (dBuV)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.162	-0.03	-0.05	60.22	60.14	65.36	-5.22	QP
0.162	-0.03	-0.05	36.11	36.03	55.36	-19.33	Average
0.207	-0.09	-0.04	55.59	55.46	63.32	-7.86	QP
0.207	-0.09	-0.04	37.73	37.60	53.32	-15.72	Average
0.323	0.00	-0.04	47.96	47.92	59.63	-11.71	QP
0.323	0.00	-0.04	33.22	33.18	49.63	-16.45	Average
0.570	0.00	-0.04	46.69	46.65	56.00	-9.35	QP
0.570	0.00	-0.04	29.81	29.77	46.00	-16.23	Average
1.360	0.10	-0.05	38.58	38.63	56.00	-17.37	QP
1.360	0.10	-0.05	27.51	27.56	46.00	-18.44	Average
2.640	0.10	-0.07	37.88	37.91	56.00	-18.09	QP
2.640	0.10	-0.07	25.27	25.30	46.00	-20.70	Average

Neutral Line

Frequency (MHz)	Cable Loss (dB)	LISN Factor (dB)	Read Level (dBuV)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Remark
0.213	-0.08	-0.04	47.56	47.44	63.09	-15.65	QP
0.213	-0.08	-0.04	37.23	37.11	53.09	-15.98	Average
0.313	0.00	-0.04	50.01	49.97	59.89	-9.92	QP
0.313	0.00	-0.04	32.39	32.35	49.89	-17.54	Average
0.422	0.00	-0.04	39.81	39.77	57.41	-17.64	QP
0.422	0.00	-0.04	30.76	30.72	47.41	-16.69	Average
0.608	0.00	-0.04	46.31	46.27	56.00	-9.73	QP
0.608	0.00	-0.04	34.85	34.81	46.00	-11.19	Average
1.280	0.10	-0.05	43.32	43.37	56.00	-12.63	QP
1.280	0.10	-0.05	30.98	31.03	46.00	-14.97	Average
2.170	0.10	-0.06	28.58	28.62	46.00	-17.38	Average
2.170	0.10	-0.06	37.64	37.68	56.00	-18.32	QP

TEST RESULTS: The unit does meet the FCC requirements.



**5.3.2 Spurious Radiated Emissions**

Test Requirement: FCC Part15 C & RSS-210  
 Test Method: Based on FCC Part15 Section 15.247& RSS-210 Section A8.5  
 Test Date: 5 December 2006  
 Measurement Distance: 3m (Semi-Anechoic Chamber)  
 Frequency range 30 MHz – 25GHz for transmitting mode.  
 Test instrumentation resolution bandwidth 120 kHz (30 MHz - 1000 MHz)  
 1 MHz (1000 MHz – 25GHz)

Receive antenna scan height 1 m - 4 m, polarization Vertical / Horizontal

Limit: 40.0 dBμV/m between 30MHz & 88MHz  
 43.5 dBμV/m between 88MHz & 216MHz  
 46.0 dBμV/m between 216MHz & 960MHz  
 54.0 dBμV/m above 960MHz

**Test Procedure:** The procedure used was ANSI Standard C63.4-2000. The receive was scanned from 30MHz to 25GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.

The field strength is calculated by adding the Antenna Factor, Cable Factor & Peramplifier . The basic equation with a sample calculation is as follows:  
 Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Peramlifer Factor



The following test results were performed on the EUT on 5 December 2006:

1. For EUT communicating with on Mode. Channel – 1

Frequency (MHz)	Antenna Polarization	Emission Level Qusia-Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)
47.460	Vertical	20.23	40.00	19.77
136.700	Vertical	10.25	43.50	33.25
179.380	Horizontal	12.54	43.50	30.96
247.280	Horizontal	15.50	46.00	30.50

Above 1000MHz

Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)		Antenna Polarization
4809.008	53.34	74.00	-20.66	PK	Vertical
4809.008	41.34	54.00	-12.66	AV	Vertical
7213.392	58.92	74.00	-15.08	PK	Vertical
7213.392	37.92	54.00	-16.08	AV	Vertical

Remark:

According to 15.35 (b) When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see Section 15.255.

