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RF Exposure Evaluation:

Standards

OET Bulletin 65 Edition 97-01 August 1997
FCC 47 CFR §1.1307
FCC 47 CFR §1.1310
RSS-102 Issue 5 – March 2015

To whom it may concern,

please find our Maximum Permissible Exposure calculations for the u-blox Co.

Best Regards



Imad Hjije (Project manager)

Test limits

Test Laboratory:

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Note:

The following test results relate only to the devices specified in this document. This report shall not be reproduced in parts without the written approval of the test laboratory.

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As specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure.

Frequency range (MHz)	Power density (mW/cm²)
300 – 1,500	f/1,500
1,500 – 100,000	1.0

Limits specified per RSS-102, Issue 5.

Frequency range (MHz)	Power density (W/m²)	Power density (mW/cm²)
300 – 6,000	0.02619 f ^{0.6834}	mW/cm ² = W/m ² * 0.1

Equation OET bulletin 65, page 18, edition 97-01: **S = P*G / (4πR²)**

Where:

- S = power density
- P = power input to the antenna
- G = power gain of the antenna in the direction of interest relative to an isotropic radiator
- R = distance to the centre of radiation of the antenna

Band	Frequency (MHz)	Antenna Gain (dBi)	Output Power - conducted- (dBm)	Output Power - conducted- (mW)	IC Limit (mW/cm²)	FCC Limit (mW/cm²)	Power Density value (mW/cm²)
GSM	824	2.5	26.24	420.73	0.2576	0.549	0.149
GSM	1850	2.5	23.24	210.86	0.4476	1.000	0.075
Bluetooth	2480	0.9	-2.1	0.62	0.5469	1.000	0.0002
BLE	2440	0.9	-2.1	0.62	0.5409	1.000	0.0001

Margin to FCC Limit (mW/cm²)	Margin to IC Limit (mW/cm²)
0.3998	0.1084