TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Test of: NTT docomo P-01A

To: FCC Part 15.225: 2006 (Subpart C)

Test Report Serial No:
RFI/RPT2/RP73958JD07A

Supersedes Test Report Serial No:
RFI/RPT1/RP73958JD07A

This Test Report Is Issued Under The Authority Of Steve Flooks, Service Leader:  **pp Brian Watson**	
Checked By: **Brian Watson** 	**Report Copy No: PDF01**
Issue Date: 14 October 2008	**Test Dates: 09 September 2008 to 23 September 2008**

This report is issued in Adobe Acrobat portable document format (PDF). It is only a valid copy of the report if it is being viewed in PDF format with the following security options not allowed: Changing the document, Selecting text and graphics, Adding or changing notes and form fields. This report may be copied in full. The results in this report apply only to the sample(s) tested.

RFI Global Services Ltd
Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire RG23 8BG
Telephone: +44 (0)1256 312000 Facsimile: +44 (0)1256 312001
Email: info@rfi-global.com Website: www.rfi-global.com

Registered in England and Wales. Company number:2117901

This page has been left intentionally blank.

Table of Contents

1. Customer Information

Company Name:	Panasonic Mobile Communications Dev of Europe Ltd
Address:	Panasonic House Willoughby Road Bracknell Berkshire RG12 8FP United Kingdom
Contact Name:	Mr M Hargreaves

2. Equipment Under Test (EUT)

The following information (with the exception of the Date of Receipt) has been supplied by the customer:

2.1. Identification of Equipment Under Test (EUT)

Description:	Dual mode (W-CDMA FDDI/FDDV/ GSM900/1800/1900MHz) Cellular Mobile Telephone with RFID and Bluetooth
Brand Name:	NTT docomo
Model Name or Number:	P-01A
Serial Number or Unique Product Identifier:	359946010018134
FCC ID Number:	UCE208009A

Description:	FOMA USB Cable with Charge Function 01
Model Name or Number:	NTT docomo
Serial Number:	Not marked or stated
Cable Length and Type:	1.1 metre
Connected to Port:	USB

Description:	FOMA AC Adapter 01
Brand Name:	NTT docomo
Model Name or Number:	MAS-BH0008-A 002
Serial Number:	AC Charger #01
Cable Length and Type:	2.23 metre / multicore
Connected to Port:	Charger

Description:	Battery
Brand Name:	NTT
Serial Number:	P19

Description:	Flat-plug Stereo Earphone Set P01
Brand Name:	NTT docomo
Model Name or Number:	P01
Cable Length and Type:	1.8m / multi-core
Connected to Port:	AV Out port

Description:	DC Charger Cable
Model Name or Number:	FOMA DC Adapter 02
Cable Length and Type:	>2m extended.
Connected to Port:	Charger

Description:	Micro-SD Memory Card
Brand Name:	Panasonic
Model Name or Number:	None Stated
Serial Number:	None Stated
Cable Length and Type:	None Stated
Connected to Port:	Dedicated micro-SD card port

2.2. Description of EUT

The equipment under test was a Dual mode (W-CDMA FDDI/FDDV/ GSM900/1800/1900MHz) Cellular Mobile Telephone with Bluetooth and RFID.

2.3. Modifications Incorporated in the EUT

During the course of testing the EUT was not modified.

2.4. Support Equipment

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

Description:	Laptop PC
Model Name or Number:	SONY Vaio PCG-VX7/BD
Serial Number:	Serial number has been partially erased and cannot be read
Cable Length and Type:	Not Applicable
Connected to Port:	USB

2.5. Additional Information Related to Testing

Power Supply Requirement:	Internal battery Supply of: 3.7V (nominal)		
Intended Operating Environment:	Within GSM Coverage UMTS coverage area		
Equipment Category:	Bluetooth, GSM/GPRS, Short Range Device, UMTS FDD I and UMTS band V		
Type of Unit:	Portable (Standalone battery powered device) Transceiver		
Transmit Frequency Range:	Not Applicable Single Frequency		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Single Channel	Not Applicable	13.56
Receive Frequency Range:	Not Applicable Single Frequency		
Receive Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Single Channel	Not Applicable	13.56

3. Test Specification, Methods and Procedures

3.1. Test Specifications

Reference:	FCC Part 15 Subpart C: 2006 (Sections 15.225)
Title:	Code of Federal Regulations, Part 15 (47CFR225) Radio Frequency Devices.

3.2. Methods and Procedures

The methods and procedures used were as detailed in:

ANSI/TIA-603-B-2003
Land Mobile Communications Equipment, Measurements and performance Standards

ANSI C63.2 (1987)
Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (2001)
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.

