

RF Exposure Exemption

Applicant : Droople SA
Product Name : LoRa communication device for smart sensors
Trade Name : iLink
Model Number : iLink V4.1
Blockchain verified QR code : 
Applicable Standard : 47 CFR §2.1093
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Issued by

Approved By :



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Taiwan Accreditation Foundation accreditation number: 1330
Test Firm MRA designation number: TW0010

Note:

- 1.The test results are valid only for samples provided by customers and under the test conditions described in this report.
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- 3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Version	Issued Date	Revisions	Revised By
00	Apr. 26, 2023	Initial Issue	Yiying Chiang

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1. Reference Applicable Standard

1.1 Reference Applicable Standard

Standard	Description	Version
47 CFR §2.1093	Radiofrequency radiation exposure evaluation: portable devices	-
IEEE C95.1	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz	1992
KDB 447498 D04	RF exposure procedures and equipment authorization policies for mobile and portable devices	v01

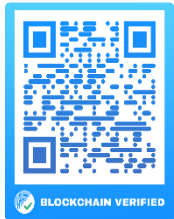
1.2 Testing Location

Site Name: Site Name: Eurofins E&E Wireless Taiwan Co., Ltd.

Site Address: ☒ No. 140-1, Changan Street, Bade District, Taoyuan City 334025, Taiwan (R.O.C.)

Site Address: ☐ No. 2, Wuquan 5th Rd. Wugu Dist., New Taipei City, Taiwan (R.O.C.)

2. Description of Equipment under Test (EUT)

Applicant	Droopple SA Route du Verney 18, 1070 Puidoux, Switzerland
Manufacturer	Droopple SA Route du Verney 18, 1070 Puidoux, Switzerland
Product Name	LoRa communication device for smart sensors
Trade Name	iLink
Model Number	iLink V4.1
FCC ID	2A9M4DRP-ILK-V4-1
Frequency Range	LoRa : 902 - 928 MHz
Supported Modulations	LoRa : CCS
Blockchain verified QR code	

Note:

The above information of DUT was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Antenna Information			
Frequency Range (MHz)	Model Number	Type	Max. Gain (dBi)
902 - 928 MHz	2111400100	Flexible Antenna	1

3. RF Exposure Limit

Table 1 Safety Limits for Controlled / Uncontrolled Environment Exposure

SAR Exposure Limit		
	General Population / Uncontrolled Exposure ¹ (W/kg)	Occupational / Controlled Exposure ² (W/kg)
Spatial Peak SAR ³ (head or Body)	1.60	8.00
Spatial Peak SAR ⁴ (Whole Body)	0.08	0.40
Spatial Peak SAR ⁵ (Hands / Feet / Ankle / Wrist)	4.00	20.00

