

Compliance with 47 CFR 2.1091 and 1.1310

The EUT is a wireless 2.4 GHz module manufactured by Telit Communications S.p.A. It was certified under FCC 15.247 as a DTS device, FCC ID: RI7XE61. The EUT will only be used with a separation distance of 20 centimeters or greater between the antenna and the body of the user or nearby persons and can therefore be considered a mobile transmitter per 47 CFR 2.1091(b). The antenna is a ceramic patch antenna. The antenna has a maximum gain of 2 dBi. The maximum peak conducted output power is 119 mW.

The maximum peak radiated power (measured) is 188 mW (EIRP). Since the transmit frequency is greater than 1.5 GHz, and the output power is less than 3 W ERP, the EUT is categorically excluded from routine environmental evaluation per 47 CFR 2.1091(c). The MPE estimates are as follows:

Table 1 in 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population above 1.5 GHz as 1 mW/cm². The exposure level at a 20 cm distance from the EUT's transmitting antenna is calculated using the general equation:

$$S = (PG)/4\pi R^2$$

Where: S = power density (mW/cm²)

P = power input to the antenna (mW)

G = numeric power gain relative to an isotropic radiator

R = distance to the center of the radiation of the antenna (20 cm = limit for MPE estimates)

PG = EIRP

Solving for S, the maximum power density 20 cm from the transmitting antenna is summarized in the following table:

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Antenna Type	Antenna Manufacturer	Antenna Part No.	Transmit Frequency (MHz)	Max Peak Conducted Output Power (mW)	Antenna Gain (dBi)	Minimum Antenna Cable Loss (dB)	Power Density @ 20 cm (mW/cm ²)	General Population Exposure Limit from 1.1310 (mW/cm ²)
Ceramic Patch	Taoglas	WPC25A	2400	119	2	0	0.03752123	1

The power density does not exceed 0.038 mW/cm² at 20 cm; therefore, the exposure condition is compliant with FCC rules.