

Report on the Exposure Calculation of:

MiX Telematics International (Pty) Ltd
Telematics Unit, Model: MiX 44MC-3G /
MiX 44MC-3G-B

In accordance with EU RED EN 50665,
FCC CFR 47 Part 2.1091, Australia ARPANSA
RPS No.3 and New Zealand NZS 2772.1

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EXECUTIVE SUMMARY

The calculation of exposure for this product was found to be compliant at 20 cm with EN 50665, FCC CFR 47 Part 2.1091, Australia ARPANSA RPS No.3 and New Zealand NZS 2772.1.

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	04 December 2019

Table 1

1.2 Introduction

Objective	To perform electromagnetic field exposure assessment to determine the equipment under test's (EUT's) compliance with the applied specifications.
Applicant	MiX Telematics Europe Ltd
Manufacturer	MiX Telematics International (Pty) Ltd
Model Number(s)	MiX 44MC-3G / MiX 44MC-3G-B
Hardware Version(s)	1
Software Version(s)	4.4.7
Specification/Issue/Date	• EN 50665:2017 Generic standard for assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz) • FCC CFR 47 Part 2.1091:2018 • Australia: ARPANSA Radiation Protection Series No.3:2002 • NZS 2772.1:1999 Radiofrequency fields, Maximum exposure levels, 3 kHz to 300 GHz
Order Number	P0092481
Date	13 September 2019
Related Document(s)	• EN 62311:2008 Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz) • Directive 2013/35/EU on minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields). • European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz), Official Journal, L199, of 1999-7-30, p.59-70. • FCC 47 CFR Part 1.1310: 2018 • OET65:97 Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields • IEEE C95.3:2002 IEEE Recommended Practice for



Measurements and Computations of Radio Frequency
Electromagnetic Fields with Respect to Human Exposure
to Such Fields, 100 kHz–300 GHz

- AS/NZS 2772.2:2016 Radiofrequency fields, Part 2:
principles and methods of measurement and
computation, 3 kHz to 300 GHz



1.3 Brief Summary of Results

The wireless device described within this report was compliant with the restrictions related to human exposure to electromagnetic fields for both general public and worker/occupational exposures.

The calculations shown in this report were made in accordance with the procedures specified in the applied test specification(s).

1.3.1 Configuration - Single transmitters

Regional Requirement	RAT	RF Exposure Level at compliance boundary of 0.2 m							
		S Power Density (W/m ²)		E Field (V/m)		H Field (A/m)		B Field (μT)	
		Result	Limit	Result	Limit	Result	Limit	Result	Limit
EU	3G BAND 8	1.00	N/A	19.39	89.12	0.0514	N/A	0.0646	0.2971
EU	3G BAND 1	1.00	N/A	19.39	131.54	0.0514	N/A	0.0646	0.4385
EU	EGSM900	1.98	N/A	27.35	89.00	0.0726	N/A	0.0912	0.2967
EU	DCS1800	0.99	N/A	19.34	124.06	0.0513	N/A	0.0645	0.4135
EU	BLE2400	0.01	N/A	1.94	140.00	0.0051	N/A	0.0065	0.4500
EU	SRD434	0.00	N/A	0.87	62.52	0.0023	N/A	0.0029	0.2084
FCC	3G BAND 5	1.00	27.55	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	3G BAND 2	1.00	50.00	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	GSM850	1.98	27.47	27.35	N/A	0.0726	N/A	0.0912	N/A
FCC	PCS1900	0.99	50.00	19.34	N/A	0.0513	N/A	0.0645	N/A
FCC	BLE2400	0.01	50.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	SRD915	0.02	30.07	2.74	N/A	0.0073	N/A	0.0091	N/A
AUSTRALIA	3G BAND 5	1.00	20.66	19.39	88.25	0.0514	0.2340	0.0646	N/A
AUSTRALIA	3G BAND 8	1.00	22.06	19.39	91.20	0.0514	0.2418	0.0646	N/A
AUSTRALIA	3G BAND 1	1.00	48.06	19.39	134.60	0.0514	0.3569	0.0646	N/A
AUSTRALIA	EGSM900	1.98	22.01	27.35	91.08	0.0726	0.2415	0.0912	N/A
AUSTRALIA	DCS1800	0.99	42.76	19.34	126.96	0.0513	0.3366	0.0645	N/A
AUSTRALIA	BLE2400	0.01	50.00	1.94	137.00	0.0051	0.3640	0.0065	N/A
AUSTRALIA	SRD434	0.00	10.86	0.87	63.98	0.0023	0.1696	0.0029	N/A
AUSTRALIA	SRD915	0.02	22.55	2.74	92.20	0.0073	0.2445	0.0091	N/A
NEW ZEALAND	3G BAND 5	1.00	20.66	19.39	86.24	0.0514	0.2300	0.0646	N/A
NEW ZEALAND	3G BAND 8	1.00	22.06	19.39	89.12	0.0514	0.2376	0.0646	N/A
NEW ZEALAND	3G BAND 1	1.00	48.06	19.39	131.54	0.0514	0.3508	0.0646	N/A
NEW ZEALAND	EGSM900	1.98	22.01	27.35	89.00	0.0726	0.2373	0.0912	N/A
NEW ZEALAND	DCS1800	0.99	42.76	19.34	124.06	0.0513	0.3308	0.0645	N/A
NEW ZEALAND	BLE2400	0.01	50.00	1.94	137.00	0.0051	0.3600	0.0065	N/A
NEW ZEALAND	SRD434	0.00	10.86	0.87	62.52	0.0023	0.1667	0.0029	N/A
NEW ZEALAND	SRD915	0.02	22.55	2.74	90.10	0.0073	0.2403	0.0091	N/A

