REM-EMIESS22Q160SKF-01Av1

This report cancels and replaces the test report N° **REM-EMIESS22Q160SKF-01Av0**

MPE test report

According to the standard:

CFR 47 FCC PART 15

Equipment under test:

CMWA 6100-EX

FCC ID: 2AJ99-CMWA-6100-EX

Company:

SKF FRANCE

Distribution: Mr PINON **(Company:** SKF FRANCE**)**

Number of pages: 8

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval Name and Function	Visa
1	4-Mar-25	See Vertical Lines	M. DUMESNIL, Radio Laboratory Manager	

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S51 RTY 000 EMF 00006 [03]

Product used for BLE tests: Sample 1

DESIGNATION OF PRODUCT:	***CMWA 6100-EB***
Serial number (S/N):	*0013*
Reference / model (P/N):	*CMWA 6100-EX*
Software/firmware version:	*V3.3*

Product used for MIRA tests: Sample 2

DESIGNATION OF PRODUCT:	***SK-2810***
Serial number (S/N):	*01*
Reference / model (P/N):	*CMWA 6100-EX*
Software/firmware version:	*Mira test FW: SVN rev: 3962*

MANUFACTURER: ***SKF FRANCE***

COMPANY SUBMITTING THE PRODUCT:

Company: SKF FRANCE

Address: 204, BOULEVARD CHARLES DE GAULLE
TSA 40208
37542 SAINT-CYR SUR LOIRE CEDEX
FRANCE

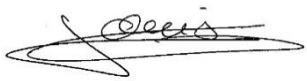
Responsible: Mr PINON

Person present during the tests: Mr PINON

DATES OF TEST: From 6-Feb-23 to 7-Feb-23

TESTING LOCATION: EMITECH ANGERS laboratory at JUIGNE SUR LOIRE (49) FRANCE
FCC Accredited under US-EU MRA Designation Number: FR0009
Test Firm Registration Number: 873677

TESTED BY: S. LOUIS **VISA:**



WRITTEN BY: S. LOUIS

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REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	**28-Feb-23**	/	Creation
1	**15-Oct-24**	1, 2 and 5	Add FCC ID Modification of Model Modification of the BLE / MIRA antenna gain

1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: ***CMWA 6100-EX***, in accordance with normative reference.

The equipment under test integrates:

- BLE transceiver radio part function declared already certified,
- MIRA transceiver radio part function declared already certified, (802.15.4)

These two functions used the same Radio part
This report concerns the two functions.

2. PRODUCT DESCRIPTION

Class:	B
Utilization:	Industrial
Antenna type and gain:	Integrated Antenna (Maximum gain: -1.95 dBi)
Operating frequency range:	From 2400 MHz to 2483.5 MHz

Sample 1: BLE

Number of channel which it can operate: 40
Channel separation: 2 MHz
Nominal Channel bandwidth: 2 MHz
Modulation: GFSK

Nominal Operating Frequencies:

Sample N°= 1 ⇨ 2402 MHz Full tests
Sample N°= 1 ⇨ 2426 MHz Full tests
Sample N°= 1 ⇨ 2480 MHz Full tests

Sample 2: MIRA

Number of channel which it can operate: 80
Channel separation: 1 MHz
Nominal Channel bandwidth: 1 MHz
Modulation: GFSK

Nominal Operating Frequencies:

Sample N°= 2 ⇨ 2401 MHz Full tests
Sample N°= 2 ⇨ 2440 MHz Full tests
Sample N°= 2 ⇨ 2480 MHz Full tests

Power source: 3.6Vdc by battery

Power level, frequency range and channels characteristics are not user adjustable.
The details pictures of the product and the circuit boards are joined with this file.

3. NORMATIVE REFERENCE

The standards and testing methods related throughout this report are those listed below.
They are applied on the whole test report even though the extensions (version, date and amendment) are not repeated.

CFR 47 (2022)	Radio Frequency Devices
ANSI C63.10	2013 Procedures for ComplianceTesting of Unlicensed Wireless Devices.
447498 D01 General RF Exposure Guidance v06	RF Exposure procedures and equipment authorization policies for mobile and portable equipment

4. RF EXPOSURE

Sample N° 1

MPE

Maximum measured power = 88.7 dBµV/m = 0.222 mW at 2402 MHz
with $P = (E \times d)^2 / (30 \times Gp)$ with d = 3 m and Gp = 1

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:

PSD= $EIRP/(4*\pi*R^{2)}$

⇨ $0.222/(4*\pi*(20\ cm)^2)$= **44.24×10^{-6} mW/cm² (limit = 1 mW/cm²)**

The equipment fulfils the requirements on power density for general population/uncontrolled exposure and therefore fulfils the requirements of 47 CFR §1.1310.

Sample N° 2

MPE

Maximum measured power = 89.4 dBµV/m = 0.261 mW at 2401 MHz
with $P = (E \times d)^2 / (30 \times Gp)$ with d = 3 m and Gp = 1

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:

PSD= $EIRP/(4*\pi*R^{2)}$

⇨ $0.261/(4*\pi*(20\ cm)^2)$= **51.98×10^{-6} mW/cm² (limit = 1 mW/cm²)**

The equipment fulfils the requirements on power density for general population/uncontrolled exposure and therefore fulfils the requirements of 47 CFR §1.1310.

□□□ End of report □□□