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.

4. Deviations from the Test Specification

There were no deviations from the test specification.

5. Operation of the EUT During Testing

5.1. Operating Modes

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

- Idle
- Constantly transmitting at full power

5.2. Configuration and Peripherals

The EUT was tested in the following configuration:

- The transmitter was enabled using a bespoke application on the Mobile handset
- Mains charger was connected to the EUT during Idle mode AC conducted and radiated spurious emissions testing.
- As the EUT was incapable of transmitting while charging no AC Mains Conducted Emissions (150 kHz to 30 MHz) was performed in transmit mode.

6. Summary of Test Results

Range of Measurements	FCC Part 15	Port Type	Result
Receiver/Idle Mode AC Conducted Emissions (150 kHz to 30 MHz)	Section 15.107	AC Mains	Complied
Receiver/Idle Mode Radiated Spurious Emissions	Section 15.109	Enclosure	Complied
Transmitter Fundamental Field Strength	Section 15.225(a)	Antenna	Complied
Transmitter Radiated Spurious Emissions	Section 15.209	Enclosure	Complied
Transmitter Band Edge Radiated Emissions	Section 15.209	Antenna	Complied
Transmitter 20 dB Bandwidth	Section 2.1049	Antenna	Complied
Transmitter Frequency Stability (Temperature & Voltage Variation)	Section 15.225(c)	Antenna	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.

6.2. Site Registration Number

FCC: 209735

7. Measurements, Examinations and Derived Results

7.1. General Comments

7.1.1. This section contains test results only.

7.1.2. 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.

7.2. Test Results

7.2.1. Receiver/Idle Mode AC Mains Conducted Emissions: Section 15.107

Ambient Temperature: 26ºC Relative Humidity: 42%

7.2.1.1. Tests were performed in accordance with C63.4 Section 7 and relevant annexes.

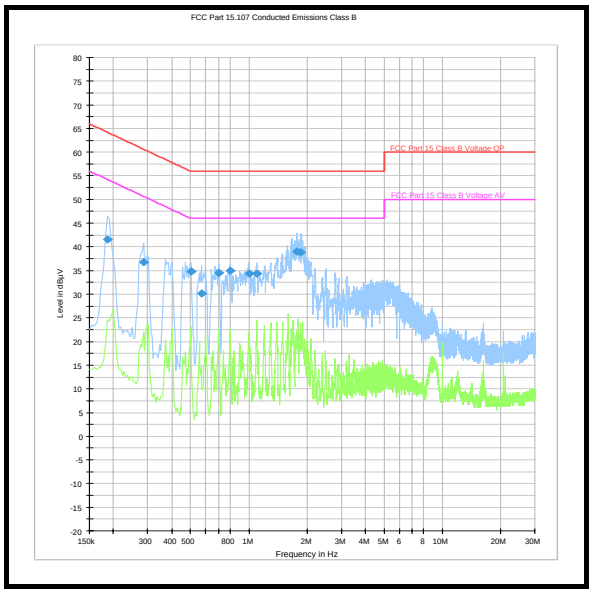
7.2.1.2. Tests were performed to identify the maximum emission levels on the AC mains line of the EUT.

Results:

Quasi-Peak Detector Measurements on Live and Neutral Lines

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.186000	Live	41.5	64.2	22.7	Complied
0.285000	Live	36.8	60.7	23.9	Complied
0.501000	Live	34.8	56.0	21.2	Complied
0.568500	Live	30.2	56.0	25.8	Complied
0.699000	Live	34.6	56.0	21.4	Complied
0.798000	Live	35.0	56.0	21.0	Complied
1.000500	Live	34.3	56.0	21.7	Complied
1.099500	Live	34.4	56.0	21.6	Complied
1.761000	Live	39.0	56.0	17.0	Complied
1.851000	Live	38.8	56.0	17.2	Complied

Receiver/Idle Mode AC Mains Conducted Emissions: Section 15.107 (Continued)



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying tables.

