

# TEST REPORT FROM RFI GLOBAL SERVICES LTD

Test of: MiLife Coaching Ltd  
SmartScales

To: FCC Part 15.247: 2006 (Subpart C)  
RSS-210 Issue 7 June 2007 and RSS-Gen Issue 2 June 2007

**Test Report Serial No:**  
RFI/RPTE2/RP49779JD03A

**Supersedes Test Report Serial No:**  
RFI/RPTE1/RP49779JD03A

**This Test Report Is Issued Under The Authority  
Of Steve Flooks, Radio Performance Group  
Service Leader:**



Checked By: Steve Flooks	 Report Copy No: PDF01
Issue Date: 11 July 2008	Test Dates: 13 May 2008 to 16 May 2008

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## **1. Client Information**

<b>Company Name:</b>	MiLife Coaching Ltd
<b>Address:</b>	Suite 22 Colworth House Annex Colworth Science Park Sharnbrook Bedford MK44 1LQ
<b>Contact Name:</b>	Mr S Jackson

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## **2. Equipment Under Test (EUT)**

The following information (with the exception of the date of receipt) has been supplied by the customer:

### **2.1. Description of EUT**

The equipment under test is an online coaching system to help individuals to manage their activity, weight and nutrition.

### **2.2. Identification of Equipment Under Test (EUT)**

<b>Description:</b>	MiLife SmartScales
<b>Brand Name:</b>	MiLife Coaching Ltd
<b>Model Name or Number:</b>	Miss-001A
<b>Serial Number:</b>	001857801F33
<b>FCC ID Number:</b>	WFC000002
<b>Country of Manufacture:</b>	China
<b>Date of Receipt:</b>	06 May 2008

### **2.3. Modifications Incorporated in the EUT**

During the course of testing the EUT was not modified.

### **2.4. Accessories**

No accessories were supplied with the EUT during testing.

### **2.5. Support Equipment**

The following support equipment was used to exercise the EUT during testing:

<b>Description:</b>	Interface cable
<b>Brand Name:</b>	None Stated
<b>Model Name or Number:</b>	None Stated
<b>Serial Number:</b>	None Stated
<b>Cable Length and Type:</b>	2m / RS232C / 9 pin D connector / Multicore
<b>Connected to Port</b>	Serial interface box

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**Support Equipment (Continued)**

<b>Description:</b>	Serial interface box
<b>Brand Name:</b>	None Stated
<b>Model Name or Number:</b>	None Stated
<b>Serial Number:</b>	None Stated
<b>Cable Length and Type:</b>	2m / DB9 socket / 3 pole socket / PSU socket
<b>Connected to Port</b>	PC Serial port / EUT serial port

<b>Description:</b>	Interface cable
<b>Brand Name:</b>	None Stated
<b>Model Name or Number:</b>	None Stated
<b>Serial Number:</b>	None Stated
<b>Cable Length and Type:</b>	2 m / multicore
<b>Connected to Port</b>	Scales serial port and serial interface box

<b>Description:</b>	Mains power supply
<b>Brand Name:</b>	Balance Electronics Co. Ltd.
<b>Model Name or Number:</b>	GPS8-0500302
<b>Serial Number:</b>	None Stated
<b>Cable Length and Type:</b>	2 m / multicore
<b>Connected to Port</b>	Serial interface box

<b>Description:</b>	Laptop computer
<b>Brand Name:</b>	Dell
<b>Model Name or Number:</b>	Latitude
<b>Serial Number:</b>	RFI asset No PC370NT
<b>Cable Length and Type:</b>	Not Applicable
<b>Connected to Port</b>	RS232 cable to serial interface box

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## **2.6. Additional Information Related to Testing**

<b>Power Supply Requirement:</b>	Internal battery Supply of: 3.7V (Transmit mode)		
<b>Intended Operating Environment:</b>	Residential and within <i>Bluetooth</i> coverage		
<b>Equipment Category:</b>	<i>Bluetooth</i>		
<b>Type of Unit:</b>	Portable (Standalone battery powered device) (Transmit Mode) Transceiver		
<b>Channel Spacing:</b>	1 MHz		
<b>Modulation Type:</b>	GFSK		
<b>Data Rate:</b>	Variable		
<b>Maximum Measured EIRP:</b>	-8.3 dBm		
<b>Transmit Frequency Range:</b>	2.402 GHz to 2.480 GHz		
<b>Transmit Channels Tested:</b>	<b>Channel ID</b>	<b>Channel Number</b>	<b>Channel Frequency (GHz)</b>
	Bottom	0	2.402
	Middle	39	2.441
	Top	78	2.480
<b>Receive Frequency Range:</b>	2.402 GHz to 2.480 GHz		
<b>Receive Channels Tested:</b>	<b>Channel ID</b>	<b>Channel Number</b>	<b>Channel Frequency (GHz)</b>
	Bottom	0	2.402
	Middle	39	2.441
	Top	78	2.480

## **2.7. Port Identification**

<b>Port</b>	<b>Description</b>	<b>Type/Length</b>
1	Serial interface	Socket

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### **3. Test Specification, Methods and Procedures**

#### **3.1. Test Specification**

<b>Reference:</b>	FCC Part 15.247: 2006 Subpart C
<b>Title:</b>	Code of Federal Regulations, Part 15.247 (47CFR15) (Intentional Radiators operating within the band 2400 MHz to 2483.5 MHz)

<b>Reference:</b>	RSS-210 Issue 7 June 2007
<b>Title:</b>	Low-power Licence-exempt Radio communication Devices (All Frequency Bands): Category Equipment.

<b>Reference:</b>	RSS-Gen Issue 2 June 2007
<b>Title:</b>	General Requirements and Information for the Certification of Radio communication Equipment.

#### **3.2. Methods and Procedures**

The methods and procedures used were as detailed in:

ANSI C63.2 (1996)

Title: American National Standard for Instrumentation - Electromagnetic Noise and Field Strength Instrumentation, 10 Hz to 40 GHz.

ANSI C63.4 (2003)

Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)

Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)

Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1: (1999)

Title: Specification For Radio Disturbance and Immunity Measuring Apparatus and Methods. Part 1: Radio Disturbance and Immunity Measuring Apparatus.

DA00-705 (2000)

Title: Filing and Frequency Measurement Guidelines for Frequency Hopping Spread Spectrum Systems.

#### **3.3. Definition of Measurement Equipment**

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Appendix 1 contains a list of the test equipment used.

