

Test report No:
NIE: 66768REM.001

Test report

**FCC Rules and Regulations CFR 47, Part 15, Subpart B
(10-1-19 Edition) & ICES-003 Issue 7 (October 2020)**

(*) Identification of item tested	Locker for furniture
(*) Trademark	Ojmar
(*) Model and /or type reference	Model: OTS 033 Type: 30-68
Other identification of the product	HW Version: Combi board Hw1.0 / antenna Hw1.0 SW version: 2.1.5 FCC ID: 2ANY7OJM004 IC: Not provided
(*) Features	Mifare Classic, Mifare Desfire EV1 2K, 4K, 8K, Ultralight, compatible with Ultralight C and technogym
Manufacturer	OJMAR, S.A. Calle Lerun (Pol. Ind. Lerun), S/N. 20870. Elgoibar. Guipúzcoa. Spain.
Test method requested, standard	FCC Rules and Regulations CFR 47, Part 15, Subpart B (10-1-19 Edition) & ICES-003 Issue 7 (October 2020)
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Rafael López Martín EMC Consumer & RF Lab. Manager  RAFAEL LÓPEZ MARTÍN 2021.01.20 08:23:05 +01'00'
Date of issue	2021-01-05
Report template No	FDT08_23 (*) "Data provided by the client"

Index

ACRONYMS3

COMPETENCES AND GUARANTEES3

GENERAL CONDITIONS4

UNCERTAINTY4

DATA PROVIDED BY THE CLIENT4

USAGE OF SAMPLES5

TEST SAMPLE DESCRIPTION6

IDENTIFICATION OF THE CLIENT7

TESTING PERIOD AND PLACE7

DOCUMENT HISTORY7

ENVIRONMENTAL CONDITIONS8

REMARKS AND COMMENTS9

TESTING VERDICTS9

LIST OF EQUIPMENT USED DURING THE TEST9

SUMMARY10

APPENDIX A: TEST RESULTS11

DESCRIPTION OF THE OPERATION MODES13

TEST STANDARDS VERSION APPLIED13

TEST CASES DETAILS14

 RE RADIATED EMISSION.....14

Acronyms

Acronym ID	Acronym Description
Avg	Radiated Average Level
Avg	Conducted Average Level
Az	Azimuth
CPL	Zones / Coupling Cables
Code	EMC Test Code
Freq	Frequency
Freq Rng	Frequency Range
H	Height
Line	Conducted Emissions - Tested Line
MP	Measurement Point
Max	Conducted Maximum Level
MaxPeak	Radiated Maximum Peak Level
OM	Operation Mode
Pol	Polarization
QuasiPeak	Conducted Quasi Peak Level
QuasiPeak	Radiated Quasi Peak Level
S/	Sample
V	Verdict
Volt Immunity Lvl	Voltage Immunity Severity Level
Volt Immunity Type	Voltage Immunity Type

Competences and guarantees

DEKRA Testing and Certification S.A.U. is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 51/LE 147.

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification S.A.U. has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification S.A.U. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification S.A.U. at the time of performance of the test.

DEKRA Testing and Certification S.A.U. is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA Testing and Certification S.A.U.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification S.A.U.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification S.A.U. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Testing and Certification internal document PODT000.

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 30 MHz to 1000 MHz is $I = \pm 4,9$ dB for quasi-peak measurements, $I = \pm 4,6$ dB for peak measurements ($k=2$).

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 1000 MHz to 12.75 GHz is $I = \pm 2,6$ dB for peaks and average measurements ($k=2$).

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested")
2. The sample consists of a Locker for furniture.

DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples undergoing test have been selected by: The client.

Id	Control Number	Description	Model	Serial N°	Date of Reception	Application
S/01	66768_01	Locker for furniture	OTS Advance 033	---	2020-11-20	Element under test

Notes referenced to samples during the project.

Id	Note
S/01	N/A

Test sample description

Ports..... :	Port name and description		Cable				
			Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾	
	N/A						
Supplementary information to the ports..... :	N/A						
Rated power supply	Voltage and Frequency			Reference poles			
				L1	L2	L3	N
		AC:					
	X	DC: Internal batteries: 4x 1,5Vdc					
Rated Power	Not provided data						
Clock frequencies..... :	Not provided data						
Other parameters	Not provided data						
Software version	2.1.5						
Hardware version	Combi board Hw1.0 / antenna Hw1.0						
Dimensions in cm (W x H x D)	Not provided data						
Mounting position		Table top equipment					
		Wall/Ceiling mounted equipment					
		Floor standing equipment					
		Hand-held equipment					
	X	Other: Lock installed in a door					
Modules/parts..... :	Module/parts of test item			Type		Manufacturer	
	N/A						
Accessories (not part of the test item)	Description			Type		Manufacturer	
	N/A						
Documents as provided by the applicant..... :	Description			File name		Issue date	
	N/A						

⁽³⁾ Only for Medical Equipment

Identification of the client

OJMAR, S.A.
Calle Lerun (Pol. Ind. Lerun), S/N.
20870. Elgoibar. Guipúzcoa. Spain.

