TEST REPORT

Your Ref:

Date: 15 March 2003

Our Ref: 56S030132/01

DID: 6885 1448 Fax: 6777 6409

NOTE: This Report is issued subject to the "Terms and Conditions Governing Technical Services" set out in the "Request for Technical Services" form. The terms and conditions governing the issue of this report are set out overleaf.

FORMAL REPORT ON TESTING IN ACCORDANCE WITH
FCC Part 15C : 2002
OF A
BLUE PENDANT BLUETOOTH HEADSET
[MODEL : BP 100]
[FCC ID : QY9-AVBP]

TEST FACILITY	Telecoms & EMC, Testing Group, PSB Corporation Pte Ltd 1 Science Park Drive, Singapore 118221
FCC REG. NO.	90937 (3m & 10m OATS) 99142 (10m Anechoic Chamber) 871638 (5m Anechoic Chamber)
IND. CANADA REG. NO.	IC 4257 (10m Anechoic Chamber)
PREPARED FOR	Ms Anitha Addvalue Communications Pte Ltd 750D Chai Chee Road #03-03 Technopark @ Chai Chee Singapore 469004 Tel : +65 6244 4828 Fax : +65 6242 4555
JOB NUMBER	56S030132
TEST PERIOD	25 Feb 2003 – 03 Mar 2003

PREPARED BY

Lim Cher Hwee
Engineer

APPROVED BY

Colin Gan
Assistance Vice President

This Report is issued under the following conditions:

1. Results of the testing/calibration in the form of a report will be issued immediately after the service has been completed or terminated.

2. Unless otherwise requested, a report shall contain only technical results. Analysis and interpretation of the results and professional opinion and recommendations expressed thereupon, if required, shall be clearly indicated and additional fee paid for, by the Client.

3. This report applies to the sample of the specific product/equipment given at the time of its testing/calibration. The results are not used to indicate or imply that they are applicable to other similar items. In addition, such results must not be used to indicate or imply that PSB Corporation approves, recommends or endorses the manufacturer, supplier or user of such product/equipment, or that PSB Corporation in any way "guarantees" the later performance of the product/equipment.

4. The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client, PSB Corporation therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.

5. Additional copies of the report are available to the Client at an additional fee. No third party can obtain a copy of this report through PSB Corporation, unless the Client has authorised PSB Corporation in writing to do so.

6. PSB Corporation may at its sole discretion add to or amend the conditions of the report at the time of issue of the report and such report and such additions or amendments shall be binding on the Client.

7. All copyright in the report shall remain with PSB Corporation and the Client shall, upon payment of PSB Corporation's fees for the carrying out of the tests/calibrations, be granted a license to use or publish the report to the third parties subject to the terms and conditions herein, provided always that PSB Corporation may at its absolute discretion be entitled to impose such conditions on the license as it sees fit.

8. Nothing in this report shall be interpreted to mean that PSB Corporation has verified or ascertained any endorsement or marks from any other testing authority or bodies that may be found on that sample.

9. This report shall not be reproduced wholly or in parts and no reference shall be made by the Client to PSB Corporation or to the report or results furnished by PSB Corporation in any advertisements or sales promotion.

The product was tested in accordance with the customer's specifications.

Test Results Summary

FCC Paragraphs	Descriptions	Pass / Fail
15.207	Conducted Emissions	Pass
15.205	Radiated Emissions (Restricted Band Requirements)	Pass
15.209	Radiated Emissions (Spurious Emissions)	Pass
15.247 (a)(1)	Carrier Frequency Separation	Pass
	Spectrum Bandwidth (20dB Bandwidth Measurement)	Pass
15.247 (a)(1)(iii)	Number of Hopping Frequencies	Pass
	Average Frequency Dwell Time	Pass
15.247 (b)(1)	Maximum Peak Power	Pass
15.247 (b)(4)	Effective Isotropic Radiated Power (EIRP) Requirements	Pass
15.247 (c)	RF Conducted Spurious Emissions & Band Edge Compliance at the Transmitter Antenna Terminal	Pass
15.247 (d)	Peak Power Spectral Density	Pass
1.1310	Maximum Permissible Exposure	N/A * see Note 3

Notes

1. Three channels as listed below, which respectively represent the lower, middle and upper channels of the equipment under test (EUT) were chosen and tested. For each channel, the EUT was configured to operate in the Bluetooth test mode

Transmit Channel	Frequency (GHz)
Channel 0	2.402
Channel 39	2.441
Channel 78	2.480

2. All the measurements in section 15.247 were done based on conducted measurements.

3. As the typical distance between users and the EUT is less than 20cm, maximum exposure test is not applicable. Specific Absorption Rate (SAR) test is not required either as the maximum transmitter power of the EUT is less than 1mW (0dBm).

Modifications

No modifications were done.

Description	:	The Equipment Under Test (EUT) is a **Bluetooth Headset**.
Manufacturer	:	Addvalue Communications Pte Ltd
Model Number	:	BP100
FCC ID	:	QY9-AVBP
Serial Number	:	Nil
Microprocessor	:	PCF87750
Operating / Transmitting Frequency	:	2402MHz – 2480MHz
Clock / Oscillator Frequency	:	13MHz
Modulation	:	Gaussian Frequency Shift Keying (GFSK) with BT = 0.5
Pulse Train Cycle	:	625μs
Port / Connectors	:	1 x DC port
Rated Input Power	:	5V DC, 300mA

Equipment Description (Including Brand Name)	**Model, Serial & FCC ID Number**	**Cable Description** (List Length, Type & Purpose)
Hewlett-Packard OmniBook Notebook	M/N: XE3 S/N: TW04903634 FCC ID: DoC	Nil
Hewlett-Packard AC/DC Power Adapter	M/N: HP F1454A S/N: JAD0046243547 FCC ID: Nil	1.5m unshielded AC power cable 2.0m unshielded DC cable with moulded ferrite bead
Anta AC/DC Power Adapter	M/N: SCP41-50300R S/N: Nil FCC ID: Nil	2.0m unshielded AC power cable

EUT OPERATING CONDITIONS

The EUT was powered via an AC/DC power adapter, which using a power source of 110V, 60Hz as the mains supply.

Tests	Description Of Operation
1. Conducted Emissions 2. Radiated Emissions 3. Carrier Frequency Separation 4. Spectrum Bandwidth (20dB Bandwidth Measurement) 5. Number Of Hopping Frequencies 6. Average Frequency Dwell Time 7. Maximum Peak Power 8. Effective Isotropic Radiated Power (EIRP) 9. RF Conducted Spurious Emissions at the Transmitter Antenna Terminal 10. Band Edge Compliance at the Transmitter Antenna Terminal 11. Peak Power Spectral Density	The EUT was exercised by operating in the Bluetooth test mode with maximum transmitting power and following configuration during the tests: <u>Carrier Frequency Separation, Number of Hopping Frequency, Average Frequency Dwell Time and Band Edge at the Transmitting Antenna:</u> Frequency hopping and modulation are on. <u>Conducted Emissions, Radiated Emissions, Spectrum Bandwidth (20dB Bandwidth Measurement), Maximum Peak Power, Effective Isotropic Radiated Power (EIRP), RF Conducted Spurious Emissions at the Transmitter Antenna Terminal and Peak Power Spectral Density</u> Frequency hopping is off and the modulation is on. Note: For all the tests mentioned above, the DH1 packet was used with the PRBS 9 as the payload.

FCC Part 15C (15.207) Conducted Emission Results

Frequency (MHz)	AV Value (dBμV)	AV Margin (dB)	Q-P Value (dBμV)	Q-P Margin (dB)	Line	Channel
2.9526	38.3	-7.7	38.9	-17.1	Neutral	0
4.1791	31.8	-14.2	35.8	-20.2	Live	0
17.3854	30.4	-19.6	37.9	-22.1	Live	39
18.3781	33.6	-16.4	40.9	-19.1	Neutral	39
19.3690	33.2	-16.8	40.3	-19.7	Live	0
20.3682	33.3	-16.7	40.3	-19.7	Neutral	0

Tested By : RBA

Notes

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   9kHz - 30MHz
   RBW: 10kHz VBW: 30kHz
4. Conducted Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 9kHz – 30MHz (Average & Quasi-peak) is ±2.4dB.

Conducted Emissions Setup (Front View)

Conducted Emissions Setup (Rear View)

FCC Part 15C (15.209) Radiated Emission (Spurious Emissions) Results

Test Distance : 3m

Frequency (MHz)	Q-P Value (dBμV/m)	Q-P Margin (dB)	Channel	Azimuth (Degrees)	Height (cm)	Polarisation (H/V)
47.9794	30.3	-9.7	0	80	1.01	V
191.9600	25.9	-14.1	78	297	1.27	V
215.9356	29.5	-10.5	78	336	1.71	H
233.9768	35.0	-12.0	39	136	1.13	H
239.9786	41.2	-5.8	0	150	1.33	H
263.9784	33.8	-13.2	78	120	1.31	H

Tested By : DP

Notes

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. Quasi-peak measurement was used for frequency measurement up to 1GHz. Average and peak measurements were used for emissions above 1GHz. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second.
3. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
4. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   30MHz - 1GHz
   RBW: 120kHz VBW: 1MHz
   >1GHz
   RBW: 1MHz VBW: 3MHz
5. The peak emissions above 1GHz show compliance to the requirement stated in Section 15.35 (b).
6. The upper frequency of radiated emission investigations were according to requirements stated in Section 15.33 (a) for intentional radiators & Section 15.33 (b) for unintentional radiators.
7. The channel in the table refers to the transmit channel of the EUT.
8. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 30MHz – 25GHz (QP only @ 3m & 10m) is ±4.3dB (for EUTs < 0.5m X 0.5m X 0.5m).

FCC Part 15C (15.205) Radiated Emissions (Restricted Band Requirements) Results

EUT Transmit Channel : 0 (Lower Channel)
Test Distance : 3m

Restricted Band (MHz)	Limit (dBμV/m)	Channel 0		
		Frequency (MHz)	PK / Q-P (dBμV/m)	Average (dBμV/m)
37.5 - 38.25	40.0	Nil	-	-
73 – 74.6	40.0	Nil	-	-
74.8 - 75.2	40.0	Nil	-	-
108 - 121.94	43.5	113.3	23.5 (Q-P)	-
	43.5	117.0	23.8 (Q-P)	-
	43.5	119.1	24.1 (Q-P)	-
	43.5	120.1	28.2 (Q-P)	-
123 – 138	43.5	Nil	-	-
	43.5	Nil	-	-
	43.5	Nil	-	-
149.9 - 150.05	43.5	Nil	-	-
156.52475 – 156.52525	43.5	Nil	-	-
156.7 - 156.9	43.5	Nil	-	-
162.0125 – 167.17	43.5	Nil	-	-
167.72 - 173.2	43.5	168.0	24.7 (Q-P)	-
240 – 285	46.0	260.4	36.8 (Q-P)	-
322 - 335.4	46.0	Nil	-	-
	46.0	Nil	-	-
399.9 – 410	46.0	Nil	-	-
608 – 614	46.0	Nil	-	-
960 – 1240	54.0	1202.2	38.6 (PK)	-
1300 – 1427	54.0	Nil	-	-
1435 - 1626.5	54.0	1524.4	34.4 (PK)	-
1645.5 – 1646.5	54.0	Nil	-	-
1660 – 1710	54.0	Nil	-	-
1718.8 – 1722.2	54.0	Nil	-	-
2200 – 2300	54.0	Nil	-	-
2310 – 2390	54.0	Nil	-	-
2483.5 – 2500	54.0	Nil	-	-
2655 – 2900	54.0	Nil	-	-
3260 – 3267	54.0	Nil	-	-
3332 – 3339	54.0	Nil	-	-
3345.8 – 3358	54.0	Nil	-	-
3600 – 4400	54.0	Nil	-	-
4500 – 5150	54.0	Nil	-	-
5350 – 5460	54.0	Nil	-	-
7250 – 7750	54.0	Nil	-	-
8025 – 8500	54.0	Nil	-	-
9000 – 9200	54.0	Nil	-	-
9300 – 9500	54.0	Nil	-	-

FCC Part 15C (15.205) Radiated Emissions (Restricted Band Requirements) Results

Restricted Band (MHz)	Limit (dBμV/m)	Channel 0		
		Frequency (MHz)	PK / Q-P (dBμV/m)	Average (dBμV/m)
10600-12700	54.0	Nil	-	-
13250-13400	54.0	Nil	-	-
14470-14500	54.0	Nil	-	-
15350-16200	54.0	Nil	-	-
17700-21400	54.0	Nil	-	-
22010-23120	54.0	Nil	-	-
23600-24000	54.0	Nil	-	-

Tested By : DP

Notes

1. The Nil in the frequency column indicates no emissions were found in the band of interest and showed compliance to the limits as specified in section 15.209. The emissions were merely the noise floor.
2. Quasi-peak measurement was used for frequency measurement up to 1GHz. Average and peak measurements were used for emissions above 1GHz. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second.
3. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   30MHz - 1GHz
   RBW: 120kHz VBW: 1MHz
   >1GHz
   RBW: 1MHz VBW: 3MHz
4. The peak emissions above 1GHz show compliance to the requirement stated in Section 15.35 (b).
6. The upper frequency of radiated emission investigations were according to requirements stated in Section 15.33 (a) for intentional radiators & Section 15.33 (b) for unintentional radiators.
7. The channel in the table refers to the transmit channel of the EUT.
8. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 30MHz – 25GHz (QP only @ 3m & 10m) is ±4.3dB (for EUTs < 0.5m X 0.5m X 0.5m).