7.2.2. Receiver/Idle Mode Radiated Spurious Emissions: Section 15.109

Ambient Temperature: 23ºC Relative Humidity: 35%

7.2.3. Electric Field Strength Measurements (Frequency Range: 30 to 1000 MHz)

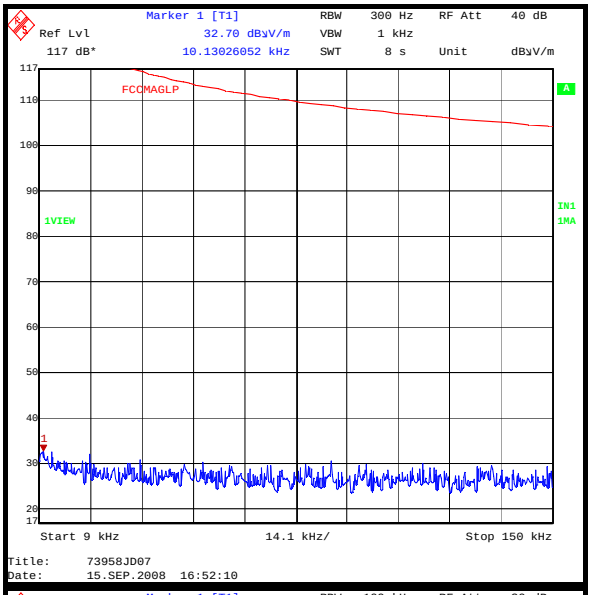
7.2.3.1. Tests were performed in accordance with C63.4 Section 8 and relevant annexes.

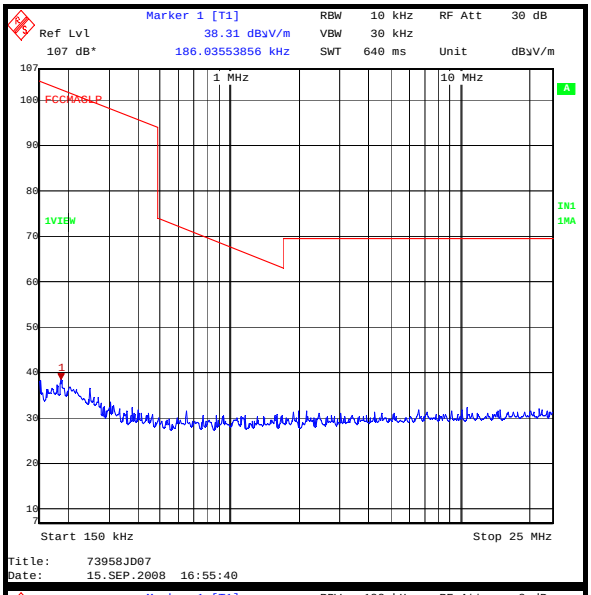
7.2.3.2. Tests were performed to identify the maximum receiver or standby radiated emission levels.

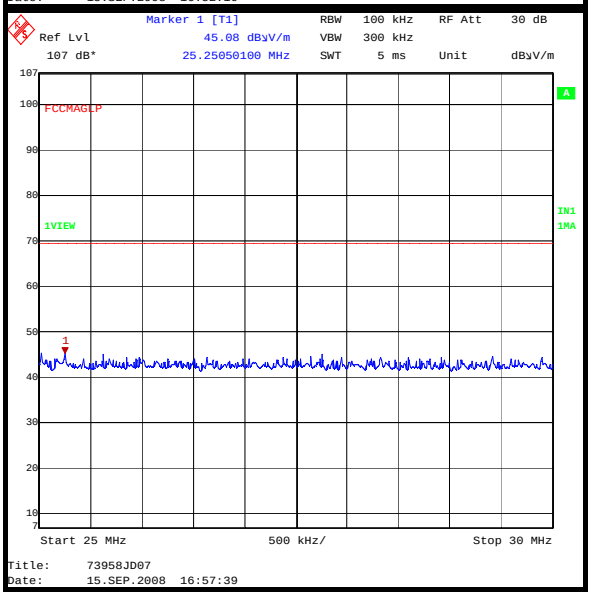
Results:

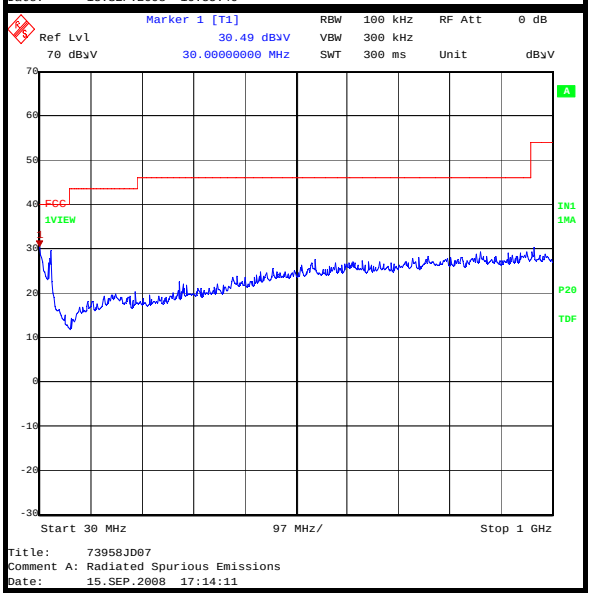
Frequency (MHz)	Antenna Polarity	Q-P Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
25.250501	Vertical	45.1	69.5	15.7	Complied

Receiver/Idle Mode Radiated Spurious Emissions: Section 15.109 (Continued)









Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying tables.