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2020-11-25
Date (finish)	2020-11-25

Document history

Report number	Date	Description
66768REM.001	2021-01-05	First release

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 75 %

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 75 %

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 35 %

Remarks and comments

The tests have been performed by the technical personnel: Antonio Ruiz.

Testing verdicts

Fail	F
Inconclusive	I
Not applicable	N/A
Not measured	N/M
Pass	P

List of equipment used during the test

Control Number	Description	Model	Manufacturer	Next Calibration
2942	EMI TEST RECEIVER 20Hz-40GHz	ESU40	ROHDE AND SCHWARZ	2021-09-17
5641	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2021-07-31
6064	SEMIANECHOIC ABSORBER LINED CHAMBER III	SAC-3	Frankonia	---
6126	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2021-04-17
6132	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2021-04-20
6329	SHIELDED ROOM	---	FRANKONIA	---

Summary

Test Specification.	Requirement – Test case	Verdict	Remark
FCC CFR 47, Part 15, Subpart B y C (10-1-19 Edition) Secs. 15.107 and 15.207 & ICES-003 Issue 7 (October 2020). ANSI C63.4 (2014)	Radiated emission	Pass	---
FCC CFR 47, Part 15, Subpart B y C (10-1-19 Edition) Secs. 15.107 and 15.207 & ICES-003 Issue 7 (October 2020) ANSI C63.4 (2014)	Conducted emission	N/A	(1)

(1) Equipment powered by internal batteries.

Appendix A: Test results

Appendix A context

DESCRIPTION OF THE OPERATION MODES	13
TEST STANDARDS VERSION APPLIED	13
TEST CASES DETAILS	14
RE RADIATED EMISSION.....	14

Description of the operation modes

The operation modes described in this paragraph constitute a functionality of the sample under test for itself. Every operation mode takes a failure criteria for the immunity test that they were applying to it and a monitoring to guarantee performance of the same ones.

The operation modes used by the samples to which the present report refers, are shown in the following table:

Id	Description
OM_01	EUT ON. NFC in RX mode. Power supply: Internal batteries (4x1,5Vdc)

Test standards version applied

The product standards and test standards applied for each test cases are shown in the following table:

Product Test Standard	Test standard	Requirement – Test case
FCC CFR 47, Part 15, Subpart B y C (10-1-19 Edition) Secs. 15.107 and 15.207 & ICES-003 Issue 7 (October 2020).	ANSI C63.4 (2014)	Radiated emission
FCC CFR 47, Part 15, Subpart B y C (10-1-19 Edition) Secs. 15.107 and 15.207 & ICES-003 Issue 7 (October 2020).	ANSI C63.4 (2014)	Conducted emission

Test Cases Details

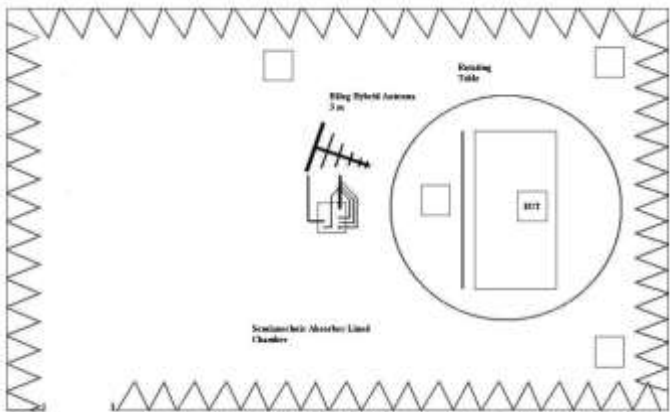
FCC CFR 47, Part 15, Subpart B (10-1-19 Edition), Sec. 15.109 & ICES-003 Issue 7 (October 2020) RE Radiated emission