Table 2 – Worker/Occupational Exposure Results

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



Regional Requirement	RAT	RF Exposure Level at compliance boundary of 0.2 m							
		S Power Density (W/m ²)		E Field (V/m)		H Field (A/m)		B Field (μT)	
		Result	Limit	Result	Limit	Result	Limit	Result	Limit
EU	3G BAND 8	1.00	4.41	19.39	40.84	0.0514	0.1099	0.0646	0.1366
EU	3G BAND 1	1.00	9.61	19.39	60.29	0.0514	0.1622	0.0646	0.2017
EU	EGSM900	1.98	4.40	27.35	40.79	0.0726	0.1098	0.0912	0.1365
EU	DCS1800	0.99	8.55	19.34	56.86	0.0513	0.1530	0.0645	0.1902
EU	BLE2400	0.01	10.00	1.94	61.00	0.0051	0.1600	0.0065	0.2000
EU	SRD434	0.00	2.17	0.87	28.65	0.0023	0.0771	0.0029	0.0959
FCC	3G BAND 5	1.00	5.51	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	3G BAND 2	1.00	10.00	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	GSM850	1.98	5.49	27.35	N/A	0.0726	N/A	0.0912	N/A
FCC	PCS1900	0.99	10.00	19.34	N/A	0.0513	N/A	0.0645	N/A
FCC	BLE2400	0.01	10.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	SRD915	0.02	6.01	2.74	N/A	0.0073	N/A	0.0091	N/A
AUSTRALIA	3G BAND 5	1.00	4.13	19.39	39.38	0.0514	0.1046	0.0646	N/A
AUSTRALIA	3G BAND 8	1.00	4.41	19.39	40.70	0.0514	0.1081	0.0646	N/A
AUSTRALIA	3G BAND 1	1.00	9.61	19.39	60.07	0.0514	0.1596	0.0646	N/A
AUSTRALIA	EGSM900	1.98	4.40	27.35	40.65	0.0726	0.1080	0.0912	N/A
AUSTRALIA	DCS1800	0.99	8.55	19.34	56.66	0.0513	0.1505	0.0645	N/A
AUSTRALIA	BLE2400	0.01	10.00	1.94	61.40	0.0051	0.1630	0.0065	N/A
AUSTRALIA	SRD434	0.00	2.17	0.87	28.55	0.0023	0.0759	0.0029	N/A
AUSTRALIA	SRD915	0.02	4.51	2.74	41.15	0.0073	0.1093	0.0091	N/A
NEW ZEALAND	3G BAND 5	1.00	4.13	19.39	39.53	0.0514	0.1064	0.0646	N/A
NEW ZEALAND	3G BAND 8	1.00	4.41	19.39	40.84	0.0514	0.1099	0.0646	N/A
NEW ZEALAND	3G BAND 1	1.00	9.61	19.39	60.29	0.0514	0.1622	0.0646	N/A
NEW ZEALAND	EGSM900	1.98	4.40	27.35	40.79	0.0726	0.1098	0.0912	N/A
NEW ZEALAND	DCS1800	0.99	8.55	19.34	56.86	0.0513	0.1530	0.0645	N/A
NEW ZEALAND	BLE2400	0.01	10.00	1.94	61.00	0.0051	0.1600	0.0065	N/A
NEW ZEALAND	SRD434	0.00	2.17	0.87	28.65	0.0023	0.0771	0.0029	N/A
NEW ZEALAND	SRD915	0.02	4.51	2.74	41.30	0.0073	0.1111	0.0091	N/A

Table 3 – General Public Exposure Results

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



1.3.1 Configuration - Multiple transmitters

Regional Requirement	RAT	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
		S Power Density	E Field	H Field	B Field
		Summation for simultaneous exposure; value to be <1			
EU	3G BAND 8 + SRD434 + BLE2400	N/A	0.0477	N/A	0.0477
EU	3G BAND 1 + SRD434 + BLE2400	N/A	0.0221	N/A	0.0221
EU	EGSM900 + SRD434 + BLE2400	N/A	0.0948	N/A	0.0948
EU	DCS1800 + SRD434 + BLE2400	N/A	0.0247	N/A	0.0247
FCC	3G BAND 5 + SRD915 + BLE2400	0.0371	N/A	N/A	N/A
FCC	3G BAND 2 + SRD915 + BLE2400	0.0208	N/A	N/A	N/A
FCC	GSM850 + SRD915 + BLE2400	0.0731	N/A	N/A	N/A
FCC	PCS1900 + SRD915 + BLE2400	0.0207	N/A	N/A	N/A
AUSTRALIA	3G BAND 5 + SRD434 + BLE2400	0.0486	0.0486	0.0487	N/A
AUSTRALIA	3G BAND 8 + SRD434 + BLE2400	0.0456	0.0456	0.0456	N/A
AUSTRALIA	3G BAND 1 + SRD434 + BLE2400	0.0211	0.0211	0.0211	N/A
AUSTRALIA	EGSM900 + SRD434 + BLE2400	0.0906	0.0906	0.0906	N/A
AUSTRALIA	DCS1800 + SRD434 + BLE2400	0.0236	0.0236	0.0236	N/A
AUSTRALIA	3G BAND 5 + SRD915 + BLE2400	0.0493	0.0493	0.0494	N/A
AUSTRALIA	3G BAND 8 + SRD915 + BLE2400	0.0463	0.0463	0.0463	N/A
AUSTRALIA	3G BAND 1 + SRD915 + BLE2400	0.0218	0.0218	0.0218	N/A
AUSTRALIA	EGSM900 + SRD915 + BLE2400	0.0913	0.0913	0.0913	N/A
AUSTRALIA	DCS1800 + SRD915 + BLE2400	0.0243	0.0243	0.0243	N/A
NEW ZEALAND	3G BAND 5 + SRD434 + BLE2400	0.0486	0.0509	0.0504	N/A
NEW ZEALAND	3G BAND 8 + SRD434 + BLE2400	0.0456	0.0477	0.0472	N/A
NEW ZEALAND	3G BAND 1 + SRD434 + BLE2400	0.0211	0.0221	0.0219	N/A
NEW ZEALAND	EGSM900 + SRD434 + BLE2400	0.0906	0.0948	0.0938	N/A
NEW ZEALAND	DCS1800 + SRD434 + BLE2400	0.0236	0.0247	0.0244	N/A
NEW ZEALAND	3G BAND 5 + SRD915 + BLE2400	0.0493	0.0517	0.0511	N/A
NEW ZEALAND	3G BAND 8 + SRD915 + BLE2400	0.0463	0.0485	0.0480	N/A
NEW ZEALAND	3G BAND 1 + SRD915 + BLE2400	0.0218	0.0228	0.0226	N/A
NEW ZEALAND	EGSM900 + SRD915 + BLE2400	0.0913	0.0956	0.0946	N/A
NEW ZEALAND	DCS1800 + SRD915 + BLE2400	0.0243	0.0254	0.0252	N/A