**TEST RESULTS: The unit does meet the FCC requirements.**



2. For EUT communicating with on Mode. Channel – 7  
30MHz- 1000MHz

Frequency (MHz)	Antenna Polarization	Emission Level Qusia-Peak (dBuV/m)	Limit (dBuV/m)	Margin (dB)
59.100	Vertical	17.03	40.00	-22.97
81.410	Vertical	20.89	40.00	-19.11
379.200	Horizontal	19.75	46.00	-26.25
561.560	Horizontal	23.79	46.00	-22.21

Above 1000MHz

Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)		Antenna Polarization
4880.936	57.33	74.0	16.67	PK	Vertical
4880.936	41.33	54.0	-12.67	AV	Vertical
7321.528	57.87	74.0	-16.13	PK	Vertical
7321.528	42.87	54.0	-11.13	AV	Vertical

Remark:

According to 15.35 (b) When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see Section 15.255.

**TEST RESULTS: The unit does meet the FCC requirements.**



3. For EUT communicating with on Mode. Channel – 14  
30MHz- 1000MHz

Frequency (MHz)	Antenna Polarization	Emission Level Qusia-Peak (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)
37.760	Vertical	21.23	40.00	-18.77
43.580	Vertical	25.86	40.00	-14.14
108.570	Horizontal	12.37	43.50	-31.13
258.920	Horizontal	17.74	46.00	-28.26

Above 1000MHz

Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)		Antenna Polarization
4941.042	64.31	74.00	-9.69	PK	Vertical
4941.042	49.81	54.00	-4.19	AV	Vertical
7411.425	60.82	74.00	-13.18	PK	Vertical
7411.425	44.82	54.00	-9.18	AV	Vertical

Remark:

According to 15.35 (b) When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see Section 15.255.

**TEST RESULTS: The unit does meet the FCC requirements.**



**5.3.3 Bandwidth**

Test Requirement: FCC Part 15 C & RSS-210  
 Test Method: Based on FCC Part15 C Section 15.247:& RSS-210 Section A8.2  
 Test Date: 5 December 2006  
 Requirements: 15.247 (a2) For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

Method of measurement: The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 100 kHz VBW. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB. Analyzer and the attached plot was taken.

Test results:

1. The EUT communicating with ON Mode

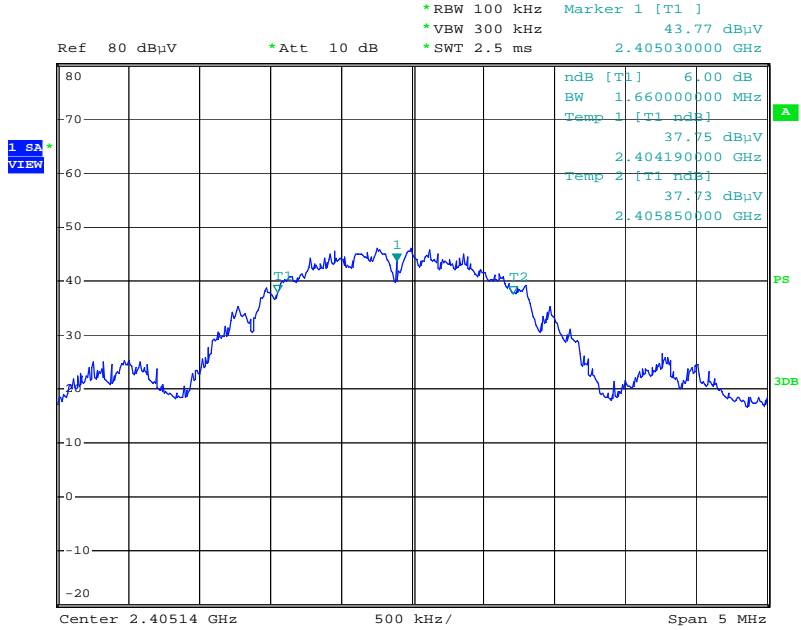
Channel	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2.405	1.66	0.5	Pass
7	2.435	1.93	0.5	Pass
14	2.470	1.91	0.5	Pass

