

Roambee Corporation
3120 De La Cruz Blvd. Suite 121, Santa Clara,
California 95054 United States

Federal Communications Commission
Authorization and Evaluation Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, MD 21046

Applicant's declaration concerning RF Radiation Exposure

We hereby indicate that the product
Product description: GPS Tracker
Model No: RMBU_3GTR

The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The integral antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter within the host device.

A safety statement concerning minimum separation distances from enclosure of the Product: GPS Tracker will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RF exposure compliance.

The appropriate information can be drawn from the test report no: W6M21703-16710-C-1, W6M21703-16710-P-2244 and the accompanying calculations.

Company: Roambee Corporation

Address: 3120 De La Cruz Blvd. Suite 121, Santa Clara, California 95054 United States

Date: 2017-04-14

Signature





Registration number: W6M21703-16710-C-1
 FCC ID: 2ALG8RMBU3GTR

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power
 EIRP = 13.98 dBm

Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

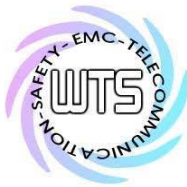
$$S = \frac{PG}{4\pi R^2}$$

- S – Power Density
- P – Output power ERP
- R – Distance
- D – Cable Loss
- AG – Antenna Gain

| Item | Unit | Value | Remarks |
|------|--------------------|---------|------------------|
| P | mW | 25.0035 | Peak value |
| D | dB | | |
| AG | dBi | 0 | |
| G | | 1 | Calculated Value |
| R | cm | 20 | Assumed value |
| S | mW/cm ² | 0.0050 | Calculated value |

Limits:

| Limit for General Population / Uncontrolled Exposure | |
|--|-------------------------------------|
| Frequency (MHz) | Power Density (mW/cm ²) |
| 1500 – 100.000 | 1.0 |



Report Number: W6M21703-16710-P-2224

FCC ID: 2ALG8RMBU3GTR

9 Maximum Permissible Exposure

9.1 Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of - - m normally can be maintained between the user and the device.

9.2 MPE Calculation Method

(A) Limits for Occupational/Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|---|---|
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 |
| 3.0-30 | 1842/f | 4.89/f | (900/f ²)* | 6 |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 |
| 300-1500 | -- | -- | f/300 | 6 |
| 1500-100,000 | -- | -- | 5 | 6 |

(B) Limits for General Population/Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|---|---|
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f ²)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | -- | -- | f/1500 | 30 |
| 1500-100,000 | -- | -- | 1.0 | 30 |

f = frequency in MHz

*Plane-wave equivalent power density

$$E \text{ (V/m)} \cdot \frac{\sqrt{30 \times P \times G}}{d}$$

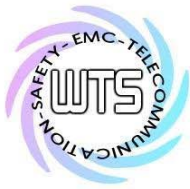
$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} \cdot \frac{E^2}{377}$$

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd \cdot \frac{30 \times P \times G}{377 \times d^2}$$



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21703-16710-P-2224
FCC ID: 2ALG8RMBU3GTR

| Frequency | Max output power (dBm) / (W) | | Antenna Gain | Power Density(S) (mW/cm ²) | Limit of Power Density (S) (mW/cm ²) | Test Result |
|-----------|---------------------------------|--------|-----------------|---|---|-------------|
| GSM 850 | 32.70 | 1.8621 | 2.46 | 0.65 | 1.0 | Complies |
| PCS 1900 | 30.43 | 1.1041 | 4.06 | 0.56 | 1.0 | Complies |
| Band II | 21.46 | 0.14 | 4.06 | 0.07 | 1.0 | Complies |
| Band V | 23.00 | 0.1995 | 2.46 | 0.07 | 1.0 | Complies |

From the peak EUT RF output power, the minimum mobile separation distance, $d=0.2$ m, as well as the gain of the used antenna, the RF power density can be obtained.