FCC Part 15C (15.205) Radiated Emissions (Restricted Band Requirements) Results

EUT Transmit Channel : 39 (Middle Channel)
Test Distance : 3m

Restricted Band (MHz)	Limit (dBμV/m)	Channel 39		
		Frequency (MHz)	PK / Q-P (dBμV/m)	Average (dBμV/m)
37.5 - 38.25	40.0	Nil	-	-
73 - 74.6	40.0	Nil	-	-
74.8 - 75.2	40.0	Nil	-	-
108 - 121.94	43.5	117.0	24.8 (Q-P)	-
	43.5	Nil		-
123 – 138	43.5	Nil	-	-
149.9 - 150.05	43.5	Nil	-	-
156.52475 – 156.52525	43.5	Nil	-	-
156.7 - 156.9	43.5	Nil	-	-
162.0125 – 167.17	43.5	Nil	-	-
167.72 - 173.2	43.5	Nil	-	-
240 – 285	46.0	247.1	25.1 (Q-P)	-
	46.0	260.4	24.7 (Q-P)	-
322 - 335.4	46.0	Nil	-	-
399.9 – 410	46.0	Nil	-	-
608 – 614	46.0	Nil	-	-
960 – 1240	54.0	Nil	-	-
1300 – 1427	54.0	Nil	-	-
1435 - 1626.5	54.0	Nil	-	-
1645.5 – 1646.5	54.0	Nil	-	-
1660 – 1710	54.0	Nil	-	-
1718.8 – 1722.2	54.0	Nil	-	-
2200 – 2300	54.0	Nil	-	-
2310 – 2390	54.0	Nil	-	-
2483.5 – 2500	54.0	Nil	-	-
2655 – 2900	54.0	Nil	-	-
3260 – 3267	54.0	Nil	-	-
3332 – 3339	54.0	Nil	-	-
3345.8 – 3358	54.0	Nil	-	-
3600 – 4400	54.0	Nil	-	-
4500 – 5150	54.0	Nil	-	-
5350 – 5460	54.0	Nil	-	-
7250 – 7750	54.0	Nil	-	-
8025 – 8500	54.0	Nil	-	-
9000 – 9200	54.0	Nil	-	-
9300 – 9500	54.0	Nil	-	-

FCC Part 15C (15.205) Radiated Emissions (Restricted Band Requirements) Results

Restricted Band (MHz)	Limit (dBμV/m)	Channel 39		
		Frequency (MHz)	PK / Q-P (dBμV/m)	Average (dBμV/m)
10600-12700	54.0	Nil	-	-
13250-13400	54.0	Nil	-	-
14470-14500	54.0	Nil	-	-
15350-16200	54.0	Nil	-	-
17700-21400	54.0	Nil	-	-
22010-23120	54.0	Nil	-	-
23600-24000	54.0	Nil	-	-

Tested By : DP

Notes

1. The Nil in the frequency column indicates no emissions were found in the band of interest and showed compliance to the limits as specified in section 15.209. The emissions were merely the noise floor.
2. Quasi-peak measurement was used for frequency measurement up to 1GHz. Average and peak measurements were used for emissions above 1GHz. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second.
3. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   30MHz - 1GHz
   RBW: 120kHz VBW: 1MHz
   >1GHz
   RBW: 1MHz VBW: 3MHz
4. The peak emissions above 1GHz show compliance to the requirement stated in Section 15.35 (b).
6. The upper frequency of radiated emission investigations were according to requirements stated in Section 15.33 (a) for intentional radiators & Section 15.33 (b) for unintentional radiators.
7. The channel in the table refers to the transmit channel of the EUT.
8. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 30MHz – 25GHz (QP only @ 3m & 10m) is ±4.3dB (for EUTs < 0.5m X 0.5m X 0.5m).

FCC Part 15C (15.205) Radiated Emissions (Restricted Band Requirements) Results

EUT Transmit Channel : 78 (Upper Channel)
Test Distance : 3m

Restricted Band (MHz)	Limit (dBμV/m)	Channel 78		
		Frequency (MHz)	PK / Q-P (dBμV/m)	Average (dBμV/m)
37.5 - 38.25	40.0	Nil	-	-
73 – 74.6	40.0	Nil	-	-
74.8 - 75.2	40.0	Nil	-	-
108 - 121.94	43.5	113.6	23.5 (Q-P)	-
	43.5	117.0	24.0 (Q-P)	-
	43.5	119.1	23.1 (Q-P)	-
	43.5	120.1	26.6 (Q-P)	-
123 – 138	43.5	Nil	-	-
	43.5	Nil	-	-
149.9 - 150.05	43.5	Nil	-	-
156.52475 – 156.52525	43.5	Nil	-	-
156.7 - 156.9	43.5	Nil	-	-
162.0125 – 167.17	43.5	Nil	-	-
167.72 - 173.2	43.5	168.0	26.3 (Q-P)	-
240 – 285	46.0	Nil	-	-
322 - 335.4	46.0	Nil	-	-
	46.0	Nil	-	-
399.9 – 410	46.0	Nil	-	-
608 – 614	46.0	Nil	-	-
960 – 1240	54.0	Nil	-	-
1300 – 1427	54.0	Nil	-	-
1435 - 1626.5	54.0	Nil	-	-
1645.5 – 1646.5	54.0	Nil	-	-
1660 – 1710	54.0	Nil	-	-
1718.8 – 1722.2	54.0	Nil	-	-
2200 – 2300	54.0	Nil	-	-
2310 – 2390	54.0	Nil	-	-
2483.5 – 2500	54.0	Nil	-	-
2655 – 2900	54.0	Nil	-	-
3260 – 3267	54.0	Nil	-	-
3332 – 3339	54.0	Nil	-	-
3345.8 – 3358	54.0	Nil	-	-
3600 – 4400	54.0	Nil	-	-
4500 – 5150	54.0	Nil	-	-
5350 – 5460	54.0	Nil	-	-
7250 – 7750	54.0	Nil	-	-
8025 – 8500	54.0	Nil	-	-
9000 – 9200	54.0	Nil	-	-
9300 – 9500	54.0	Nil	-	-

FCC Part 15C (15.205) Radiated Emissions (Restricted Band Requirements) Results

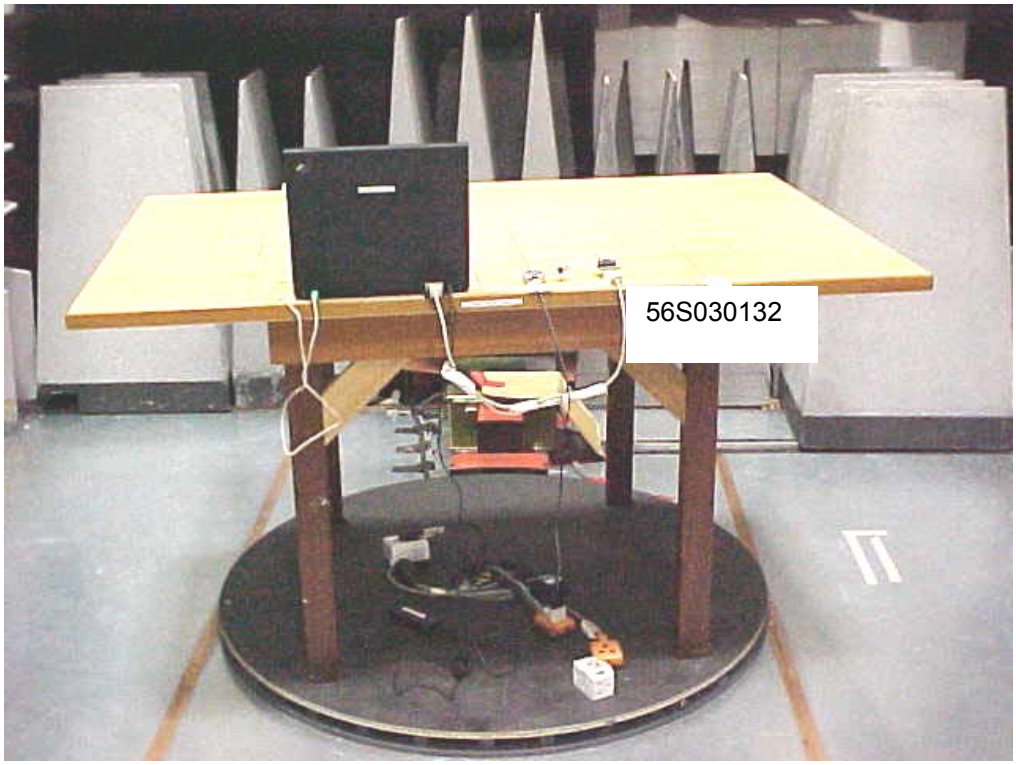
Restricted Band (MHz)	Limit (dBμV/m)	Channel 78		
		Frequency (MHz)	PK / Q-P (dBμV/m)	Average (dBμV/m)
10600-12700	54.0	Nil	-	-
13250-13400	54.0	Nil	-	-
14470-14500	54.0	Nil	-	-
15350-16200	54.0	Nil	-	-
17700-21400	54.0	Nil	-	-
22010-23120	54.0	Nil	-	-
23600-24000	54.0	Nil	-	-

Tested By : DP

Notes

1. The Nil in the frequency column indicates no emissions were found in the band of interest and showed compliance to the limits as specified in section 15.209. The emissions were merely the noise floor.
2. Quasi-peak measurement was used for frequency measurement up to 1GHz. Average and peak measurements were used for emissions above 1GHz. The average measurement was done by averaging over a complete cycle of the pulse train, including the blanking interval as the pulse train duration does not exceed 0.1 second.
3. EMI receiver Resolution Bandwidth (RBW) and Video Bandwidth (VBW) settings:
   30MHz - 1GHz
   RBW: 120kHz VBW: 1MHz
   >1GHz
   RBW: 1MHz VBW: 3MHz
4. The peak emissions above 1GHz show compliance to the requirement stated in Section 15.35 (b).
6. The upper frequency of radiated emission investigations were according to requirements stated in Section 15.33 (a) for intentional radiators & Section 15.33 (b) for unintentional radiators.
7. The channel in the table refers to the transmit channel of the EUT.
8. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95%, with a coverage factor of 2, in the range 30MHz – 25GHz (QP only @ 3m & 10m) is ±4.3dB (for EUTs < 0.5m X 0.5m X 0.5m).