Limits of interference Class B

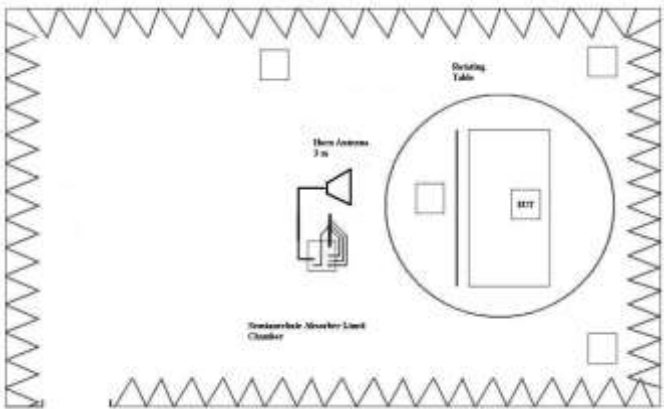
The applied limit for radiated emissions, 3 m distance, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (10-1-19 Edition), Secs. 15.109 & ICES-003 Issue 7 (Updated 10-2020)

Frequency of emission (MHz)	47 CFR Part 15 Field strength (microvolt/meter)	ICES-003 Issue 7 Field strength (dBmicrovolt/meter)
30-88	100	40
88-216	150	43.5
216-230	200	46
230-960	200	47
Above 960	500	54

*Above 1GHz, the limit is defined for an AVG detector.



Setup for measurements < 1GHz.



Setup for measurements > 1GHz.

RESULTS

CRmmnnRR	Description	Result
CR0101LR	Range: 30 MHz - 1000 MHz.	P

mm: Sample number; nn: Operation mode; RR: Measurement range.

*According to FCC 47 CFR Part 15B / ICES-003 Issue 7, only need to measurement to the tenth harmonic. 15.33
Frequency range of radiated measurements, paragraph 2

VERDICT

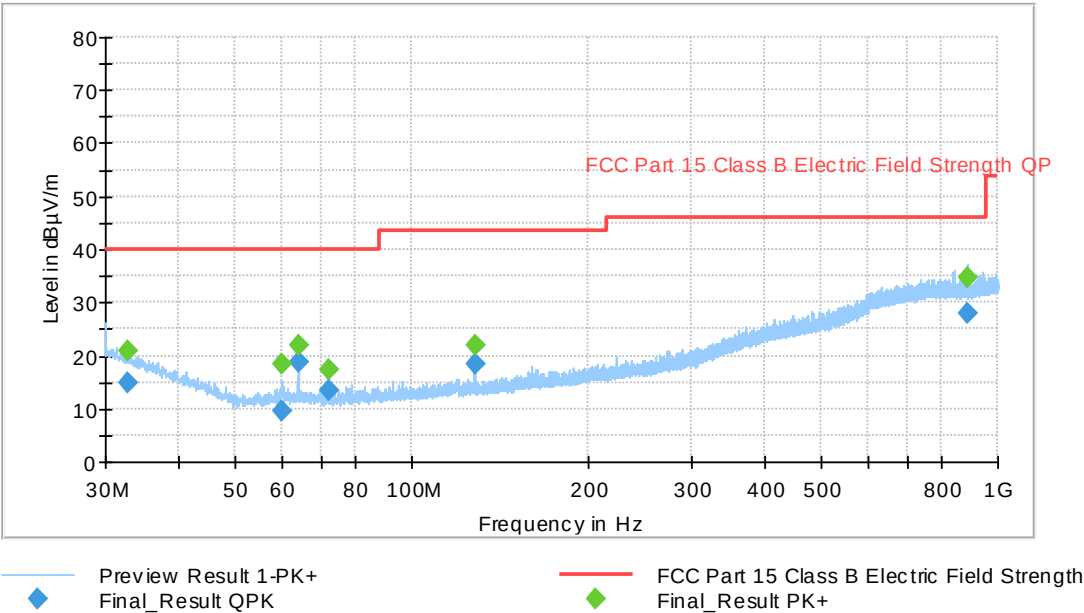
Pass

Images:

Project: 66768REM.001
Company: OJMAR S.A.
Sample: S/01
Operation mode: OM#01
Graphical code: RE0101LR
Description: EUT ON. NFC in RX mode.
Power supply: Internal batteries (4x1,5Vdc).

Verdict: Passed

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
32.789000	14.84	---	40.00	25.16	150.0	V	79.0
32.789000	---	20.81	---	---	150.0	V	79.0
59.982000	---	18.28	---	---	211.0	V	-120.0
59.982000	9.44	---	40.00	30.56	211.0	V	-120.0
64.000000	18.88	---	40.00	21.12	112.0	V	155.0
64.000000	---	22.03	---	---	112.0	V	155.0
72.413000	13.41	---	40.00	26.59	232.0	V	164.0
72.413000	---	17.52	---	---	232.0	V	164.0
128.020000	18.48	---	43.52	25.04	100.0	V	69.0
128.020000	---	21.96	---	---	100.0	V	69.0
886.765000	---	34.57	---	---	158.0	H	136.0
886.765000	27.87	---	46.00	18.13	158.0	H	136.0