

## MPE exemption letter according Interim procedure KDB 447498 D04

| Customer                                                                                    | Product                  | Model        | HW Status | SW status | FCC-ID           |
|---------------------------------------------------------------------------------------------|--------------------------|--------------|-----------|-----------|------------------|
| <p>ARESIS srl<br/>Via Flumendosa, 16<br/>20132, Milan<br/>Italy<br/>Mr. Luca Mereghetti</p> | Tank level probing Radar | ScanBrick® W | 1.1.0     | 2.1       | 2A7GA-SCANBRICKW |

Declared minimum distance to human body according to customer  $\geq 20$  cm according customer's document "MPE Information Requirements.pdf". The customer thus declares that the device is not body-worn.

According 1.1307(b)(3)(i)(C) Option C – ERP frequencies above 300 kHz but at distances  $R > \lambda/2\pi$  can be exempted as follows:

Table 2. Single RF Sources Subject to Routine Environmental Evaluation under MPE-Based Exemptions,  $R \geq \lambda/2\pi$

| Transmitter Frequency | Threshold ERP   |
|-----------------------|-----------------|
| 0.3 – 1.34            | $1,920 R^2$     |
| 1.34 – 30             | $3,450 R^3/f^2$ |
| 30 – 300              | $3.83 R^2$      |
| 300 – 1,500           | $0.0128 R^2 f$  |
| 1,500 – 100,000       | $19.2 R^2$      |

Note: Transmitter Frequency is in MHz, Threshold ERP is in watts, R is in meters, f is in MHz.

Calculation based on external document "MPE Information Requirements.pdf" provided by customer.

| Transmitter | Frequency [MHz] | $\lambda/2\pi$ [m] | R [m] | $R \geq \lambda/2\pi$ fulfilled | Threshold ERP [W] | Cond. PWR incl. Tolerance [dBm] | Maximum Antenna Gain [dBi] | EIRP [dBm] | ERP [dBm] | ERP [W]     | MPE Exemption fulfilled |
|-------------|-----------------|--------------------|-------|---------------------------------|-------------------|---------------------------------|----------------------------|------------|-----------|-------------|-------------------------|
| 1           | 77000           | 0.000620084        | 10    | yes                             | 1920              | 13                              | 10                         | 23         | 20.85     | 0.1216186   | yes                     |
|             | 79000           | 0.000604386        | 10    | yes                             | 1920              | 13                              | 10.85                      | 23.85      | 21.7      | 0.147910839 | yes                     |
|             | 81000           | 0.000589463        | 10    | yes                             | 1920              | 13                              | 10                         | 23         | 20.85     | 0.1216186   | yes                     |
| 2           | 77000           | 0.000620084        | 10    | yes                             | 1920              | 13                              | 10                         | 23         | 20.85     | 0.1216186   | yes                     |
|             | 79000           | 0.000604386        | 10    | yes                             | 1920              | 13                              | 10.85                      | 23.85      | 21.7      | 0.147910839 | yes                     |
|             | 81000           | 0.000589463        | 10    | yes                             | 1920              | 13                              | 10                         | 23         | 20.85     | 0.1216186   | yes                     |
| 3           | 77000           | 0.000620084        | 10    | yes                             | 1920              | 13                              | 10                         | 23         | 20.85     | 0.1216186   | yes                     |
|             | 79000           | 0.000604386        | 10    | yes                             | 1920              | 13                              | 10.85                      | 23.85      | 21.7      | 0.147910839 | yes                     |
|             | 81000           | 0.000589463        | 10    | yes                             | 1920              | 13                              | 10                         | 23         | 20.85     | 0.1216186   | yes                     |

# Simultaneous Transmission SAR Test Exemption with Respect to Multiple Exemption Criteria

| Transmitter                  | 1        | 2        | 3        |
|------------------------------|----------|----------|----------|
| max Ratio of MPE-Value/Limit | 0.000077 | 0.000077 | 0.000077 |

| Sum of the ratios | Exemption fulfilled |
|-------------------|---------------------|
| 0.000231          | yes                 |

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Conclusion: MPE-Based Exemption fulfilled

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| Version | Applied changes | Date of release |
|---------|-----------------|-----------------|
| --      | Initial release | 2022-Aug-18     |
|         |                 |                 |

**End of Test Report**