Table 4 – Worker/Occupational Exposure Results

The calculations show that the EUT complies with the worker/occupational exposure levels described in in the listed specifications in Annex A at the point of investigation, 0.2 m.



Regional Requirement	RAT	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
		S Power Density	E Field	H Field	B Field
		Summation for simultaneous exposure; value to be <1			
EU	3G BAND 8 + SRD434 + BLE2400	0.2279	0.2272	0.2209	0.2256
EU	3G BAND 1 + SRD434 + BLE2400	0.1056	0.1053	0.1024	0.1046
EU	EGSM900 + SRD434 + BLE2400	0.4529	0.4515	0.4388	0.4483
EU	DCS1800 + SRD434 + BLE2400	0.1180	0.1176	0.1143	0.1168
FCC	3G BAND 5 + SRD915 + BLE2400	0.1853	N/A	N/A	N/A
FCC	3G BAND 2 + SRD915 + BLE2400	0.1040	N/A	N/A	N/A
FCC	GSM850 + SRD915 + BLE2400	0.3655	N/A	N/A	N/A
FCC	PCS1900 + SRD915 + BLE2400	0.1035	N/A	N/A	N/A
AUSTRALIA	3G BAND 5 + SRD434 + BLE2400	0.2432	0.2443	0.2435	N/A
AUSTRALIA	3G BAND 8 + SRD434 + BLE2400	0.2279	0.2289	0.2281	N/A
AUSTRALIA	3G BAND 1 + SRD434 + BLE2400	0.1056	0.1061	0.1057	N/A
AUSTRALIA	EGSM900 + SRD434 + BLE2400	0.4529	0.4548	0.4533	N/A
AUSTRALIA	DCS1800 + SRD434 + BLE2400	0.1180	0.1185	0.1181	N/A
AUSTRALIA	3G BAND 5 + SRD915 + BLE2400	0.2467	0.2478	0.2470	N/A
AUSTRALIA	3G BAND 8 + SRD915 + BLE2400	0.2314	0.2324	0.2316	N/A
AUSTRALIA	3G BAND 1 + SRD915 + BLE2400	0.1091	0.1096	0.1092	N/A
AUSTRALIA	EGSM900 + SRD915 + BLE2400	0.4563	0.4583	0.4568	N/A
AUSTRALIA	DCS1800 + SRD915 + BLE2400	0.1215	0.1220	0.1216	N/A
NEW ZEALAND	3G BAND 5 + SRD434 + BLE2400	0.2432	0.2425	0.2357	N/A
NEW ZEALAND	3G BAND 8 + SRD434 + BLE2400	0.2279	0.2272	0.2209	N/A
NEW ZEALAND	3G BAND 1 + SRD434 + BLE2400	0.1056	0.1053	0.1024	N/A
NEW ZEALAND	EGSM900 + SRD434 + BLE2400	0.4529	0.4515	0.4388	N/A
NEW ZEALAND	DCS1800 + SRD434 + BLE2400	0.1180	0.1176	0.1143	N/A
NEW ZEALAND	3G BAND 5 + SRD915 + BLE2400	0.2467	0.2460	0.2391	N/A
NEW ZEALAND	3G BAND 8 + SRD915 + BLE2400	0.2314	0.2307	0.2242	N/A
NEW ZEALAND	3G BAND 1 + SRD915 + BLE2400	0.1091	0.1088	0.1058	N/A
NEW ZEALAND	EGSM900 + SRD915 + BLE2400	0.4563	0.4550	0.4422	N/A
NEW ZEALAND	DCS1800 + SRD915 + BLE2400	0.1215	0.1211	0.1177	N/A

Table 5 – General Public Exposure Results

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



1.4 Product Information

1.4.1 Technical Description

The MiX 4000 3G is a fleet product that incorporates the latest market trends. It consists mainly of an on-board computer, a 2G [GSM/GPRS/EDGE] / 3G [UMTS/HSDPA/HSUPA] modem, a GNSS, an accelerometer, Low Energy Bluetooth, I/O, 2 x CAN, 2 x RS232, 4 x positive drives and 434 / 915 MHz short range transceiver.

1.4.2 Transmitter Description

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

Radio Access Technology	Antenna Port	Frequency Band	Minimum Frequency	Output Power	Duty Cycle
		MHz	MHz	dBm	%
3G BAND 19	1	832.4-842.6	832.4	24.0	100.0
3G BAND 5	1	826.4-846.6	826.4	24.0	100.0
3G BAND 8	1	882.4-912.6	882.4	24.0	100.0
3G BAND 2	1	1852.4-1907.6	1852.4	24.0	100.0
3G BAND 1	1	1922.4-1950	1922.4	24.0	100.0
GSM850	1	824.2-848.8	824.2	33.0	25.0
EGSM900	1	880.2-897.5	880.2	33.0	25.0
DCS1800	1	1710.2-1747.5	1710.2	30.0	25.0
PCS1900	1	1850.2-1909.8	1850.2	30.0	25.0
BLE2400	2	2402-2480	2402.0	10.0	50.0
SRD434	3	434.3	434.3	10.0	10.0
SRD915	4	902-928	902.0	20.0	10.0

Table 6 – Transmitter Description

1.4.3 Antenna Description

The following antennas are supported by the equipment under test.

