



FCC RF Exposure Test Report

FCC RF Exposure Test Report

Report No. : SAR260812B001

Applicant : Telit Communications S.P.A.

Address : Via Stazione di Prosecco 5/B - 34010 Sgonico (TS) - ITALY

Product : ME310M1-W4

FCC ID : RI7ME310M1WX

Brand : TELIT CINTERION

Model No. : ME310M1-W4

Standards : FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06

Sample Received Date : Jul. 23, 2026

Date of Testing : Jul. 23, 2026 ~ Aug. 13, 2026

Test Lab : The FCC Site Registration No. is 646781; The Designation No. is CN1429.

Issued By : BOOMWAVE TEST (SHENZHEN) CO., LTD.

Address : Room B38, Warehouse A5(Chiwan No.1), No.3 Chiwan 4th Road, Chiwan Community, Zhaoshang Street, Nanshan District, Shenzhen, Guangdong, P.R. CHINA

CERTIFICATION: The above equipment have been tested by **BOOMWAVE TEST (SHENZHEN) CO., LTD.** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by A2LA or any government agencies.

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(Simon Wang/Manager)

Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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Release Control Record

Report No.	Reason for Change	Date Issued
W7L-240204W001SA02	Original release	May. 11, 2024
PSU-NQN2508270215-1SA02	Based on the original product , the new product adds GPS and WiFi capabilities. The new sample data no change.	Sep. 05, 2025
SAR260812B001	Based on the report PSU-NQN2508270215-1SA02(model: ME310M1-W1, FCC ID: R17ME310M1WX), the differences between model ME310M1-W1 and ME310M1-W4: different chips and ME310M1-W4 GNSS is not supported, for more details please refer to The Hardware Differences Letter provided by the manufacturer.	Aug. 13, 2026

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1. Description of Equipment Under Test

EUT Type	ME310M1-W4
Brand Name	Telit Cinterion
Model Name	ME310M1-W4
Tx Frequency Bands (Unit: MHz)	CAT-M: 1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 699.7MHz ~ 715.3MHz (FOR LTE Band12) 779.5MHz ~ 784.5MHz (FOR LTE Band13) 790.5MHz ~ 795.5MHz (FOR LTE Band14) 1850.7MHz ~ 1914.3MHz (FOR LTE Band25) 814.7MHz ~ 848.3MHz (FOR LTE Band26) 1710.7MHz ~ 1779.3MHz (FOR LTE Band66) 665.5MHz ~ 695.5MHz (FOR LTE Band71) 700.5MHz ~ 713.5MHz (FOR LTE Band85) 898.2MHz ~ 899.8MHz (FOR LTE Band8) NB-IoT: 1850.2MHz ~ 1909.8MHz (FOR LTE Band2) 1710.2MHz ~ 1754.8MHz (FOR LTE Band4) 824.2MHz ~ 848.8MHz (FOR LTE Band5) 699.1MHz ~ 715.8MHz (FOR LTE Band12) 777.1MHz ~ 786.8MHz (FOR LTE Band13) 788.1MHz ~ 797.9MHz (FOR LTE Band14) 1850.2MHz ~ 1914.8MHz (FOR LTE Band25) 814.2MHz ~ 848.8MHz (FOR LTE Band26) 1710.2MHz ~ 1779.8MHz (FOR LTE Band66) 663.2MHz ~ 697.8MHz (FOR LTE Band71) 698.2MHz ~ 715.8MHz (FOR LTE Band85) 897.7MHz ~ 900.3MHz (FOR LTE Band8)
Uplink Modulations	CAT-M: QPSK/16QAM NB-IoT: BPSK/QPSK
HW VERSION	0.0
SW VERSION	M0U.400004
Antenna Type	1/4 1 Antenna
EUT Stage	Production Unit

Note:

- The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

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2. MPE(Maximum Permissible Exposure) Assessment

2.1 Introduction

According to 47 CFR §2.1091, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the transmitting antenna and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 cm separation requirement. The limits to be used for MPE evaluation are specified in §1.1310. All unlicensed personal communications service (PCS) devices and unlicensed NII devices shall be subject to the limits for general population/uncontrolled exposure.

2.2 RF Radiation Exposure Limits

According to 47 CFR §1.1310, the criteria listed in below table shall be used to evaluate the environmental impact of human exposure to RF radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093.

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (min)
(A) Limits for Occupational / Controlled Exposures				
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 – 100000	-	-	5	6
(B) Limits for General Population / Uncontrolled Exposures				
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 – 100000	-	-	1.0	30

Limits for maximum permissible exposure (MPE)

Notes:

- f = frequency in MHz
- Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided they are made aware of the potential for exposure.
- General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

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2.3 MPE Assessment Method

Calculations can be made to predict RF field strength and power density levels around typical RF sources. For example, in the case of a single radiating antenna, a prediction for power density in the far-field of the antenna can be made by use of the general Equations below. This equation is generally accurate in the far-field of an antenna but will over-predict power density in the near field, where they could be used for making a "worst case" or conservative prediction.

$$\text{Power Density (S)} = \frac{PG}{4\pi R^2} = \frac{\text{EIRP}}{4\pi R^2}$$

Where

S = Power Density, unit in mW/cm²

P = Power input to the antenna, unit in mW

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna, unit in cm

EIRP = Effective isotropically radiated power

2.4 MPE Calculation for Standalone Operations

The manufacturer expects that the radiated component of this device will not close to the human body during normal usage and the warning statement was also stated in the user instruction. Since the transmitting antenna will be kept at least 20 cm away from the human body, the MPE level is calculated based on this condition and the result is listed in below table.

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CALCULATION FOR MAXIMUM E.I.R.P

CAT-M/ NB-IoT:

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit	Gain according to EIRP (dBi)	Gain according to PD (dBi)	Max Gain Allowed (dBi)	Result
LTE Band 2	2.14	25.00	517.607	0.103	1.000	0.103	8.01	12.00	8.01	Pass
LTE Band 4	2.14	25.00	517.607	0.103	1.000	0.103	5.00	12.00	5.00	Pass
LTE Band 5	2.14	25.00	517.607	0.103	0.550	0.187	15.60	9.40	9.40	Pass
LTE Band 12	2.14	25.00	517.607	0.103	0.466	0.221	11.92	8.68	8.68	Pass
LTE Band 13	2.14	25.00	517.607	0.103	0.520	0.198	11.92	9.15	9.15	Pass
LTE Band 14	2.14	25.00	517.607	0.103	0.527	0.195	11.92	9.21	9.21	Pass
LTE Band 25	2.14	25.00	517.607	0.103	1.000	0.103	8.01	12.00	8.01	Pass
LTE Band 26(Part 90)	2.14	25.00	517.607	0.103	0.543	0.190	25.00	9.34	9.34	Pass
LTE Band 26(Part 22)	2.14	25.00	517.607	0.103	0.550	0.187	15.60	9.40	9.40	Pass
LTE Band 66	2.14	25.00	517.607	0.103	1.000	0.103	5.00	12.00	5.00	Pass
LTE Band 71	2.14	25.00	517.607	0.103	0.444	0.232	11.92	8.46	8.46	Pass
LTE Band 85	2.14	25.00	517.607	0.103	0.467	0.221	11.92	8.69	8.69	Pass
LTE Band 8A	2.14	25.00	517.607	0.103	0.599	0.172	11.92	9.77	9.77	Pass

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3. Information on the Testing Laboratories

We, BOOMWAVE TEST (SHENZHEN) CO., LTD., were founded in 2025 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

BOOMWAVE TEST (SHENZHEN) CO., LTD.

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