

Exposure Calculation Report

MiX Telematics International (Pty) Ltd
Model: MiX 3400-B

In accordance with EN 50665, FCC CFR 47 Part 2.1091, Health Canada Safety Code 6: 2015, Australia ARPANSA RPS No.3, New Zealand NZS 2772.1

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EXECUTIVE SUMMARY

The calculation of exposure for this product was found to be compliant at a minimum distance of 20 cm with EN 50665, FCC CFR 47 Part 2.1091, Health Canada Safety Code 6, Australia ARPANSA RPS No.3, New Zealand NZS 2772.1 assuming continuous exposure of 6 minutes or more. If alternative antennas are used with greater gains, the distance must be recalculated.

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Contents

1	Report Summary	2
1.1	Report Modification Record.....	2
1.2	Introduction.....	2
1.3	Manufacturer's declared variants	4
1.4	Brief Summary of Results	5
1.5	Product Information	15
2	Assessment Details	19
2.1	Assessment Method.....	19
2.2	Individual Antenna Port Exposure Results.....	20
2.3	Combined Antenna Port RF Exposure Results.....	25
2.4	Far Field Region Boundary Results	66
2.5	Uncertainty	68
Annex A	Regional Requirements.....	A.2



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	12 September 2022

Table 1

1.2 Introduction

Applicant	MiX Telematics Europe Ltd
Manufacturer	MiX Telematics International (Pty) Ltd
Model Number(s)	MiX 3400-B
Manufacturer's Declared Variant(s)	MiX 3400-B (TLA) U0140MT MiX 3400-B (VZN) U0142MT
Hardware Version(s)	1
Software Version(s)	5.2.0
Specification/Issue/Date	<ul style="list-style-type: none"> • 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 47 CFR Part 2. 1091: 2020 Radiofrequency radiation exposure evaluation: mobile devices • ISED Canada: Health Canada Safety Code 6:2015 • Australia: ARPANSA Radiation Protection Series No.3:2002 • NZS 2772.1:1999 Radiofrequency fields, Maximum exposure levels, 3 kHz to 300 GHz
Order Number	P0094972
Date	20-April-2021
Related Document(s)	<ul style="list-style-type: none"> • 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: 2020 Radiofrequency radiation exposure limits • 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
- RSS-102 Issue 5 Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)
- AS/NZS 2772.2:2016 Radiofrequency fields, Part 2: principles and methods of measurement and computation, 3 kHz to 300 GHz



1.3 Manufacturer’s declared variants

The below information was provided by the customer

MiX 3400-B (TLA) U0140MT

MiX 3400-B (VZN) U0142MT

Modem	Technology	P/N	Model	Model	Region/	Network operator
BG96	LTE Cat M1/2G	U0051MT	MiX 3400-B	MiX 3400 Electronic Unit with Backup Battery and Quectel BG96 modem	1 & 2	Various
BG96	LTE Cat M1/2G	U0140MT	MiX 3400-B (TLA)	MiX 3400 Electronic Unit with Backup Battery and Quectel BG96 Cat M1 modem (with Telstra modem FW)	3 Australia	Telstra
BG96	LTE Cat M1/2G	U0142MT	MiX 3400-B (VZN)	MiX 3400 Electronic Unit with Backup Battery and Quectel BG96 Cat M1 modem (with Verizon modem FW)	2	Verizon

The models listed in the table above present the same electrical, physical and electro mechanics characteristics e.g., the same layout, PCB, components, and enclosure.

The MiX 3400-B, MiX 3400-B (VZN) and MiX 3400-B (TLA) use the same modem hardware, but the modem firmware is specific to the regions and network operators listed above.



1.4 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).

1.4.1 Configuration - Single Transmitter

Regional Requirement	RAT	Calculated RF exposure level at minimum 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
EN	BLE2400	0.01	N/A	1.94	140.00	0.0051	N/A	0.0065	0.4500
EN	LTE Band 1	0.79	N/A	17.30	131.45	0.0459	N/A	0.0577	0.4382
EN	LTE Band 3	0.79	N/A	17.30	124.06	0.0459	N/A	0.0577	0.4135
EN	LTE Band 8	0.50	N/A	13.74	88.99	0.0365	N/A	0.0458	0.2966
EN	LTE Band 5	0.50	N/A	13.74	86.13	0.0365	N/A	0.0458	0.2871
EN	GSM850	1.25	N/A	21.73	86.13	0.0576	N/A	0.0724	0.2871
EN	LTE Band 20	0.50	N/A	13.74	86.53	0.0365	N/A	0.0458	0.2884
EN	LTE Band 28	0.50	N/A	13.74	79.54	0.0365	N/A	0.0458	0.2651
EN	GSM900	1.98	N/A	27.35	89.00	0.0726	N/A	0.0912	0.2967
EN	DCS1800	0.99	N/A	19.34	124.06	0.0513	N/A	0.0645	0.4135
FCC	BLE2400	0.01	50.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	LTE Band 1	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 3	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 2	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 4	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 5	0.50	27.47	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 12	0.50	23.30	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 13	0.50	25.90	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 25	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 26	0.50	27.13	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	GSM850	1.25	27.47	21.73	N/A	0.0576	N/A	0.0724	N/A
FCC	PCS1900	0.99	50.00	19.34	N/A	0.0513	N/A	0.0645	N/A
CANADA	BLE2400	0.01	31.64	1.94	109.21	0.0051	0.2897	0.0065	N/A
CANADA	LTE Band 1	0.79	28.28	17.30	103.26	0.0459	0.2739	0.0577	N/A
CANADA	LTE Band 3	0.79	26.69	17.30	100.32	0.0459	0.2661	0.0577	N/A
CANADA	LTE Band 2	0.79	27.76	17.30	102.31	0.0459	0.2714	0.0577	N/A
CANADA	LTE Band 4	0.79	26.69	17.30	100.32	0.0459	0.2661	0.0577	N/A
CANADA	LTE Band 5	0.50	18.53	13.74	83.58	0.0365	0.2217	0.0458	N/A



CANADA	LTE Band 12	0.50	17.07	13.74	80.21	0.0365	0.2128	0.0458	N/A
CANADA	LTE Band 13	0.50	17.99	13.74	82.36	0.0365	0.2185	0.0458	N/A
CANADA	LTE Band 25	0.79	27.76	17.30	102.31	0.0459	0.2714	0.0577	N/A
CANADA	LTE Band 26	0.50	18.42	13.74	83.33	0.0365	0.2210	0.0458	N/A
CANADA	GSM850	1.25	18.53	21.73	83.59	0.0576	0.2217	0.0724	N/A
CANADA	PCS1900	0.99	27.77	19.34	102.31	0.0513	0.2714	0.0645	N/A
AUSTRALIA	BLE2400	0.01	50.00	1.94	137.00	0.0051	0.3640	0.0065	N/A
AUSTRALIA	LTE Band 1	0.79	48.00	17.30	134.52	0.0459	0.3567	0.0577	N/A
AUSTRALIA	LTE Band 3	0.79	42.75	17.30	126.95	0.0459	0.3366	0.0577	N/A
AUSTRALIA	LTE Band 8	0.50	22.00	13.74	91.07	0.0365	0.2415	0.0458	N/A
AUSTRALIA	LTE Band 5	0.50	20.61	13.74	88.14	0.0365	0.2337	0.0458	N/A
AUSTRALIA	GSM850	1.25	20.61	21.73	88.14	0.0576	0.2337	0.0724	N/A
AUSTRALIA	LTE Band 20	0.50	20.80	13.74	88.55	0.0365	0.2348	0.0458	N/A
AUSTRALIA	LTE Band 28	0.50	17.58	13.74	81.40	0.0365	0.2158	0.0458	N/A
AUSTRALIA	GSM900	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
NEW ZEALAND	BLE2400	0.01	10.00	1.94	61.40	0.0051	0.1630	0.0065	N/A
NEW ZEALAND	LTE Band 1	0.79	9.60	17.30	60.03	0.0459	0.1595	0.0577	N/A
NEW ZEALAND	LTE Band 3	0.79	8.55	17.30	56.65	0.0459	0.1505	0.0577	N/A
NEW ZEALAND	LTE Band 8	0.50	4.40	13.74	40.64	0.0365	0.1080	0.0458	N/A
NEW ZEALAND	LTE Band 5	0.50	4.12	13.74	39.33	0.0365	0.1045	0.0458	N/A
NEW ZEALAND	GSM850	1.25	4.12	21.73	39.33	0.0576	0.1045	0.0724	N/A
NEW ZEALAND	LTE Band 20	0.50	4.16	13.74	39.52	0.0365	0.1050	0.0458	N/A
NEW ZEALAND	LTE Band 28	0.50	3.52	13.74	36.32	0.0365	0.0965	0.0458	N/A
NEW ZEALAND	GSM900	1.98	4.40	27.35	40.65	0.0726	0.1080	0.0912	N/A
NEW ZEALAND	DCS1800	0.99	8.55	19.34	56.66	0.0513	0.1505	0.0645	N/A

Table 2 – 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, a minimum of 0.2 m.