**Conclusion:: The unit does meet the FCC requirements.**

Please refer to the graph as below:



1. For EUT communicating with on Mode. Channel – 1

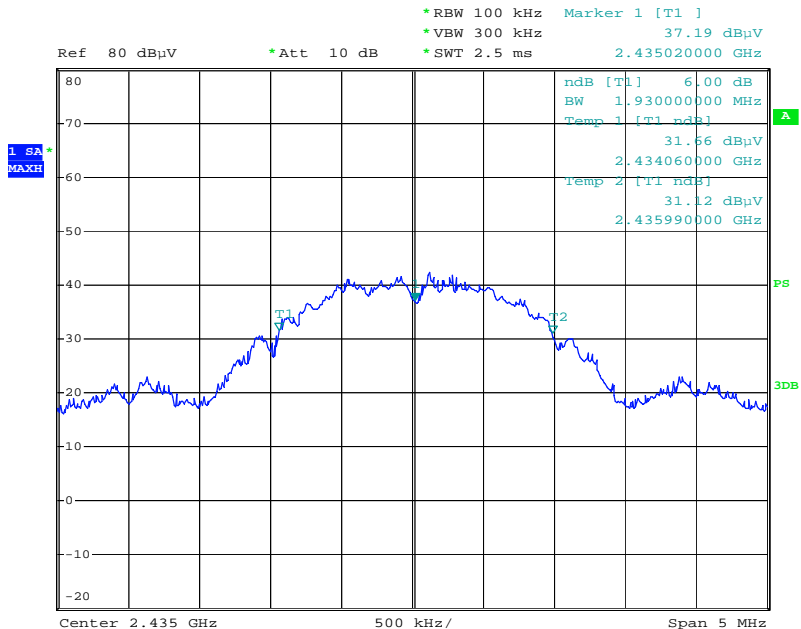


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Date: 8.DEC.2006 09:20:54





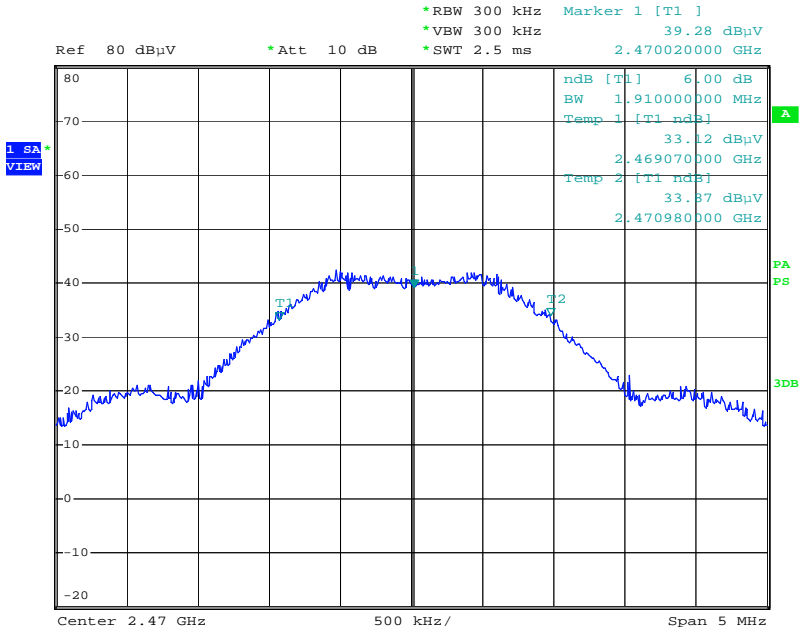
2. For EUT communicating with on Mode. Channel – 7



