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Report On

RF Exposure Assessment of the
Controlant ehf.
CO 11.01 Transceiver

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REPORT ON

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Controlant ehf.
CO 11.01 Transceiver

Document 75929314 Report 06 Issue 2

June 2015

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Product Service

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SECTION 1

REPORT SUMMARY

RF Exposure Assessment of the
Controlant ehf.
CO 11.01 Transceiver

1.1 INTRODUCTION

The information contained in this report is intended to show verification of the RF Exposure Assessment of the Controlant ehf. CO 11.01 Transceiver to the requirements of the applied test specifications.

Objective	To perform RF Exposure Assessment to determine the Equipment Under Test's (EUT's) compliance of the applied rules.
Applicant	Controlant ehf.
Manufacturer	Controlant ehf.
Manufacturing Description	Transceiver
Model Number(s)	CO 11.01
Test Specification/Issue/Date	Council Recommendation 1999/519/EC CFR 47 Pt1.1310 Health Canada Safety Code 6 ARPANSA Radiation Protection Series No.3

1.2 REGIONAL REQUIREMENTS

The table below shows the regional requirements that are referenced in this test report. A full list of the requirements is shown in Annex A.

Report Reference	Regional Requirement
EU	Council Recommendation 1999/519/EC
FCC	CFR 47 Pt1.1310
IC	Health Canada Safety Code 6
AUS	ARPANSA Radiation Protection Series No.3

1.3 PRODUCT INFORMATION

1.3.1 Technical Description

The Equipment under test was a Controlant ehf. CO 11.01 Transceiver . A full technical description can be found in the manufacturer's documentation.

All reported calculations were carried out on the relevant information supplied for the CO 11.01 Transceiver to demonstrate compliance with the applied test specification(s) the sample assessed was found to comply with the requirements of the applied rules.

1.3.2 Supported Features

The following radio access technologies and frequency bands are supported by the equipment under test.

Radio Access Technology	GSM
	WCDMA
	SRD
Frequency Band	GSM: 824-849
	GSM: 880-915
	DCS: 1710-1785
	PCS: 1850-1910
	WCDMA: 824-849
	WCDMA: 880-915
	WCDMA: 1920-1980
	SRD868: 863-870
	SRD915: 902-928

1.3.3 Antennas

The following antennas are supported by the equipment under test.

No.	Model	Gain (dBi)
1	SRD	2.5
2	Cellular	2.14

1.4 BRIEF SUMMARY OF RESULTS

The wireless device described within this report has been shown to be capable of compliance with the basic restrictions related to human exposure to electromagnetic fields for both General public and Occupational. The calculations shown in this report were made in accordance the procedures specified in the applied test specification(s).

Configuration	Required Compliance Boundary (m)	
	Occupational	General Population
GSM 850	0.2	0.2
GSM 900	0.2	0.2
DSC 1800	0.2	0.2
PCS 1900	0.2	0.2
WCDMA 850	0.2	0.2
WCDMA 900	0.2	0.2
WCDMA 1900	0.2	0.2
SRD 868	0.2	0.2
SRD 915	0.2	0.2

Table 1 – Compliance Boundary Results

1.4.1 Configuration 1 - GSM 850

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	1.1071	20.6050	20.4294	86.1267	0.0542	0.2285
FCC*	0.1107	2.7473	N/A	N/A	N/A	N/A
IC	1.1071	27.4733	20.4294	101.6294	0.0542	0.2699
AUS	1.1071	20.6050	20.4294	88.1363	0.0542	0.2337

* Requirement and Result in mW/cm^2

Table 2 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	1.1071	4.1210	20.4294	39.4747	0.0542	0.1045
FCC*	0.1107	0.5495	N/A	N/A	N/A	N/A
IC	1.1071	5.4947	20.4294	45.5036	0.0542	0.1206
AUS	1.1071	4.1210	20.4294	39.3312	0.0542	0.1045

* Requirement and Result in mW/cm^2

Table 3 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.2 Configuration 2 - GSM 900

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	1.1071	22.0050	20.4294	89.0045	0.0542	0.2362
FCC*	0.1107	2.9340	N/A	N/A	N/A	N/A
IC	1.1071	29.3400	20.4294	105.0253	0.0542	0.2789
AUS	1.1071	22.0050	20.4294	91.0813	0.0542	0.2415

* Requirement and Result in mW/cm^2

Table 4 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	1.1071	4.4010	20.4294	40.7937	0.0542	0.1080
FCC*	0.1107	0.5868	N/A	N/A	N/A	N/A
IC	1.1071	5.8680	20.4294	47.0240	0.0542	0.1246
AUS	1.1071	4.4010	20.4294	40.6454	0.0542	0.1080