Regional Requirement	RAT	Calculated RF exposure level at minimum 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
EN	BLE2400	0.01	10.00	1.94	61.00	0.0051	0.1600	0.0065	0.2000
EN	LTE Band 1	0.79	9.60	17.30	60.25	0.0459	0.1621	0.0577	0.2016
EN	LTE Band 3	0.79	8.55	17.30	56.86	0.0459	0.1530	0.0577	0.1902
EN	LTE Band 8	0.50	4.40	13.74	40.79	0.0365	0.1098	0.0458	0.1365
EN	LTE Band 5	0.50	4.12	13.74	39.47	0.0365	0.1062	0.0458	0.1321
EN	GSM850	1.25	4.12	21.73	39.47	0.0576	0.1062	0.0724	0.1321
EN	LTE Band 20	0.50	4.16	13.74	39.66	0.0365	0.1067	0.0458	0.1327
EN	LTE Band 28	0.50	3.52	13.74	36.46	0.0365	0.0981	0.0458	0.1220
EN	GSM900	1.98	4.40	27.35	40.79	0.0726	0.1098	0.0912	0.1365
EN	DCS1800	0.99	8.55	19.34	56.86	0.0513	0.1530	0.0645	0.1902
FCC	BLE2400	0.01	10.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	LTE Band 1	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 3	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 2	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 4	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 5	0.50	5.49	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 12	0.50	4.66	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 13	0.50	5.18	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 25	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 26	0.50	5.43	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	GSM850	1.25	5.49	21.73	N/A	0.0576	N/A	0.0724	N/A
FCC	PCS1900	0.99	10.00	19.34	N/A	0.0513	N/A	0.0645	N/A
CANADA	BLE2400	0.01	5.35	1.94	44.91	0.0051	0.1191	0.0065	N/A
CANADA	LTE Band 1	0.79	4.59	17.30	41.60	0.0459	0.1104	0.0577	N/A
CANADA	LTE Band 3	0.79	4.24	17.30	39.99	0.0459	0.1061	0.0577	N/A
CANADA	LTE Band 2	0.79	4.48	17.30	41.08	0.0459	0.1090	0.0577	N/A
CANADA	LTE Band 4	0.79	4.24	17.30	39.99	0.0459	0.1061	0.0577	N/A
CANADA	LTE Band 5	0.50	2.58	13.74	31.16	0.0365	0.0827	0.0458	N/A
CANADA	LTE Band 12	0.50	2.30	13.74	29.46	0.0365	0.0781	0.0458	N/A
CANADA	LTE Band 13	0.50	2.47	13.74	30.54	0.0365	0.0810	0.0458	N/A
CANADA	LTE Band 25	0.79	4.48	17.30	41.08	0.0459	0.1090	0.0577	N/A
CANADA	LTE Band 26	0.50	2.55	13.74	31.03	0.0365	0.0823	0.0458	N/A
CANADA	GSM850	1.25	2.58	21.73	31.16	0.0576	0.0827	0.0724	N/A
CANADA	PCS1900	0.99	4.48	19.34	41.08	0.0513	0.1090	0.0645	N/A
AUSTRALIA	BLE2400	0.01	10.00	1.94	61.40	0.0051	0.1630	0.0065	N/A
AUSTRALIA	LTE Band 1	0.79	9.60	17.30	60.03	0.0459	0.1595	0.0577	N/A



AUSTRALIA	LTE Band 3	0.79	8.55	17.30	56.65	0.0459	0.1505	0.0577	N/A
AUSTRALIA	LTE Band 8	0.50	4.40	13.74	40.64	0.0365	0.1080	0.0458	N/A
AUSTRALIA	LTE Band 5	0.50	4.12	13.74	39.33	0.0365	0.1045	0.0458	N/A
AUSTRALIA	GSM850	1.25	4.12	21.73	39.33	0.0576	0.1045	0.0724	N/A
AUSTRALIA	LTE Band 20	0.50	4.16	13.74	39.52	0.0365	0.1050	0.0458	N/A
AUSTRALIA	LTE Band 28	0.50	3.52	13.74	36.32	0.0365	0.0965	0.0458	N/A
AUSTRALIA	GSM900	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
NEW ZEALAND	BLE2400	0.01	10.00	1.94	61.00	0.0051	0.1600	0.0065	N/A
NEW ZEALAND	LTE Band 1	0.79	9.60	17.30	60.25	0.0459	0.1621	0.0577	N/A
NEW ZEALAND	LTE Band 3	0.79	8.55	17.30	56.86	0.0459	0.1530	0.0577	N/A
NEW ZEALAND	LTE Band 8	0.50	4.40	13.74	40.79	0.0365	0.1098	0.0458	N/A
NEW ZEALAND	LTE Band 5	0.50	4.12	13.74	39.47	0.0365	0.1062	0.0458	N/A
NEW ZEALAND	GSM850	1.25	4.12	21.73	39.47	0.0576	0.1062	0.0724	N/A
NEW ZEALAND	LTE Band 20	0.50	4.16	13.74	39.66	0.0365	0.1067	0.0458	N/A
NEW ZEALAND	LTE Band 28	0.50	3.52	13.74	36.46	0.0365	0.0981	0.0458	N/A
NEW ZEALAND	GSM900	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

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, a minimum of 0.2 m.



1.4.1 Configuration - Multiple Transmitters

Regional Requirement	Configuration	Calculated RF exposure level at minimum 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			
EN	Combination 01 BLE2400 + LTE BAND 1	N/A	0.0175	N/A	0.0175
EN	Combination 02 BLE2400 + LTE BAND 3	N/A	0.0196	N/A	0.0197
EN	Combination 03 BLE2400 + LTE BAND 8	N/A	0.0240	N/A	0.0240
EN	Combination 04 BLE2400 + LTE BAND 5	N/A	0.0257	N/A	0.0257
EN	Combination 05 BLE2400 + GSM850	N/A	0.0638	N/A	0.0638
EN	Combination 13 BLE2400 + LTE BAND 20	N/A	0.0254	N/A	0.0254
EN	Combination 14 BLE2400 + LTE BAND 28	N/A	0.0300	N/A	0.0300
EN	Combination 15 BLE2400 + GSM900	N/A	0.0946	N/A	0.0947
EN	Combination 16 BLE2400 + GSM1800	N/A	0.0245	N/A	0.0245
FCC	Combination 01 BLE2400 + LTE BAND 1	0.0161	N/A	N/A	N/A
FCC	Combination 02 BLE2400 + LTE BAND 3	0.0161	N/A	N/A	N/A
FCC	Combination 04 BLE2400 + LTE BAND 5	0.0184	N/A	N/A	N/A
FCC	Combination 05 BLE2400 + GSM850	0.0458	N/A	N/A	N/A
FCC	Combination 06 BLE2400 + LTE BAND 2	0.0161	N/A	N/A	N/A
FCC	Combination 07 BLE2400 + LTE BAND 4	0.0161	N/A	N/A	N/A
FCC	Combination 08 BLE2400 + LTE BAND 12	0.0217	N/A	N/A	N/A



FCC	Combination 09 BLE2400 + LTE BAND 13	0.0195	N/A	N/A	N/A
FCC	Combination 10 BLE2400 + LTE BAND 25	0.0161	N/A	N/A	N/A
FCC	Combination 11 BLE2400 + LTE BAND 26	0.0187	N/A	N/A	N/A
FCC	Combination 12 BLE2400 + PCS1900	0.0200	N/A	N/A	N/A
CANADA	Combination 01 BLE2400 + LTE BAND 1	0.0284	0.0284	0.0284	N/A
CANADA	Combination 02 BLE2400 + LTE BAND 3	0.0301	0.0301	0.0301	N/A
CANADA	Combination 04 BLE2400 + LTE BAND 5	0.0273	0.0273	0.0273	N/A
CANADA	Combination 05 BLE2400 + GSM850	0.0679	0.0679	0.0679	N/A
CANADA	Combination 06 BLE2400 + LTE BAND 2	0.0289	0.0289	0.0289	N/A
CANADA	Combination 07 BLE2400 + LTE BAND 4	0.0301	0.0301	0.0301	N/A
CANADA	Combination 08 BLE2400 + LTE BAND 12	0.0297	0.0297	0.0297	N/A
CANADA	Combination 09 BLE2400 + LTE BAND 13	0.0282	0.0282	0.0282	N/A
CANADA	Combination 10 BLE2400 + LTE BAND 25	0.0289	0.0289	0.0289	N/A
CANADA	Combination 11 BLE2400 + LTE BAND 26	0.0275	0.0275	0.0275	N/A
CANADA	Combination 12 BLE2400 + PCS1900	0.0361	0.0361	0.0361	N/A
AUSTRALIA	Combination 01 BLE2400 + LTE BAND 1	0.0167	0.0167	0.0168	N/A
AUSTRALIA	Combination 02 BLE2400 + LTE BAND 3	0.0188	0.0188	0.0188	N/A
AUSTRALIA	Combination 03 BLE2400 + LTE BAND 8	0.0230	0.0230	0.0230	N/A
AUSTRALIA	Combination 04 BLE2400 + LTE BAND 5	0.0245	0.0245	0.0245	N/A