N  
Date: 8.DEC.2006 09:22:46



3. For EUT communicating with on Mode. Channel – 14



N  
Date: 8.DEC.2006 09:25:28



**5.3.4 Occupied Bandwidth**

Test Requirement: RSS-210  
Test Method: RSS-210 Section A8.4  
Test Date: 5 December 2006

<b>Channel</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>20 dB BANDWIDTH (MHz)</b>
1	2.405	2.64
7	2.435	2.60
14	2.470	2.56



1For EUT communicating with on Mode. Channel – 1

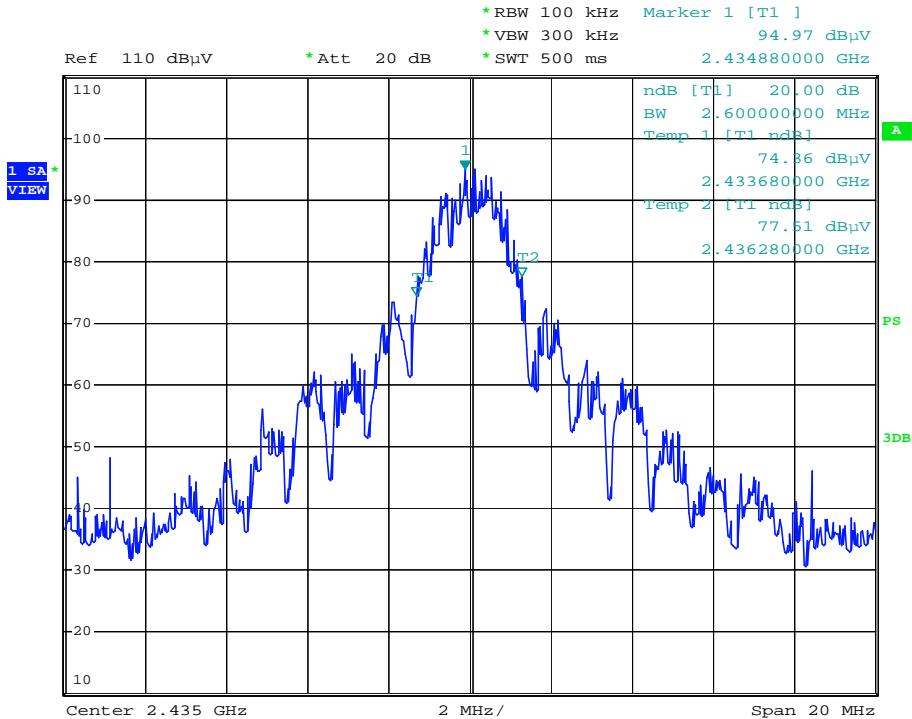


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Date: 11.DEC.2006 09:15:12



2For EUT communicating with on Mode. Channel – 7

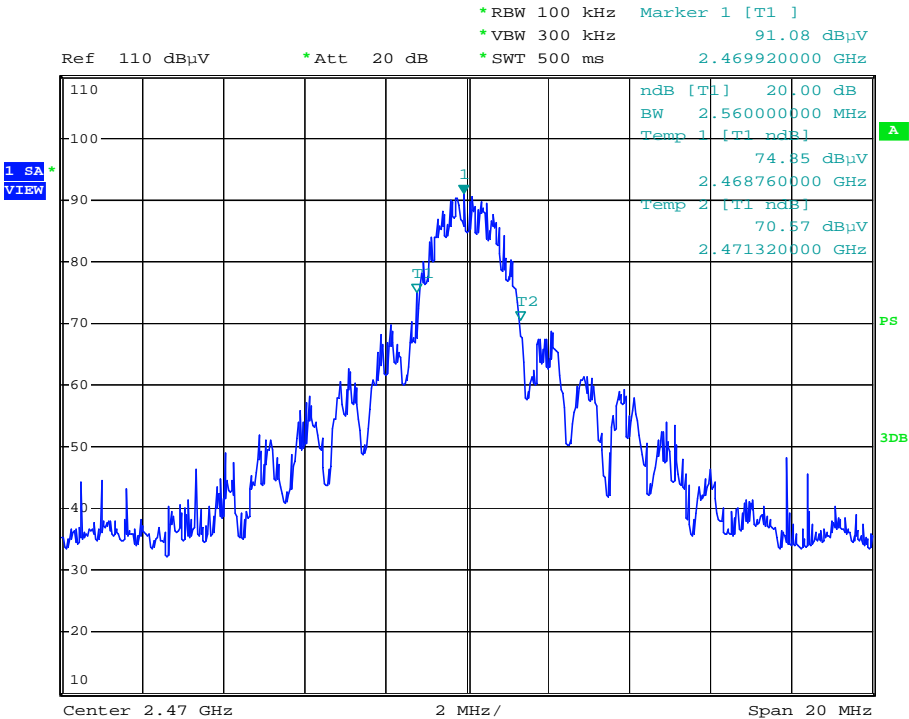


N

Date: 11.DEC.2006 09:21:04



3For EUT communicating with on Mode. Channel – 14



N

Date: 11.DEC.2006 09:23:45



**5.3.5 Maximum Peak Output Power:**

Test Requirement: FCC Part 15 C & RSS-210  
Test Method: FCC Part15 C Section 15.247. & RSS-210 Section A8.4  