7.2.4. Transmitter Fundamental Field Strength: Section 15.225 (a)

Ambient Temperature: 22ºC Relative Humidity: 35%

7.2.4.1. Tests were performed in accordance with C63.4 Section 8 and relevant annexes.

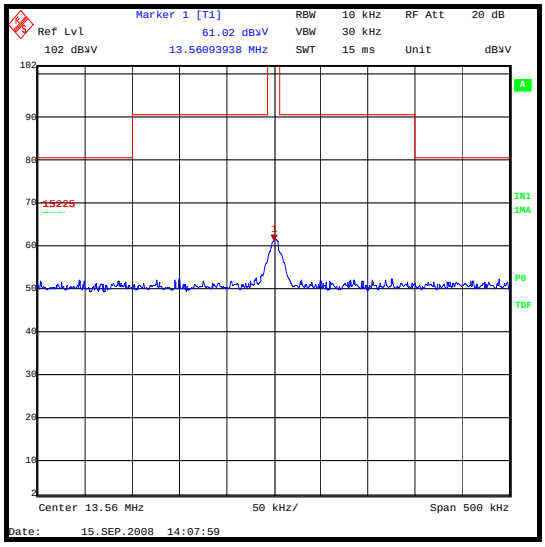
7.2.4.2. Measurements we performed at 3 metres and corrected to 30 metres using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Results:

Battery Powered Devices

Frequency (MHz)	Antenna Polarity	Q-P Level (dBµV/m)	Limit at 30 metres (dBµV/m)	Margin (dB)	Result
13.56	Loop edge on to EUT	61.0	124.0	63.0	Complied

Transmitter Fundamental Field Strength (Continued)



7.2.5. Transmitter Radiated Spurious Emissions: Section 15.209

Ambient Temperature: 22ºC Relative Humidity: 35%

7.2.6. Electric Field Strength Measurements (Frequency Range: 9 kHz to 1000 MHz)

7.2.6.1. Tests were performed in accordance with C63.4 Section 8 and relevant annexes.

7.2.6.2. Tests were performed to identify the maximum radiated spurious emission levels.

7.2.6.3. Limits below 30 MHz are specified at test distance of 30 metres, whilst below 0.49 MHz they are specified at a test distance of 300 metres. However as specified by section 15.31 (f)(2), measurements may be performed at a closer distance, and the measured level corrected to the specified measurement distance by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

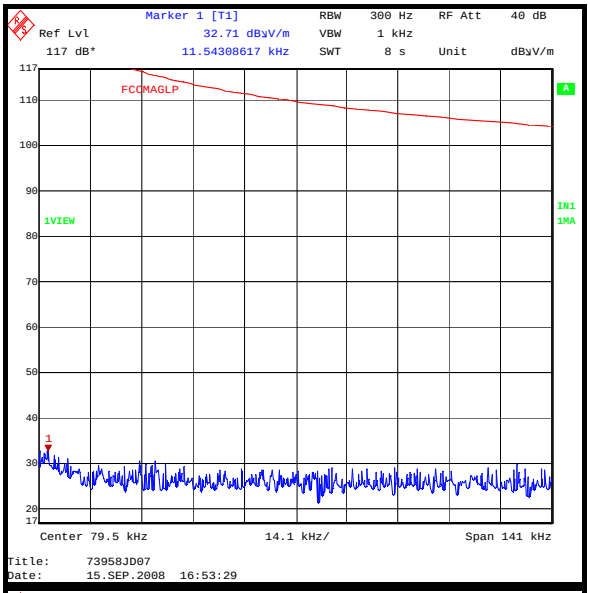
Results:

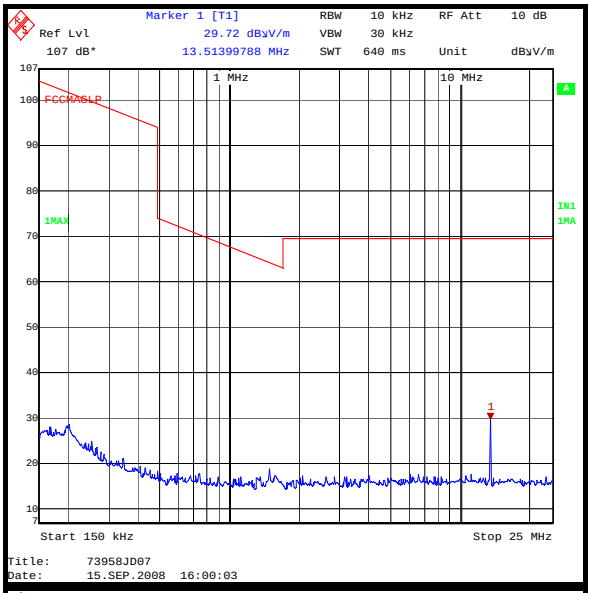
Frequency (MHz)	Antenna Polarity	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
40.6724	Vertical	27.9	40.0	12.1	Complied
67.7970	Vertical	35.7	40.0	4.3	Complied

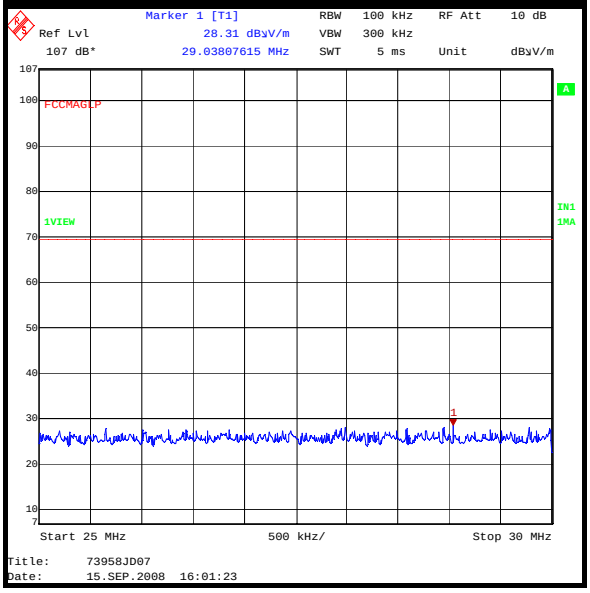
Note(s):

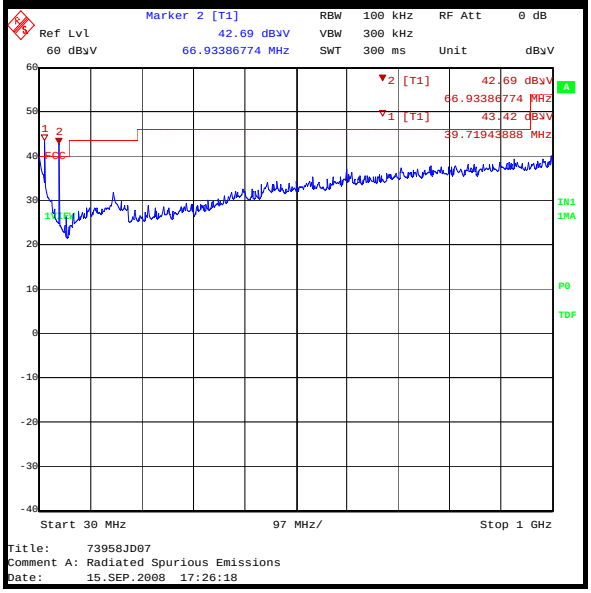
1. The carrier is shown on the above plot at 13.5 MHz

Transmitter Radiated Spurious Emissions (Continued)









Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying tables.

7.2.7. Transmitter Radiated Emissions at Band Edges: Section 15.209

Ambient Temperature: 25ºC Relative Humidity: 38%

7.2.7.1. Tests were performed in accordance with C63.4 Section 8 and relevant annexes.

7.2.7.2. Tests were performed to identify the maximum emissions level at the band edges of the frequency band that the EUT will operate over.

Results:

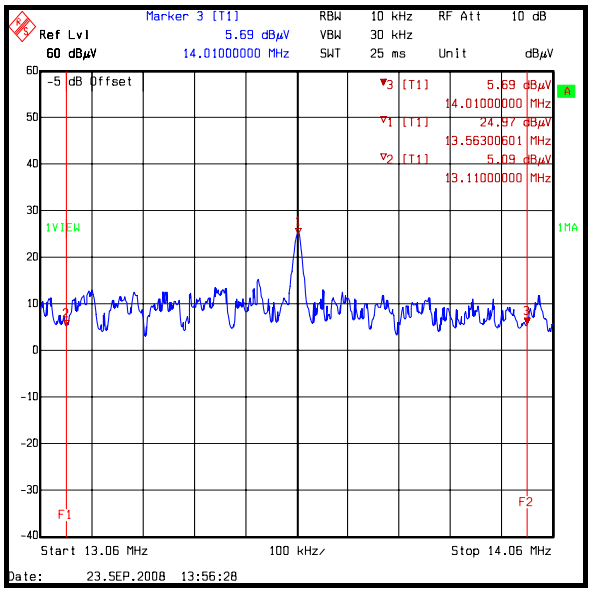
Bottom Band Edge

Frequency (MHz)	Q-P Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
13.553	5.1	80.5	75.4	Complied

Top Band Edge

Frequency (MHz)	Q-P Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
13.567	5.7	80.5	74.8	Complied

Transmitter Radiated Emissions at Band Edges (Continued)



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying tables.