AUSTRALIA	Combination 05 BLE2400 + GSM850	0.0610	0.0610	0.0610	N/A
AUSTRALIA	Combination 13 BLE2400 + LTE BAND 20	0.0243	0.0243	0.0243	N/A
AUSTRALIA	Combination 14 BLE2400 + LTE BAND 28	0.0287	0.0287	0.0287	N/A
AUSTRALIA	Combination 15 BLE2400 + GSM900	0.0904	0.0904	0.0905	N/A
AUSTRALIA	Combination 16 BLE2400 + GSM1800	0.0234	0.0234	0.0234	N/A
NEW ZEALAND	Combination 01 BLE2400 + LTE BAND 1	0.0167	0.0175	0.0173	N/A
NEW ZEALAND	Combination 02 BLE2400 + LTE BAND 3	0.0188	0.0196	0.0194	N/A
NEW ZEALAND	Combination 03 BLE2400 + LTE BAND 8	0.0230	0.0240	0.0238	N/A
NEW ZEALAND	Combination 04 BLE2400 + LTE BAND 5	0.0245	0.0257	0.0254	N/A
NEW ZEALAND	Combination 05 BLE2400 + GSM850	0.0610	0.0638	0.0632	N/A
NEW ZEALAND	Combination 13 BLE2400 + LTE BAND 20	0.0243	0.0254	0.0252	N/A
NEW ZEALAND	Combination 14 BLE2400 + LTE BAND 28	0.0287	0.0300	0.0297	N/A
NEW ZEALAND	Combination 15 BLE2400 + GSM900	0.0904	0.0947	0.0937	N/A
NEW ZEALAND	Combination 16 BLE2400 + GSM1800	0.0234	0.0245	0.0243	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, a minimum of 0.2 m.



Regional Requirement	Configuration	Calculated RF exposure level at minimum 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			
EN	Combination 01 BLE2400 + LTE BAND 1	0.0837	0.0835	0.0811	0.0829
EN	Combination 02 BLE2400 + LTE BAND 3	0.0938	0.0936	0.0910	0.0929
EN	Combination 03 BLE2400 + LTE BAND 8	0.1148	0.1145	0.1113	0.1137
EN	Combination 04 BLE2400 + LTE BAND 5	0.1226	0.1222	0.1188	0.1214
EN	Combination 05 BLE2400 + GSM850	0.3049	0.3040	0.2954	0.3018
EN	Combination 13 BLE2400 + LTE BAND 20	0.1214	0.1210	0.1177	0.1202
EN	Combination 14 BLE2400 + LTE BAND 28	0.1435	0.1431	0.1391	0.1421
EN	Combination 15 BLE2400 + GSM900	0.4520	0.4506	0.4379	0.4474
EN	Combination 16 BLE2400 + GSM1800	0.1170	0.1167	0.1135	0.1159
FCC	Combination 01 BLE2400 + LTE BAND 1	0.0804	N/A	N/A	N/A
FCC	Combination 02 BLE2400 + LTE BAND 3	0.0804	N/A	N/A	N/A
FCC	Combination 04 BLE2400 + LTE BAND 5	0.0922	N/A	N/A	N/A
FCC	Combination 05 BLE2400 + GSM850	0.2289	N/A	N/A	N/A
FCC	Combination 06 BLE2400 + LTE BAND 2	0.0804	N/A	N/A	N/A
FCC	Combination 07 BLE2400 + LTE BAND 4	0.0804	N/A	N/A	N/A
FCC	Combination 08 BLE2400 + LTE BAND 12	0.1085	N/A	N/A	N/A
FCC	Combination 09 BLE2400 + LTE BAND 13	0.0977	N/A	N/A	N/A



FCC	Combination 10 BLE2400 + LTE BAND 25	0.0804	N/A	N/A	N/A
FCC	Combination 11 BLE2400 + LTE BAND 26	0.0933	N/A	N/A	N/A
FCC	Combination 12 BLE2400 + PCS1900	0.1002	N/A	N/A	N/A
CANADA	Combination 01 BLE2400 + LTE BAND 1	0.1748	0.1748	0.1748	N/A
CANADA	Combination 02 BLE2400 + LTE BAND 3	0.1890	0.1890	0.1890	N/A
CANADA	Combination 04 BLE2400 + LTE BAND 5	0.1963	0.1964	0.1963	N/A
CANADA	Combination 05 BLE2400 + GSM850	0.4880	0.4880	0.4880	N/A
CANADA	Combination 06 BLE2400 + LTE BAND 2	0.1792	0.1792	0.1792	N/A
CANADA	Combination 07 BLE2400 + LTE BAND 4	0.1890	0.1890	0.1890	N/A
CANADA	Combination 08 BLE2400 + LTE BAND 12	0.2195	0.2195	0.2195	N/A
CANADA	Combination 09 BLE2400 + LTE BAND 13	0.2043	0.2043	0.2043	N/A
CANADA	Combination 10 BLE2400 + LTE BAND 25	0.1792	0.1792	0.1792	N/A
CANADA	Combination 11 BLE2400 + LTE BAND 26	0.1980	0.1980	0.1980	N/A
CANADA	Combination 12 BLE2400 + PCS1900	0.2235	0.2236	0.2235	N/A
AUSTRALIA	Combination 01 BLE2400 + LTE BAND 1	0.0837	0.0840	0.0838	N/A
AUSTRALIA	Combination 02 BLE2400 + LTE BAND 3	0.0938	0.0942	0.0939	N/A
AUSTRALIA	Combination 03 BLE2400 + LTE BAND 8	0.1148	0.1153	0.1149	N/A
AUSTRALIA	Combination 04 BLE2400 + LTE BAND 5	0.1226	0.1231	0.1227	N/A
AUSTRALIA	Combination 05 BLE2400 + GSM850	0.3049	0.3062	0.3052	N/A



AUSTRALIA	Combination 13 BLE2400 + LTE BAND 20	0.1214	0.1219	0.1215	N/A
AUSTRALIA	Combination 14 BLE2400 + LTE BAND 28	0.1435	0.1441	0.1436	N/A
AUSTRALIA	Combination 15 BLE2400 + GSM900	0.4520	0.4539	0.4524	N/A
AUSTRALIA	Combination 16 BLE2400 + GSM1800	0.1170	0.1175	0.1172	N/A
NEW ZEALAND	Combination 01 BLE2400 + LTE BAND 1	0.0837	0.0835	0.0811	N/A
NEW ZEALAND	Combination 02 BLE2400 + LTE BAND 3	0.0938	0.0936	0.0910	N/A
NEW ZEALAND	Combination 03 BLE2400 + LTE BAND 8	0.1148	0.1145	0.1113	N/A
NEW ZEALAND	Combination 04 BLE2400 + LTE BAND 5	0.1226	0.1222	0.1188	N/A
NEW ZEALAND	Combination 05 BLE2400 + GSM850	0.3049	0.3040	0.2954	N/A
NEW ZEALAND	Combination 13 BLE2400 + LTE BAND 20	0.1214	0.1210	0.1177	N/A
NEW ZEALAND	Combination 14 BLE2400 + LTE BAND 28	0.1435	0.1431	0.1391	N/A
NEW ZEALAND	Combination 15 BLE2400 + GSM900	0.4520	0.4506	0.4379	N/A
NEW ZEALAND	Combination 16 BLE2400 + GSM1800	0.1170	0.1167	0.1135	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, a minimum of 0.2 m.



1.5 Product Information

1.5.1 Technical Description

The MiX3000 series product that is aimed on the easy-install and light fleet market. It consists mainly of an on-board-computer, modem, GNSS, accelerometer, Low Energy Bluetooth, 2 x analogue inputs, serial communication ports (3 x CAN, L & K-Line, LIN, J1850/J1708 and RS232), 3 x LED's, switchable positive-drive and an audible buzzer.