Test Date: 5 December 2006  
Requirements:

**Regulation 15.247 (b)** The Limit of Maximum Peak Output Power Measurement is 30dBm.

Test results

1. For EUT communicating with on Mode

Channel	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER Limit (dBm)	PASS/FAIL
1	2.405	1.6	30.0	Pass
7	2.435	3.1	30.0	Pass
14	2.470	1.8	30.0	Pass

Conclusion:

The EUT meets the requirements of this section.



### 5.3.6 Band Edges Measurement

Test Requirement: FCC Part15 C & RSS-210  
Test Method: Based on FCC Part15 C Section 15.247.& RSS-210 Section A8.5  
Test Date: 5 December 2006

#### Requirements:

**Regulation 15.247 (C)** In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

#### Test Procedures:

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz with suitable frequency span including 100 kHz bandwidth from band edge. The band edges was measured and recorded.

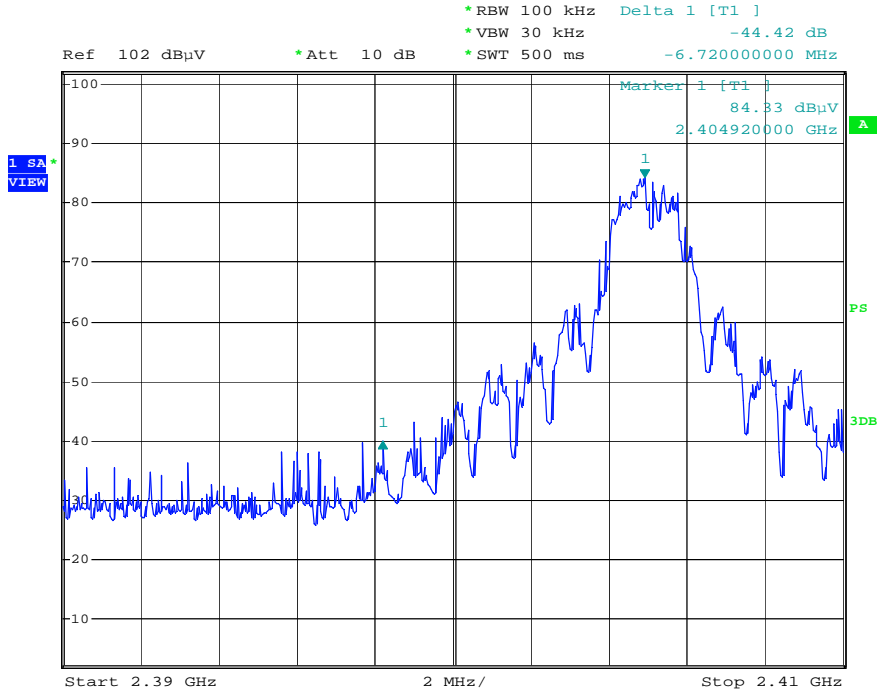
#### Test Result:

Please refer to the measurement graph and data.





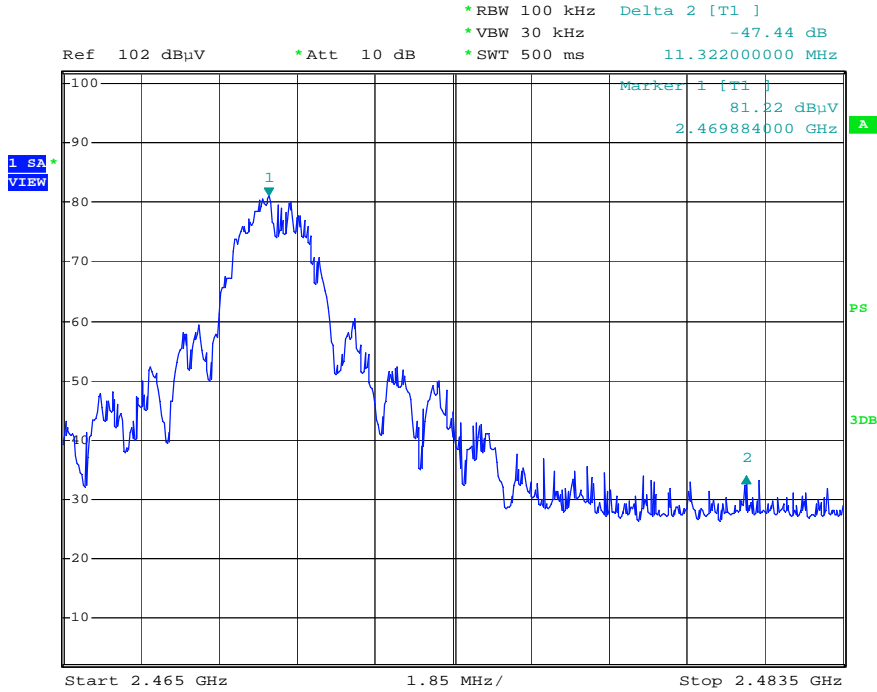
1. This is the hard copy of our measurement for EUT communicating with On Mode. **channel 1** bandedge.



N  
Date: 5.DEC.2006 17:26:39



2.This is the hard copy of our measurement for EUT communicating with On Mode.  
**channel 14** bandedge.



N  
Date: 5.DEC.2006 17:31:04



**Conclusion:**

The spectrum plot extended to the start frequency : 2390MHz and the stop frequency 2485MHz (restriction bands are 2310 – 2390 MHz and 2483.5 – 2500MHz).  
In any 100 kHz bandwidth outside the frequency band are at least than 20 dB below that in the 100 kHz bandwidth within the band.

For Wireless USB Adapter **channel 1** bandedge

The band edge emission plot on page 21 shows 44.4dB delta between carrier maximum power and local maximum emission in restrict band (2390MHz). The emission of carrier strength list in Radiated Emission test is 77.4dB $\mu$ V/m, so the maximum field strength in restrict band is  $77.4 - 44.4 = 33.0$  dB $\mu$ V/m which is under 54 dB $\mu$ V/m limit.

For Wireless USB Adapter **channel 14** bandedge

The band edge emission plot on page 22 shows 47.4dB delta between carrier maximum power and local maximum emission in restrict band (2483.5MHz). The emission of carrier strength list in Radiated Emission test is 76.9dB $\mu$ V/m, so the maximum field strength in restrict band is  $76.9 - 47.4 = 29.5$  dB $\mu$ V/m which is under 54 dB $\mu$ V/m limit.