Radiated Emissions Setup (Front View)



Radiated Emissions Setup (Rear View)

FCC Part 15C (15.247(a)(1)) Carrier Frequency Separation Results

The EUT shows compliance to the requirements of this section, which states the adjacent carrier frequencies must be separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

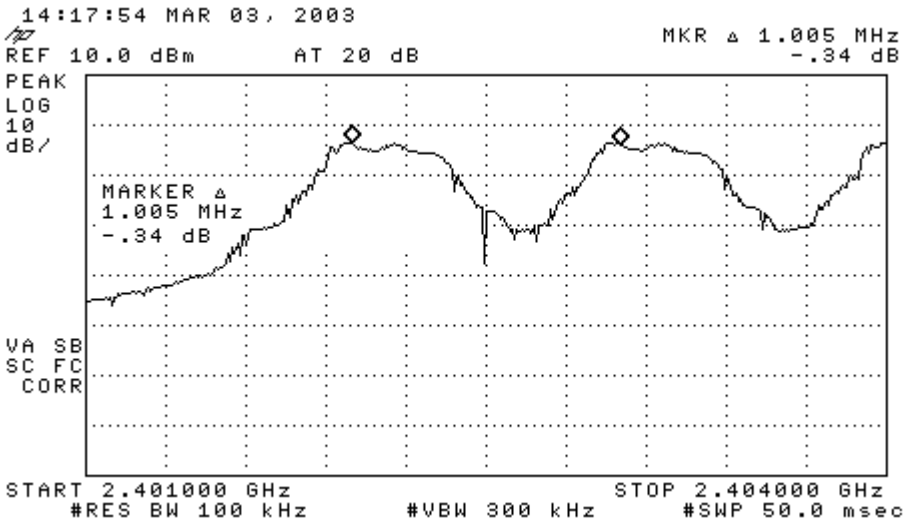
Adjacent Channels	Channel Separation (MHz)
0 and 1 (2.402GHz and 2.403GHz)	1.005
38 and 39 (2.440GHz and 2.441GHz)	1.013
39 and 40 (2.441GHz and 2.442GHz)	1.013
77 and 78 (2.479GHz and 2.480GHz)	1.005

Please refer to the attached Plots 1 - 4 for details.

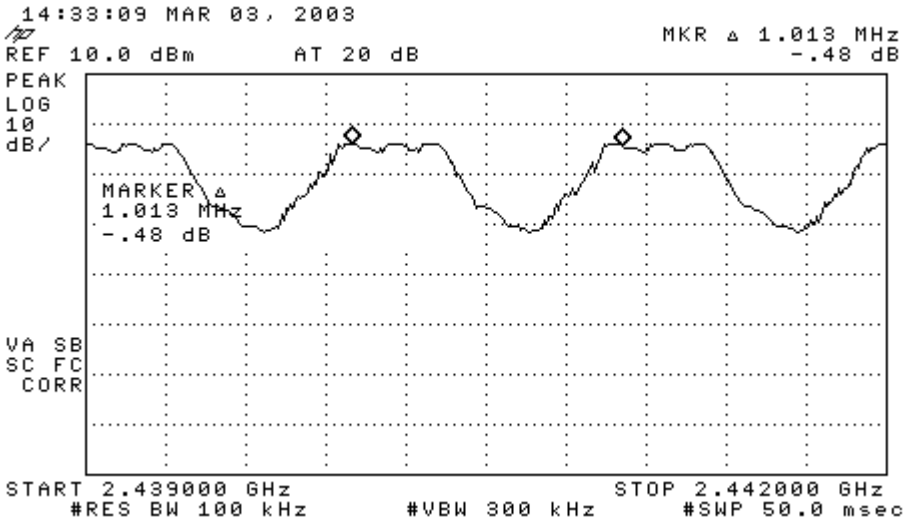
Tested By: AL

Carrier Frequency Separation Measurement Test Setup

CARRIER FREQUENCY SEPARATION PLOTS

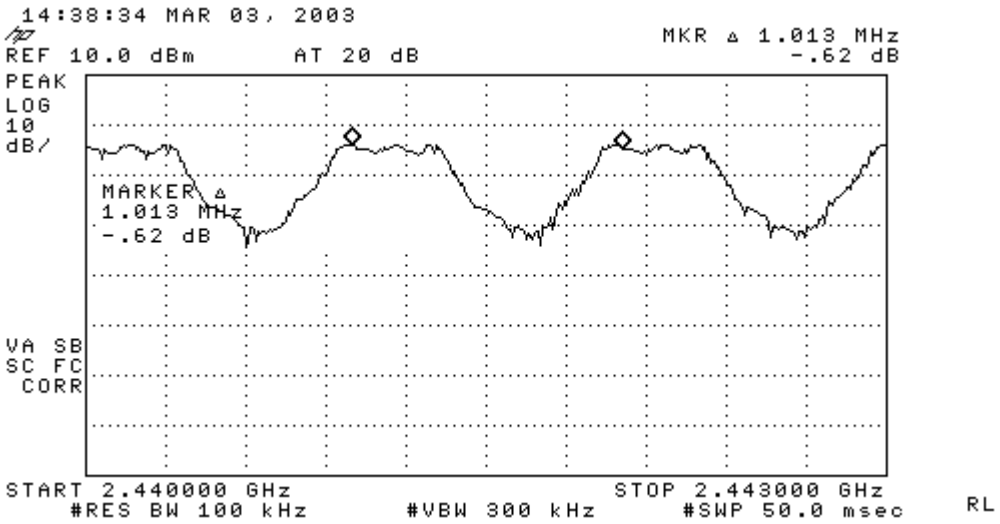


Plot 1- Channels 0 and 1 Separation

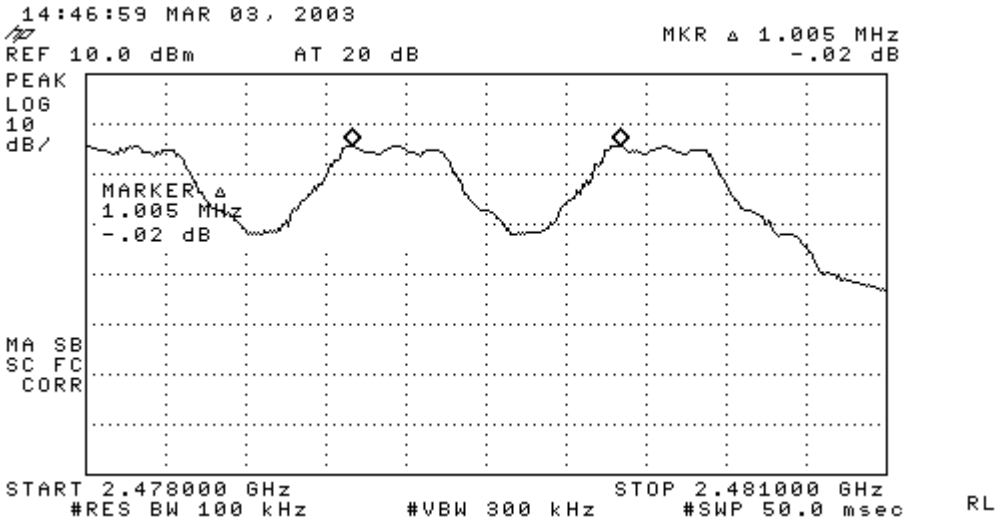


Plot 2 – Channels 38 and 39 Separation

CARRIER FREQUENCY SEPARATION PLOTS



Plot 3 - Channel 39 & 40 Separation



Plot 4 - Channel 77 and 78 Separation

FCC Part 15C (15.247(a)(1)) Spectrum Bandwidth (20dB Bandwidth Measurement) Results

The EUT 20dB Bandwidth was tabulated as shown below.

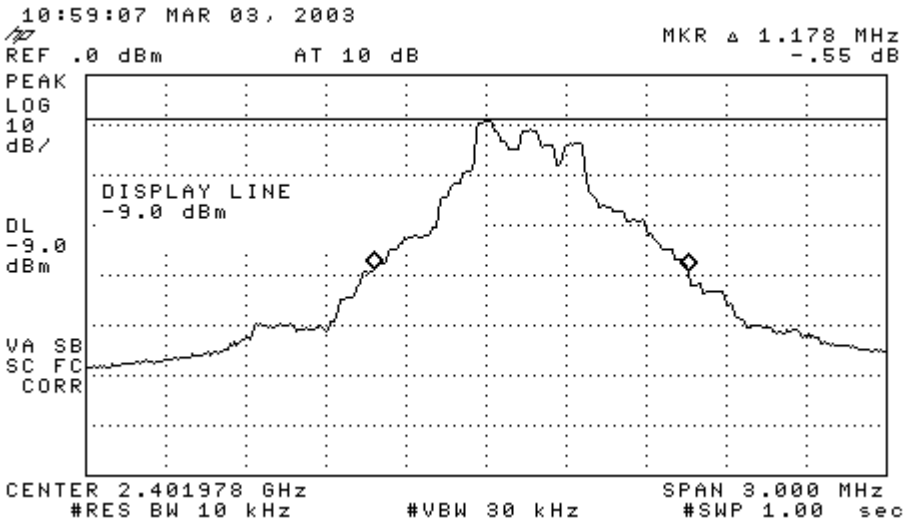
Channel	Channel Frequency (GHz)	20dB Bandwidth (MHz)
0	2.402	1.170
39	2.441	1.170
78	2.480	1.245

Please refer to attached Plots 5 - 7 for details.

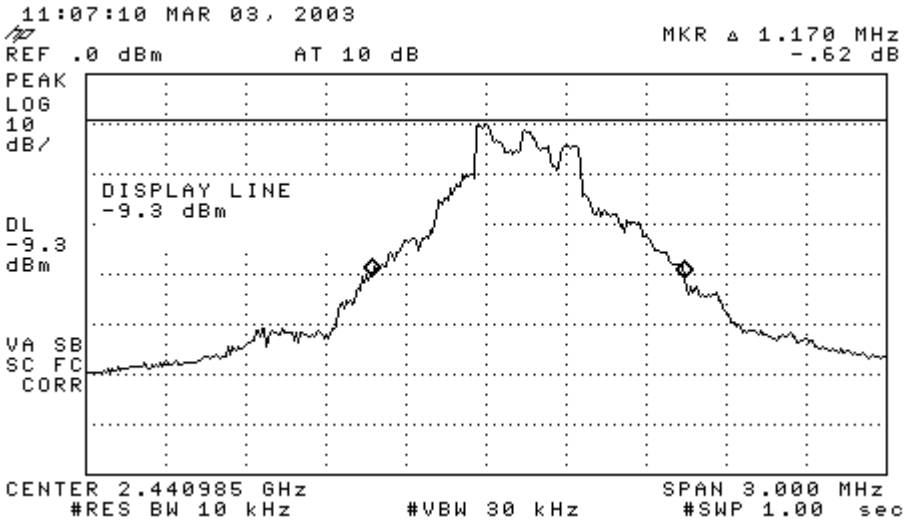
Tested By: AL

Spectrum Bandwidth Measurement Test Setup

SPECTRUM BANDWIDTH (20DB BANDWIDTH MEASUREMENT) PLOTS

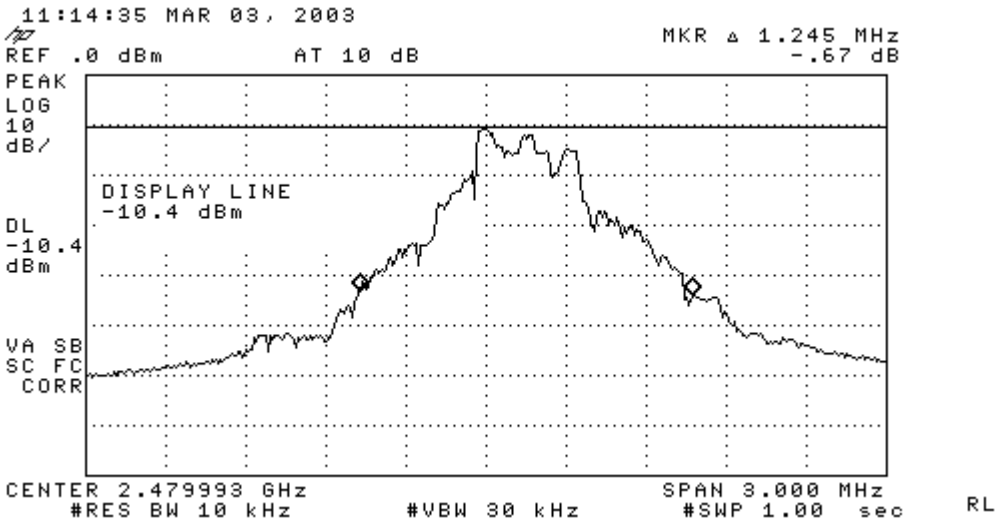


Plot 5 – Channel 0



Plot 6 – Channel 39

SPECTRUM BANDWIDTH (20DB BANDWIDTH MEASUREMENT) PLOTS



Plot 7 – Channel 78

FCC Part 15C (15.247(a)(1)(iii)) Number of Hopping Frequencies Results

The EUT shows compliance to the requirements of this section, which shows the number of hopping frequencies are more than 75.