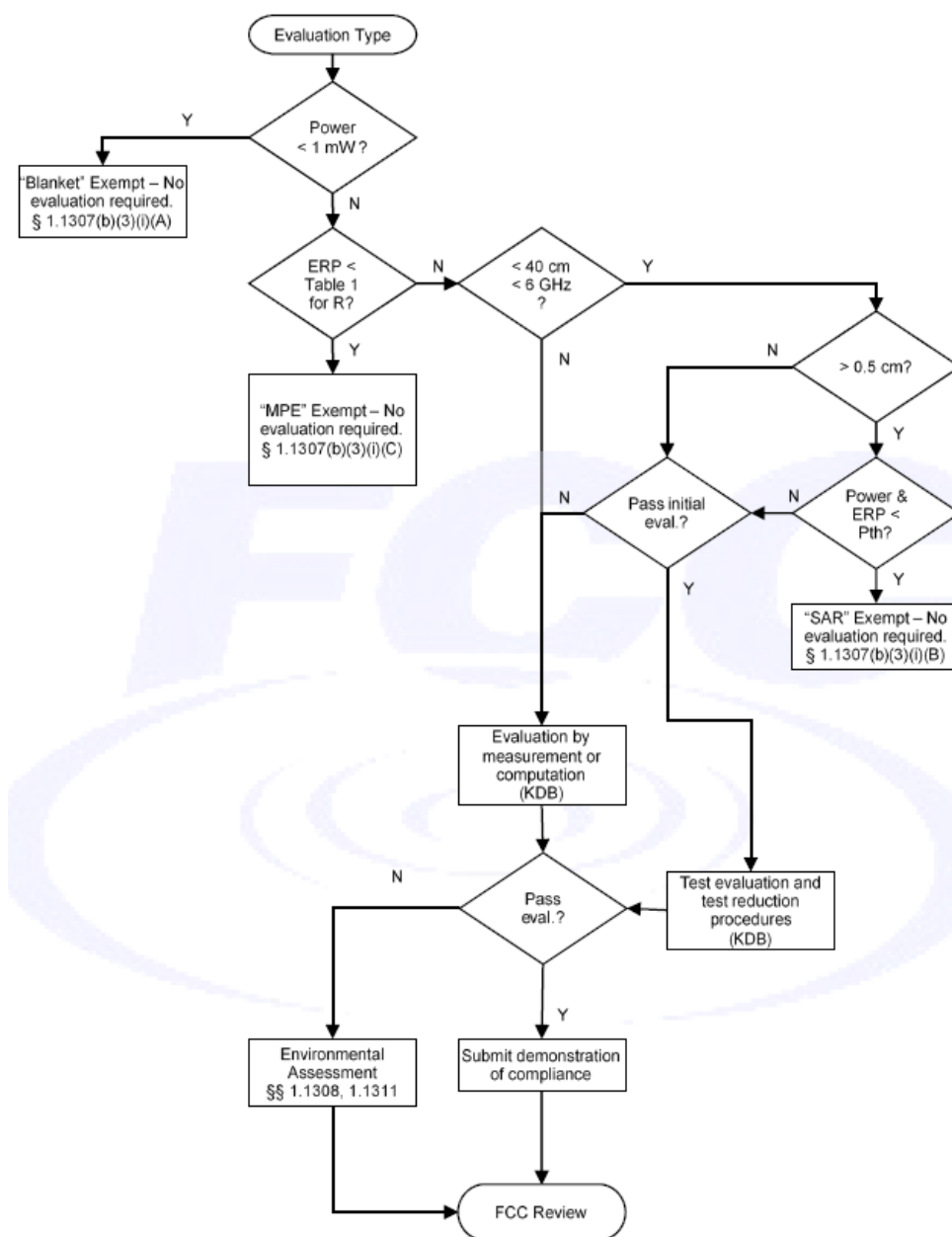
Notes :

1. General Population / Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.
2. Occupational / Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation).
3. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
4. The Spatial Average value of the SAR averaged over the whole body.
5. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

4. Exemption Evaluation

Exemption evaluation was performed according to the appendix A and B in KDB447498 D04.

The General Sequence for Determination of Procedure demonstrated in Figure A.1 of KDB447498 D04 was applied.



5. Maximum Tune-up Power

Operate Band	Frequency (MHz)	ANT 0
LoRa	902 - 928	14.60

6. Test Result

Band	Frequency (MHz)	Distance (cm) [R]	Antenna	Tune-up Power (dBm)	Tune-up Power (mW)	ANT Gain (dBi)	ERP (W)	<§1.1307(b)(3)(i)(C)> Exemption Minimum Distance (m)	<§1.1307(b)(3)(i)(C)> Exemption Threshold ERP (W)	<§1.1307(b)(3)(i)(C)> Exemption considerations	<§1.1307(b)(3)(i)(C)> ERP / ERP _{th}
LoRa	902 - 928	20.00	ANT 0	14.60	28.84	1.00	0.022	0.053	0.033	Qualified	0.66

Note:

This device is qualified for exemption under § 1.1307(b)(3)(i)(C).

7. Conclusion

The result shows that this device is qualified for SAR-Based Exemption in KDB 447498. Therefore, SAR testing is not required.

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