The range includes variants with LTE CAT1/2G and CAT M1/2G modems. All variants make use of the same PCB with the integrated modem, as the only discernible difference with the variant modems populated at the same location on a compatible PCB land pattern.

MiX 3400-B Electronic Unit (EU) with Backup Battery and Quectel BG96 modem. MiX 3410 Electronic Unit (EU) with Backup Battery and Quectel EG912Y-EU modem.

1.5.2 Transmitter Description

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

Radio Access Technology	Frequency Band (MHz)	Minimum Frequency (MHz)	Output Power (dBm)	Duty Cycle (%)
BLE2400	2400 – 2483.5	2402.0	7.9	50.0
LTE BAND 1	1920 – 1980	1920.0	23.0	100.0
LTE BAND 3	1710 – 1785	1710.0	23.0	100.0
LTE BAND 8	880 – 915	880.0	23.0	100.0
LTE BAND 5	824 – 849	824.0	23.0	100.0
GSM850	824.2 – 848.8	824.2	33.0	25.0
LTE BAND 20	832 – 862	832.0	23.0	100.0
LTE BAND 28	703 – 748	703.0	23.0	100.0
GSM900	880.2 – 914.8	880.2	33.0	25.0
DCS1800	1710.2 – 1784.8	1710.2	30.0	25.0

Table 6 – Transmitter Description (EN, AUS, NZ)



Radio Access Technology	Frequency Band (MHz)	Minimum Frequency (MHz)	Output Power (dBm)	Duty Cycle (%)
BLE2400	2400 – 2483.5	2402.0	10.0	50.0
LTE BAND 1	1920 – 1980	1920.0	23.0	100.0
LTE BAND 3	1710 – 1785	1710.0	23.0	100.0
LTE BAND 2	1850 – 1910	1850.0	23.0	100.0
LTE BAND 4	1710 – 1755	1710.0	23.0	100.0
LTE BAND 5	824 – 849	824.0	23.0	100.0
LTE BAND 12	699 – 716	699.0	23.0	100.0
LTE BAND 13	777 – 787	777.0	23.0	100.0
LTE BAND 25	1850 – 1915	1850.0	23.0	100.0
LTE BAND 26	814 – 849	814.0	23.0	100.0
GSM850	824.2 – 848.8	824.2	33.0	25.0
PCS1900	1850.2 – 1909.8	1850.2	30.0	25.0

Table 7 – Transmitter Description (FCC, CAN)

Note: Transmitter power includes upper bounds of uncertainty therefore maximum values are used in accordance with Section 2.5.



1.5.3 Antenna Description

The following antennas are supported by the equipment under test.

Radio Access Technology	Antenna Model	Gain (dBi)	Antenna length (cm)	Minimum Separation Distance (cm)
BLE2400	PCB trace	2.1	1.3	20
LTE BAND 1	Not provided	3	12.3	20
LTE BAND 3	Not provided	3	12.3	20
LTE BAND 8	Not provided	1	12.3	20
LTE BAND 2	Not provided	3	12.3	20
LTE BAND 4	Not provided	3	12.3	20
LTE BAND 5	Not provided	1	12.3	20
LTE BAND 12	Not provided	1	12.3	20
LTE BAND 13	Not provided	1	12.3	20
LTE BAND 25	Not provided	3	12.3	20
LTE BAND 26	Not provided	1	12.3	20
GSM850	Not provided	1	12.3	20
PCS1900	Not provided	3	12.3	20
LTE BAND 20	Not provided	1	12.3	20
LTE BAND 28	Not provided	1	12.3	20
GSM900	Not provided	3	12.3	20
DCS1800	Not provided	3	12.3	20

Table 8 – Antenna description

In the case of more than one type of antenna being supported by the equipment, the calculation is based on the maximum of the antenna gains. If other antennas can be used that have greater gains, the minimum separation distances will need to be recalculated.

Note: Antenna gain includes upper bounds of uncertainty therefore maximum values are used in accordance with Section 2.5.



1.5.4 Equipment Configuration

CE/AUS/NZ

- Combination 01 = BLE2400 + LTE BAND 1
- Combination 02 = BLE2400 + LTE BAND 3
- Combination 03 = BLE2400 + LTE BAND 8
- Combination 04 = BLE2400 + LTE BAND 5
- Combination 05 = BLE2400 + GSM850
- Combination 13 = BLE2400 + LTE BAND 20
- Combination 14 = BLE2400 + LTE BAND 28
- Combination 15 = BLE2400 + GSM900
- Combination 16 = BLE2400 + GSM1800

FCC/IC

- Combination 01 = BLE2400 + LTE BAND 1
- Combination 02 = BLE2400 + LTE BAND 3
- Combination 04 = BLE2400 + LTE BAND 5
- Combination 05 = BLE2400 + GSM850
- Combination 06 = BLE2400 + LTE BAND 2
- Combination 07 = BLE2400 + LTE BAND 4
- Combination 08 = BLE2400 + LTE BAND 12
- Combination 09 = BLE2400 + LTE BAND 13
- Combination 10 = BLE2400 + LTE BAND 25
- Combination 11 = BLE2400 + LTE BAND 26
- Combination 12 = BLE2400 + PCS1900



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 and also radiating near field conditions where applicable (see Section 2.4).

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

Where:

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

P – Average transmitter power W ($P_{av} = P_{max} \times \text{Duty Cycle}$)

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 $4 \times \pi \text{ E-7 H/m}$

This assessment assumes that exposure is continuous for 6 minutes or more in accordance with the averaging time required by the exposure standards at the stated minimum compliance boundary separation distance. Exposures of less than 6 minutes at other separation distances are not addressed by this report.

This assessment method of RF exposure is applicable to separation distances of 20 cm or more beyond the reactive near field boundary. Separation distances of less than 20 cm require a Specific Absorption Rate (SAR) assessment.

The reactive near field boundary and far field region boundary depend on the frequency and wavelength and also on the antenna dimension. The boundaries of the field regions are calculated in Section 2.4 to demonstrate the validity of using the spherical model.

The result is compared to the limits in Annex A to determine compliance or to calculate the required compliance distance. The calculation is based on the lowest frequency in each band as the most onerous requirement as the limits increase with frequency for frequencies above 10-50 MHz (dependent on region).



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	RAT	Frequency (MHz)	RF Exposure Level at minimum 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
EN	BLE2400	2402.0	0.01	N/A	1.94	140.00	0.0051	N/A	0.0065	0.4500
EN	LTE Band 1	1920.0	0.79	N/A	17.30	131.45	0.0459	N/A	0.0577	0.4382
EN	LTE Band 3	1710.0	0.79	N/A	17.30	124.06	0.0459	N/A	0.0577	0.4135
EN	LTE Band 8	880.0	0.50	N/A	13.74	88.99	0.0365	N/A	0.0458	0.2966
EN	LTE Band 5	824.2	0.50	N/A	13.74	86.13	0.0365	N/A	0.0458	0.2871
EN	GSM850	824.2	1.25	N/A	21.73	86.13	0.0576	N/A	0.0724	0.2871
EN	LTE Band 20	832.0	0.50	N/A	13.74	86.53	0.0365	N/A	0.0458	0.2884
EN	LTE Band 28	703.0	0.50	N/A	13.74	79.54	0.0365	N/A	0.0458	0.2651
EN	GSM900	880.2	1.98	N/A	27.35	89.00	0.0726	N/A	0.0912	0.2967
EN	DCS1800	1710.2	0.99	N/A	19.34	124.06	0.0513	N/A	0.0645	0.4135
FCC	BLE2400	2402.0	0.01	50.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	LTE Band 1	1920.0	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 3	1710.0	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 2	1850.0	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 4	1710.0	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 5	824.0	0.50	27.47	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 12	699.0	0.50	23.30	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 13	777.0	0.50	25.90	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 25	1850.0	0.79	50.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 26	814.0	0.50	27.13	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	GSM850	824.2	1.25	27.47	21.73	N/A	0.0576	N/A	0.0724	N/A
FCC	PCS1900	1850.2	0.99	50.00	19.34	N/A	0.0513	N/A	0.0645	N/A
CANADA	BLE2400	2402.0	0.01	31.64	1.94	109.21	0.0051	0.2897	0.0065	N/A
CANADA	LTE Band 1	1920.0	0.79	28.28	17.30	103.26	0.0459	0.2739	0.0577	N/A
CANADA	LTE Band 3	1710.0	0.79	26.69	17.30	100.32	0.0459	0.2661	0.0577	N/A
CANADA	LTE Band 2	1850.0	0.79	27.76	17.30	102.31	0.0459	0.2714	0.0577	N/A