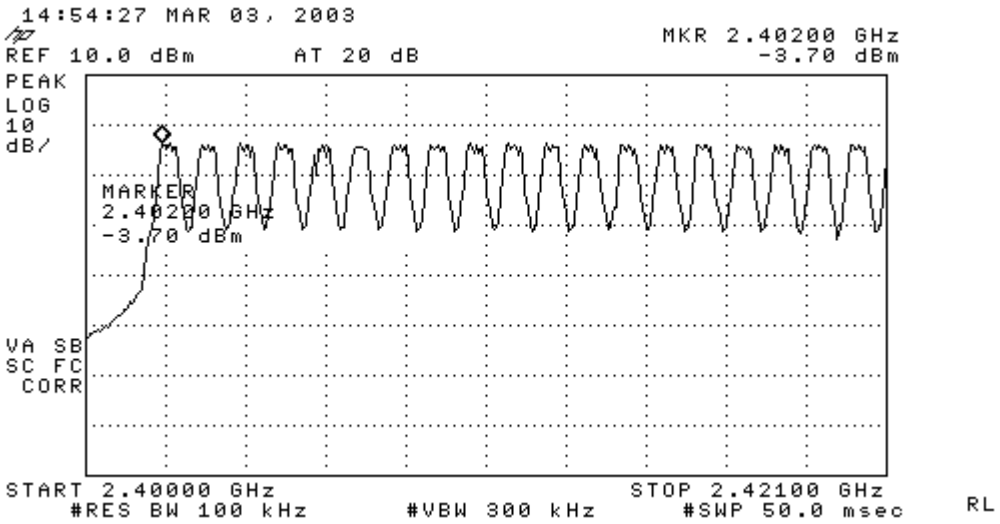
The EUT was found to have 79 hopping frequencies.

Please refer to the attached Plots 8 - 11 for details.

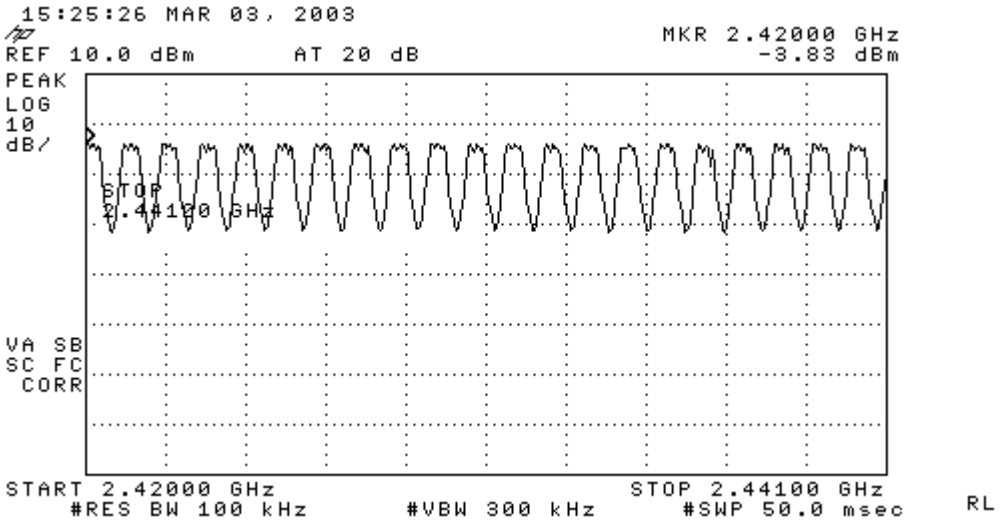
Tested By: AL

Number of Hopping Frequencies Measurement Test Setup

NUMBER OF HOPPING FREQUENCIES PLOTS

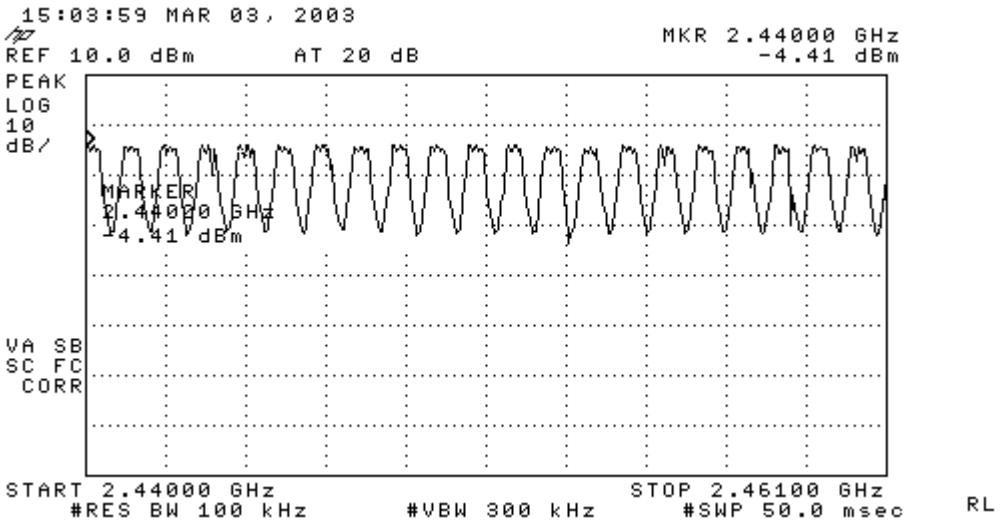


Plot 8 - Channels 0 to 18

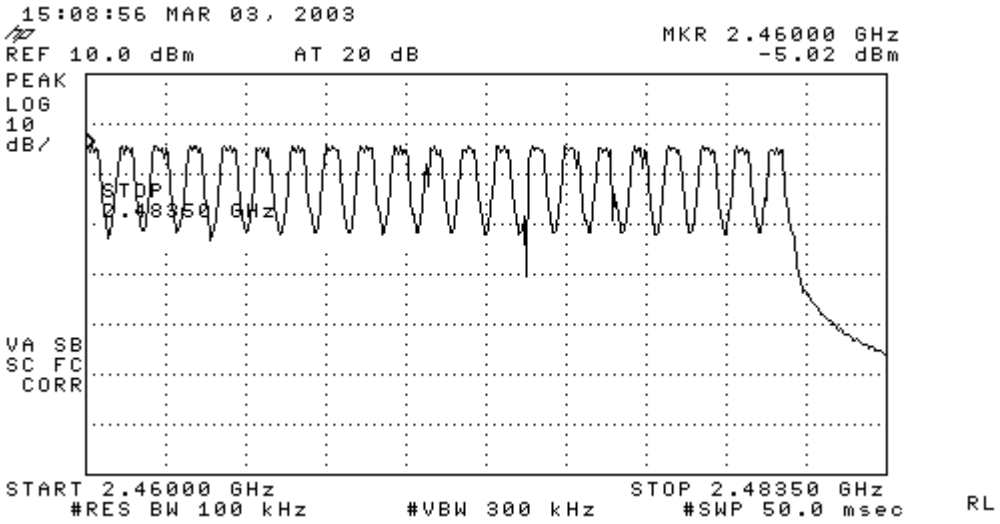


Plot 9 - Channels 19 to 38

NUMBER OF HOPPING FREQUENCIES PLOTS



Plot 10 - Channels 39 to 58



Plot 11 - Channels 59 to 78

FCC Part 15C (15.247(a)(1)(iii)) Average Frequency Dwell Time Results

The EUT shows compliance to the requirements of this section, which states the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a period of 0.4second multiplied by the number of hopping channels employed.

EUT hopping rate = 1600 hops/s
Number of EUT hopping frequencies = 79 hops
DH1packet was used as a transmission packet

Average Frequency Dwell Time = measured time slot length (l) x hopping rate (h) / number of hopping frequencies x 30 second period

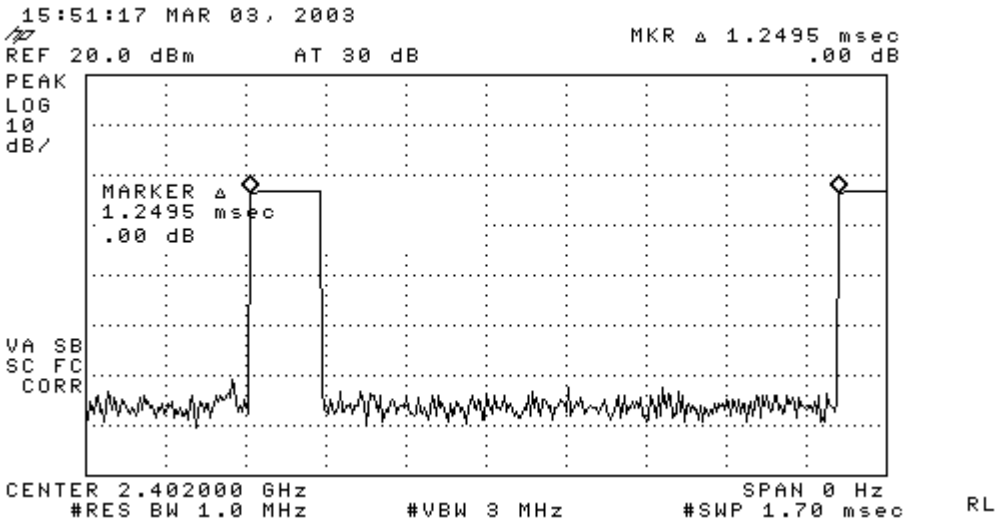
Channel	Channel Frequency (GHz)	Measured Time Slot Length for DH1 Packet(μs)	Average Frequency Dwell Time (s)	Average Occupancy Limit (s)
0	2.402	624.75	0.38	0.4
39	2.441	626.90	0.38	0.4
78	2.480	626.90	0.38	0.4

Please refer to the attached Plots 12 – 14 for details.