**The EUT meets the requirements of this section.**



**5.3.7 Power Spectral Density Measurement**

Test Requirement: FCC Part15 C & RSS-210  
 Test Method: Based on FCC Part15 C Section 15.247.& RSS-210 Section A8.2  
 Test Date: 5 December 2006  
 Requirements:

**Regulation 15.247 (d)** For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission

**Test Procedures:**

The tests below are running with the EUT transmitter set at high power mode .A USB port from a notebook computer to the EUT. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Connected with the spectrum analyzer.

Set spectrum analyzer RBW = 3 KHz, VBW > RBW (e.g. VBW = 10 KHz), Span = 2 MHz. Turn around the table to find maximum emission. Then set the Span = 300 KHz and sweep time = 100 sec. Peak the maximum emission again. The peak level measured must be no greater than + 8dBm.

The EUT was set transmitting continuously and force selection of output power level and channel number. We'd observed that the peak levels aren't greater than +8dBm limit.

**Test Result:**

- For EUT communicating with on Mode

Channel	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM Limit (dBm)	PASS/FAIL
1	2.405	-42.9	8.0	Pass
7	2.435	-36.5	8.0	Pass
14	2.470	-32.4	8.0	Pass

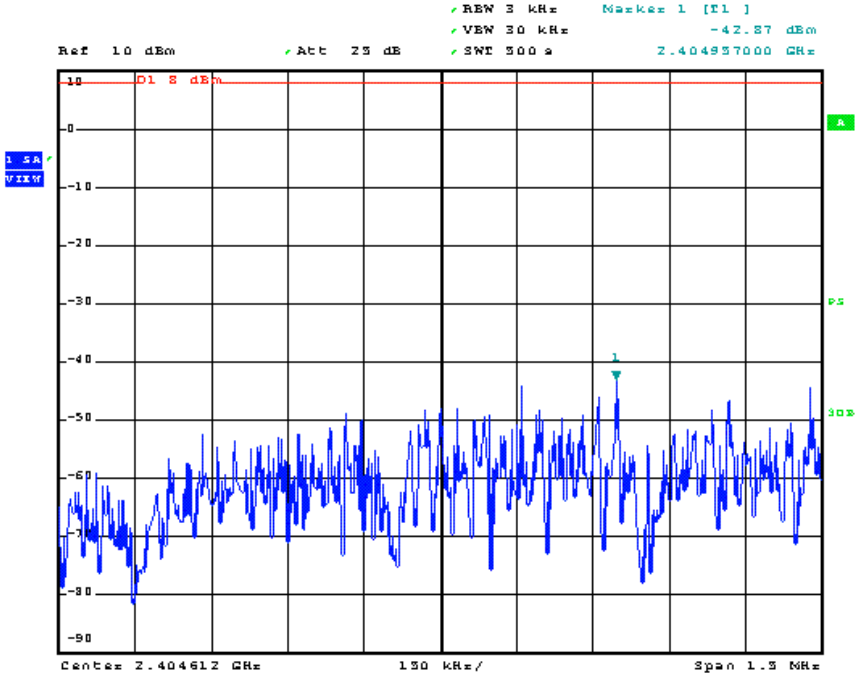
**Conclusion:**

The EUT meets the requirements of this section.