Antenna No	Radio Access Technology	Antenna Model	Gain	Antenna length	Minimum Separation Distance
			dBi	cm	cm
1	3G/GSM/DCS/PCS	Internal ANT0047	3	6.5	20
2	BLE2400	Internal PCB	0	1.1	20
3	SRD434	Internal PCB0126	0	1.5	20
4	SRD915	Internal PCB0126	0	3.5	20

Table 7 – Antenna description



1.4.4 Equipment Configuration

Configuration	Band	Applicability: EU RED	Applicability: FCC	Applicability: Australia/New Zealand
Configuration 1	3G BAND 19	No	No	No
Configuration 2	3G BAND 5	No	Yes	Yes
Configuration 3	3G BAND 8	Yes	No	Yes
Configuration 4	3G BAND 2	No	Yes	No
Configuration 5	3G BAND 1	Yes	No	Yes
Configuration 6	GSM850	No	Yes	No
Configuration 7	EGSM900	Yes	No	Yes
Configuration 8	DCS1800	Yes	No	Yes
Configuration 9	PCS1900	No	Yes	No
Configuration 10	BLE2400	Yes	Yes	Yes
Configuration 11	SRD434	Yes	No	Yes
Configuration 12	SRD915	No	Yes	Yes
Configuration 13	3G BAND 19 + SRD434 + BLE2400	No	No	No
Configuration 14	3G BAND 5 + SRD434 + BLE2400	No	No	Yes
Configuration 15	3G BAND 8 + SRD434 + BLE2400	Yes	No	Yes
Configuration 16	3G BAND 2 + SRD434 + BLE2400	No	No	No
Configuration 17	3G BAND 1 + SRD434 + BLE2400	Yes	No	Yes
Configuration 18	GSM850 + SRD434 + BLE2400	No	No	No
Configuration 19	EGSM900 + SRD434 + BLE2400	Yes	No	Yes
Configuration 20	DCS1800 + SRD434 + BLE2400	Yes	No	Yes
Configuration 21	PCS1900 + SRD434 + BLE2400	No	No	No
Configuration 22	3G BAND 19 + SRD915 + BLE2400	No	No	No
Configuration 23	3G BAND 5 + SRD915 + BLE2400	No	Yes	Yes
Configuration 24	3G BAND 8 + SRD915 + BLE2400	No	No	Yes
Configuration 25	3G BAND 2 + SRD915 + BLE2400	No	Yes	No
Configuration 26	3G BAND 1 + SRD915 + BLE2400	No	No	Yes
Configuration 27	GSM850 + SRD915 + BLE2400	No	Yes	No
Configuration 28	EGSM900 + SRD915 + BLE2400	No	No	Yes
Configuration 29	DCS1800 + SRD915 + BLE2400	No	No	Yes
Configuration 30	PCS1900 + SRD915 + BLE2400	No	Yes	No

Note: This report has calculated the RF exposure for those bands shown as “Yes” against the applicable EU RED, FCC, Australia and New Zealand regions. If a band was not applicable to any region, no calculation was performed.



2 Assessment Details

2.1 Assessment Method

The assessment method is by calculation of the power density S , electric field strength E , magnetic field strength H or magnetic flux density B .

The calculation uses the spherical model applicable under far field conditions.

$$S = E \times H = \frac{E^2}{\eta} = H^2 \times \eta = \frac{P \times G_i}{4 \times \pi \times r^2}$$

Where:

η - Impedance of free space (377 ohm in far field)

P – Transmitter power W

G_i – Antenna gain ratio relative to isotropic

r – Separation distance m

The magnetic flux density is related to the magnetic field strength by a constant:

$$B = \mu_o \times H$$

Where:

μ_o – Permeability of free space $4\pi \times 10^{-7}$ H/m

Where additional calculations are required by the regional specifications these are detailed below.

The far field region boundary depends on the frequency and wavelength and also on the antenna dimension. The boundary of the far field region is calculated in 2.4 below to demonstrate the validity of using the spherical model.



2.2 Individual Antenna Port Exposure Results

2.2.1 Calculation of Exposure at Specified Separation Distance

The frequencies shown in the tables below have been chosen based on the lowest possible frequency that the EUT can transmit. A full list of the regional requirements is shown in Annex A.