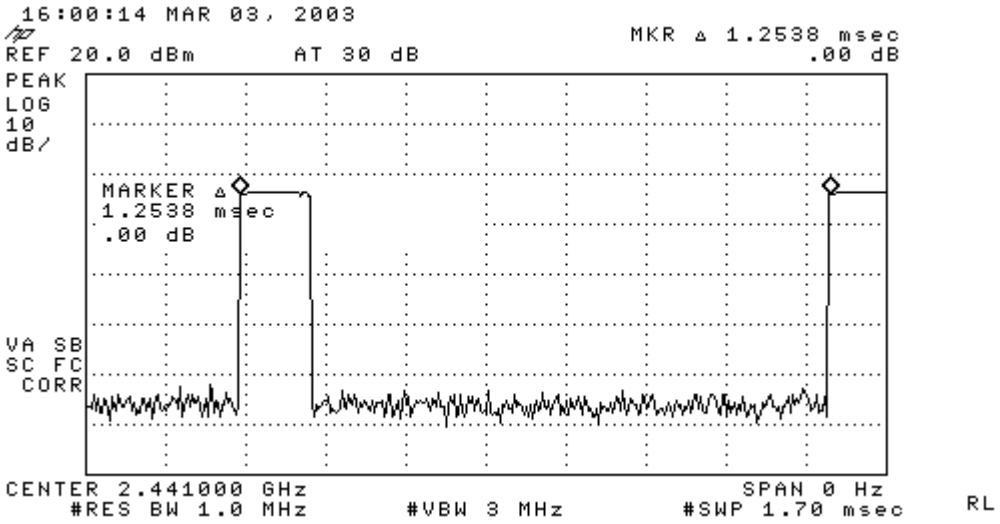
Tested By: AL

Average Frequency Dwell Time Measurement Test Setup

AVERAGE FREQUENCY DWELL TIME PLOTS

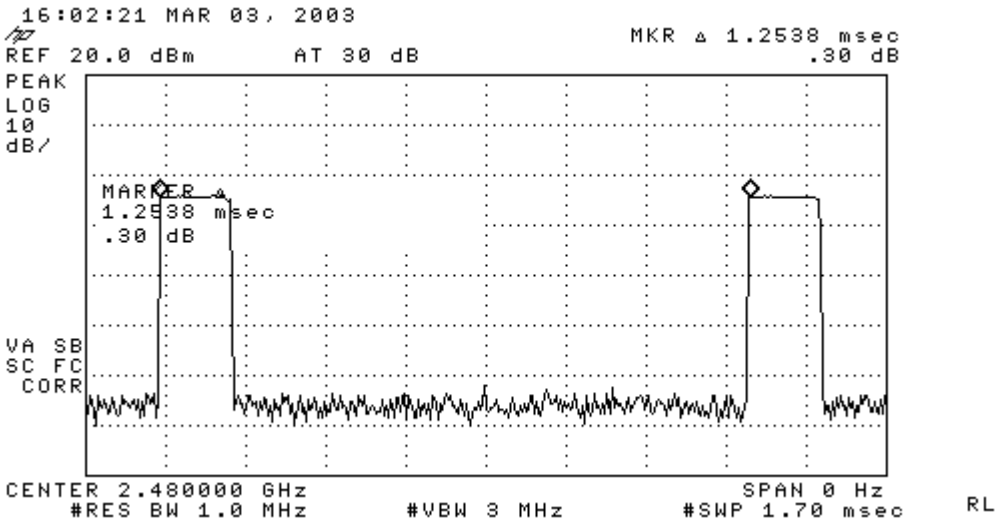


Plot 12 – Channel 0



Plot 13 – Channel 39

AVERAGE FREQUENCY DWELL TIME PLOTS



Plot 14 – Channel 78

FCC Part 15C (15.247(b)(1)) Maximum Peak Power Results

The EUT shows compliance to the requirements of this section, which states the peak power of an intentional radiator (EUT) shall not exceed 30dBm (1 Watt).

The maximum peak power for Channels 0, 39 and 78 at 2.402GHz, 2.441GHz and 2.480GHz respectively were investigated and found below 30dBm (1Watt).

Channel	Channel Frequency (GHz)	Maximum Peak Power (W)	Limit (W)
0	2.402	0.00052	1
39	2.441	0.00056	1
78	2.480	0.00051	1

Tested By: AL

Notes

1. Universal Radio Communication Tester Resolution Bandwidth (RBW), Video Bandwidth (VBW) and detector mode settings:
   RBW: 3MHz VBW: 3MHz Detector Mode: Peak

Maximum Peak Power Measurement Test Setup

FCC Part 15C (15.247(b)(4)) Effective Isotropic Radiated Power (EIRP) Results

The EUT shows compliance to the requirements of this section, which states if the transmitting antenna gain used is greater than 6dBi, the peak power output from the intention radiator shall be reduced to 1Watt as appropriate by the amount in dB that the directional gain of the antenna exceeds 6dBi.

EUT antenna gain = 2.15dBi (0dBd)

EIRP = EUT maximum peak power on hopped channel + antenna gain (2.15dBi)

Channel	Channel Frequency (GHz)	Maximum Peak Power (W)	EIRP (W)	Limit (W)
0	2.402	0.00052	0.00086	1
39	2.441	0.00056	0.00092	1
78	2.480	0.00051	0.00084	1

Tested By: AL

Notes

1. Universal Radio Communication Tester Resolution Bandwidth (RBW), Video Bandwidth (VBW) and detector mode settings:
   RBW: 3MHz VBW: 3MHz Detector Mode: Peak

Effective Isotropic Radiated Power Measurement Test Setup

FCC Part 15C (15.247(c)) RF Conducted Spurious Emissions & Band Edge Compliance at the Transmitter Antenna Results

The EUT shows compliance to the requirements of this section, which states in any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator (EUT) is operating, the RF power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.

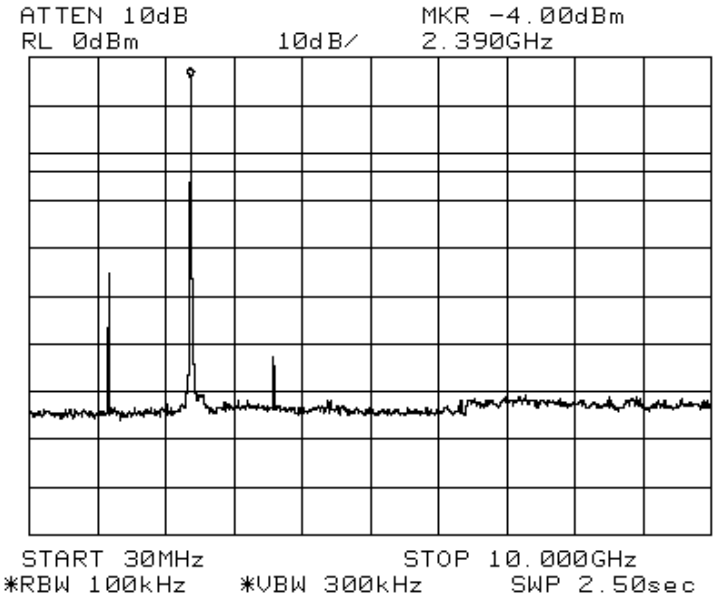
The RF conducted spurious emissions were scanned from 10MHz to 25GHz for Channels 0, 39, and 78 with channel frequency at 2.402GHz, 2.441GHz and 2.480GHz respectively. No significant signal was found and they were below the specified limit. Please refer to the attached Plots 15 – 20 for details.

The conducted spurious at lower and upper band-edges (2.4000GHz and 2.4835GHz) were scanned. The spurious emissions at band-edges were found below the specified limit. Please refer to the attached Plots 21 – 22 for details.

