

Telecommunication Certification Body
UL International (UK) Ltd
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Hampshire
RG24 8AH
United Kingdom

Subject: RF Exposure Analysis – Routine Evaluation Exemption

Applicant: Inxpect SpA

FCC ID: 2ANOS-S202A

Model number/name: S202A

To whom it may concern

The above device operates in the 60.7–62.9 GHz frequency band (Part 15 Field Disturbance Sensor).

The following FCC Rule Parts are applicable:

Part 2.1091 – Radiofrequency radiation exposure evaluation: mobile devices

Part 1.1307(b)(3)(i)(A) – 1 mW Blanket Exemption (i)

Part 1.1307(b)(3)(i)(C) – MPE-based Exemption (ii)

Part 1.1307(b)(3)(i)(B) – SAR-based Exemption (iii)

For the above device:

Transmitter frequency range = 60.7 GHz to 62.9 GHz

Max. EIRP = 14.0 dBm (including tune-up tolerance)

ERP = EIRP - 2.15 dBm = 11.85 dBm (15.31 mW)

Duty Cycle: 21 %

Maximum time-averaged Power (ERP): $15.31 \text{ mW} * 0.21 = \text{3.22 mW}$

Minimum separation distance (R) to be considered: **0.2 m**

Evaluation

RF exemption applies if the maximum time-averaged transmitted power is less than the maximum of the following three criteria:

- i. Less than 1 mw Blanket exemption. PTH = 0.001 W – §1.1307(b)(3)(i)(A) - **criteria not met**
- ii. determination of exemption under the MPE-based §1.1307(b)(3)(i)(C), if i) not met
- iii. determination of exemption under the SAR-based §1.1307(b)(3)(i)(B) if both i) and ii) are not met;

Determination of threshold power (PTH) under the MPE-based §1.1307(b)(3)(i)(C):

This is only applicable at a separation distance greater than $\lambda/2\pi$ and at frequencies from 0.3 GHz to 100 GHz.

For 60 GHz operation: $\lambda/2\pi = 0.0008 \text{ m}$

It follows that this clause is applicable since the separation distance (R) equals **0.2 m** which is greater than **0.0008 m**.

Threshold ERP P_{TH} (watts) for the frequency range of 1.5-100 GHz: $19.2 * R^2$

$R = 0.2 \text{ m}$

$P_{TH} = (19.2 * 0.2^2) \text{ W} = 0.768 \text{ W} (\mathbf{768 \text{ mW}})$

Conclusion

The maximum ERP of **3.22 mW** is below the applicable **768 mW** threshold for operation in the 60.7–62.9 GHz frequency band, and therefore the above device is exempt from evaluation in accordance with §1.1307(b)(3)(i)(C).

Yours faithfully,

Name: Lorenzo Nava

Position: CTO

Signature