Please refer to the graph as below:



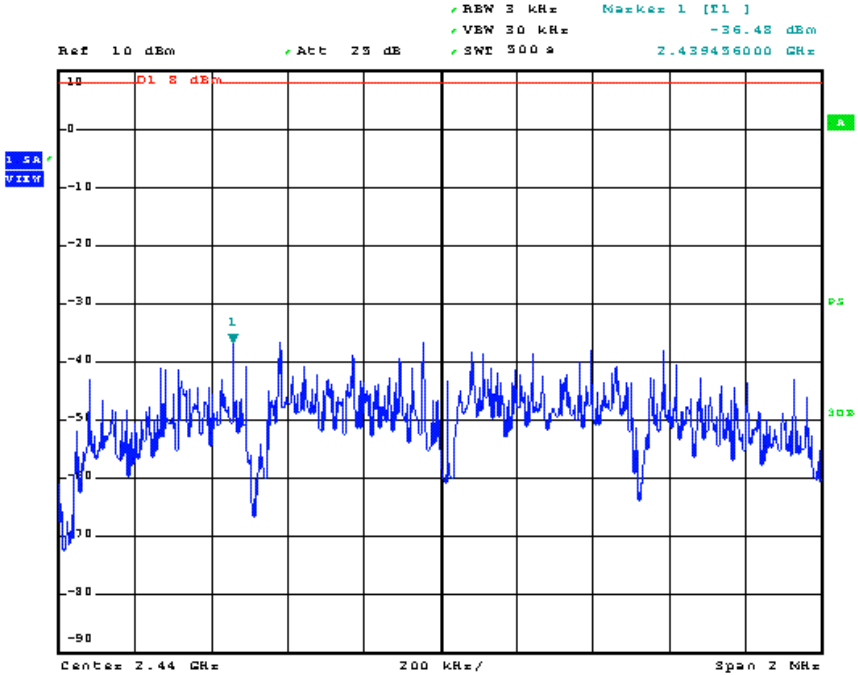
1. For EUT communicating with on Mode. Channel – 1



N  
Date: 5.DEC.2006 17:52:26



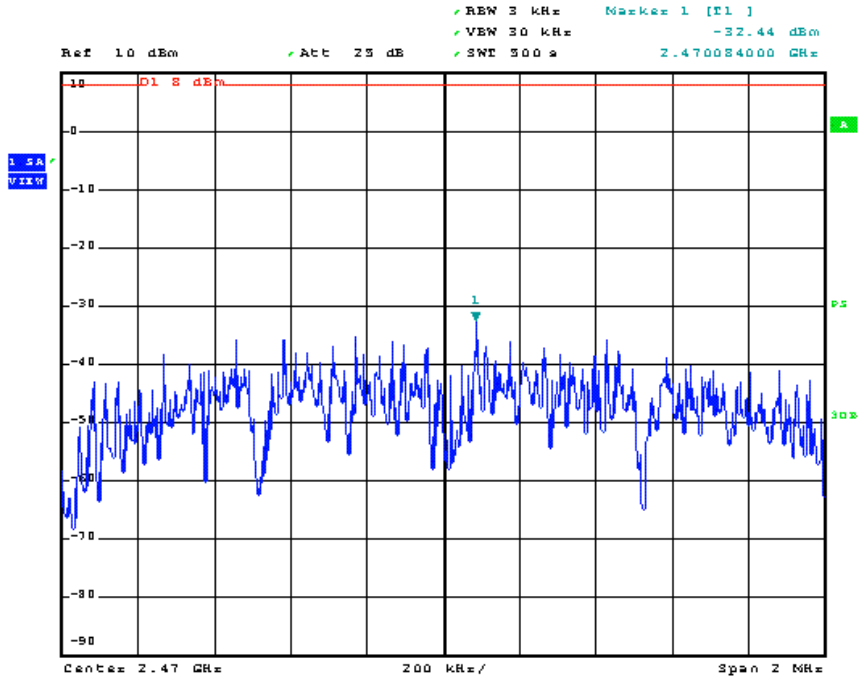
2.For EUT communicating with on Mode. Channel – 7



N  
Date: 5.DEC.2006 17:58:08



3. For EUT communicating with on Mode. Channel – 14



N  
Date: 5.DEC.2006 18:01:34



**5.3.8 Antenna Requirement**

**STANDARD APPLICABLE**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247(b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.