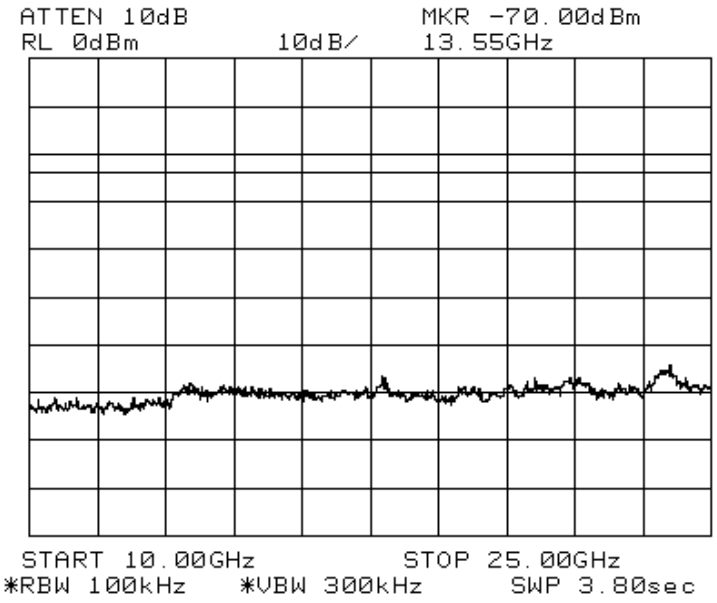
Tested by: AL

RF Conducted Spurious & Band Edge Measurement Test Setup

RF CONDUCTED SPURIOUS EMISSIONS PLOTS

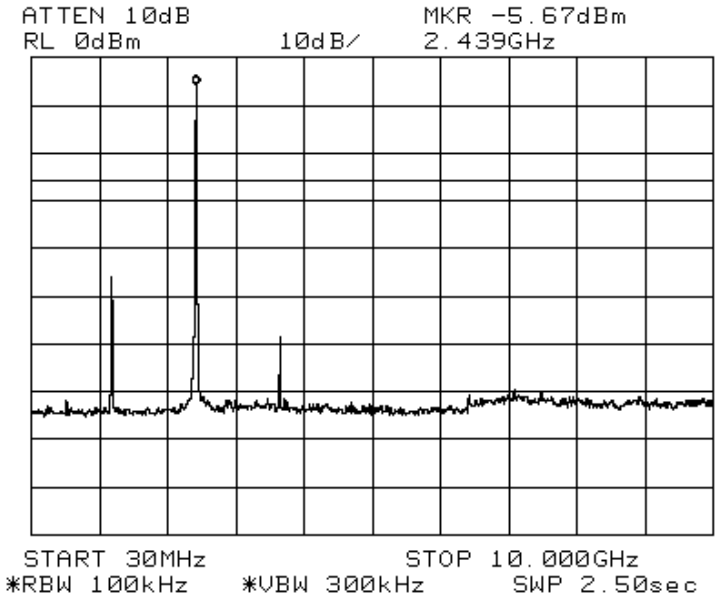


Plot 15 – Channel 0

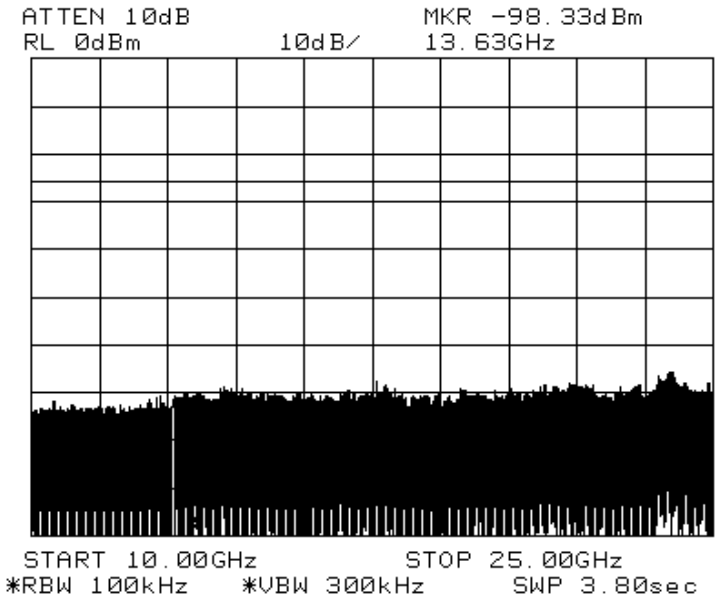


Plot 16 – Channel 0

RF CONDUCTED SPURIOUS EMISSIONS PLOTS

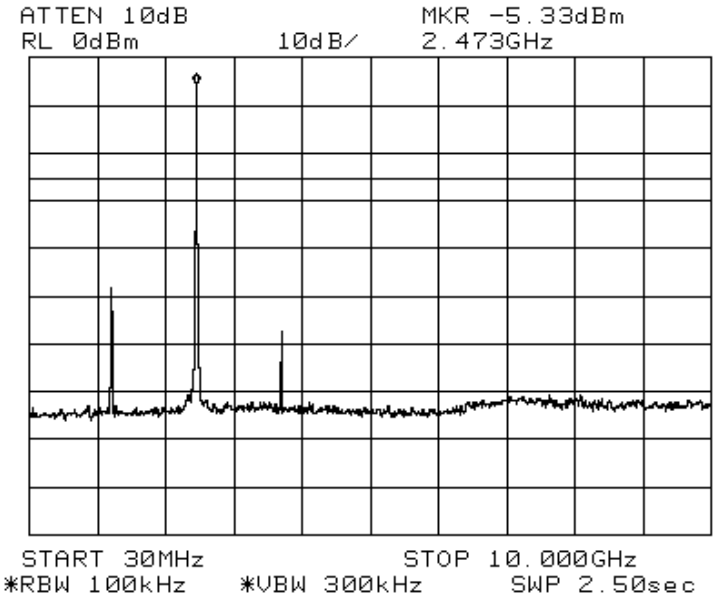


Plot 17 – Channel 39

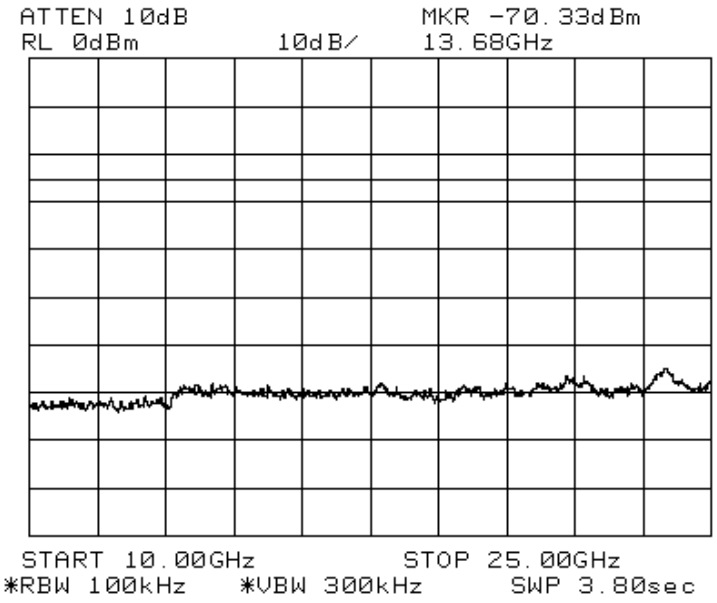


Plot 18 – Channel 39

RF CONDUCTED SPURIOUS EMISSIONS PLOTS

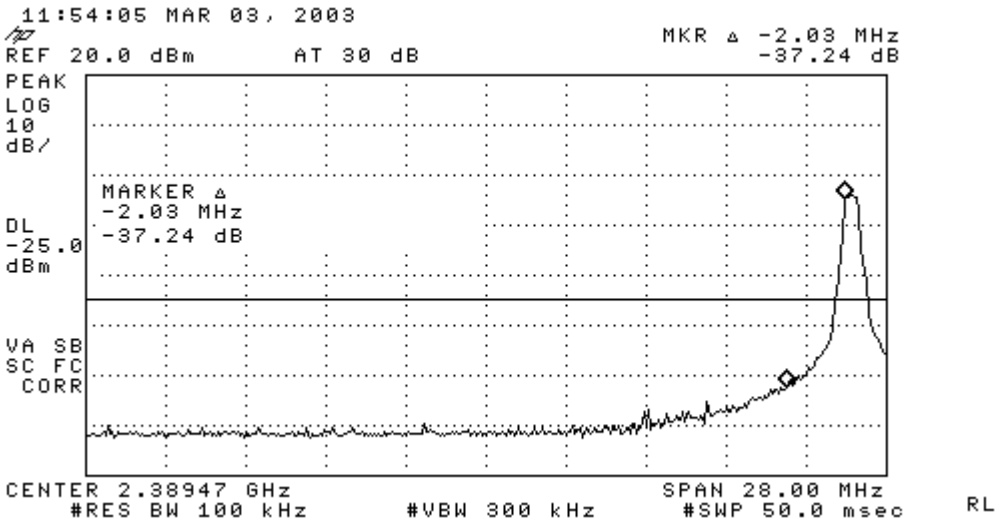


Plot 19 – Channel 78

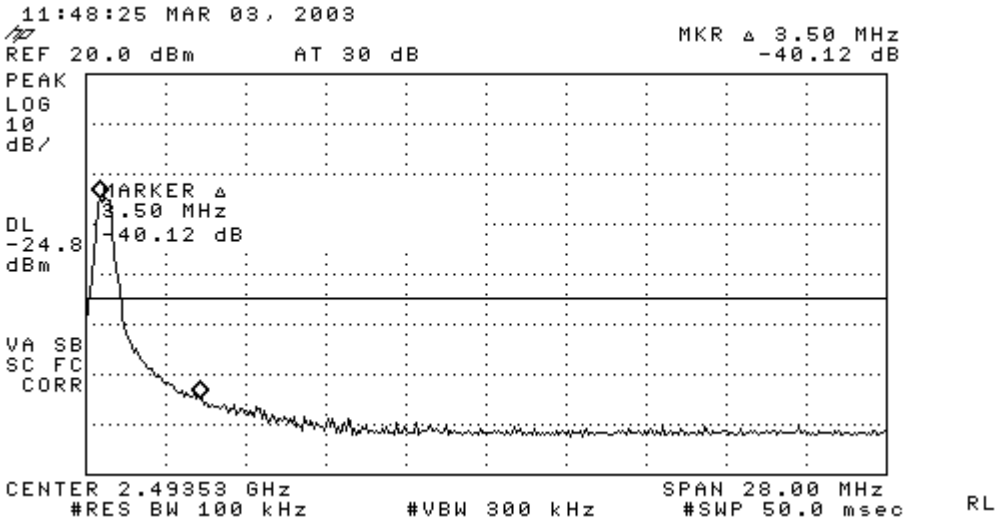


Plot 20 – Channel 78

BAND EDGE COMPLIANCE PLOTS



Plot 21 – Lower Band Edge at 2.40GHz



Plot 22 – Upper Band Edge at 2.4835GHz

FCC Part 15C (15.247(d)) Peak Power Spectral Density Results

The EUT shows compliance to the requirements of this section, which states the peak power spectral density of an intentional radiator (EUT) to the antenna shall not be greater than 8dBm (6.3mW) in any 3kHz band during any time interval of continuous transmission.

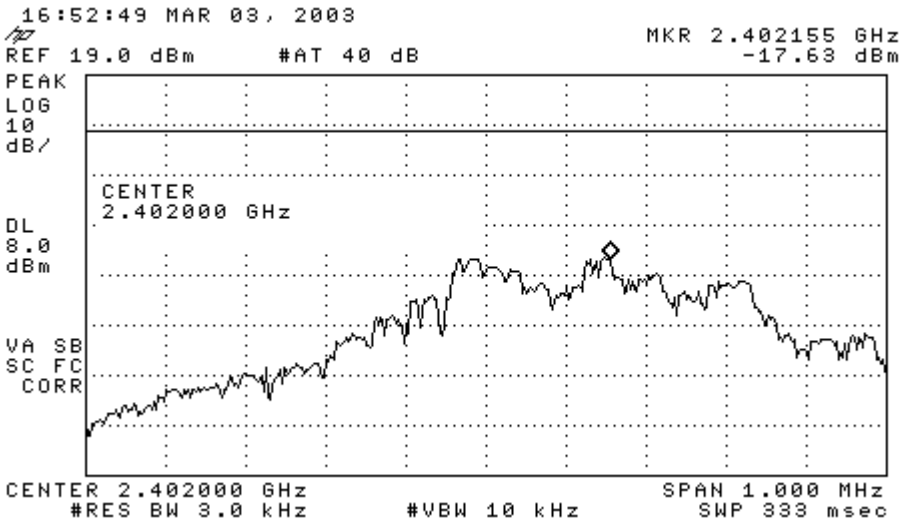
Channel	Channel Frequency (GHz)	Peak Power Spectral Density (mW)	Limit (mW)
0	2.402	0.0173	6.3
39	2.441	0.0153	6.3
78	2.480	0.0158	6.3

Please refer to the attached Plots 23 – 25 for details.

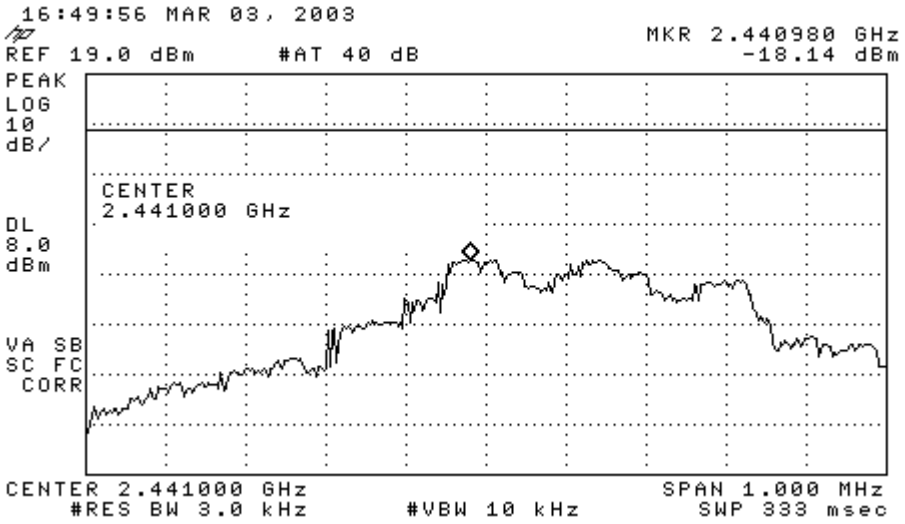
Tested By: AL

Peak Power Spectral Density Measurement Test Setup

PEAK POWER SPECTRAL DENSITY PLOTS

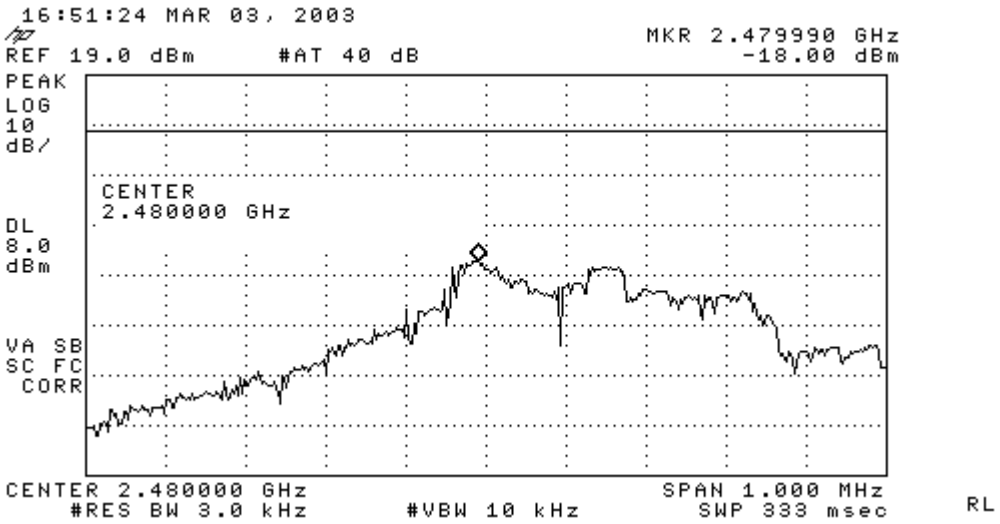


Plot 23 – Channel 0



Plot 24 – Channel 39

PEAK POWER SPECTRAL DENSITY PLOTS



Plot 25 – Channel 78

ANNEX A

TEST INSTRUMENTATION & GENERAL PROCEDURES

TEST INSTRUMENTATION & GENERAL PROCEDURES ANNEX A

3m OATS Test Instrumentation
(Conducted EMI)

Instrument	Model	S/No	Cal Due Date	
R&S Test Receiver (9kHz-30MHz)	ESH3	862301/005	17 Jul 2003	X
R&S Pulse Limiter	ESH3-Z2	357.8810.52	12 Apr 2003	X
EMCO LISN (for EUT) – LISN4	3816/2	9602-1036	14 Jun 2003	X

5m Anechoic Chamber Test Instrumentation
(Radiated Emissions)

Instrument	Model	S/No	Cal Due Date	
R&S Test Receiver (20Hz – 26.5GHz) – ESMI2	ESMI	829214/006 829550/001	22 Jul 2003	X
HP Preamplifier (for ESMI2, 0.01-3GHz) – PA8	87405A	3950M00373	16 Apr 2003	X
MITEQ Preamplifier (0.1-26.5GHz) – PA10	NSP2650-N	728230	9 Apr 2003	X
Schaffner Bilog Antenna – BL8	CBL6143	5044	15 May 2003	X
EMCO Horn Antenna – H15	3115	0003-6088	18 Jul 2003	X

Room 1 Test Instrumentation
(Carrier Frequency Separation, Number Of Hopping Frequencies, Spectrum Bandwidth (20dB Bandwidth Measurement), Average Frequency Dwell Time, Maximum Peak Power, Effective Isotropic Radiated Power (EIRP), RF Conducted Spurious Emissions at the Transmitter Antenna Terminal, Band Edge Compliance at the Transmitter Antenna Terminal, Peak Power Density)

Instrument	Model	S/No	Cal Due Date	
HP Spectrum Analyzer	8564E	00533	21 Nov 2003	X
R&S Universal Radio Communication Tester	CMU 200	837587/068	15 Apr 2003	X

TEST INSTRUMENTATION & GENERAL PROCEDURES ANNEX A

CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains.