CANADA	LTE Band 4	1710.0	0.79	26.69	17.30	100.32	0.0459	0.26 61	0.0577	N/A
CANADA	LTE Band 5	824.0	0.50	18.53	13.74	83.58	0.0365	0.22 17	0.0458	N/A
CANADA	LTE Band 12	699.0	0.50	17.07	13.74	80.21	0.0365	0.21 28	0.0458	N/A
CANADA	LTE Band 13	777.0	0.50	17.99	13.74	82.36	0.0365	0.21 85	0.0458	N/A
CANADA	LTE Band 25	1850.0	0.79	27.76	17.30	102.31	0.0459	0.27 14	0.0577	N/A
CANADA	LTE Band 26	814.0	0.50	18.42	13.74	83.33	0.0365	0.22 10	0.0458	N/A
CANADA	GSM850	824.2	1.25	18.53	21.73	83.59	0.0576	0.22 17	0.0724	N/A
CANADA	PCS1900	1850.2	0.99	27.77	19.34	102.31	0.0513	0.27 14	0.0645	N/A
AUSTRALIA	BLE2400	2402.0	0.01	50.00	1.94	137.00	0.0051	0.36 40	0.0065	N/A
AUSTRALIA	LTE Band 1	1920.0	0.79	48.00	17.30	134.52	0.0459	0.35 67	0.0577	N/A
AUSTRALIA	LTE Band 3	1710.0	0.79	42.75	17.30	126.95	0.0459	0.33 66	0.0577	N/A
AUSTRALIA	LTE Band 8	880.0	0.50	22.00	13.74	91.07	0.0365	0.24 15	0.0458	N/A
AUSTRALIA	LTE Band 5	824.2	0.50	20.61	13.74	88.14	0.0365	0.23 37	0.0458	N/A
AUSTRALIA	GSM850	824.2	1.25	20.61	21.73	88.14	0.0576	0.23 37	0.0724	N/A
AUSTRALIA	LTE Band 20	832.0	0.50	20.80	13.74	88.55	0.0365	0.23 48	0.0458	N/A
AUSTRALIA	LTE Band 28	703.0	0.50	17.58	13.74	81.40	0.0365	0.21 58	0.0458	N/A
AUSTRALIA	GSM900	880.2	1.98	22.01	27.35	91.08	0.0726	0.24 15	0.0912	N/A
AUSTRALIA	DCS1800	1710.2	0.99	42.76	19.34	126.96	0.0513	0.33 66	0.0645	N/A
NEW ZEALAND	BLE2400	2402.0	0.01	50.00	1.94	137.00	0.0051	0.36 00	0.0065	N/A
NEW ZEALAND	LTE Band 1	1920.0	0.79	48.00	17.30	131.45	0.0459	0.35 05	0.0577	N/A
NEW ZEALAND	LTE Band 3	1710.0	0.79	42.75	17.30	124.06	0.0459	0.33 08	0.0577	N/A
NEW ZEALAND	LTE Band 8	880.0	0.50	22.00	13.74	88.99	0.0365	0.23 73	0.0458	N/A
NEW ZEALAND	LTE Band 5	824.2	0.50	20.61	13.74	86.13	0.0365	0.22 97	0.0458	N/A
NEW ZEALAND	GSM850	824.2	1.25	20.61	21.73	86.13	0.0576	0.22 97	0.0724	N/A
NEW ZEALAND	LTE Band 20	832.0	0.50	20.80	13.74	86.53	0.0365	0.23 08	0.0458	N/A



NEW ZEALAND	LTE Band 28	703.0	0.50	17.58	13.74	79.54	0.0365	0.21 21	0.0458	N/A
NEW ZEALAND	GSM900	880.2	1.98	22.01	27.35	89.00	0.0726	0.23 73	0.0912	N/A
NEW ZEALAND	DCS1800	1710.2	0.99	42.76	19.34	124.06	0.0513	0.33 08	0.0645	N/A

Table 9 – Worker/Occupational Individual Transmitter Result

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, a minimum distance of 0.2 m.

Regional Requirement	RAT	Frequency (MHz)	RF Exposure Level at minimum 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
EN	BLE2400	2402.0	0.01	10.00	1.94	61.00	0.0051	0.16 00	0.0065	0.2000
EN	LTE Band 1	1920.0	0.79	9.60	17.30	60.25	0.0459	0.16 21	0.0577	0.2016
EN	LTE Band 3	1710.0	0.79	8.55	17.30	56.86	0.0459	0.15 30	0.0577	0.1902
EN	LTE Band 8	880.0	0.50	4.40	13.74	40.79	0.0365	0.10 98	0.0458	0.1365
EN	LTE Band 5	824.2	0.50	4.12	13.74	39.47	0.0365	0.10 62	0.0458	0.1321
EN	GSM850	824.2	1.25	4.12	21.73	39.47	0.0576	0.10 62	0.0724	0.1321
EN	LTE Band 20	832.0	0.50	4.16	13.74	39.66	0.0365	0.10 67	0.0458	0.1327
EN	LTE Band 28	703.0	0.50	3.52	13.74	36.46	0.0365	0.09 81	0.0458	0.1220
EN	GSM900	880.2	1.98	4.40	27.35	40.79	0.0726	0.10 98	0.0912	0.1365
EN	DCS1800	1710.2	0.99	8.55	19.34	56.86	0.0513	0.15 30	0.0645	0.1902
FCC	BLE2400	2402.0	0.01	10.00	1.94	N/A	0.0051	N/A	0.0065	N/A
FCC	LTE Band 1	1920.0	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 3	1710.0	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 2	1850.0	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 4	1710.0	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A
FCC	LTE Band 5	824.0	0.50	5.49	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 12	699.0	0.50	4.66	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 13	777.0	0.50	5.18	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	LTE Band 25	1850.0	0.79	10.00	17.30	N/A	0.0459	N/A	0.0577	N/A



FCC	LTE Band 26	814.0	0.50	5.43	13.74	N/A	0.0365	N/A	0.0458	N/A
FCC	GSM850	824.2	1.25	5.49	21.73	N/A	0.0576	N/A	0.0724	N/A
FCC	PCS1900	1850.2	0.99	10.00	19.34	N/A	0.0513	N/A	0.0645	N/A
CANADA	BLE2400	2402.0	0.01	5.35	1.94	44.91	0.0051	0.1191	0.0065	N/A
CANADA	LTE Band 1	1920.0	0.79	4.59	17.30	41.60	0.0459	0.1104	0.0577	N/A
CANADA	LTE Band 3	1710.0	0.79	4.24	17.30	39.99	0.0459	0.1061	0.0577	N/A
CANADA	LTE Band 2	1850.0	0.79	4.48	17.30	41.08	0.0459	0.1090	0.0577	N/A
CANADA	LTE Band 4	1710.0	0.79	4.24	17.30	39.99	0.0459	0.1061	0.0577	N/A
CANADA	LTE Band 5	824.0	0.50	2.58	13.74	31.16	0.0365	0.0827	0.0458	N/A
CANADA	LTE Band 12	699.0	0.50	2.30	13.74	29.46	0.0365	0.0781	0.0458	N/A
CANADA	LTE Band 13	777.0	0.50	2.47	13.74	30.54	0.0365	0.0810	0.0458	N/A
CANADA	LTE Band 25	1850.0	0.79	4.48	17.30	41.08	0.0459	0.1090	0.0577	N/A
CANADA	LTE Band 26	814.0	0.50	2.55	13.74	31.03	0.0365	0.0823	0.0458	N/A
CANADA	GSM850	824.2	1.25	2.58	21.73	31.16	0.0576	0.0827	0.0724	N/A
CANADA	PCS1900	1850.2	0.99	4.48	19.34	41.08	0.0513	0.1090	0.0645	N/A
AUSTRALIA	BLE2400	2402.0	0.01	10.00	1.94	61.40	0.0051	0.1630	0.0065	N/A
AUSTRALIA	LTE Band 1	1920.0	0.79	9.60	17.30	60.03	0.0459	0.1595	0.0577	N/A
AUSTRALIA	LTE Band 3	1710.0	0.79	8.55	17.30	56.65	0.0459	0.1505	0.0577	N/A
AUSTRALIA	LTE Band 8	880.0	0.50	4.40	13.74	40.64	0.0365	0.1080	0.0458	N/A
AUSTRALIA	LTE Band 5	824.2	0.50	4.12	13.74	39.33	0.0365	0.1045	0.0458	N/A
AUSTRALIA	GSM850	824.2	1.25	4.12	21.73	39.33	0.0576	0.1045	0.0724	N/A
AUSTRALIA	LTE Band 20	832.0	0.50	4.16	13.74	39.52	0.0365	0.1050	0.0458	N/A
AUSTRALIA	LTE Band 28	703.0	0.50	3.52	13.74	36.32	0.0365	0.0965	0.0458	N/A
AUSTRALIA	GSM900	880.2	1.98	4.40	27.35	40.65	0.0726	0.1080	0.0912	N/A
AUSTRALIA	DCS1800	1710.2	0.99	8.55	19.34	56.66	0.0513	0.1505	0.0645	N/A
NEW ZEALAND	BLE2400	2402.0	0.01	10.00	1.94	61.00	0.0051	0.1600	0.0065	N/A