* Requirement and Result in mW/cm^2

Table 5 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.3 Configuration 3 - DSC 1800

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.5536	42.7550	14.4462	124.0637	0.0383	0.3292
FCC*	0.0554	5.0000	N/A	N/A	N/A	N/A
IC	0.5536	50.0000	14.4462	137.0000	0.0383	0.3640
AUS	0.5536	42.7550	14.4462	126.9585	0.0383	0.3366

* Requirement and Result in mW/cm^2

Table 6 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.5536	8.5510	14.4462	56.8625	0.0383	0.1505
FCC*	0.0554	1.0000	N/A	N/A	N/A	N/A
IC	0.5536	10.0000	14.4462	61.4000	0.0383	0.1630
AUS	0.5536	8.5510	14.4462	56.6558	0.0383	0.1505

* Requirement and Result in mW/cm^2

Table 7 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.4 Configuration 4 - PCS 1900

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.5536	46.2550	14.4462	129.0419	0.0383	0.3424
FCC*	0.0554	5.0000	N/A	N/A	N/A	N/A
IC	0.5536	50.0000	14.4462	137.0000	0.0383	0.3640
AUS	0.5536	46.2550	14.4462	132.0528	0.0383	0.3501

* Requirement and Result in mW/cm^2

Table 8 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.5536	9.2510	14.4462	59.1442	0.0383	0.1566
FCC*	0.0554	1.0000	N/A	N/A	N/A	N/A
IC	0.5536	10.0000	14.4462	61.4000	0.0383	0.1630
AUS	0.5536	9.2510	14.4462	58.9291	0.0383	0.1566

* Requirement and Result in mW/cm^2

Table 9 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.5 Configuration 5 - WCDMA 850

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.1384	20.6600	7.2236	86.2415	0.0192	0.2288
FCC*	0.0138	2.7547	N/A	N/A	N/A	N/A
IC	0.1384	27.5467	7.2236	101.7650	0.0192	0.2702
AUS	0.1384	20.6600	7.2236	88.2538	0.0192	0.2340

* Requirement and Result in mW/cm^2

Table 10 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.1384	4.1320	7.2236	39.5274	0.0192	0.1046
FCC*	0.0138	0.5509	N/A	N/A	N/A	N/A
IC	0.1384	5.5093	7.2236	45.5643	0.0192	0.1207
AUS	0.1384	4.1320	7.2236	39.3836	0.0192	0.1046

* Requirement and Result in mW/cm^2

Table 11 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.6 Configuration 6 - WCDMA 900

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.1384	22.0600	7.2236	89.1157	0.0192	0.2365
FCC*	0.0138	2.9413	N/A	N/A	N/A	N/A
IC	0.1384	29.4133	7.2236	105.1565	0.0192	0.2792
AUS	0.1384	22.0600	7.2236	91.1950	0.0192	0.2418

* Requirement and Result in mW/cm^2

Table 12 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.1384	4.4120	7.2236	40.8447	0.0192	0.1081
FCC*	0.0138	0.5883	N/A	N/A	N/A	N/A
IC	0.1384	5.8827	7.2236	47.0828	0.0192	0.1248
AUS	0.1384	4.4120	7.2236	40.6961	0.0192	0.1081

* Requirement and Result in mW/cm^2

Table 13 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.7 Configuration 7 - WCDMA 1900

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.1384	48.0600	7.2236	131.5355	0.0192	0.3490
FCC*	0.0138	5.0000	N/A	N/A	N/A	N/A
IC	0.1384	50.0000	7.2236	137.0000	0.0192	0.3640
AUS	0.1384	48.0600	7.2236	134.6047	0.0192	0.3569

* Requirement and Result in mW/cm^2

Table 14 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.1384	9.6120	7.2236	60.2871	0.0192	0.1596
FCC*	0.0138	1.0000	N/A	N/A	N/A	N/A
IC	0.1384	10.0000	7.2236	61.4000	0.0192	0.1630
AUS	0.1384	9.6120	7.2236	60.0679	0.0192	0.1596

* Requirement and Result in mW/cm^2

Table 15 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.8 Configuration 8 - SRD 868

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.0004	21.7050	0.3652	88.3957	0.0010	0.2345
FCC*	0.0000	2.8940	N/A	N/A	N/A	N/A
IC	0.0004	28.9400	0.3652	104.3069	0.0010	0.2770
AUS	0.0004	21.7050	0.3652	90.4583	0.0010	0.2398