3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.

4. All other supporting equipment were powered separately from another LISN.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. A scan was made on the NEUTRAL line over the required frequency range using an EMI test receiver.

3. High peaks, relative to the limit line, were then selected.

4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10kHz. Both Quasi-peak and Average measurements were made.

5. Steps 2 to 4 were then repeated for the LIVE line.

Sample Calculation Example

At 20 MHz limit = 250 μV = 47.96 dBμV

Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.2 dB

Q-P reading obtained directly from EMI Receiver = 40 dBμV
(Calibrated for system losses)

Therefore, Q-P margin = 40 - 47.96 = -7.96 i.e. **7.96 dB below limit**

TEST INSTRUMENTATION & GENERAL PROCEDURES ANNEX A

RADIATED EMISSIONS TEST DESCRIPTION (5m ANC)

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table.

2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.

3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. A prescan was carried out to pick the worst frequencies.

3. The test was carried out at the selected frequency points obtained from the prescan. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:

   a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
   b. The EUT was then rotated to the direction that gave the maximum emission.
   c. Finally, the antenna height was adjusted to the height that gave the maximum emission.

4. A Quasi-peak measurement was made for that frequency point if it was less than or equal to 1GHz. For frequency point that above 1GHz, both Peak and Average measurements were carried out.

5. Steps 3 and 4 were repeated for the next frequency point, until all selected frequency points were measured.

6. The frequency range covered was from 30MHz to 10GHz, using the Biconical antenna for frequencies up to 200MHz, the Log-periodic antenna for frequencies above 200MHz to 1GHz, and the Horn antenna above 1GHz.

Sample Calculation Example

At 300 MHz limit = 200 μV/m = 46 dBμV/m

Log-periodic antenna factor & cable loss at 300 MHz = 18.511 dB

Q-P reading obtained directly from EMI Receiver = 40 dBμV/m
(Calibrated level including antenna factors & cable losses)

Therefore, Q-P margin = 40 - 46 = -6 i.e. **6 dB below limit**

CARRIER FREQUENCY SEPARATION TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz.

5. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode with hopping sequence on.

2. The start and stop frequencies of the spectrum analyser were set to 2.401GHz and 2.404GHz with frequency sweeping set to 50ms.

3. The spectrum analyser was set to max hold to capture the two adjacent transmitting frequencies within the span. The signal capturing was continuous until no further signals were detected.

4. The carrier frequency separation of the two adjacent transmitting / operating frequency was measured by finding the carrier frequency difference between the two adjacent channels.

4. The steps 2 to 4 were repeated with the following start and stop frequencies settings:
   a. 2.439GHz to 2.442GHz
   b. 2.440GHz to 2.443GHz
   c. 2.478GHz to 2.481GHz

SPECTRUM BANDWIDTH (20dB BANDWIDTH MEASUREMENT) TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 10kHz and 30kHz.

5. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode, non-hopping with transmitting frequency at Channel 0 (2.402GHz).

2. The center frequency of the spectrum analyser was set to the transmitting frequency with the frequency span wide enough to capture the 20dB bandwidth of the transmitting frequency.

3. The spectrum analyser was set to max hold to capture the transmitting frequency. The signal capturing was continuous until no further changes were observed.

4. The peak of the transmitting frequency was detected with the marker peak function of the spectrum analyser. The frequencies below the 20dB peak frequency at lower (f_L) and upper (f_H) sides of the transmitting frequency were marked and measured by using the marker-delta function of the spectrum analyser.

6. The 20dB bandwidth of the transmitting frequency is the frequency difference between the marked lower and upper frequencies, $| f_H - f_L |$.

7. The steps 2 to 5 were repeated with the transmitting frequency was set to Channel 39 (2.441GHz) and Channel 78 (2.480GHz) respectively.

NUMBER OF HOPPING FREQUENCIES TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

5. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz.

5. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode with hopping sequence on.

2. The start and stop frequencies of the spectrum analyser were set to 2.40GHz and 2.421GHz with frequency sweeping set to 50ms.

3. The spectrum analyser was set to max hold to capture all the transmitting frequencies within the span. The signal capturing was continuous until all the transmitting frequencies were captured and no further signals were detected.

4. The numbers of transmitting frequencies were counted and recorded.

5. The steps 2 to 5 were repeated with the following start and stop frequencies settings:

   a. 2.420GHz to 2.441GHz
   b. 2.440GHz to 2.461GHz
   c. 2.460GHz to 2.4835GHz

6. The total number of hopping frequencies is the sum of the number of the hopping frequencies found for each span.

AVERAGE FREQUENCY DWELL TIME TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 1MHz and 3MHz.

5. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode, hopping sequence on.

2. The center frequency of the spectrum analyser was set to 2.402GHz with zero frequency span (spectrum analyser acts as an oscilloscope).

3. The sweep time of the spectrum analyser was adjusted until a stable signal can be seen on the spectrum analyser.

4. The duration (dwell time) of a packet was measured using the marker-delta function of the spectrum analyser. The average dwell time of the transmitting frequency was computed as below:

Average Frequency Dwell Time	=	measured time slot length (l) x hopping rate (h) / number of hopping frequencies x 30 second period
where EUT hopping rate	=	1600 hops/s
Number of EUT hopping frequencies	=	79 hops

5. The steps 2 to 4 were repeated with the center frequency of the spectrum analyser were set to 2.441GHz and 2.480GHz respectively.

MAXIMUM PEAK POWER TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the Universal Radio Communication Tester, which set into power analyser mode via a low-loss coaxial cable.

4. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode, non-hopping with transmitting frequency at Channel 0 (2.402GHz).

2. The maximum peak power of the transmitting frequency was detected and recorded.

3. The step 2 was repeated with the transmitting frequency was set to Channel 39 (2.441GHz) and Channel 78 (2.480GHz) respectively.

EFFECTIVE ISOTROPIC RADIATED POWER (EIRP) TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the Universal Radio Communication Tester, which set into power analyser mode via a low-loss coaxial cable.

4. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode, non-hopping with transmitting frequency at Channel 0 (2.402GHz).

2. The maximum peak power of the transmitting frequency was detected and recorded

3. The EIRP of the transmitting frequency is the sum of the peak power and the declared EUT antenna gain.

4. The steps 2 to 3 were repeated with the transmitting frequency was set to Channel 39 (2.441GHz) and Channel 78 (2.480GHz) respectively.

RF CONDUCTED SPURIOUS EMISSIONS AT THE TRANSMITTER ANTENNA TERMINAL TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz.

5. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode, non-hopping with transmitting frequency at Channel 0 (2.402GHz).

2. The start and stop frequencies of the spectrum analyser were set to 10MHz and 10GHz.

3. The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected.

4. The steps 2 to 3 were repeated with frequency span was set from 10GHz to 25GHz.

5. The steps 2 to 4 were repeated with the transmitting frequency was set to Channel 39 (2.441GHz) and Channel 78 (2.480GHz) respectively.

BAND EDGE COMPLIANCE AT THE TRANSMITTER ANTENNA TERMINAL TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the spectrum analyser via a low-loss coaxial cable.

4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 100kHz and 300kHz.

5. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode, hopping sequence on.

2. The frequency span of the spectrum analyser was set to wide enough to capture the lower band edge of the Bluetooth band, 2.40GHz and any spurious emissions at the band edge.

3. The spectrum analyser was set to max hold to capture any spurious emissions within the span. The signal capturing was continuous until no further spurious emissions were detected.

4. The steps 2 to 3 were repeated with the frequency span of the spectrum analyser was set to wide enough to capture the upper band edge frequency of the Bluetooth band, 2.4835GHz and the any spurious emissions at the band-edge.

PEAK POWER SPECTRAL DENSITY TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in a shielded enclosure; accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.

2. The power supply for the EUT was connected to a filtered mains.

3. The RF antenna connector was connected to the spectrum via a low-loss coaxial cable.

4. The resolution bandwidth (RBW) and the video bandwidth (VBW) of the spectrum analyser were respectively set to 3kHz and 10kHz.

5. All other supporting equipment were powered separately from another filtered mains.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition. The EUT was then configured to operate in the Bluetooth test mode, non-hopping with transmitting frequency at Channel 0 (2.402GHz).

2. The sweep time of the spectrum analyser was set to the value of the ratio of the frequency span divided by the RBW.

3. The peak power density of the transmitting frequency was detected and recorded.

4. The step 3 was repeated with the transmitting frequency was set to Channel 39 (2.441GHz) and Channel 78 (2.480GHz) respectively.