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#### **4. Deviations from the Test Specification**

There were no deviations from the test specification.

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## **5. Operation and Configuration of the EUT during Testing**

### **5.1. Operating Modes**

The EUT was tested in the following operating modes, unless otherwise stated:

- Idle and Transmit powered by the internal batteries.

### **5.2. Configuration and Peripherals**

The EUT was tested in the following configuration:

- In Bluetooth Test Mode and in a link with a Bluetooth test set.

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## **6. Summary of Test Results**

<b>Range of Measurements</b>	<b>FCC Part 15 Reference</b>	<b>IC RSS Reference</b>	<b>Port Type</b>	<b>Compliance Status</b>
Idle Mode Radiated Spurious Emissions	15.109	RSS-Gen 6.0	Antenna	Complied
Transmitter 20 dB Bandwidth	15.247(a)(1)	RSS-210 A8.1(a)	Antenna	Complied
Transmitter Carrier Frequency Separation	15.247(a)(1)	RSS-210 A8.1(b)	Antenna	Complied
Transmitter Average Time of Occupancy	15.247(a)(1)(iii)	RSS-210 A8.1(d)	Antenna	Complied
Transmitter Maximum Peak Output Power	15.247(b)(1)	RSS-210 A8.4(2)	Antenna	Complied
Transmitter Radiated Emissions	15.247(d) & 15.209(a)	RSS-210 A8.5	Antenna	Complied
Transmitter Band Edge Radiated Emissions	15.247(d) & 15.209(a)	RSS-210 A8.5	Antenna	Complied

### **6.1. Location of Tests**

All the measurements described in this report were performed at the premises of  
 RFI Global Services Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ

### **6.2. Site Registration Numbers**

- FCC: 90895
- IC: 3485

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## **7. Measurements, Examinations and Derived Results**

### **7.1. General Comments**

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to section 8 for details of measurement uncertainties.

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## **7.2. Test Results**

### **7.2.1. Idle Mode Radiated Spurious Emissions**

Ambient Temperature: 21°C

Relative Humidity: 49 %

7.2.1.1. Tests were performed using the test methods detailed in ANSI C63.4 Section 8.

7.2.1.2. Tests were performed to identify the maximum receiver or standby radiated emission levels.

#### **Results:**

#### **Electric Field Strength Measurements (Frequency Range: 30 MHz to 1000 MHz)**

Frequency (MHz)	Antenna Polarity	Quasi-Peak Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
996.713	Vertical	37.6	54.0	16.4	Complied

#### **Note(s):**

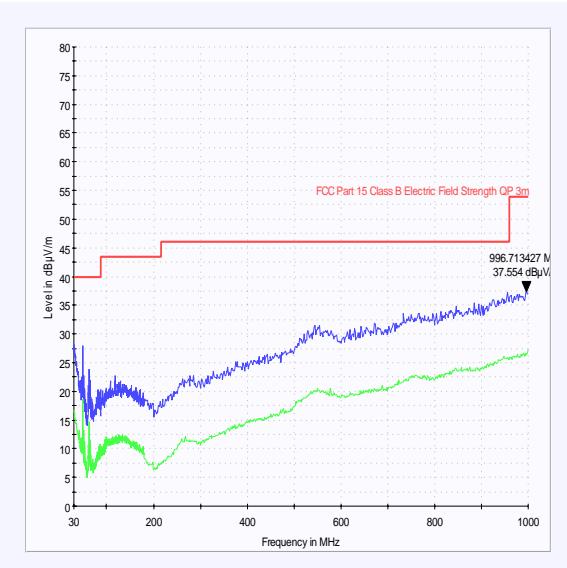
1. No spurious emissions were detected above the noise floor of the measuring receiver; therefore, the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above. The peak level was compared to the average limit as opposed to being compared to the peak limit because this is the more onerous limit.

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**Idle Mode Radiated Spurious Emissions (Continued)**



*Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.*

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**7.2.2. Idle Mode Radiated Spurious Emissions (Continued)**

**Electric Field Strength Measurements (Frequency Range: 1 GHz to 13 GHz)**

**Highest Peak Level:**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
12.599198	Horizontal	29.9	17.6	47.5	54.0	6.5	Complied