Regional Requirement	Antenna Port	RAT	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m							
				S Power Density (W/m ²)		E Field (V/m)		H Field (A/m)		B Field (μT)	
				Result	Limit	Result	Limit	Result	Limit	Result	Limit
EU	1	3G BAND 8	882.4	1.00	N/A	19.39	89.12	0.0514	N/A	0.0646	0.2971
EU	1	3G BAND 1	1922.4	1.00	N/A	19.39	131.54	0.0514	N/A	0.0646	0.4385
EU	1	EGSM900	880.2	1.98	N/A	27.35	89.00	0.0726	N/A	0.0912	0.2967
EU	1	DCS1800	1710.2	0.99	N/A	19.34	124.06	0.0513	N/A	0.0645	0.4135
EU	2	BLE2400	2402.0	0.01	N/A	1.94	140.00	0.0051	N/A	0.0065	0.4500
EU	3	SRD434	434.3	0.00	N/A	0.87	62.52	0.0023	N/A	0.0029	0.2084
FCC	1	3G BAND 5	826.4	1.00	27.55	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	1	3G BAND 2	1852.4	1.00	50.00	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	1	GSM850	824.2	1.98	27.47	27.35	N/A	0.0726	N/A	0.0912	N/A
FCC	1	PCS1900	1850.2	0.99	50.00	19.34	N/A	0.0513	N/A	0.0645	N/A
FCC	2	BLE2400	2402.0	0.01	50.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	4	SRD915	902.0	0.02	30.07	2.74	N/A	0.0073	N/A	0.0091	N/A
AUSTRALIA	1	3G BAND 5	826.4	1.00	20.66	19.39	88.25	0.0514	0.2340	0.0646	N/A
AUSTRALIA	1	3G BAND 8	882.4	1.00	22.06	19.39	91.20	0.0514	0.2418	0.0646	N/A
AUSTRALIA	1	3G BAND 1	1922.4	1.00	48.06	19.39	134.60	0.0514	0.3569	0.0646	N/A
AUSTRALIA	1	EGSM900	880.2	1.98	22.01	27.35	91.08	0.0726	0.2415	0.0912	N/A
AUSTRALIA	1	DCS1800	1710.2	0.99	42.76	19.34	126.96	0.0513	0.3366	0.0645	N/A
AUSTRALIA	2	BLE2400	2402.0	0.01	50.00	1.94	137.00	0.0051	0.3640	0.0065	N/A
AUSTRALIA	3	SRD434	434.3	0.00	10.86	0.87	63.98	0.0023	0.1696	0.0029	N/A
AUSTRALIA	4	SRD915	902.0	0.02	22.55	2.74	92.20	0.0073	0.2445	0.0091	N/A
NEW ZEALAND	1	3G BAND 5	826.4	1.00	20.66	19.39	86.24	0.0514	0.2300	0.0646	N/A
NEW ZEALAND	1	3G BAND 8	882.4	1.00	22.06	19.39	89.12	0.0514	0.2376	0.0646	N/A
NEW ZEALAND	1	3G BAND 1	1922.4	1.00	48.06	19.39	131.54	0.0514	0.3508	0.0646	N/A
NEW ZEALAND	1	EGSM900	880.2	1.98	22.01	27.35	89.00	0.0726	0.2373	0.0912	N/A



Regional Requirement	Antenna Port	RAT	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m							
				S Power Density (W/m ²)		E Field (V/m)		H Field (A/m)		B Field (μT)	
				Result	Limit	Result	Limit	Result	Limit	Result	Limit
NEW ZEALAND	1	DCS1800	1710.2	0.99	42.76	19.34	124.06	0.0513	0.3308	0.0645	N/A
NEW ZEALAND	2	BLE2400	2402.0	0.01	50.00	1.94	137.00	0.0051	0.3600	0.0065	N/A
NEW ZEALAND	3	SRD434	434.3	0.00	10.86	0.87	62.52	0.0023	0.1667	0.0029	N/A
NEW ZEALAND	4	SRD915	902.0	0.02	22.55	2.74	90.10	0.0073	0.2403	0.0091	N/A

Table 8 – Worker/Occupational Individual Transmitter Result

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Regional Requirement	Antenna Port	RAT	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m							
				S Power Density (W/m ²)		E Field (V/m)		H Field (A/m)		B Field (μT)	
				Result	Limit	Result	Limit	Result	Limit	Result	Limit
EU	1	3G BAND 8	882.4	1.00	4.41	19.39	40.84	0.0514	0.1099	0.0646	0.1366
EU	1	3G BAND 1	1922.4	1.00	9.61	19.39	60.29	0.0514	0.1622	0.0646	0.2017
EU	1	EGSM900	880.2	1.98	4.40	27.35	40.79	0.0726	0.1098	0.0912	0.1365
EU	1	DCS1800	1710.2	0.99	8.55	19.34	56.86	0.0513	0.1530	0.0645	0.1902
EU	2	BLE2400	2402.0	0.01	10.00	1.94	61.00	0.0051	0.1600	0.0065	0.2000
EU	3	SRD434	434.3	0.00	2.17	0.87	28.65	0.0023	0.0771	0.0029	0.0959
FCC	1	3G BAND 5	826.4	1.00	5.51	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	1	3G BAND 2	1852.4	1.00	10.00	19.39	N/A	0.0514	N/A	0.0646	N/A
FCC	1	GSM850	824.2	1.98	5.49	27.35	N/A	0.0726	N/A	0.0912	N/A
FCC	1	PCS1900	1850.2	0.99	10.00	19.34	N/A	0.0513	N/A	0.0645	N/A
FCC	2	BLE2400	2402.0	0.01	10.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	4	SRD915	902.0	0.02	6.01	2.74	N/A	0.0073	N/A	0.0091	N/A
AUSTRALIA	1	3G BAND 5	826.4	1.00	4.13	19.39	39.38	0.0514	0.1046	0.0646	N/A
AUSTRALIA	1	3G BAND 8	882.4	1.00	4.41	19.39	40.70	0.0514	0.1081	0.0646	N/A
AUSTRALIA	1	3G BAND 1	1922.4	1.00	9.61	19.39	60.07	0.0514	0.1596	0.0646	N/A
AUSTRALIA	1	EGSM900	880.2	1.98	4.40	27.35	40.65	0.0726	0.1080	0.0912	N/A
AUSTRALIA	1	DCS1800	1710.2	0.99	8.55	19.34	56.66	0.0513	0.1505	0.0645	N/A
AUSTRALIA	2	BLE2400	2402.0	0.01	10.00	1.94	61.40	0.0051	0.1630	0.0065	N/A



