

Prüfbericht – Produkte
Test Report - Products

Prüfbericht-Nr.: <i>Test report no.:</i>	IN23ISA3 001 ULR-TC5688233000000040F	Auftrags-Nr.: <i>Order no.:</i>	146662795 190	Seite 1 von 3 Page 1 of 3
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	2283344	Auftragsdatum: <i>Order date:</i>	2022.02.16	
Auftraggeber: <i>Client:</i>	LifeSignals, Inc. 426 S Hillview Dr, Milpitas, CA 95035, USA			
Prüfgegenstand: <i>Test item:</i>	UbiqVue 2A Wearable Biosensor using UbiqVue 2A Wireless Patient Monitoring System			
Bezeichnung: <i>Identification.:</i>	UB2550/UX2550			
Auftrags-Inhalt: <i>Order content:</i>	Maximum Permissible Exposure			
Prüfgrundlage: <i>Test specification:</i>	FCC 1.1310			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2022.05.16			
Prüfmuster-Nr & Serien-Nr.: <i>Test sample no & serial no.:</i>	A003068621-001 A003068621-002 2021061001			
Prüfzeitraum: <i>Testing period:</i>	2022.05.20 - 2022.06.15			
Ort der Prüfung: <i>Place of testing:</i>	Wireless laboratory, Bangalore			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (India) Pvt.Ltd., 27/B, 2nd Cross, Electronic City Phase1 Bangalore -560 100, India FCC Test site registration number: 496599 ISED Test site registration number: 3466E-1			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	Yogesh V Engineer		genehmigt von: <i>authorized by:</i>	Madhu K N Senior Engineer
Datum: <i>Date:</i>	2022.06.16		Ausstellatum: <i>Issue date:</i>	2023.05.08
Sonstiges / Other:	FCC ID: 2AHV9-UB2550			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut 3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = N/T = nicht
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good 3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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RF Exposure Report

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: $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f} \text{ (GHz)}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g.

Extremity SAR, where

- $f(\text{GHz})$ 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

- $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$, at 100 MHz to 1500 MHz
- $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$ 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 $[1 + \log(100/f(\text{MHz}))]$ 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 $\frac{1}{2}$ 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.

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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	1.32	1	2.32	1.7060	5	0.529930172	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	7.08	1	8.08	6.4268	5	1.992124594	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 IN23ISA3 001 / ULR-TC5688233000000040F

******END OF TEST REPORT******