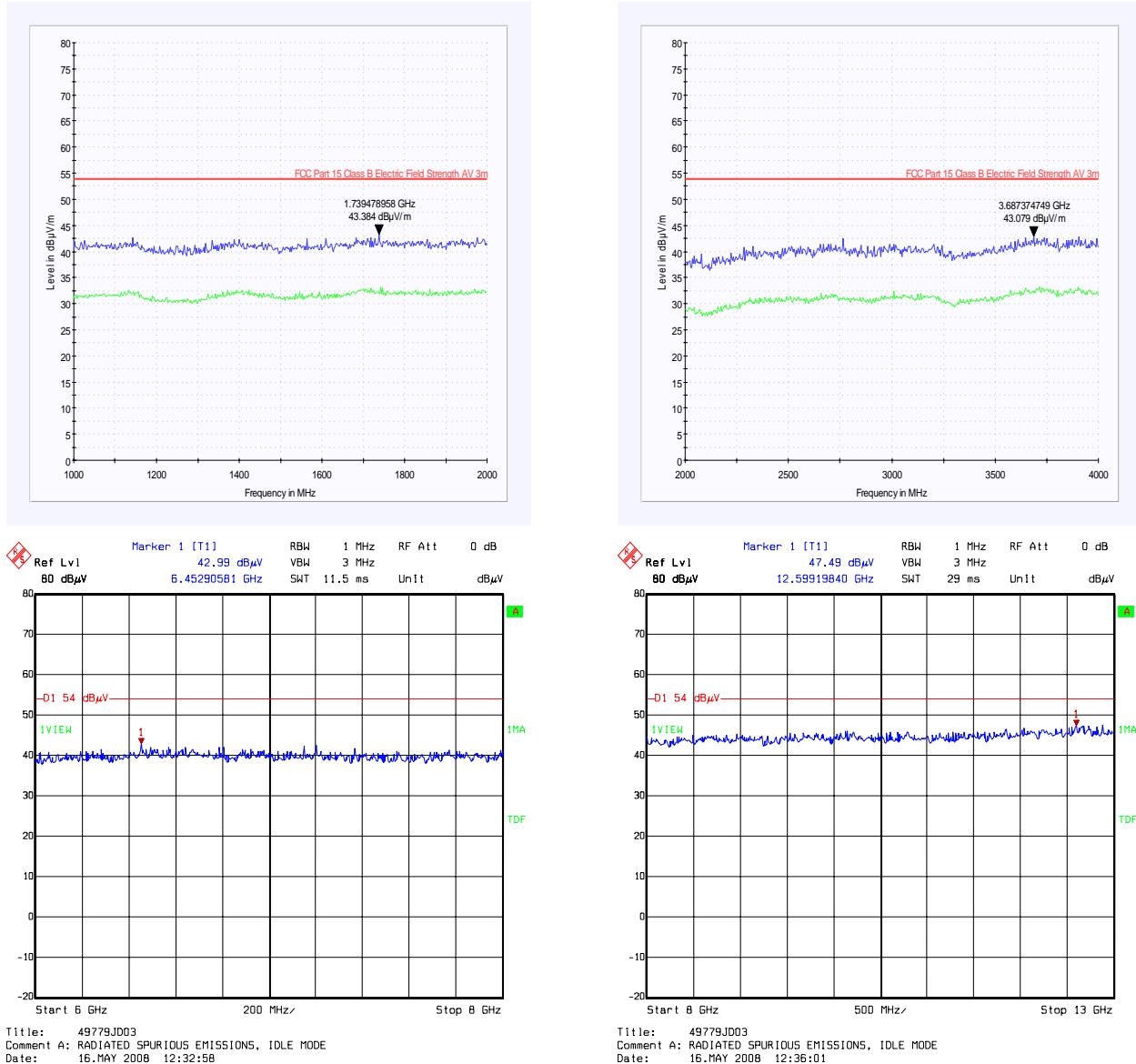
**Note(s):**

1. *No spurious emissions were detected above the noise floor of the measuring receiver; therefore, the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above. The peak level was compared to the average limit as opposed to being compared to the peak limit because this is the more onerous limit.*

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**Idle Mode Radiated Spurious Emissions (Continued)**



*Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.*

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### 7.2.3. Transmitter 20 dB Bandwidth

Ambient Temperature: 20°C

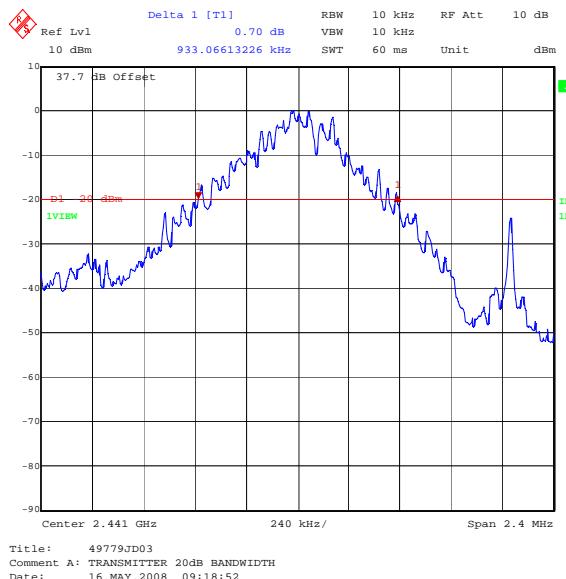
Relative Humidity: 49 %

Tests were performed using the test methods detailed in Public Notice DA 00-705 (March 30, 2000).

Tests were performed to identify the 20 dB bandwidth.

#### Results:

Transmitter 20 dB Bandwidth (kHz)	Limit (kHz)
933.066	None specified



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#### **7.2.4. Transmitter Carrier Frequency Separation**

Ambient Temperature: 20°C

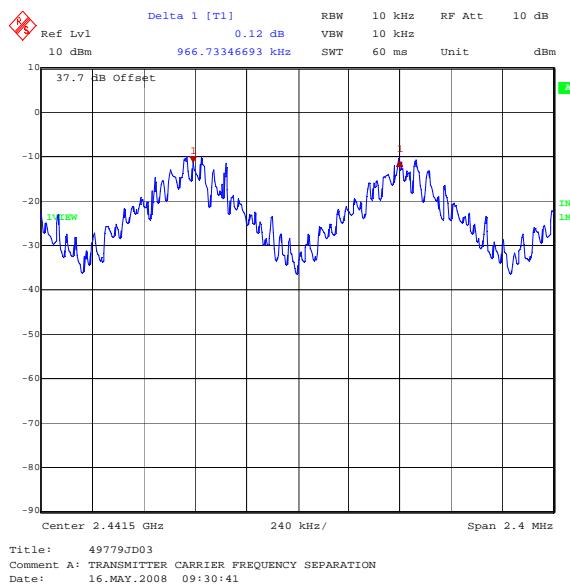
Relative Humidity: 49 %

Tests were performed using the test methods detailed in Public Notice DA 00-705 (March 30, 2000).

Tests were performed to identify the carrier frequency separation.

#### **Results:**

Transmitter Carrier Frequency Separation (kHz)	Limit ( $\frac{2}{3}$ of 20 dB BW) (kHz)	Margin (kHz)	Result
966.733	622.044	344.689	Complied



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### **7.2.5. Transmitter Average Time of Occupancy**

Ambient Temperature: 20°C

Relative Humidity: 49 %

Tests were performed using the test methods detailed in Public Notice DA 00-705 (March 30, 2000).

Tests were performed to identify the average time of occupancy in number of channels (79) x 0.4 seconds. The calculated period is 31.6 seconds.

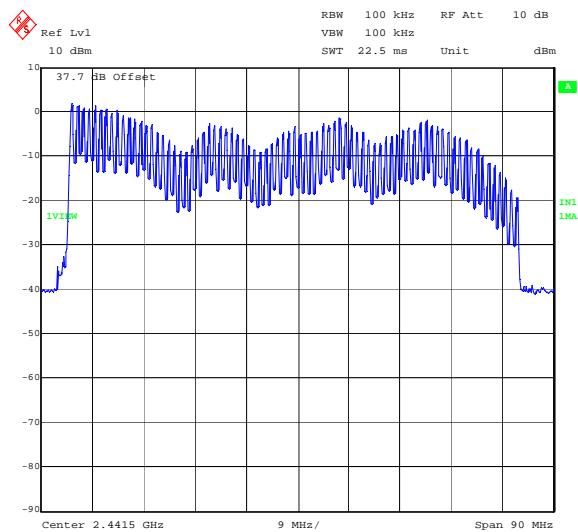
#### **Results:**

Emission Width (μs)	Number of Hops in 31.6 Seconds	Average Time of Occupancy (s)	Limit (s)	Margin (s)	Result
2901.804	113	0.3279	0.4	0.0721	Complied