* Requirement and Result in mW/cm^2

Table 16 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.0004	4.3410	0.3652	40.5147	0.0010	0.1073
FCC*	0.0000	0.5788	N/A	N/A	N/A	N/A
IC	0.0004	5.7880	0.3652	46.7024	0.0010	0.1238
AUS	0.0004	4.3410	0.3652	40.3674	0.0010	0.1073

* Requirement and Result in mW/cm^2

Table 17 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

1.4.9 Configuration 9 - SRD 915

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.0003	22.5750	0.3504	90.1499	0.0009	0.2392
FCC*	0.0000	3.0100	N/A	N/A	N/A	N/A
IC	0.0003	30.1000	0.3504	106.3769	0.0009	0.2825
AUS	0.0003	22.5750	0.3504	92.2534	0.0009	0.2446

* Requirement and Result in mW/cm^2

Table 18 – Occupational Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

Regional Requirement	Calculated RF exposure level at compliance boundary of 0.2 m					
	S Field (W/m^2)		E Field (V/m)		H Field (A/m)	
	Result	Limit	Result	Limit	Result	Limit
EU	0.0003	4.5150	0.3504	41.3187	0.0009	0.1094
FCC*	0.0000	0.6020	N/A	N/A	N/A	N/A
IC	0.0003	6.0200	0.3504	47.6292	0.0009	0.1262
AUS	0.0003	4.5150	0.3504	41.1684	0.0009	0.1094

* Requirement and Result in mW/cm^2

Table 19 – General Population Results

The calculations show that the EUT complies with the occupational exposure levels described in the Council Recommendation 1999/519/EC, CFR 47 Pt1.1310, Health Canada Safety Code 6 and ARPANSA Radiation Protection Series No.3 at the point of investigation, 0.2 m.

SECTION 2

TEST DETAILS

2.1 RATIONALE FOR ASSESSMENT OF THE RF EXPOSURE

The aim of the assessment report is to evaluate the compliance boundary for a set of given input power(s) according to the basic restrictions (directly or indirectly via compliance with reference levels) related to human exposure to radio frequency electromagnetic fields.
The chosen assessment method to establish the compliance boundary in the far-field region is the reference method as defined in the relevant specifications.

The RF exposure assessment is based upon the following criteria:

The CO 11.01 Transceiver operates with the following transmitters active on the antenna ports shown in table 1. For each transmitter, the Radio Access Technology (RAT), EIRP inclusive of antenna gain and duty cycle, gain of the antenna and lowest frequency of operation are shown as they contribute to the calculation of S Field, E field and H field values according to the following formulas.

The power flux (S Field):

$$S = \frac{PG_{(\theta,\phi)}}{4\pi r^2}$$

The electric field strength (E Field):

$$E = \frac{\sqrt{30PG}_{(\theta,\phi)}}{r}$$

The magnetic field strength (H Field):

$$H = \frac{E}{\eta_o}$$

Where:

P = Average Power (W)
G = Antenna Gain (dBi)
r = Distance (cm) or (m)
η_o = 377

2.2 TEST RESULT DETAILS

The frequencies shown in the tables below have been chosen based on the lowest possible frequency that the EUT can transmit.

2.2.1 Configuration 1 - GSM 850

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.556	17	2.14	824.2	1.1071	20.4294	0.0542

Table 20 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.556	17	2.14	824.2	1.1071	20.4294	0.0542

Table 21 – General Population Transmitter Summary

2.2.2 Configuration 2 - GSM 900

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.556	17	2.14	880.2	1.1071	20.4294	0.0542

Table 22 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.556	17	2.14	880.2	1.1071	20.4294	0.0542

Table 23 – General Population Transmitter Summary

2.2.3 Configuration 3 - DSC 1800

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.278	17	2.14	1710.2	0.5536	14.4462	0.0383

Table 24 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.278	17	2.14	1710.2	0.5536	14.4462	0.0383

Table 25 – General Population Transmitter Summary

2.2.4 Configuration 4 - PCS 1900

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.278	17	2.14	1850.2	0.5536	14.4462	0.0383

Table 26 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	GSM	0.278	17	2.14	1850.2	0.5536	14.4462	0.0383

Table 27 – General Population Transmitter Summary

2.2.5 Configuration 5 - WCDMA 850

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	WCDMA	0.070	17	2.14	826.4	0.1384	7.2236	0.0192

Table 28 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	WCDMA	0.070	17	2.14	826.4	0.1384	7.2236	0.0192

Table 29 – General Population Transmitter Summary

2.2.6 Configuration 6 - WCDMA 900

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	WCDMA	0.070	17	2.14	882.4	0.1384	7.2236	0.0192

Table 30 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	WCDMA	0.070	17	2.14	882.4	0.1384	7.2236	0.0192

