

Radiation Product Certification

DIGITAL MATTER OYSTER_RC1



Approved:

Author	Sign-off Signature #1	Sign-off Signature #2
B.RAY		

Key words :

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**Radiation Product
Certification
DIGITAL MATTER
OYSTER_RC1**

Ref.: QF_223
Rev.:0.5
Date : 23/06/2017

Revision History

Rev.	Date	Change description
0.1	2014 July 1st	First Draft
0.2	2016 October 19 th	New branding
0.3	2016 December 12 th	Update requirement document reference name
0.4	2017 April 5 th	Update classes and EIRP definitions
0.5	2017 April 11 th	Frequency Frame spreading



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1. Introduction

This document shows the DIGITAL MATTER OYSTER_RC1 certification results based on Sigfox Specifications in terms of radiation.

2. Setup

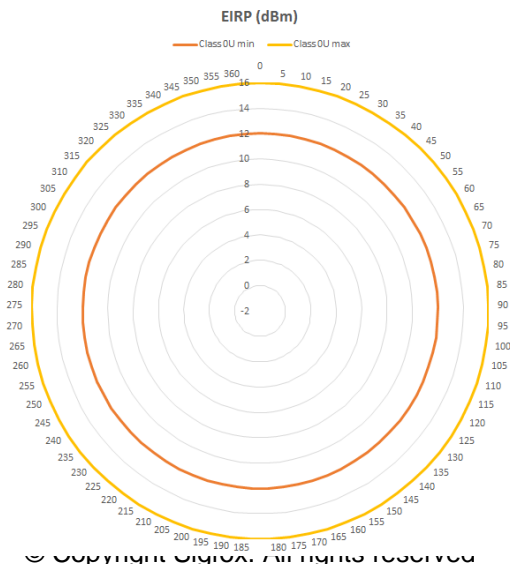
- Company: DIGITAL MATTER
- Product Name: OYSTER_RC1
- Product revision: 1.0
- Product ID (Sigfox ID): 21F65A
- Radio Configuration Zone: RCZ1
- Product S/N: NA
- Product communication mode: Uplink & downlink

3. Effective Radiated power

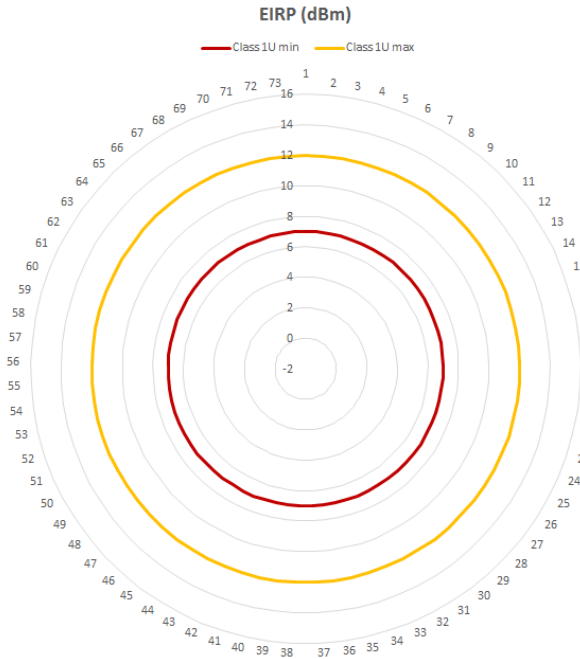
a. Classes of Radiation:

4 Sigfox Radiation classes (0U, 1U, 2U and 3U) have been defined in the “Sigfox Ready™ certification requirements and tests for end products-March 2017” document.