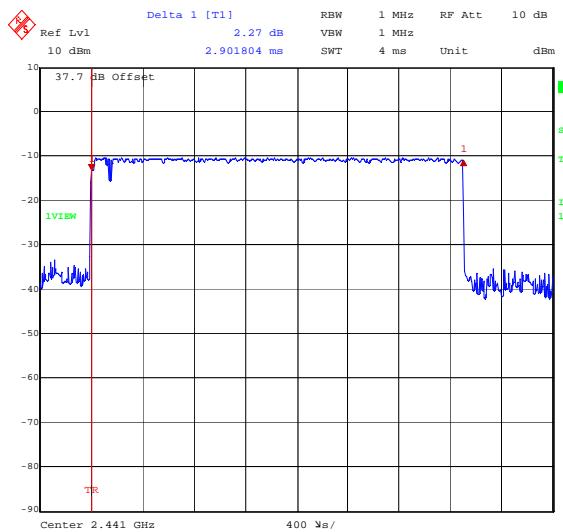
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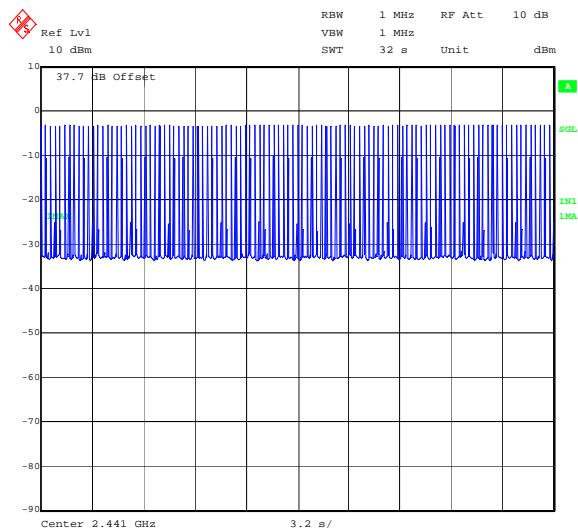
**Transmitter Average Time of Occupancy (Continued)**



Title: 49779JD03  
Comment A: AVERAGE TIME OF OCCUPANCY, NUMBER OF CHANNELS  
Date: 16.MAY.2008 09:36:50



Title: 49779JD03  
Comment A: AVERAGE TIME OF OCCUPANCY, PULSE LENGTH  
Date: 16.MAY.2008 09:46:00



Title: 49779JD03  
Comment A: AVERAGE TIME OF OCCUPANCY, NUMBER OF HOPS  
Date: 16.MAY.2008 09:50:16

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### **7.2.6. Transmitter Maximum Peak Output Power: (EIRP)**

Ambient Temperature: 13°C      Relative Humidity: 80 %

Tests were performed using the test methods detailed in Public Notice DA 00-705 (March 30, 2000), ANSI TIA-603-C-2004 and FCC CFR Part 2.

Tests were performed to identify the transmitter maximum peak output power (EIRP) of the EUT.

## **Results:**

## Battery Powered Devices

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	-8.3	30.0	38.3	Complied
Middle	-10.2	30.0	40.2	Complied
Top	-12.3	30.0	42.3	Complied

**Note(s):**

1. These tests were performed radiated; therefore the EUT antenna gain is encompassed in the final result and not measurable.

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### **7.2.7. Transmitter Radiated Emissions**

Ambient Temperature: 21°C

Relative Humidity: 49 %

Tests were performed using the test methods detailed in ANSI C63.4 Section 8 and Public Notice DA 00-705 (March 30, 2000).

Tests were performed to identify the maximum transmitter radiated emission levels.

#### **Results:**

##### **Electric Field Strength Measurements: 30 MHz to 1000 MHz (Emissions Occurring in the Restricted Bands)**

###### **Top Channel**

Frequency (MHz)	Antenna Polarity	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
976.994	Vertical	38.1	54.0	15.9	Complied

#### **Note(s):**

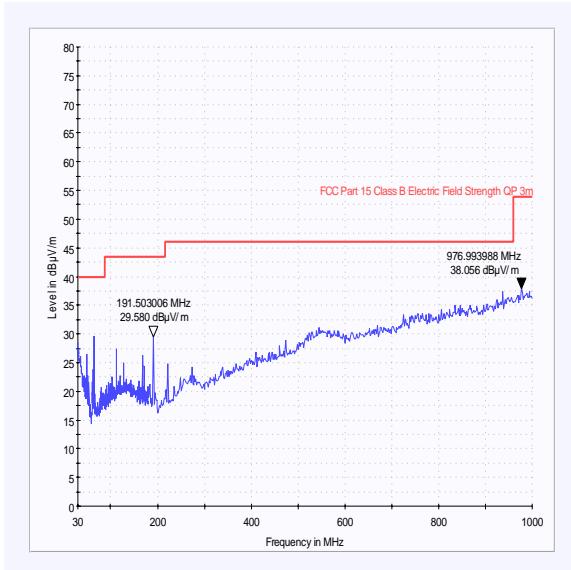
1. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the top channel only.
2. The preliminary scans showed similar emission levels for each mode below 1 GHz, therefore final radiated emissions measurements were performed with the EUT set to the top channel only.
3. No spurious emissions were detected above the noise floor of the measuring receiver; therefore, the highest peak noise floor reading of the measuring receiver was recorded as shown in the table above. The peak level was compared to the average limit as opposed to being compared to the peak limit because this is the more onerous limit.

