**Prüfbericht – Produkte**
Test Report - Products

TÜVRheinland®

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|---|---|---|---|---|
| **Prüfbericht-Nr.:** *Test report no.:* | **IN24HKZS 001** | **Auftrags-Nr.:** *Order no.:* | **146960621 010** | Seite 1 von 3 *Page 1 of 3* |
| **Kunden-Referenz-Nr.:** *Client reference no.:* | 2283344 | **Auftragsdatum:** *Order date:* | 2024.09.09 | |
| **Auftraggeber:** *Client:* | LifeSignals, Inc.<br>426 S Hillview Dr, Milpitas, CA 95035, USA | | | |
| **Prüfgegenstand:** *Test item:* | UbiqVue™ 2AYe Holter System | | | |
| **Bezeichnung** *Identification* | UB2251/UX2251 | **Serien -Nr.:** *Serial no.:* Engineering Sample | | |
| **Auftrags-Inhalt:** *Order content*: | Testing and issue of Test Report and Grant Certificate | | | |
| **Prüfgrundlage:** *Test specification:* | FCC 1.1310, and RSS 102 Issue 5<br>KDB 447498 D01 | | | |
| **Wareneingangsdatum:** *Date of sample receipt:* | 2024-09-10 | | | |
| **Prüfmuster-Nr.:** *Test sample no:* | A003825183-001<br>A003825183-002<br>ZOOYH,GRBBY | | | |
| **Prüfzeitraum:** *Testing period:* | 2024.09.12 - 2024.10.04 | | | |
| **Ort der Prüfung:** *Place of testing:* | Wireless laboratory, Bangalore | | | |
| **Prüflaboratorium:** *Testing laboratory:* | TÜV Rheinland (India) Pvt. Ltd. 27/B,2nd cross road, Electronic city Phase1, Banglore-560100, India<br><br>FCC Test Site Registration No: 496599<br>IC Test Site Registration No: 3466E-1 | | | |
| **Prüfergebnis*:** *Test result*:* | Pass | | | |


**geprüft von:**
*tested by:*

**Datum:**
*Date:* 2024-12-13

**genehmigt von:**
*authorized by:*

**Ausstellatum:**
*Issue date:* 2024-12-13

| | | | |
|---|---|---|---|
| **Stellung** / *Position:* | **Yogesh V**<br>**Senior Engineer** | **Stellung** / *Position:* | **Madhu KN**<br>**Asst Manager** |

**Sonstiges** / *Other:* FCC ID: 2AHV9-UB2251

**Zustand des Prüfgegenstandes bei Anlieferung:** **Prüfmuster vollständig und unbeschädigt**
*Condition of the test item at delivery:* ***Test item complete and undamaged***

| | | | | | |
|---|---|---|---|---|---|
| * Legende: | 1 = sehr gut | 2 = gut | 3 = befriedigend | 4 = ausreichend | 5 = mangelhaft |
| | P(ass) = entspricht o.g. Prüfgrundlage(n) | | F(ail) = entspricht nicht o.g. Prüfgrundlage(n) | N/A = nicht anwendbar | N/T = nicht getestet |
| ** Legend:* | *1 = very good* | *2 = good* | *3 = satisfactory* | *4 = sufficient* | *5 = poor* |
| | *P(ass) = passed a.m. test specification(s)* | | *F(ail) = failed a.m. test specification(s)* | *N/A = not applicable* | *N/T = not tested* |

# 1 Maximum Permissible Exposure

## 1.1 RF Exposure Compliance Requirement

**Following FCC KDB 447498 D01 General SAR test exclusion guidelines**

The corresponding SAR exclusion threshold condition, listed below:

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation Distances ≤ 50 mm are determined by: [(max. power of channel, including tune-up tolerance, mW)/ (min. test separation distance, mm)] · [√f (GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g.

Extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation.
- The result is rounded to one decimal place for comparison The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion(447498 D01 General RF Exposure Guidance v06)

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold Is determined according to the following

- [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·( f(MHz)/150)] mW, at 100 MHz to 1500 MHz
- [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion,

- The power threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by [1 + log(100/f(MHz))] for *test separation distances* > 50 mm and < 200 mm
- The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by ½ for *test separation distances* ≤ 50 mm
- SAR measurement procedures are not established below 100 MHz When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

**SAR Test Exclusion Thresholds**

**Protocol: Wi-Fi 2.4GHz**

**Exclusion calculation considering measured maximum power excluding antenna gain**

| Frequency (GHz) | Max.Power (dBm) | Tune-up value | Max.Power Including Tune-up Tolarence (dBm) | Max.Power Including Tune-up Tolarence (mW) | Minimum test separation distance (mm) | SAR Test Exclusion Calculation Values | 1-g Extremity SAR Test exclusion Threshold |
|---|---|---|---|---|---|---|---|
| 2.412 | -0.10 | 1 | 0.90 | 1.230 | 5 | 0.3821 | 3 |

**Protocol: Bluetooth low energy (BLE)**

**Exclusion calculation considering measured maximum power excluding antenna gain**

| Frequency (GHz) | Max.Power (dBm) | Tune-up value | Max.Power Including Tune-up Tolarence (dBm) | Max.Power Including Tune-up Tolarence (mW) | Minimum test separation distance (mm) | SAR Test Exclusion Calculation Values | 1-g Extremity SAR Test exclusion Threshold |
|---|---|---|---|---|---|---|---|
| 2.402 | -9.63 | 1 | -8.63 | 0.1370 | 5 | 0.0425 | 3 |

From above table calculation the EUT is exempted from routine SAR evaluation

Note:
1. SAR exclusion threshold is calculated using condition1 formulas.
2. Transmitting power level is taken from the RF test report **IN24HKZS 001**

## 1.2 Conclusion

The Power density of the EUT is less than defined limit as shown above, Hence EUT is meeting MPE Calculation.