Table 31 – General Population Transmitter Summary

2.2.7 Configuration 7 - WCDMA 1900

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	WCDMA	0.070	17	2.14	1922.4	0.1384	7.2236	0.0192

Table 32 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	2	WCDMA	0.070	17	2.14	1922.4	0.1384	7.2236	0.0192

Table 33 – General Population Transmitter Summary

2.2.8 Configuration 8 - SRD 868

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	1	SRD	0.000	1	2.5	868.2	0.0004	0.3652	0.0010

Table 34 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	1	SRD	0.000	1	2.5	868.2	0.0004	0.3652	0.0010

Table 35 – General Population Transmitter Summary

2.2.9 Configuration 9 - SRD 915

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	1	SRD	0.000	1	2.5	903	0.0003	0.3504	0.0009

Table 36 – Occupational Transmitter Summary

Antenna Port	Tx No.	Ant No.	RAT	EIRP (W)	Duty Cycle (%)	Gain (dBi)	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m		
								S Field	E Field	H Field
1	1	1	SRD	0.000	1	2.5	903	0.0003	0.3504	0.0009

Table 37 – General Population Transmitter Summary

SECTION 3

DISCLAIMERS AND COPYRIGHT

3.1 DISCLAIMERS AND COPYRIGHT

This report relates only to the actual item/items tested.

ANNEX A

REGIONAL REQUIREMENTS

Frequency Range (MHz)	Power Density (W/m^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0.065 - 1	-	610/f	1.6/f
1 - 10	-	610/f	1.6/f
10 - 400	10	61	0.162
400 - 2000	f/40	3*f^0.5	0.00796*f^0.5
2000 - 300000	50	137	0.363

Table A.1 – Council Recommendation 1999/519/EC Occupational Limits

Frequency Range (MHz)	Power Density (W/m^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0.003 - 0.15	-	87	5
0.15 - 1	-	87/f	0.73/f
1 - 10	-	87/f^0.5	0.73/f
10 - 400	2	27	0.071
400 - 2000	f/200	1.375*f^0.5	0.00364*f^0.5
2000 - 300000	10	61	0.162

Table A.2 – Council Recommendation 1999/519/EC General Population Limits

Frequency Range (MHz)	S Field (mW/cm^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0 - 0.3	-	-	-
0.3 - 3	100	614	1.63
3 - 30	900/f^2	1842/f	4.89/f
30 - 300	1	61.4	0.163
300 - 1500	f/300	-	-
1500 - 100000	5	-	-

Table A.3 – CFR 47 Pt1.1310 Occupational Limits

Frequency Range (MHz)	S Field (mW/cm^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0 - 0.3	-	-	-
0.3 - 3	100	614	1.63
3 - 30	180/f^2	824/f	2.19/f
30 - 300	0.2	27.5	0.073
300 - 1500	f/1500	-	-
1500 - 100000	1	-	-

Table A.4 – CFR 47 Pt1.1310 General Population Limits

Frequency Range (MHz)	Power Density (W/m^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0.003 - 1	-	600	4.9
1 - 10	-	600/f	4.9/f
10 - 30	-	60	4.9/f
30 - 300	10	60	0.163
300 - 1500	f/30	3.54*f^0.5	0.0094*f^0.5
1500 - 150000	50	137	0.364

Table A.5 – Health Canada Safety Code 6 Occupational Limits

Frequency Range (MHz)	Power Density (W/m^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0.003 - 1	-	280	2.19
1 - 10	-	280/f	2.19/f
10 - 30	-	28	2.19/f
30 - 300	2	28	0.073
300 - 1500	f/150	1.585*f^0.5	0.0042*f^0.5
1500 - 150000	10	61.4	0.163

Table A.6 – Health Canada Safety Code 6 General Population Limits

Frequency Range (MHz)	Power Density (W/m^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0.1 - 1	-	614	1.63/f
1 - 10	1000/f^2	614	1.63/f
10 - 400	10	61.4	0.163
400 - 2000	f/40	3.07*f^0.5	0.00814*f^0.5
2000 - 300000	50	137	0.364

Table A.7 – ARPANSA Radiation Protection Series No.3 Occupational Limits

Frequency Range (MHz)	Power Density (W/m^2)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0.1 - 0.15	-	86.8	4.86
0.15 - 1	-	86.8	0.729/f
1 - 10	-	86.8/f^0.5	0.729/f
10 - 400	2	27.4	0.0729
400 - 2000	f/200	1.37*f^0.5	0.00364*f^0.5
2000 - 300000	10	61.4	0.163

Table A.8 – ARPANSA Radiation Protection Series No.3 General Population Limits