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### Transmitter Radiated Emissions (Continued)



*Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.*

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**Transmitter Radiated Emissions (Continued)**

**Results:**

**Electric Field Strength Measurements (Frequency Range: 1 to 26.5GHz)  
(emissions occurring in the restricted bands)**

**Highest Peak Level: Bottom Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
1.602033	Vertical	47.7	1.1	48.8	74.0	25.2	Complied
4.804030	Vertical	65.8	-3.3	62.5	74.0	11.5	Complied

**Highest Average Level: Bottom Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
1.602033	Vertical	43.1	1.1	44.2	54.0	9.8	Complied
4.804030	Vertical	56.5	-3.3	53.2	54.0	0.8	Complied

**Highest Peak Level: Middle Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
4.882030	Vertical	65.3	-3.5	61.8	74.0	12.2	Complied

**Highest Average Level: Middle Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
4.882030	Vertical	39.7	-3.5	36.2	54.0	17.8	Complied

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**Transmitter Radiated Emissions (Continued)**

**Results:**

**Highest Peak Level: Top Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
4.960050	Vertical	62.7	-3.7	59.0	74.0	15.0	Complied

**Highest Average Level: Top Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
4.960050	Vertical	55.6	-3.7	51.9	54.0	2.1	Complied

**Highest Peak Level: Hopping Mode**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
4.948383	Vertical	65.8	-3.7	62.1	74.0	11.9	Complied

**Highest Average Level: Hopping Mode**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
4.948383	Vertical	34.5	-3.7	30.8	54.0	23.2	Complied

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**Transmitter Radiated Emissions (Continued)**

**Electric Field Strength Measurements (Frequency Range: 1 to 26.5 GHz) (emissions outside the restricted bands)**

**Highest Peak Level: Bottom Channel**

The result for this channel fell within a restricted band and can therefore be seen in the restricted bands result tables above.

**Highest Peak Level: Middle Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	-20 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
1652.595	Horizontal	45.9	1.1	47.0	65.0	18.0	Complied

**Highest Peak Level: Top Channel**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	-20 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
1653.997	Horizontal	50.4	1.1	51.5	62.9	11.4	Complied

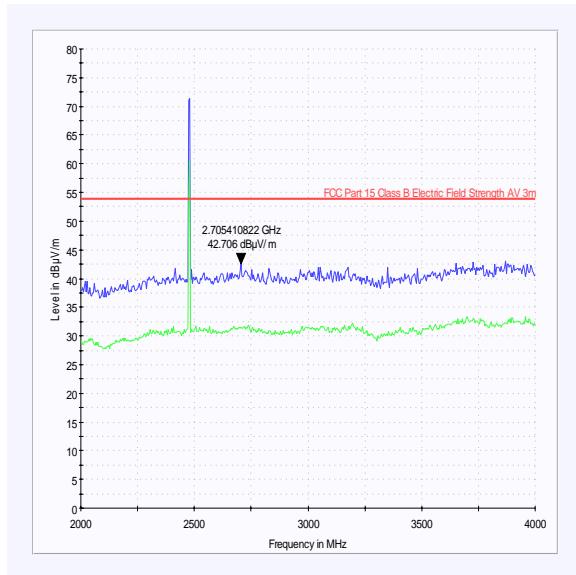
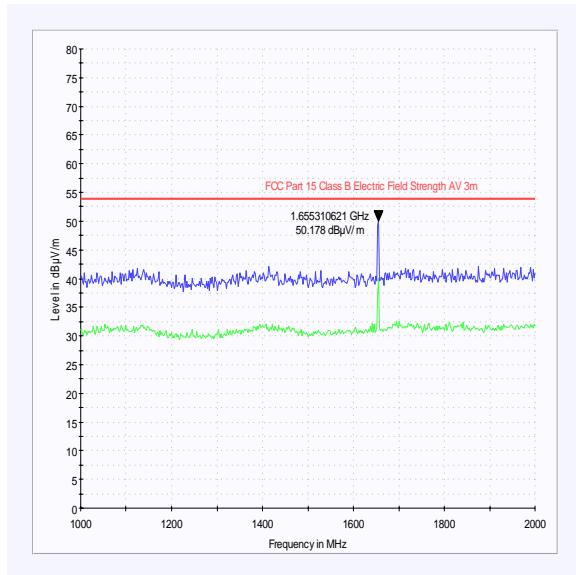
**Highest Peak Level: Hopping Mode**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	-20 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
1652.414	Horizontal	50.0	1.1	51.1	65.0	13.9	Complied

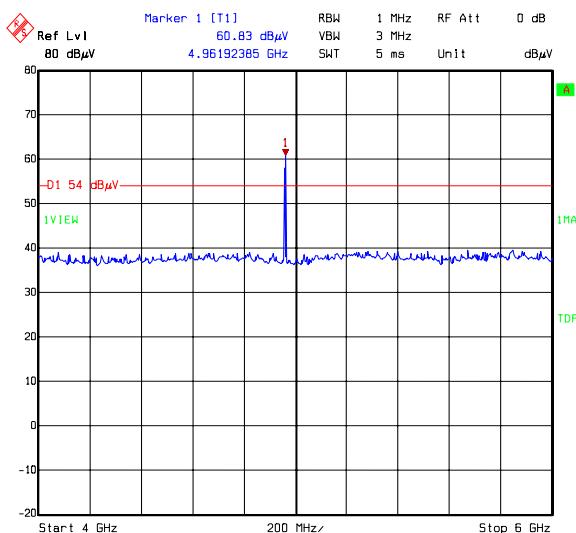
**Test of: MiLife Coaching Ltd  
SmartScales**

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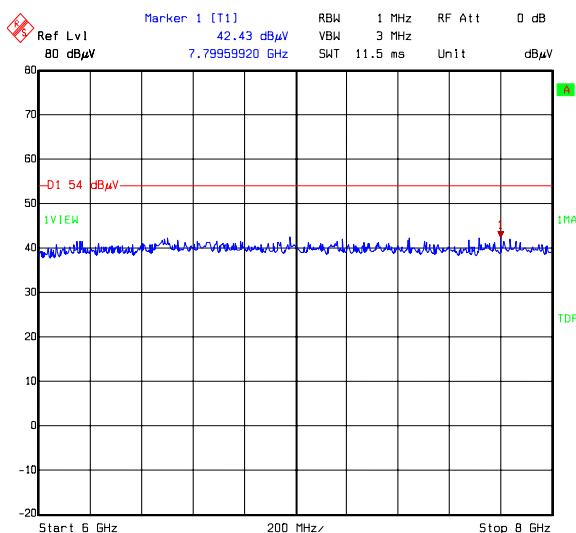
**Transmitter Radiated Emissions (Continued)**



NOTE: The carrier is shown on the above plot



Title: 49779JD03  
Comment A: TX RADIATED SPURIOUS EMISSIONS TOP CHANNEL  
Date: 16.MAY.2008 10:39:23