Regional Requirement	Antenna Port	RAT	Frequency (MHz)	RF Exposure Level at compliance boundary of 0.2 m							
				S Power Density (W/m ²)		E Field (V/m)		H Field (A/m)		B Field (μT)	
				Result	Limit	Result	Limit	Result	Limit	Result	Limit
AUSTRALIA	3	SRD434	434.3	0.00	2.17	0.87	28.55	0.0023	0.0759	0.0029	N/A
AUSTRALIA	4	SRD915	902.0	0.02	4.51	2.74	41.15	0.0073	0.1093	0.0091	N/A
NEW ZEALAND	1	3G BAND 5	826.4	1.00	4.13	19.39	39.53	0.0514	0.1064	0.0646	N/A
NEW ZEALAND	1	3G BAND 8	882.4	1.00	4.41	19.39	40.84	0.0514	0.1099	0.0646	N/A
NEW ZEALAND	1	3G BAND 1	1922.4	1.00	9.61	19.39	60.29	0.0514	0.1622	0.0646	N/A
NEW ZEALAND	1	EGSM900	880.2	1.98	4.40	27.35	40.79	0.0726	0.1098	0.0912	N/A
NEW ZEALAND	1	DCS1800	1710.2	0.99	8.55	19.34	56.86	0.0513	0.1530	0.0645	N/A
NEW ZEALAND	2	BLE2400	2402.0	0.01	10.00	1.94	61.00	0.0051	0.1600	0.0065	N/A
NEW ZEALAND	3	SRD434	434.3	0.00	2.17	0.87	28.65	0.0023	0.0771	0.0029	N/A
NEW ZEALAND	4	SRD915	902.0	0.02	4.51	2.74	41.30	0.0073	0.1111	0.0091	N/A

Table 9 – General Public Individual Transmitter Result

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

2.3 Combined Antenna Port RF Exposure Results

As the frequency of operation for each transmitter is not the same, in order to evaluate compliance with the limit which is dependent on frequency, the fractional exposure value is calculated. The calculated S power density is divided by the limit to get a fractional exposure value. The calculated E and H fields are divided by the limit and squared to get a fractional exposure value. The summation of the fractional RF exposure results for each transmitter provides the combined result. Any values less than one are compliant with the limit.

Calculations are made on an Excel spreadsheet and numbers may not add up exactly due to rounding.



2.3.1 Configuration 15 (EU)

EU EN 62311 specifies the method of summation in clause 8.3 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	N/A	0.0473	N/A	0.0473
2	BLE2400	2402.0	N/A	0.0002	N/A	0.0002
3	SRD434	434.3	N/A	0.0002	N/A	0.0002
Summation			N/A	0.0477	N/A	0.0477

Table 10 – EU Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.2260	0.2253	0.2189	0.2237
2	BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
3	SRD434	434.3	0.0009	0.0009	0.0009	0.0009
Summation			0.2279	0.2272	0.2209	0.2256

Table 11 – EU General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.2 Configuration 17 (EU)

EU EN 62311 specifies the method of summation in clause 8.3 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	N/A	0.0217	N/A	0.0217
2	BLE2400	2402.0	N/A	0.0002	N/A	0.0002
3	SRD434	434.3	N/A	0.0002	N/A	0.0002
Summation			N/A	0.0221	N/A	0.0221

Table 12 – EU Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.1037	0.1034	0.1005	0.1027
2	BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
3	SRD434	434.3	0.0009	0.0009	0.0009	0.0009
Summation			0.1056	0.1053	0.1024	0.1046

Table 13 – EU General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.3 Configuration 19 (EU)

EU EN 62311 specifies the method of summation in clause 8.3 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	N/A	0.0944	N/A	0.0944
2	BLE2400	2402.0	N/A	0.0002	N/A	0.0002
3	SRD434	434.3	N/A	0.0002	N/A	0.0002
Summation			N/A	0.0948	N/A	0.0948

Table 14 – EU Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.4509	0.4496	0.4369	0.4463
2	BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
3	SRD434	434.3	0.0009	0.0009	0.0009	0.0009
Summation			0.4529	0.4515	0.4388	0.4483

Table 15 – EU General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.4 Configuration 20 (EU)

EU EN 62311 specifies the method of summation in clause 8.3 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	N/A	0.0243	N/A	0.0243
2	BLE2400	2402.0	N/A	0.0002	N/A	0.0002
3	SRD434	434.3	N/A	0.0002	N/A	0.0002
Summation			N/A	0.0247	N/A	0.0247

Table 16 – EU Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.1161	0.1157	0.1124	0.1149
2	BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
3	SRD434	434.3	0.0009	0.0009	0.0009	0.0009
Summation			0.1180	0.1176	0.1143	0.1168

Table 17 – EU General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.5 Configuration 23 (FCC)

FCC OET 65 specifies the method of summation in clause; Multiple-Transmitter Sites and Complex Environments; with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.0362	N/A	N/A	N/A
2	BLE2400	2402.0	0.0002	N/A	N/A	N/A
4	SRD915	902.0	0.0007	N/A	N/A	N/A
Summation			0.0371	N/A	N/A	N/A

Table 18 – FCC Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.1810	N/A	N/A	N/A
2	BLE2400	2402.0	0.0010	N/A	N/A	N/A
4	SRD915	902.0	0.0033	N/A	N/A	N/A
Summation			0.1853	N/A	N/A	N/A

Table 19 – FCC General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.6 Configuration 25 (FCC)

FCC OET 65 specifies the method of summation in clause; Multiple-Transmitter Sites and Complex Environments; with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 2	1852.4	0.0199	N/A	N/A	N/A
2	BLE2400	2402.0	0.0002	N/A	N/A	N/A
4	SRD915	902.0	0.0007	N/A	N/A	N/A
Summation			0.0208	N/A	N/A	N/A

