3.10 Directional gain of the antenna, FCC 15.319 (e)

Directional gain of antennas influences the limit of peak transmit power if the maximum directional gain exceeds 3 dBi.

Max antenna gain [dBi]	Exceeds 3 dBi by amount [dB]
-3	0

The antenna gain value is derived from:

Manufacturer declaration	☒
Antenna diagram	☐
Measured gain of complete system	☐

Comment: Manufacturer declaration documents or Antenna diagrams will be considered in course of certification by responsible authority.

3.12 Radio frequency radiation exposure; FCC 15.319(i)

Consideration of radio frequency radiation exposure for EUT is done as

SAR test acc. IEEE 1528 (for PP)	☐
MPE calculation as below (for FP, Repeater)	☒

SAR test results: not applicable

MPE calculation:

The EUT is considered as a mobile device according to OET Bulletin 65, Edition – 97 – 01. Therefore distance to human body of min. 20 cm is determined.

The internal/external antennas used for this mobile transmitter must provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

A safety statement concerning minimum separation distances from enclosure of the device will be integrated in the users manual to provide end-users with transmitter operating conditions for satisfying RFE exposure compliance.

The limit of Power density for General Population / Uncontrolled Exposure is 1.0 mW/cm^2.

Formula:

$$S = EIRP / 4\pi R^2$$

Calculation: for internal antenna:

EIRP	Radiated Power [dBm]	19.70
EIRP	Radiated Power [mW]	93.325
R	Distance [cm]	20
S	Power Density [mW/cm^2]	0.018

Result: The EUT complies with the radio frequency radiation exposure requirement.

Comment: Please find radiated power test results in Appendix I and J.