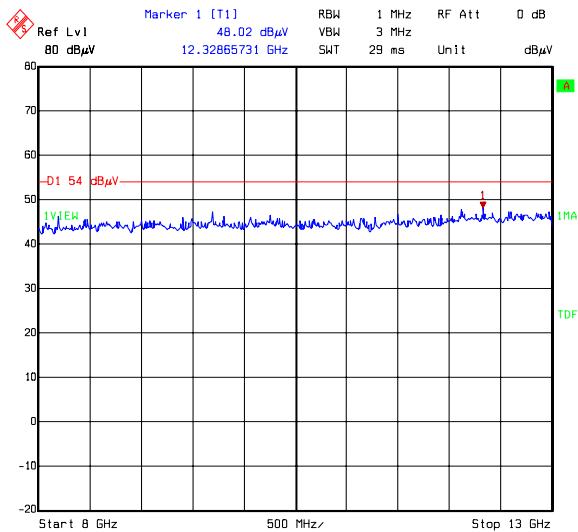
Title: 49779JD03  
Comment A: TX RADIATED SPURIOUS EMISSIONS TOP CHANNEL  
Date: 16.MAY.2008 11:56:08

*Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.*

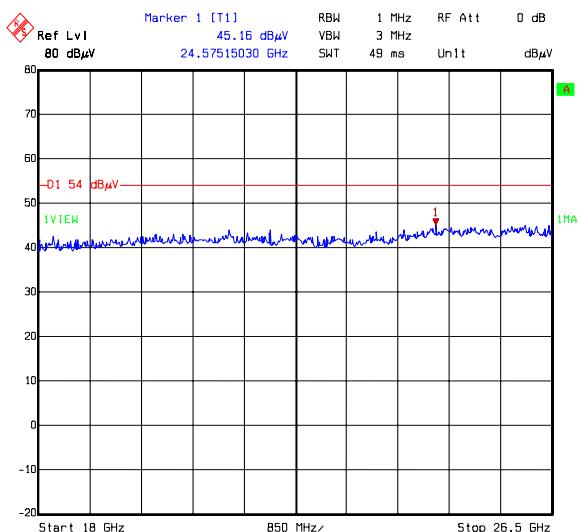
**Test of: MiLife Coaching Ltd  
SmartScales**

**To: FCC Part 15.247: 2006 (Subpart C)  
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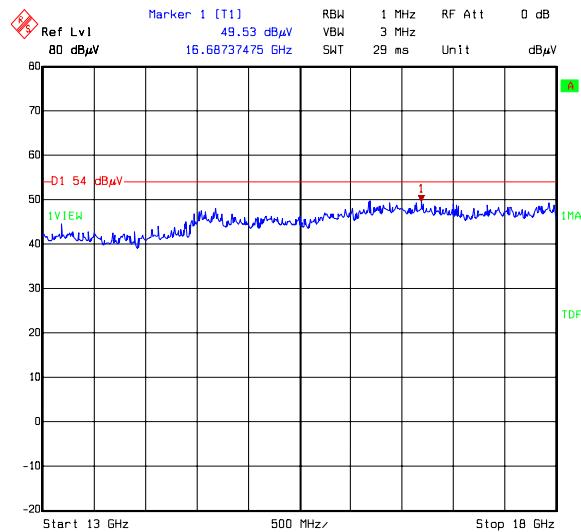
### Transmitter Radiated Emissions (Continued)



Title: 49779JD03  
Comment A: TX RADIATED SPURIOUS EMISSIONS TOP CHANNEL  
Date: 16.MAY.2008 11:51:49



Title: 49779JD03  
Comment A: TX RADIATED SPURIOUS EMISSIONS TOP CHANNEL  
Date: 16.MAY.2008 12:10:44



Title: 49779JD03  
Comment A: TX RADIATED SPURIOUS EMISSIONS TOP CHANNEL  
Date: 16.MAY.2008 11:48:28

*Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.*

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### **7.2.8. Transmitter Band Edge Radiated Emissions**

Ambient Temperature: 13°C      Relative Humidity: 80 %

Tests were performed using the test methods detailed in ANSI C63.4 Section 8 and Public Notice DA 00-705 (March 30, 2000).

Tests were performed to identify the maximum radiated band edge emissions.

## **Results:**

## Electric Field Strength Measurements

### Peak Power Level Hopping Mode:

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2.4000	Vertical	53.0	-6.5	46.5	*66.9	20.4	Complied
2.4835	Vertical	56.0	-8.0	48.0	74.0	26.0	Complied

## Average Power Level Hopping Mode:

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2.4835	Vertical	42.5	-8.0	34.5	54.0	19.5	Complied

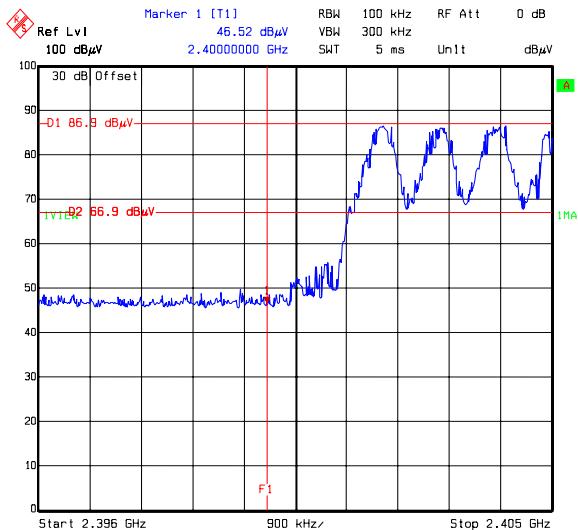
**Note(s):**

### 1. \* -20 dBc limit

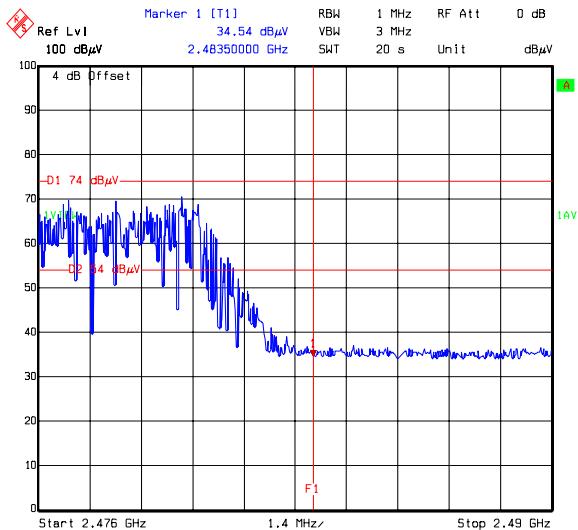
**Test of: MiLife Coaching Ltd**  
**SmartScales**