Table 20 – FCC Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 2	1852.4	0.0997	N/A	N/A	N/A
2	BLE2400	2402.0	0.0010	N/A	N/A	N/A
4	SRD915	902.0	0.0033	N/A	N/A	N/A
Summation			0.1040	N/A	N/A	N/A

Table 21 – FCC General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.7 Configuration 27 (FCC)

FCC OET 65 specifies the method of summation in clause; Multiple-Transmitter Sites and Complex Environments; with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	GSM850	824.2	0.0722	N/A	N/A	N/A
2	BLE2400	2402.0	0.0002	N/A	N/A	N/A
4	SRD915	902.0	0.0007	N/A	N/A	N/A
Summation			0.0731	N/A	N/A	N/A

Table 22 – FCC Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	GSM850	824.2	0.3612	N/A	N/A	N/A
2	BLE2400	2402.0	0.0010	N/A	N/A	N/A
4	SRD915	902.0	0.0033	N/A	N/A	N/A
Summation			0.3655	N/A	N/A	N/A

Table 23 – FCC General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.8 Configuration 30 (FCC)

FCC OET 65 specifies the method of summation in clause; Multiple-Transmitter Sites and Complex Environments; with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	PCS1900	1850.2	0.0198	N/A	N/A	N/A
2	BLE2400	2402.0	0.0002	N/A	N/A	N/A
4	SRD915	902.0	0.0007	N/A	N/A	N/A
Summation			0.0207	N/A	N/A	N/A

Table 24 – FCC Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	PCS1900	1850.2	0.0992	N/A	N/A	N/A
2	BLE2400	2402.0	0.0010	N/A	N/A	N/A
4	SRD915	902.0	0.0033	N/A	N/A	N/A
Summation			0.1035	N/A	N/A	N/A

Table 25 – FCC General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.9 Configuration 14 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.0483	0.0483	0.0483	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0486	0.0486	0.0487	N/A

Table 26 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.2413	0.2423	0.2415	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.2432	0.2443	0.2435	N/A

Table 27 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.10 Configuration 15 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.0452	0.0452	0.0452	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0456	0.0456	0.0456	N/A

Table 28 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.2260	0.2270	0.2262	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.2279	0.2289	0.2281	N/A

Table 29 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.11 Configuration 17 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.0207	0.0207	0.0208	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0211	0.0211	0.0211	N/A

Table 30 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.1037	0.1042	0.1038	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.1056	0.1061	0.1057	N/A

Table 31 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.12 Configuration 19 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.0902	0.0902	0.0903	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0906	0.0906	0.0906	N/A

Table 32 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.4509	0.4529	0.4514	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.4529	0.4548	0.4533	N/A

Table 33 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.13 Configuration 20 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.0232	0.0232	0.0232	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0236	0.0236	0.0236	N/A

Table 34 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.1161	0.1166	0.1162	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.1180	0.1185	0.1181	N/A

Table 35 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.14 Configuration 23 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.0483	0.0483	0.0483	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0493	0.0493	0.0494	N/A

Table 36 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.2413	0.2423	0.2415	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0044	N/A
Summation			0.2467	0.2478	0.2470	N/A

Table 37 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.15 Configuration 24 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.0452	0.0452	0.0452	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0463	0.0463	0.0463	N/A

Table 38 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.2260	0.2270	0.2262	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0044	N/A
Summation			0.2314	0.2324	0.2316	N/A

Table 39 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.16 Configuration 26 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.0207	0.0207	0.0208	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0218	0.0218	0.0218	N/A

Table 40 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.1037	0.1042	0.1038	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0044	N/A
Summation			0.1091	0.1096	0.1092	N/A

Table 41 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.17 Configuration 28 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.0902	0.0902	0.0903	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0913	0.0913	0.0913	N/A

Table 42 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.4509	0.4529	0.4514	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0044	N/A
Summation			0.4563	0.4583	0.4568	N/A

Table 43 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.18 Configuration 29 (Australia)

AUSTRALIA ARPANSA Radiation Protection Series No.3 specifies the method of summation in clause 3.4 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.0232	0.0232	0.0232	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0243	0.0243	0.0243	N/A

Table 44 – AUSTRALIA Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.1161	0.1166	0.1162	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0044	N/A
Summation			0.1215	0.1220	0.1216	N/A

Table 45 – AUSTRALIA General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.19 Configuration 14 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.0483	0.0505	0.0500	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0486	0.0509	0.0504	N/A

Table 46 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.2413	0.2406	0.2338	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.2432	0.2425	0.2357	N/A

Table 47 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.20 Configuration 15 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.0452	0.0473	0.0468	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0456	0.0477	0.0472	N/A

Table 48 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.2260	0.2253	0.2189	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.2279	0.2272	0.2209	N/A

Table 49 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.21 Configuration 17 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.0207	0.0217	0.0215	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0211	0.0221	0.0219	N/A

Table 50 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.1037	0.1034	0.1005	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.1056	0.1053	0.1024	N/A

Table 51 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.22 Configuration 19 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.0902	0.0944	0.0934	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0906	0.0948	0.0938	N/A

Table 52 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.4509	0.4496	0.4369	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.4529	0.4515	0.4388	N/A

Table 53 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.23 Configuration 20 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.0232	0.0243	0.0240	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
3	SRD434	434.3	0.0002	0.0002	0.0002	N/A
Summation			0.0236	0.0247	0.0244	N/A

Table 54 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.1161	0.1157	0.1124	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
3	SRD434	434.3	0.0009	0.0009	0.0009	N/A
Summation			0.1180	0.1176	0.1143	N/A

Table 55 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.24 Configuration 23 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.0483	0.0505	0.0500	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0493	0.0517	0.0511	N/A

Table 56 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 5	826.4	0.2413	0.2406	0.2338	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0043	N/A
Summation			0.2467	0.2460	0.2391	N/A

Table 57 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.25 Configuration 24 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.0452	0.0473	0.0468	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0463	0.0485	0.0480	N/A

Table 58 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 8	882.4	0.2260	0.2253	0.2189	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0043	N/A
Summation			0.2314	0.2307	0.2242	N/A

Table 59 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.26 Configuration 26 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.0207	0.0217	0.0215	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0218	0.0228	0.0226	N/A

Table 60 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	3G BAND 1	1922.4	0.1037	0.1034	0.1005	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0043	N/A
Summation			0.1091	0.1088	0.1058	N/A

Table 61 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.27 Configuration 28 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.0902	0.0944	0.0934	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0913	0.0956	0.0946	N/A

Table 62 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	EGSM900	880.2	0.4509	0.4496	0.4369	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0043	N/A
Summation			0.4563	0.4550	0.4422	N/A

Table 63 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.