ANNEX B

TEST PHOTOGRAPHS / DIAGRAMS

TEST PHOTOGRAPHS / DIAGRAMS ANNEX B

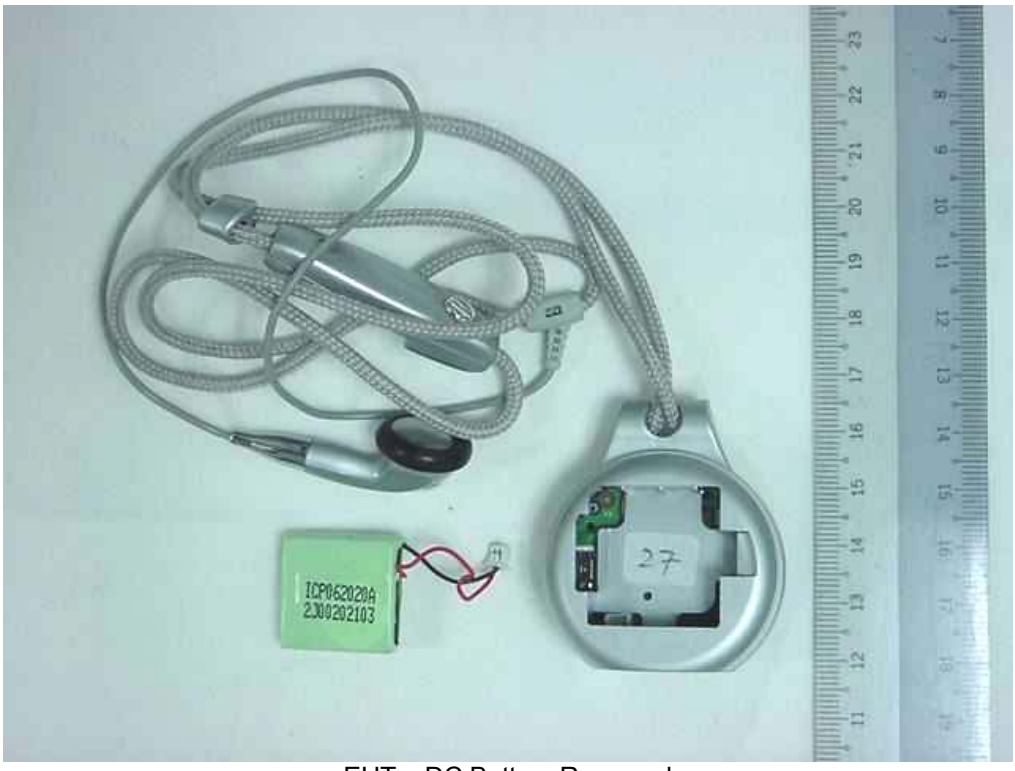
EUT PHOTOGRAPHS

EUT - Front View

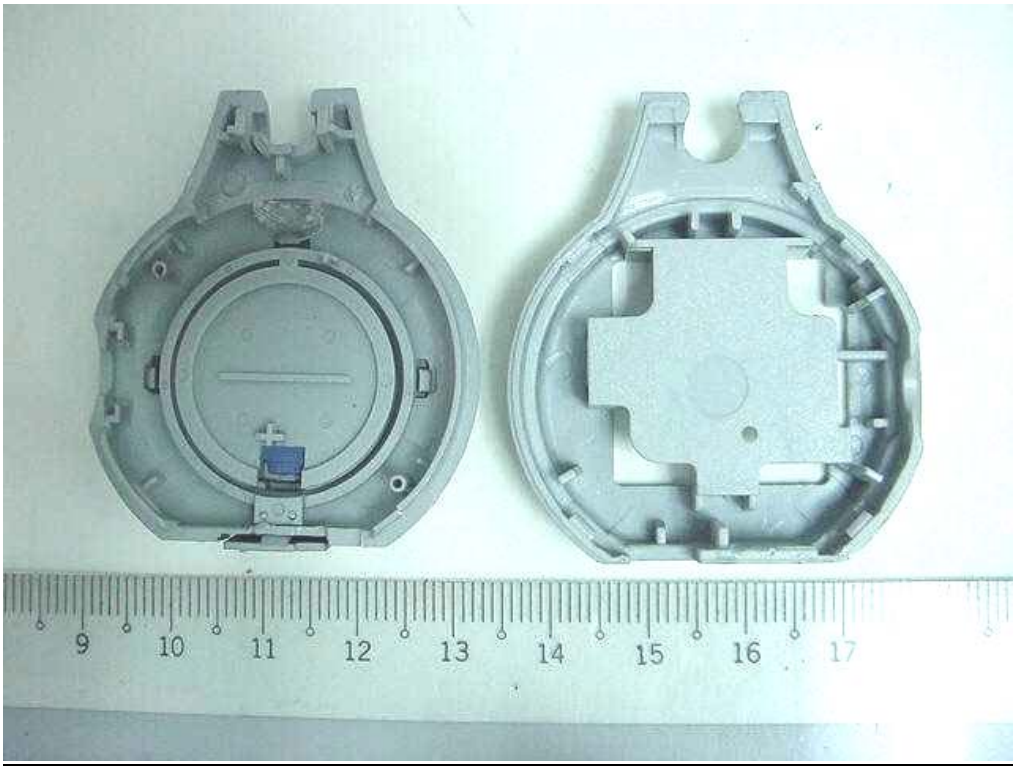
EUT - Rear View

TEST PHOTOGRAPHS / DIAGRAMS ANNEX B

EUT PHOTOGRAPHS



EUT – DC Battery Removed

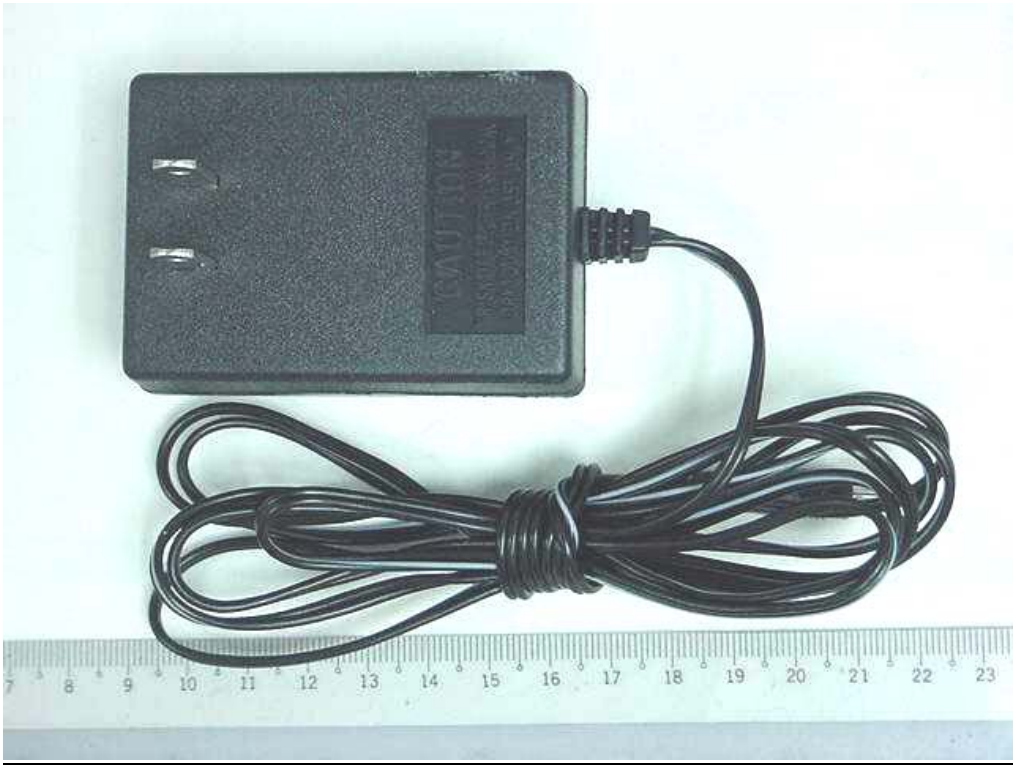


EUT Housing – Internal View

TEST PHOTOGRAPHS / DIAGRAMS ANNEX B

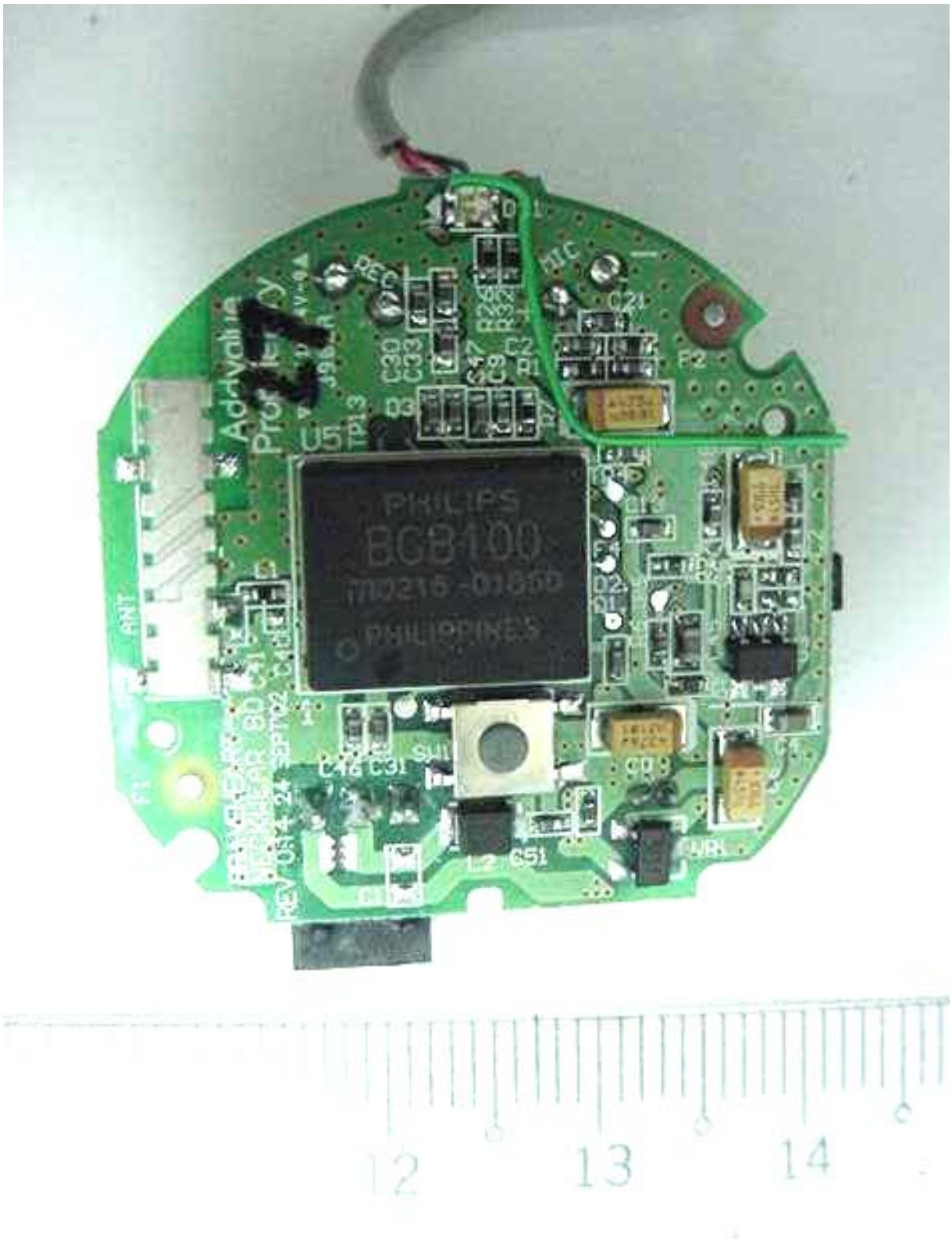
EUT PHOTOGRAPHS

EUT AC/DC Power Adapter – Top View



EUT AC/DC Power Adapter – Bottom View

EUT PHOTOGRAPHS



EUT PCB - Top View

EUT PHOTOGRAPHS

EUT PCB - Bottom View

ANNEX C

USER MANUAL
TECHNICAL DESCRIPTION
BLOCK & CIRCUIT DIAGRAMS

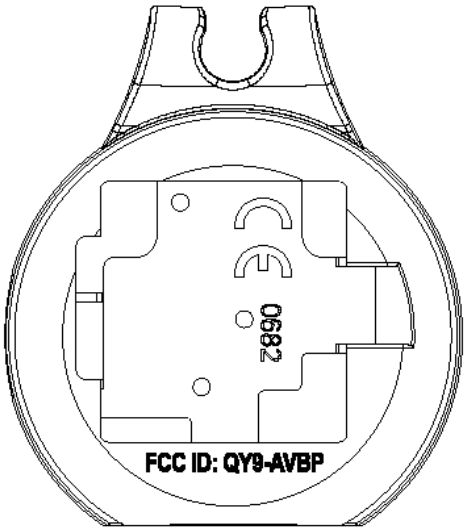
(Please refer to attached copy)

ANNEX D

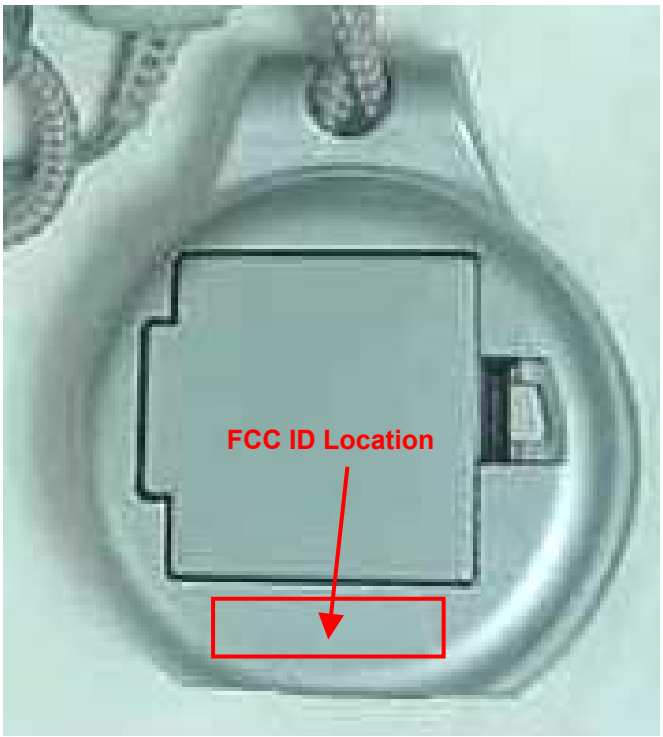
FCC LABEL & POSITION

Labelling requirements per Section 2.925 & 15.19

The label shown will be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.



Sample Label



Physical Location of FCC ID on EUT