NEW ZEALAND	LTE Band 1	1920.0	0.79	9.60	17.30	60.25	0.0459	0.16 21	0.0577	N/A
NEW ZEALAND	LTE Band 3	1710.0	0.79	8.55	17.30	56.86	0.0459	0.15 30	0.0577	N/A
NEW ZEALAND	LTE Band 8	880.0	0.50	4.40	13.74	40.79	0.0365	0.10 98	0.0458	N/A
NEW ZEALAND	LTE Band 5	824.2	0.50	4.12	13.74	39.47	0.0365	0.10 62	0.0458	N/A
NEW ZEALAND	GSM850	824.2	1.25	4.12	21.73	39.47	0.0576	0.10 62	0.0724	N/A
NEW ZEALAND	LTE Band 20	832.0	0.50	4.16	13.74	39.66	0.0365	0.10 67	0.0458	N/A
NEW ZEALAND	LTE Band 28	703.0	0.50	3.52	13.74	36.46	0.0365	0.09 81	0.0458	N/A
NEW ZEALAND	GSM900	880.2	1.98	4.40	27.35	40.79	0.0726	0.10 98	0.0912	N/A
NEW ZEALAND	DCS1800	1710.2	0.99	8.55	19.34	56.86	0.0513	0.15 30	0.0645	N/A

Table 10 – 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, a minimum distance of 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.

EN 62311:2008 specifies the method of summation in clause 8.3 with results as follows:

2.3.1 Combination 1 - BLE2400 + LTE BAND 1

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
LTE Band 1	1920.0	N/A	0.0173	N/A	0.0173
Summation		N/A	0.0175	N/A	0.0175

Table 11 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
LTE Band 1	1920.0	0.0827	0.0824	0.0801	0.0818
Summation		0.0837	0.0835	0.0811	0.0829

Table 12 – EN General Public Combined Exposure

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



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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 1	1920.0	0.0159	N/A	N/A	N/A
Summation		0.0161	N/A	N/A	N/A

Table 13 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 1	1920.0	0.0794	N/A	N/A	N/A
Summation		0.0804	N/A	N/A	N/A

Table 14 – FCC General Public Combined Exposure

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

CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 1	1920.0	0.0281	0.0281	0.0281	N/A
Summation		0.0284	0.0284	0.0284	N/A

Table 15 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 1	1920.0	0.1729	0.1729	0.1729	N/A
Summation		0.0019	0.0019	0.0019	N/A

Table 16 – CANADA 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, a minimum distance of 0.2 m.

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 1	1920.0	0.0165	0.0165	0.0166	N/A
Summation		0.0167	0.0167	0.0168	N/A

Table 17 – 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 1	1920.0	0.0827	0.0830	0.0828	N/A
Summation		0.0837	0.0840	0.0838	N/A

Table 18 – 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, a minimum distance of 0.2 m.



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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 1	1920.0	0.0165	0.0173	0.0171	N/A
Summation		0.0167	0.0175	0.0173	N/A

Table 19 – NEW ZEALAND Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 1	1920.0	0.0827	0.0824	0.0801	N/A
Summation		0.0837	0.0835	0.0811	N/A

Table 20 – NEW ZEALAND General Public Combined Exposure

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



2.3.2 Combination 2 - BLE2400 + LTE BAND 3

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
LTE Band 3	1710.0	N/A	0.0194	N/A	0.0194
Summation		N/A	0.0196	N/A	0.0197

Table 21 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
LTE Band 3	1710.0	0.0928	0.0926	0.0899	0.0919
Summation		0.0938	0.0936	0.0910	0.0929

Table 22 – EN General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 3	1710.0	0.0159	N/A	N/A	N/A
Summation		0.0161	N/A	N/A	N/A

Table 23 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 3	1710.0	0.0794	N/A	N/A	N/A
Summation		0.0804	N/A	N/A	N/A

Table 24 – 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, a minimum distance of 0.2 m.

CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 3	1710.0	0.0297	0.0297	0.0297	N/A
Summation		0.0301	0.0301	0.0301	N/A

Table 25 – CANADA 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 3	1710.0	0.1871	0.1872	0.1871	N/A
Summation		0.1890	0.1890	0.1890	N/A

Table 26 – CANADA 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, a minimum distance of 0.2 m.



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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 3	1710.0	0.0186	0.0186	0.0186	N/A
Summation		0.0188	0.0188	0.0188	N/A

Table 27 – AUSTRALIA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 3	1710.0	0.0928	0.0932	0.0929	N/A
Summation		0.0938	0.0942	0.0939	N/A

Table 28 – AUSTRALIA General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 3	1710.0	0.0186	0.0194	0.0192	N/A
Summation		0.0188	0.0196	0.0194	N/A

Table 29 – NEW ZEALAND Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 3	1710.0	0.0928	0.0926	0.0899	N/A
Summation		0.0938	0.0936	0.0910	N/A

Table 30 – 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, a minimum distance of 0.2 m.



2.3.3 Combination 3 - BLE2400 + LTE BAND 8

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
LTE Band 8	880.0	N/A	0.0238	N/A	0.0238
Summation		N/A	0.0240	N/A	0.0240

Table 31 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
LTE Band 8	880.0	0.1138	0.1135	0.1103	0.1127
Summation		0.1148	0.1145	0.1113	0.1137

Table 32 – EN General Public Combined Exposure

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



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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 8	880.0	0.0228	0.0228	0.0228	N/A
Summation		0.0230	0.0230	0.0230	N/A

Table 33 – AUSTRALIA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 8	880.0	0.1138	0.1143	0.1139	N/A
Summation		0.1148	0.1153	0.1149	N/A

Table 34 – AUSTRALIA General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 8	880.0	0.0228	0.0238	0.0236	N/A
Summation		0.0230	0.0240	0.0238	N/A

Table 35 – NEW ZEALAND Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 8	880.0	0.1138	0.1135	0.1103	N/A
Summation		0.1148	0.1145	0.1113	N/A

Table 36 – 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, a minimum distance of 0.2 m.



2.3.4 Combination 4 - BLE2400 + LTE BAND 5

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
LTE Band 5	824.0	N/A	0.0255	N/A	0.0255
Summation		N/A	0.0257	N/A	0.0257

Table 37 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
LTE Band 5	824.0	0.1216	0.1212	0.1178	0.1203
Summation		0.1226	0.1222	0.1188	0.1214

Table 38 – EN General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 5	824.0	0.0182	N/A	N/A	N/A
Summation		0.0184	N/A	N/A	N/A

Table 39 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 5	824.0	0.0912	N/A	N/A	N/A
Summation		0.0922	N/A	N/A	N/A

Table 40 – 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, a minimum distance of 0.2 m.

CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 5	824.0	0.0270	0.0270	0.0270	N/A
Summation		0.0273	0.0273	0.0273	N/A

Table 41 – CANADA 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 5	824.0	0.1945	0.1945	0.1945	N/A
Summation		0.1963	0.1964	0.1963	N/A

Table 42 – CANADA 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, a minimum distance of 0.2 m.

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum compliance boundary of 0.2 m as a fraction of the limit
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		S Power Density	E Field	H Field	B Field
		Summation for simultaneous exposure; value to be <1			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 5	824.0	0.0243	0.0243	0.0243	N/A
Summation		0.0245	0.0245	0.0245	N/A

Table 43 – AUSTRALIA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 5	824.0	0.1216	0.1221	0.1217	N/A
Summation		0.1226	0.1231	0.1227	N/A

Table 44 – AUSTRALIA General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 5	824.0	0.0243	0.0255	0.0252	N/A
Summation		0.0245	0.0257	0.0254	N/A

Table 45 – NEW ZEALAND Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 5	824.0	0.1216	0.1212	0.1178	N/A
Summation		0.1226	0.1222	0.1188	N/A

Table 46 – 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, a minimum distance of 0.2 m.