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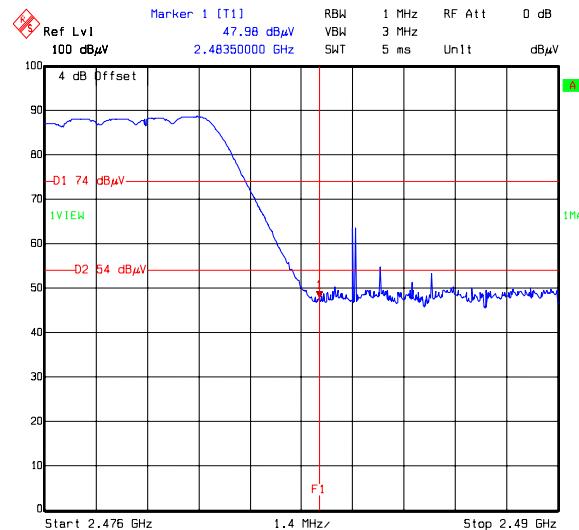
### Transmitter Band Edge Radiated Emissions (Continued)



Title: 49779JD03  
 Comment A: TX BAND EDGE, BOTTOM CHANNEL, HOPPING, PEAK  
 Date: 16.MAY.2008 15:17:25



Title: 49779JD03  
 Comment A: TX BAND EDGE, TOP CHANNEL, HOPPING, AVERAGE  
 Date: 16.MAY.2008 15:37:51



Title: 49779JD03  
 Comment A: TX BAND EDGE, TOP CHANNEL, HOPPING, PEAK  
 Date: 16.MAY.2008 15:40:40

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**Transmitter Band Edge Radiated Emissions (Continued)**

**Results:**

**Peak Power Level Static Mode:**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2.4000	Vertical	56.0	-6.5	49.5	*66.9	17.4	Complied
2.4835	Vertical	55.0	-8.0	47.0	74.0	27.0	Complied

**Average Power Level Static Mode:**

Frequency (GHz)	Antenna Polarity	Detector Level (dB $\mu$ V)	Transducer Factor (dB)	Actual Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2.4835	Vertical	43.8	-8.0	35.8	54.0	18.2	Complied

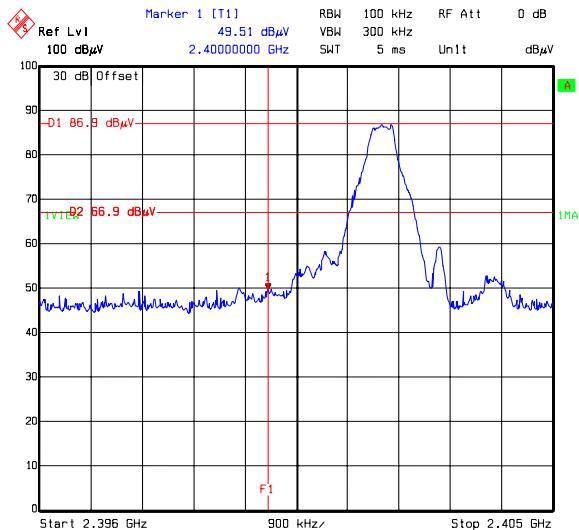
**Note(s):**

1. \* -20 dBc limit

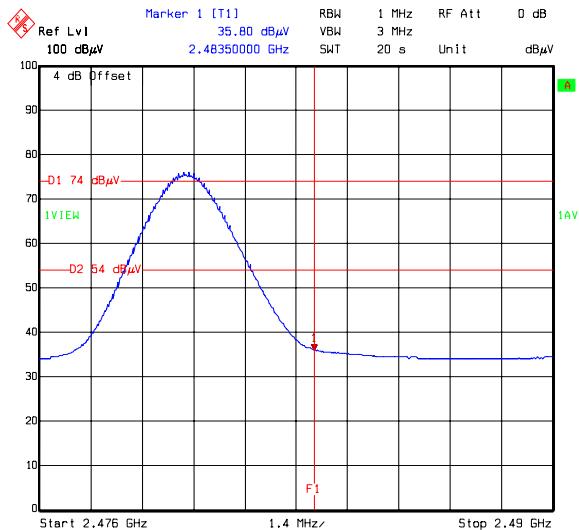
**Test of: MiLife Coaching Ltd**  
**SmartScales**

**To: FCC Part 15.247: 2006 (Subpart C)**  
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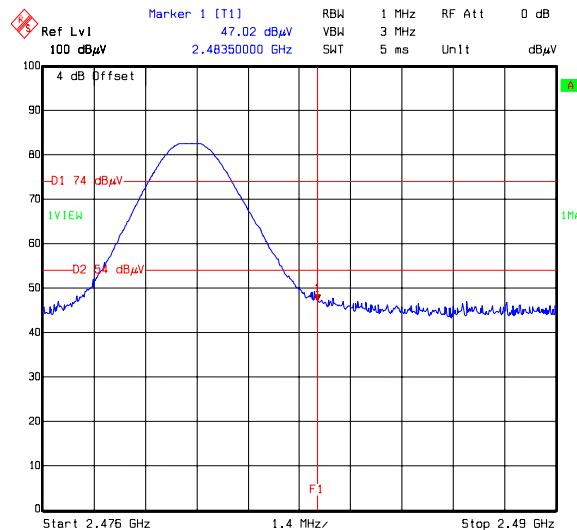
### Transmitter Band Edge Radiated Emissions (Continued)



Title: 49779JD03  
 Comment A: TX BAND EDGE, BOTTOM CHANNEL, PEAK  
 Date: 16.MAY.2008 15:12:58



Title: 49779JD03  
 Comment A: TX BAND EDGE, TOP CHANNEL, STATIC, AVERAGE  
 Date: 16.MAY.2008 15:31:26



Title: 49779JD03  
 Comment A: TX BAND EDGE, TOP CHANNEL, STATIC, PEAK  
 Date: 16.MAY.2008 15:27:23

**Test of: MiLife Coaching Ltd**  
**SmartScales**

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## **8. Measurement Uncertainty**

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
Transmitter Maximum Peak Output Power	Not Applicable	95%	±2.94 dB
Conducted Emissions Antenna Port	30 MHz to 40 GHz	95%	±0.28 dB
Transmitter Carrier Frequency Separation	Not Applicable	95%	±11.4 ppm
Transmitter Average Time of Occupancy	Not Applicable	95%	±0.3 ns
20 dB Bandwidth	Not Applicable	95%	± 11.4 ppm
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	±4.64 dB
Radiated Spurious Emissions	1 GHz to 40 GHz	95%	±2.94 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

