

RF Exposure Evaluation Report

Date of Report:	3/03/2026	Client's Contact person:	Tony Allen
Number of pages:	7	Responsible Test engineer:	Kalle Orava
Testing laboratory:	Verkotan Oy Elektroniikkatie 17 90590 Oulu Finland	Client:	Redtail Telematics Ltd Plextek Building, London Road Great Chesterford, Essex B10 1NY United Kingdom of Great Britain
Tested device:	Vehicle Location Tracker		
Related reports:	-		
Testing has been carried out in accordance with:	47CFR §2.1091 Radiofrequency Radiation Exposure Evaluation: Mobile Devices FCC published RF exposure KDB procedures 447498 D04 Interim General RF Exposure Guidance v01		
Documentation:	The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory		
Test Results:	The EUT complies with the requirements in respect of all parameters subject to the test. The test results relate only to devices specified in this document		
Date and signatures:	03.03.2026		

Laboratory Manager

Miia Nurkkala

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1. EVALUATION SUMMARY

1.1 Test Details

Device under Test (DUT):

Product:	Vehicle Location Tracker
Manufacturer:	Redtail Telematics Ltd
Model:	VLU6M4VP
Hardware Version:	EP2
FCC ID:	2AXBF-VLU6M4VP
Mobile/Portable device:	Mobile
FCC Test Firm Designation Number:	FI0005
Document ID:	FCC_RF Exposure Evaluation_Vehicle Location Tracker_ID7956_27022026.docx
Document History:	Initial version

1.2 Evaluation Results

1.2.1 Standalone Exposure

The device conforms to the requirements of the standards when the maximum ERP is less than or equal to the Test Exclusion Threshold Limit.

Mode of Operation	Maximum ERP [mW]	Separation Distance [mm]	MPE-Based Exemption threshold [mW]	Evaluation Result
VHF	76.55	300	344.70	PASS

2. DESCRIPTION OF THE DEVICE UNDER TEST (DUT)

The device is designed for aftermarket installation in motor vehicles to assist in the recovery in the event of a theft. The device is mounted behind the vehicle's dashboard. The device is powered by the host vehicle's 12V supply. An internal 6V backup battery is used if there is an interruption to the primary power source. The EUT also has an integrated VHF radio transceiver which is used for tracking / location purposes. The VHF radio unit has 3 modes of operation; normal run, activated and speed up mode. They all transmit with duty cycle from which the speed up mode is having highest operation duty cycle: it has Tx on for 100ms every 2 seconds.

According to the manufacturer the gain of the antenna is 0 dBi.

Exposure Environment	General population, uncontrolled
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2.1 Supported Frequency Bands and Operational Modes

TX Frequency bands	Modes of Operation	Transmitter Frequency Range [MHz]	Maximum Specified Output Power [dBm]
	VHF	173.075 – 173.225	34

3. TEST EXCLUSIONS

FCC MPE-based Exemption thresholds in 447498 D04 Interim General RF Exposure Guidance v01 are shown in a table below.

TABLE B.1—THRESHOLDS FOR SINGLE RF SOURCES
SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

RF Source Frequency			Minimum Distance			Threshold ERP
f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W
0.3	–	1.34	159 m	–	35.6 m	$1,920 R^2$
1.34	–	30	35.6 m	–	1.6 m	$3,450 R^2/f^2$
30	–	300	1.6 m	–	159 mm	$3.83 R^2$
300	–	1,500	159 mm	–	31.8 mm	$0.0128 R^2 f$
1,500	–	100,000	31.8 mm	–	0.5 mm	$19.2 R^2$
Subscripts L and H are low and high; λ is wavelength. From § 1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.						

According to Table B.1 in 447498 D04 Interim General RF Exposure Guidance v01, FCC MPE-based Exemption threshold can be calculated according to formulas:

300-1500 MHz: $0.0128 * R^2 * f$
 1500-100 000 MHz: $19.2 R^2$

where:

R = Separation distance (m)
 f = Frequency (MHz)

Modes of Operation	Frequency [MHz]	Separation Distance [mm]	P_{th} [mW]
VHF	173.075	300	344.70

4. RESULTS

4.1 Standalone Exposure

Modes of Operation	Frequency [MHz]	Distance, R [mm]	Maximum Input Power to Antenna, P [dBm]	Time Averaging Factor	Time-Averaged Input Power to Antenna, P [mW]	Time-Averaged Input Power to Antenna, P [dBm]	Power Gain of Antenna, G [dBi]	Time-Averaged ERP [dBm]	Time-Averaged ERP [mW]	P _{th} [mW]
VHF	173.075	300	34	0.050	125.59	20.99	0	18.84	76.55	344.70

The ERP of the DUT is below the test exclusion threshold.