2.3.5 Combination 5 - BLE2400 + GSM850

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
GSM850	824.2	N/A	0.0636	N/A	0.0636
Summation		N/A	0.0638	N/A	0.0638

Table 47 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
GSM850	824.2	0.3039	0.3030	0.2944	0.3008
Summation		0.3049	0.3040	0.2954	0.3018

Table 48 – EN General Public Combined Exposure

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



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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
GSM850	824.2	0.0456	N/A	N/A	N/A
Summation		0.0458	N/A	N/A	N/A

Table 49 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
GSM850	824.2	0.2279	N/A	N/A	N/A
Summation		0.2289	N/A	N/A	N/A

Table 50 – FCC General Public Combined Exposure

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

CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
GSM850	824.2	0.0676	0.0676	0.0676	N/A
Summation		0.0679	0.0679	0.0679	N/A

Table 51 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
GSM850	824.2	0.4861	0.4862	0.4861	N/A
Summation		0.4880	0.4880	0.4880	N/A

Table 52 – CANADA 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, a minimum distance of 0.2 m.

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
GSM850	824.2	0.0608	0.0608	0.0608	N/A
Summation		0.0610	0.0610	0.0610	N/A

Table 53 – 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
GSM850	824.2	0.3039	0.3052	0.3042	N/A
Summation		0.3049	0.3062	0.3052	N/A

Table 54 – 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, a minimum distance of 0.2 m.



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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
GSM850	824.2	0.0608	0.0636	0.0630	N/A
Summation		0.0610	0.0638	0.0632	N/A

Table 55 – NEW ZEALAND Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
GSM850	824.0	0.3039	0.3030	0.2944	N/A
Summation		0.3049	0.3040	0.2954	N/A

Table 56 – NEW ZEALAND General Public Combined Exposure

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



2.3.6 Combination 6 - BLE2400 + LTE BAND 2

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 2	1850.0	0.0159	N/A	N/A	N/A
Summation		0.0161	N/A	N/A	N/A

Table 57 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 2	1850.0	0.0794	N/A	N/A	N/A
Summation		0.0804	N/A	N/A	N/A

Table 58 – FCC General Public Combined Exposure

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

CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 2	1850.0	0.0286	0.0286	0.0286	N/A
Summation		0.0289	0.0289	0.0289	N/A

Table 59 – CANADA Worker/Occupational Combined Exposure



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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 2	1850.0	0.1773	0.1774	0.1773	N/A
Summation		0.1792	0.1792	0.1792	N/A

Table 60 – CANADA General Public Combined Exposure

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



2.3.7 Combination 7 - BLE2400 + LTE BAND 4

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 4	1710.0	0.0159	N/A	N/A	N/A
Summation		0.0161	N/A	N/A	N/A

Table 61 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 4	1710.0	0.0794	N/A	N/A	N/A
Summation		0.0804	N/A	N/A	N/A

Table 62 – FCC General Public Combined Exposure

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



CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 4	1710.0	0.0297	0.0297	0.0297	N/A
Summation		0.0301	0.0301	0.0301	N/A

Table 63 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 4	1710.0	0.1871	0.1872	0.1871	N/A
Summation		0.1890	0.1890	0.1890	N/A

Table 64 – CANADA General Public Combined Exposure

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



2.3.8 Combination 8 - BLE2400 + LTE BAND 12

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 12	699.0	0.0215	N/A	N/A	N/A
Summation		0.0217	N/A	N/A	N/A

Table 65 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 12	699.0	0.1075	N/A	N/A	N/A
Summation		0.1085	N/A	N/A	N/A

Table 66 – FCC General Public Combined Exposure

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



CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 12	699.0	0.0293	0.0293	0.0293	N/A
Summation		0.0297	0.0297	0.0297	N/A

Table 67 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 12	699.0	0.2176	0.2176	0.2176	N/A
Summation		0.2195	0.2195	0.2195	N/A

Table 68 – CANADA General Public Combined Exposure

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



2.3.9 Combination 9 - BLE2400 + LTE BAND 13

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 13	777.0	0.0193	N/A	N/A	N/A
Summation		0.0195	N/A	N/A	N/A

Table 69 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 13	777.0	0.0967	N/A	N/A	N/A
Summation		0.0977	N/A	N/A	N/A

Table 70 – FCC General Public Combined Exposure

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



CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 13	777.0	0.0278	0.0278	0.0278	N/A
Summation		0.0282	0.0282	0.0282	N/A

Table 71 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 13	777.0	0.2024	0.2025	0.2024	N/A
Summation		0.2043	0.2043	0.2043	N/A

Table 72 – CANADA General Public Combined Exposure

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



2.3.10 Combination 10 - BLE2400 + LTE BAND 25

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 25	1850.0	0.0159	N/A	N/A	N/A
Summation		0.0161	N/A	N/A	N/A

Table 73 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 25	1850.0	0.0794	N/A	N/A	N/A
Summation		0.0804	N/A	N/A	N/A

Table 74 – FCC General Public Combined Exposure

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



CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 25	1850.0	0.0286	0.0286	0.0286	N/A
Summation		0.0289	0.0289	0.0289	N/A

Table 75 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 25	1850.0	0.1773	0.1774	0.1773	N/A
Summation		0.1792	0.1792	0.1792	N/A

Table 76 – CANADA General Public Combined Exposure

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



2.3.11 Combination 11 - BLE2400 + LTE BAND 26

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
LTE Band 26	814.0	0.0185	N/A	N/A	N/A
Summation		0.0187	N/A	N/A	N/A

Table 77 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
LTE Band 26	814.0	0.0923	N/A	N/A	N/A
Summation		0.0933	N/A	N/A	N/A

Table 78 – FCC General Public Combined Exposure

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



CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
LTE Band 26	814.0	0.0272	0.0272	0.0272	N/A
Summation		0.0275	0.0275	0.0275	N/A

Table 79 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
LTE Band 26	814.0	0.1961	0.1961	0.1961	N/A
Summation		0.1980	0.1980	0.1980	N/A

Table 80 – CANADA General Public Combined Exposure

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



2.3.12 Combination 12 - BLE2400 + PCS1900

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	N/A	N/A	N/A
PCS 1900	1850.2	0.0198	N/A	N/A	N/A
Summation		0.0200	N/A	N/A	N/A

Table 81 - FCC Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	N/A	N/A	N/A
PCS 1900	1850.2	0.0992	N/A	N/A	N/A
Summation		0.1002	N/A	N/A	N/A

Table 82 – FCC General Public Combined Exposure

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



CANADA Health Canada Safety Code 6 specifies the method of summation in clause 2.2.1 Note 6 with results as follows:

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0003	0.0003	0.0003	N/A
PCS 1900	1850.2	0.0357	0.0357	0.0357	N/A
Summation		0.0361	0.0361	0.0361	N/A

Table 83 – CANADA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0019	0.0019	0.0019	N/A
PCS 1900	1850.2	0.2217	0.2217	0.2217	N/A
Summation		0.2235	0.2236	0.2235	N/A

Table 84 – CANADA General Public Combined Exposure

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



2.3.13 Combination 13 - BLE2400 + LTE BAND 20

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
LTE Band 20	832.0	N/A	0.0252	N/A	0.0252
Summation		N/A	0.0254	N/A	0.0254

Table 85 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
LTE Band 20	832.0	0.1204	0.1200	0.1166	0.1192
Summation		0.1214	0.1210	0.1177	0.1202

Table 86 – EN General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 20	832.0	0.0241	0.0241	0.0241	N/A
Summation		0.0243	0.0243	0.0243	N/A

Table 87 – AUSTRALIA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 20	832.0	0.1204	0.1209	0.1205	N/A
Summation		0.1214	0.1219	0.1215	N/A

Table 88 – 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, a minimum distance of 0.2 m.

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 20	832.0	0.0241	0.0252	0.0250	N/A
Summation		0.0243	0.0254	0.0252	N/A

Table 89 – 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 20	832.0	0.1204	0.1200	0.1166	N/A
Summation		0.1214	0.1210	0.1177	N/A

Table 90 – 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, a minimum distance of 0.2 m.



2.3.14 Combination 14 - BLE2400 + LTE BAND 28

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
LTE Band 28	703.0	N/A	0.0298	N/A	0.0298
Summation		N/A	0.0300	N/A	0.0300

Table 91 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
LTE Band 28	703.0	0.1425	0.1421	0.1381	0.1410
Summation		0.1435	0.1431	0.1391	0.1421

Table 92 – EN General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 28	703.0	0.0285	0.0285	0.0285	N/A
Summation		0.0287	0.0287	0.0287	N/A

Table 93 – AUSTRALIA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 28	703.0	0.1425	0.1431	0.1426	N/A
Summation		0.1435	0.1441	0.1436	N/A

Table 94 – 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, a minimum distance of 0.2 m.