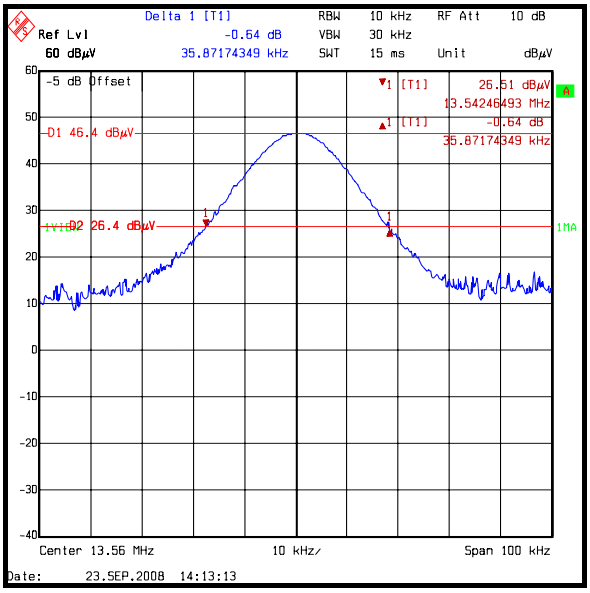
7.2.8.Transmitter 20 dB Bandwidth

Ambient Temperature: 25ºC Relative Humidity: 38%

7.2.8.1. Tests were performed in accordance with C63.4 Section 10.1.8.8 and 13.1.7 and relevant annexes with the only deviation being that the 20 dBc bandwidth was reported.

7.2.8.2. This test is not required to show compliance to 15.225 but has been included for information in order to aid Industry Canada (IC) applications.

Transmitter 20 dB Bandwidth (Hz)
35.872



7.2.9. Transmitter Frequency Stability (Temperature & Voltage Variation)

Ambient Temperature: 25ºC Relative Humidity: 36%

7.2.9.1. Tests were performed in accordance with C63.4 Section 10.1.8.7 and 13.1.6 and relevant annexes

7.2.9.2. Tests were performed to identify the maximum frequency error of the EUT with variations in nominal operating voltage at an ambient temperature of 20°C.

7.2.9.3. Tests were performed in accordance with FCC Part 2.1055 but over the frequency range specified in FCC Part 15.

Results:

Maximum frequency error of the EUT with variations in ambient temperature

Temp (°C)	Nominal Frequency	Measured Frequency	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Margin (%)	Result
-20	13.56	13.559943	-57	0.0004	0.01	0.0096	Complied
20	13.56	13.559957	-43	0.0003	0.01	0.0097	Complied
50	13.56	13.559893	-107	0.0008	0.01	0.0092	Complied

Maximum frequency error of the EUT with variations in nominal operating voltage at an ambient temperature of 20°C

Supply Voltage (V)	Nominal Frequency	Measured Frequency	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Margin (%)	Result
3.4	13.56	13.559958	-42	0.0003	0.01	0.0097	Complied
3.7	13.56	13.559957	-43	0.0003	0.01	0.0097	Complied
4.2	13.56	13.559957	-43	0.0003	0.01	0.0097	Complied

8. Measurement Uncertainty

8.1. 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.

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

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

8.4. 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
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±3.25 dB
Occupied Bandwidth	N/A	95%	±0.12 %
Frequency Stability	N/A	95%	±11.37 ppm
Radiated Spurious Emissions	9 kHz to 30 MHz	95%	±3.53 dB
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	±5.26 dB

8.5. 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.