2.3.28 Configuration 29 (New Zealand)

NEW ZEALAND NZS 2772 Part 1 specifies the method of summation in clause 7 with results as follows:

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.0232	0.0243	0.0240	N/A
2	BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
4	SRD915	902.0	0.0009	0.0009	0.0009	N/A
Summation			0.0243	0.0254	0.0252	N/A

Table 64 – NEW ZEALAND Worker/Occupational Combined Exposure

The calculations show that the EUT complies with the worker/occupational exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

Antenna Port	RAT	Frequency (MHz)	Calculated RF exposure level at compliance boundary of 0.2 m as a fraction of the limit			
			S Power Density	E Field	H Field	B Field
			Summation for simultaneous exposure; value to be <1			
1	DCS1800	1710.2	0.1161	0.1157	0.1124	N/A
2	BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
4	SRD915	902.0	0.0044	0.0044	0.0043	N/A
Summation			0.1215	0.1211	0.1177	N/A

Table 65 – NEW ZEALAND General Public Combined Exposure

The calculations show that the EUT complies with the general public exposure levels described in the listed specifications in Annex A at the point of investigation, 0.2 m.

2.4 Far Field Region Boundary Results

The far field region boundary calculation result is shown in Table 66.

Near Field / Far Field Boundary (Ref: IEEE C95.3 Annex B.2, EN 62311 Annex A)			
RAT Name	Frequency MHz	Reactive Near Field Boundary (Wave Impedance Dependent)	Far Field Boundary (Antennas on axis)
		$\lambda/4$ (m)	$2D^2/\lambda$ (m)
3G BAND 5	826.4	0.0908	0.0233
3G BAND 8	882.4	0.0850	0.0249
3G BAND 2	1852.4	0.0405	0.0522
3G BAND 1	1922.4	0.0390	0.0541
GSM850	824.2	0.0910	0.0232
EGSM900	880.2	0.0852	0.0248
DCS1800	1710.2	0.0439	0.0482
PCS1900	1850.2	0.0405	0.0521
BLE2400	2402.0	0.0312	0.0019
SRD434	434.3	0.1727	0.0007
SRD915	902.0	0.0831	0.0074

Table 66 – Far Field

The table below shows the maximum calculated near field / far field region boundaries.

The compliance boundary of 0.2 m is in the far field region and therefore, the approach described in section 2.1 is valid.

Field Region	Reactive Near Field Region	Radiating Near Field Region	Far Field Region
Maximum Boundary	< 0.1727 m	N/A	> 0.1727 m
Validity of Regions	Spherical model potential under-estimate: SAR assessment required	Spherical model over-estimate and conservative	Spherical model valid
Compliance Boundary Location	N/A	N/A	0.2 m

Table 67 – Assessment Method Validity

2.5 Uncertainty

The basic computation formulas presented in section 2.1 are conservative formulas for the estimation of RF field strength or power density. No uncertainty estimations are required when using these formulas but there is clear guidance on where and when these formulas are applicable.

For the estimate of S, E or H to be conservative, the transmitter power P and antenna gain G_i values shall be the upper bounds of uncertainty therefore maximum values are used.

The spherical formula is valid under far field conditions which are established in section 2.4.



ANNEX A

REGIONAL REQUIREMENTS



Frequency Range (MHz)	Power Density (W/m ²)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Magnetic Flux Density (μT)
0.1 - 1	-	610	N/A	2/f
1 - 10	-	610/f	N/A	2/f
10 - 400		61	N/A	0.2
400 - 2000		3*f ^{0.5}	N/A	1E-2*f ^{0.5}
2000 - 6000		140	N/A	0.45
6000 - 300000	50	140	N/A	0.45

Table A.1 – EU: Action levels in Directive 2013/35/EU Annex III Table B1 Worker/Occupational Limits

Frequency Range (MHz)	Power Density (W/m ²)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Magnetic Flux Density (μT)
0.003 - 0.15	-	87	5	6.25
0.15 - 1	-	87	0.73/f	0.92/f
1 - 10	-	87/f ^{0.5}	0.73/f	0.92/f
10 - 400	2	28	0.073	0.092
400 - 2000	f/200	1.375*f ^{0.5}	0.0037*f ^{0.5}	0.0046*f ^{0.5}
2000 - 300000	10	61	0.16	0.2

Table A.2 – EU: Council Recommendation 1999/519/EC Annex II Table 1 General Public Limits

Frequency Range (MHz)	Power Density (mW/cm ²) Note 1	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 (2018) Worker/Occupational Limits

Frequency Range (MHz)	Power Density (mW/cm ²) Note 1	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 (2018) General Public Limits

Note 1: The calculations and limits presented in this report for power density are in units of W/m². The conversion factor is; 1 mW/cm² = 10 W/m².



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/f	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.5 – ARPANSA Radiation Protection Series No.3 Worker/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.6 – ARPANSA Radiation Protection Series No.3 General Public 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/f	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 – NZS 2772 Part 1:1999 Worker/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 – NZS 2772 Part 1:1999 General Public Limits