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### Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A028	Antenna	Eaton	91888-2	304	08 Jun 2006	36
A031	Antenna	Eaton	91889-2	557	08 Jun 2006	36
A1534	Pre Amplifier	Hewlett Packard	8449B OPT H02	3008A00405	Calibrated before use	-
A253	Antenna	Flann Microwave	12240-20	128	17 Nov 2006	36
A254	Antenna	Flann Microwave	14240-20	139	17 Nov 2006	36
A255	Antenna	Flann Microwave	16240-20	519	17 Nov 2006	36
A256	Antenna	Flann Microwave	18240-20	400	17 Nov 2006	36
A436	Antenna	Flann	20240-20	330	24 Apr 2006	36
A490	Antenna	Chase	CBL6111A	1590	07 Feb 2008	12
C1080	Rosenberger Cable 3m	Rosenberger	FA210A1030M5050	28464-1	Calibrated before use	-
C1155	Cable	Huber & Suhner	Sucoflex 104PA	1522/4PA	Calibrated before use	-
C1167	Cable	Rosenberger Micro-Coax	FA210A1030007070	43190-01	Calibrated before use	-
C1190	Cable	Rosenburg	FA210A1015M3030	27141-05	Calibrated before use	-
C172	Cable	Rosenberger	UFA210A-1-1181-70x70	None	Calibrated before use	-
M1124	Spectrum Analyser	Rohde & Schwarz	ESIB26	100046K	19 Feb 2008	12
M1242	Spectrum Analyser	Rohde & Schwarz, Inc.	FSEM30	845986/022	29 Nov 2007	12
M1379	Test Receiver	Rohde and Schwarz	ESIB7	100330	02 Aug 2007	12
S202	Site 2	RFI	2	S202-15011990	28 Jan 2008	12
S207	Site 7	RFI	7	None	Calibration not required	-
S209	Anechoic Chamber	RFI	9	None	Verified before use	-

**NB** In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.

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## **Appendix 2. Test Configuration Drawings**

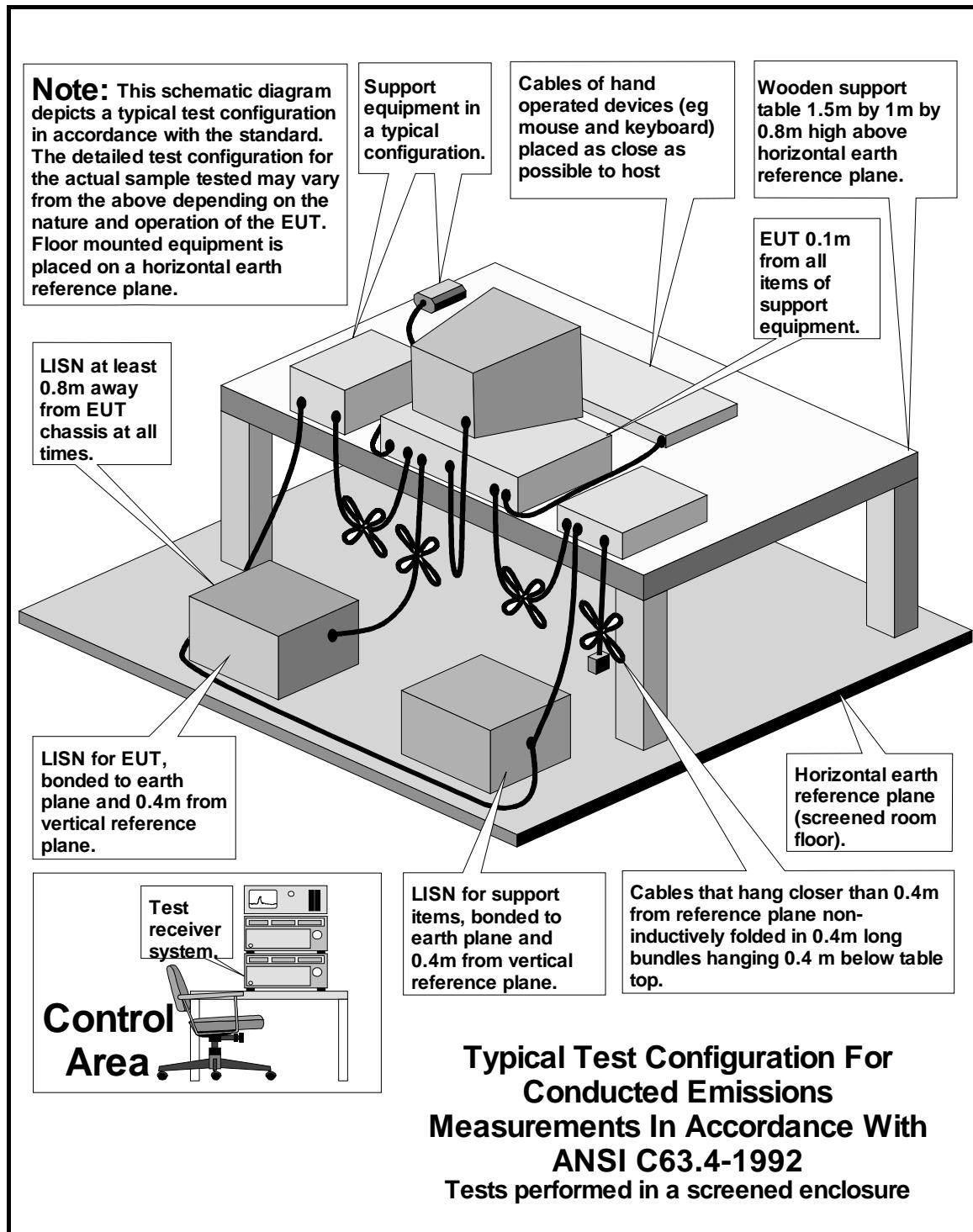
This appendix contains the following drawings:

Drawing Reference Number	Title
DRG\49779JD03\EMICON	Test configuration for measurement of conducted emissions.
DRG\49779JD03\EMIRAD	Test configuration for measurement of radiated emissions.

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**DRG\49779JD03\EMICON**



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**DRG\49779JD03\EMIRAD**