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A007	Antenna	Rohde & Schwarz	HFH2-Z2	880 458/020	28 Feb 2008	12
A1299	Antenna	Schaffner	CBL6143	5094	28 Jul 2008	12
E013	Environmental Chamber	Sanyo	ATMOS chamber	None	Calibration not required	12
M1068	Thermometer	Iso-Tech	RS55	93102884	09 Jul 2008	12
M1124	Spectrum Analyser	Rohde & Schwarz	ESIB26	100046K	19 Feb 2008	12
M1229	Digital Multimeter	Fluke	179	87640015	09 May 2008	12
M1242	Spectrum Analyser	Rohde & Schwarz, Inc.	FSEM30	845986/022	29 Nov 2007	12
S0520	DC Power Supply Unit	GW instek	GPC-3030	E835141	Calibrated before use	12
K0002	3m RSE Chamber	Not Applicable	Not Applicable	Not Applicable	26 Aug 2008	12
K0004	Site Reference 4428	RFI Global Services Ltd	N/A	N/A	Calibration not required	12

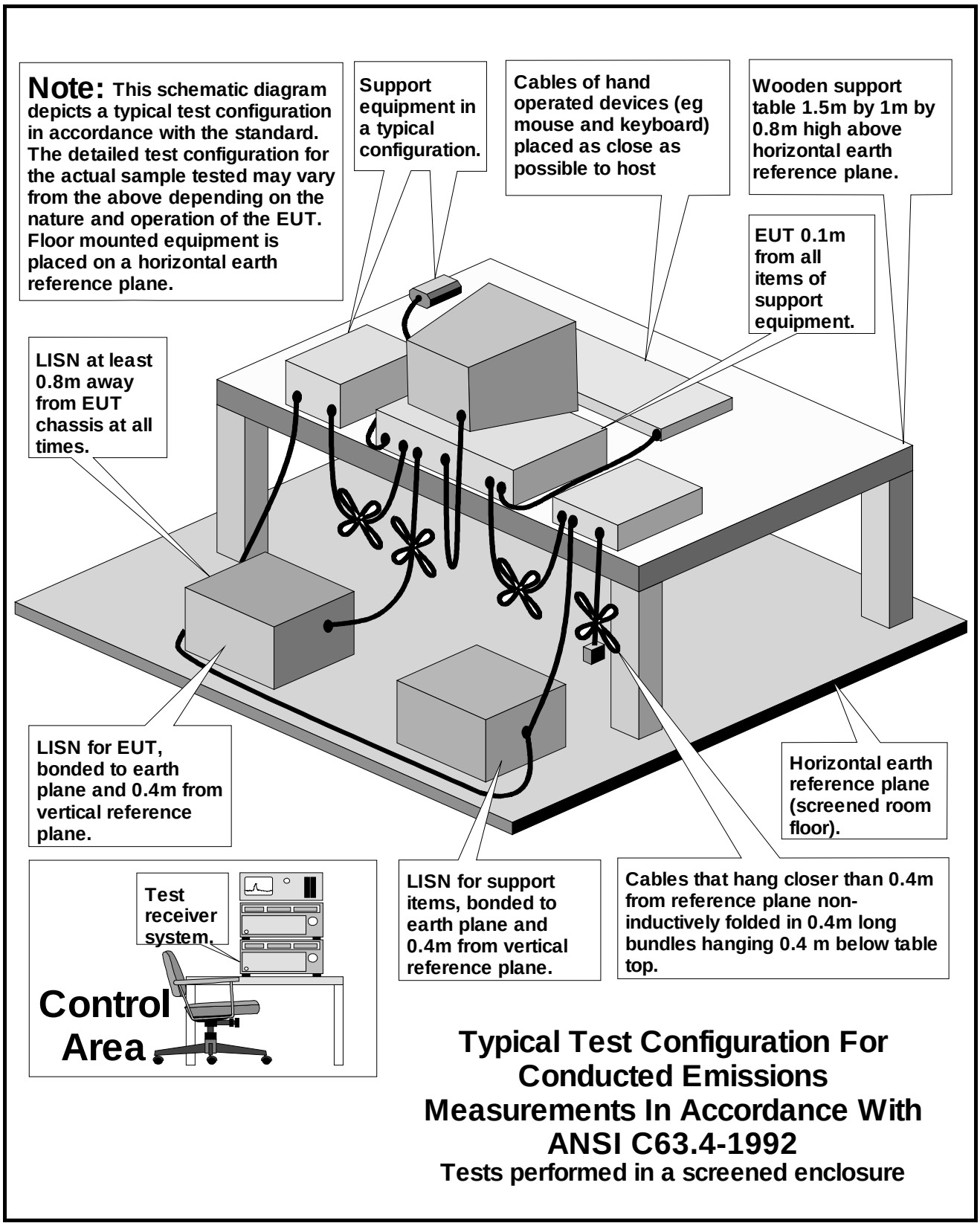
NB In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.

Appendix 2. Test Configuration Drawings

This appendix contains the following drawings:

Drawing Reference Number	Title
DRG\73958JD07\EMICON	Test configuration for measurement of conducted emissions.
DRG\73958JD07\EMIRAD	Test configuration for measurement of radiated emissions.