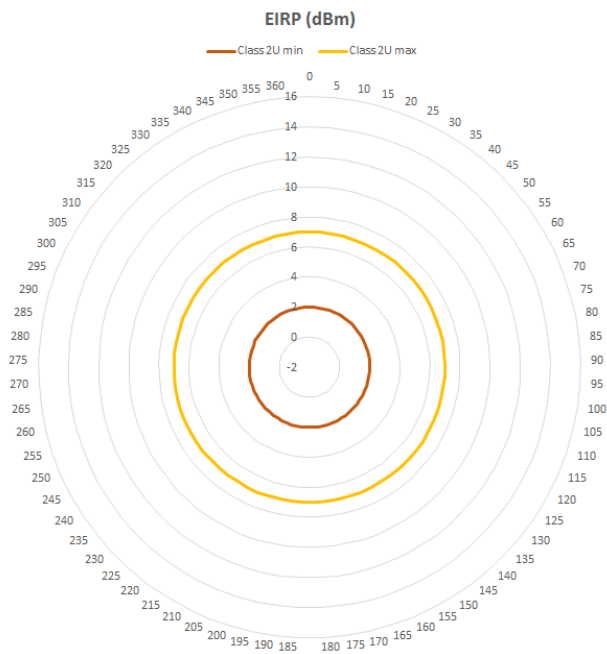
Hereafter is a table summary of each uplink class, with limits defined in **EIRP**, and its dedicated radiated pattern graph for RC1 (Radio Configuration 1).



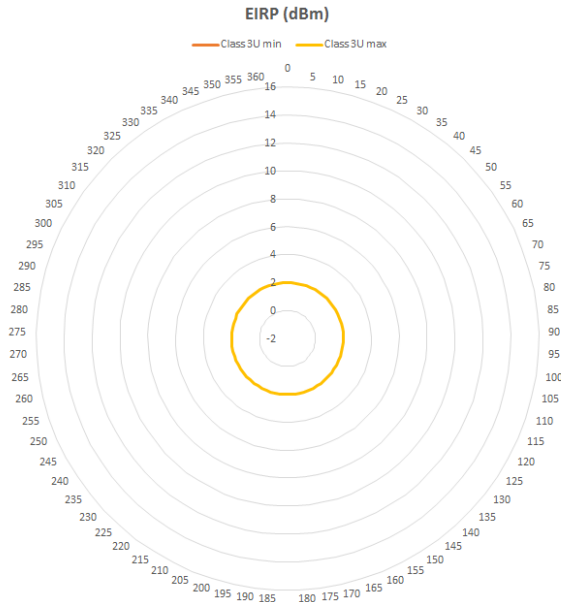
Angle (°)	EIRP (dBm)	
	Class 0U min	Class 0U max
0-360	12	16



EIRP (dBm)		
Angle (°)	Class 1U min	Class 1U max
0-360	7	12



EIRP (dBm)		
Angle (°)	Class 2U min	Class 2U max
0-360	2	7



Angle (°)	EIRP (dBm)	
	Class 3U min	Class 3U max
0-360	-	2

b. Measurement Setup

Measurement setup is described in the laboratory report. This lab was mandated to perform radiated power measurement and radiation pattern.

c. Device Under Test

Measurement results are included in the laboratory report
Test-Report_SIGFOX_21F65A_TW_10061323-001

4. Radiation Conclusion

Following measurements of the device we can establish that the OYSTER_RC1 product is **Sigfox Qualified as Class 0u** because of its maximum radiation value (**EIRP**) measured at **16.07dBm**

Note 1: Installation precautions might be needed to restore the achieved class of the product since the radiation pattern has been measured with environment free of wall, ground or metallic planes.



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Summary :	
Class of the DUT	0u
Frequency Frame Spreading	PASS
Frequency Channel Respect	PASS
Presence of 2 repetitions	PASS

5. Certification ID

Following the previous classification, you can find below the Certification ID you will need to register OYSTER_RC1 products into Sigfox Cloud. The registration of the certificate is **mandatory**.

The Certification ID is composed by:

- 'P' letter to know that is a product
- Unique manufacturer code (4 hex digits)
- Unique product Certification code(4 hex digits)
- Certification revision (2 hex digits)

OYSTER_RC1 Certification ID: P_0089_8D19_01