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
LTE Band 28	703.0	0.0285	0.0298	0.0295	N/A
Summation		0.0287	0.0300	0.0297	N/A

Table 95 – 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
LTE Band 28	703.0	0.1425	0.1421	0.1381	N/A
Summation		0.1435	0.1431	0.1391	N/A

Table 96 – 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, a minimum distance of 0.2 m.



2.3.15 Combination 15 - BLE2400 + GSM900

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
GSM900	880.2	N/A	0.0945	N/A	0.0944
Summation		N/A	0.0946	N/A	0.0947

Table 97 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
GSM900	880.2	0.4510	0.4496	0.4369	0.4463
Summation		0.4520	0.4506	0.4379	0.4474

Table 98 – EN General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
GSM900	880.2	0.0902	0.0902	0.0903	N/A
Summation		0.0904	0.0904	0.0905	N/A

Table 99 – AUSTRALIA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
GSM900	880.2	0.4510	0.4529	0.4514	N/A
Summation		0.4520	0.4539	0.4524	N/A

Table 100 – 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, a minimum distance of 0.2 m.

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
GSM900	880.2	0.0902	0.0945	0.0935	N/A
Summation		0.0904	0.0947	0.0937	N/A

Table 101 – 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
GSM900	880.2	0.4510	0.4496	0.4369	N/A
Summation		0.4520	0.4506	0.4379	N/A

Table 102 – 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, a minimum distance of 0.2 m.



2.3.16 Combination 16 - BLE2400 + DCS1800

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	N/A	0.0002	N/A	0.0002
DCS1800	1710.2	N/A	0.0243	N/A	0.0243
Summation		N/A	0.0245	N/A	0.0245

Table 103 – EN Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	0.0010
DCS1800	1710.2	0.1161	0.1157	0.1124	0.1149
Summation		0.1170	0.1167	0.1135	0.1159

Table 104 – EN General Public Combined Exposure

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

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
DCS1800	1710.2	0.0232	0.0232	0.0232	N/A
Summation		0.0234	0.0234	0.0234	N/A

Table 105 – AUSTRALIA Worker/Occupational Combined Exposure

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, a minimum distance of 0.2 m.



RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
DCS1800	1710.2	0.1161	0.1166	0.1162	N/A
Summation		0.1170	0.1175	0.1172	N/A

Table 106 – 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, a minimum distance of 0.2 m.

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

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0002	0.0002	0.0002	N/A
DCS1800	1710.2	0.0232	0.0243	0.0240	N/A
Summation		0.0234	0.0245	0.0243	N/A

Table 107 – 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, a minimum distance of 0.2 m.

RAT	Frequency (MHz)	Calculated RF exposure level at minimum 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			
BLE2400	2402.0	0.0010	0.0010	0.0010	N/A
DCS1800	1710.2	0.1161	0.1157	0.1124	N/A
Summation		0.1170	0.1167	0.1135	N/A

Table 108 – 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, a minimum distance of 0.2 m.



2.4 Far Field Region Boundary Results

The far field region boundary calculation result is shown in Table 109 and Table 111.

Near Field / Far Field Boundary (Ref: IEEE C95.3 Annex B.2, EN 62311 Annex A, AS/NZS 2772.2 Appendix B)			
RAT Name	Frequency MHz	Reactive Near Field Boundary (Wave Impedance Dependent)	Far Field Boundary (Antennas on axis)
		$\lambda/4$ (m)	$2D^2/\lambda$ (m)
BLE2400	2402.0	0.0312	0.0027
LTE Band 1	1920.0	0.0391	0.1921
LTE Band 3	1710.0	0.0439	0.1711
LTE Band 8	880.0	0.0852	0.0880
LTE Band 5	824.0	0.0910	0.0824
GSM850	824.2	0.0910	0.0825
LTE Band 20	832.0	0.0901	0.0832
LTE Band 28	703.0	0.1067	0.0703
GSM900	880.2	0.0852	0.0881
DCS1800	1710.2	0.0439	0.1711

Table 109 – Far Field Boundary (EN, AUSTRALIA, NEW-ZEALAND)

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	< 0.1067 m	0.1067 m – 0.1921	> 0.1921 m
Validity of Regions	Spherical model potential under-estimate: SAR / test assessment required	Spherical model over-estimate and conservative	Spherical model valid
Compliance Boundary Location	N/A	N/A	0.2 m

Table 110 – Assessment Method Validity (EN, AUSTRALIA, NEW-ZEALAND)



Near Field / Far Field Boundary (Ref: FCC 1.1307(b)(3)(i)(C), Technical Guide for Interpretation and Compliance Assessment of Health Canada's Radiofrequency Exposure Guidelines 7.1)			
RAT Name	Frequency MHz	Reactive Near Field Boundary (Wave Impedance Dependent)	Far Field Boundary (Antennas on axis)
		$\lambda/2\pi$ (m)	$2D^2/\lambda$ (m)
BLE2400	2402.0	0.0199	0.1937
LTE Band 1	1920.0	0.0249	0.1725
LTE Band 3	1710.0	0.0279	0.0888
LTE Band 2	1850.0	0.0258	0.1725
LTE Band 4	1710.0	0.0279	0.0831
LTE Band 5	824.0	0.0579	0.0705
LTE Band 12	699.0	0.0683	0.0784
LTE Band 13	777.0	0.0614	0.1866
LTE Band 25	1850.0	0.0258	0.0821
LTE Band 26	814.0	0.0587	0.0831
GSM850	824.2	0.0579	0.1866
PCS1900	1850.2	0.0258	0.1937

Table 111 – Far Field Boundary (FCC, CANADA)

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	< 0.0614 m	0.0614 – 0.1937 m	> 0.1937 m
Validity of Regions	Spherical model potential under-estimate: SAR / test assessment required	Spherical model over-estimate and conservative	Spherical model valid
Compliance Boundary Location	N/A	N/A	0.2 m

Table 112 – Assessment Method Validity (FCC, CANADA)



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 – EN: 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 – EN: 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 – FCC CFR 47 Pt.1.1310 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 – FCC CFR 47 Pt.1.1310 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)
10 - 20	10	61.4	0.163
20 - 48	44.72/f ^{0.5}	129.8/f ^{0.25}	0.3444/f ^{0.25}
48 - 100	6.455	49.33	0.1309
100 - 6000	0.6455*f ^{0.5}	15.60*f ^{0.25}	0.04138*f ^{0.25}
6000 - 150000	50	137	0.364

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

Frequency Range (MHz)	Power Density (W/m ²)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
10 - 20	2	27.46	0.0728
20 - 48	8.944/f ^{0.5}	58.07/f ^{0.25}	0.1540/f ^{0.25}
48 - 300	1.291	22.06	0.05852
300 - 6000	0.02619*f ^{0.6834}	3.142*f ^{0.3417}	0.008335*f ^{0.3417}
6000 - 15000	10	61.4	0.163

Table A.6 – Health Canada Safety Code 6 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 – 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.8 – ARPANSA Radiation Protection Series No.3 General Public Limits



Frequency Range	Power Density (W/m ²)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0 - 1 Hz	-	-	1.63*10 ⁵
1 - 8 Hz	-	20000	1.63*10 ⁵ /f ²
8 - 5 Hz	-	20000	2*10 ⁴ /f
0.025 - 0.82 kHz	-	500/f	20/f
0.82 - 65 kHz	-	610	24.4
0.065 - 1 MHz	-	610	1.6/f
1 - 10 MHz	-	610/f	1.6/f
10 - 400 MHz	10	61	0.16
400 - 2000 MHz	f/40	3*f ^{0.5}	0.008*f ^{0.5}
2000 - 300000 MHz	50	137	0.36

Table A.9 – NZS 2772 Part 1 Worker/Occupational Limits

Frequency Range	Power Density (W/m ²)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)
0 - 1 Hz	-	-	3.2*10 ⁴
1 - 8 Hz	-	10000	3.2*10 ⁴ /f ²
8 - 5 Hz	-	10000	4000/f
0.025 - 0.8 kHz	-	250/f	4/f
0.8 - 3 kHz	-	250/f	5
3 - 150 kHz	-	87	5
0.15 - 1 MHz	-	87	0.73/f
1 - 10 MHz	-	87/f ^{0.5}	0.73/f
10 - 400 MHz	2	87/f ^{0.5}	0.073
400 - 2000 MHz	f/200	28	0.0037*f ^{0.5}
2000 - 300000 MHz	10		0.16

Table A.10 – NZS 2772 Part 1 General Public Limits