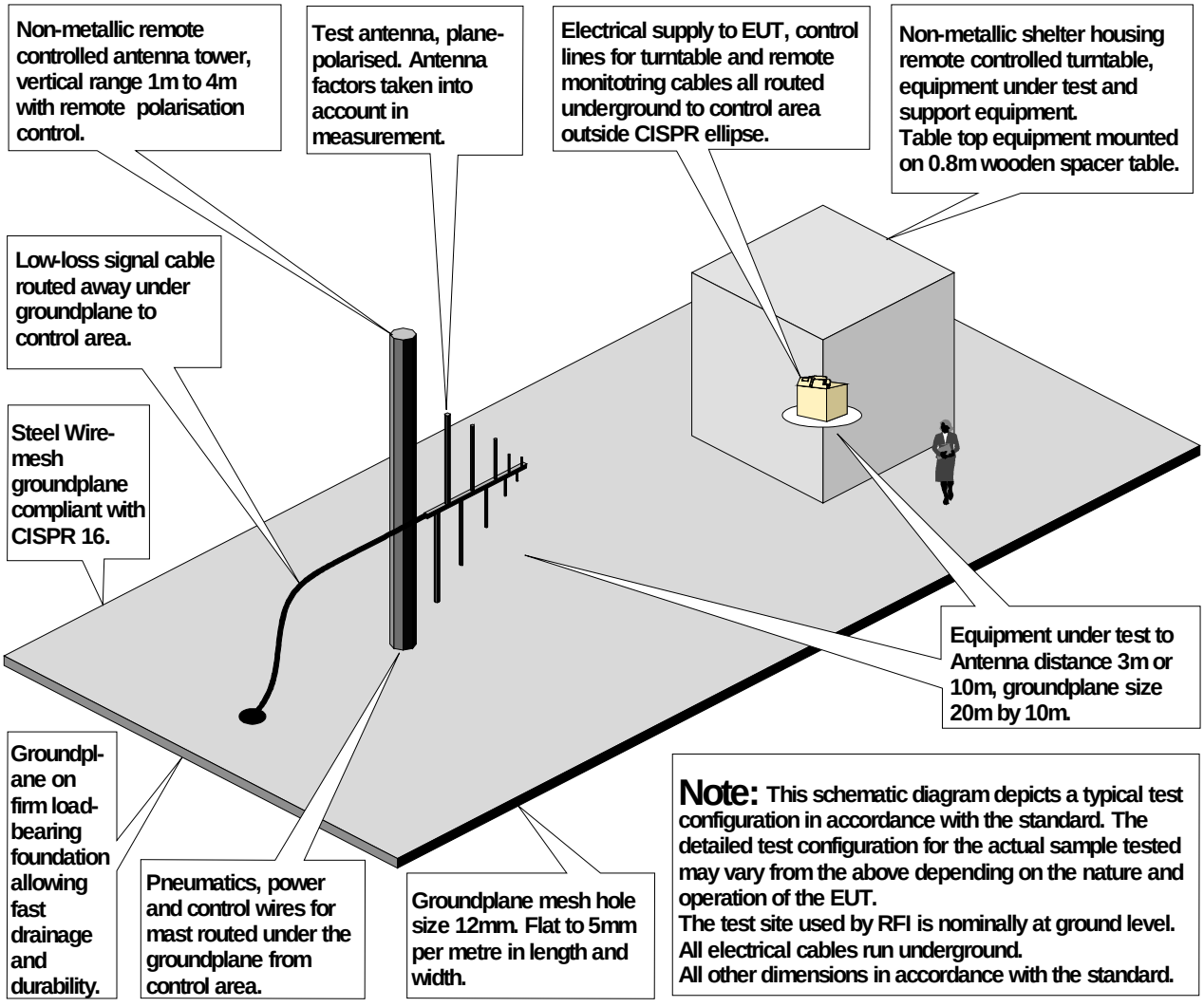
DRG\73958JD07\EMICON



Typical Test Configuration For Conducted Emissions Measurements In Accordance With ANSI C63.4-1992

Tests performed in a screened enclosure

DRG\73958JD07\EMIRAD



Note: This schematic diagram depicts a typical test configuration in accordance with the standard. The detailed test configuration for the actual sample tested may vary from the above depending on the nature and operation of the EUT.
The test site used by RFI is nominally at ground level.
All electrical cables run underground.
All other dimensions in accordance with the standard.

Test Configuration For Radiated Emissions Measurements

Reflection-free area: >60m by 52m (CISPR ellipse)

Groundplane Earthed

Control room outside CISPR ellipse