

EMF TEST REPORT

Test Report No. : OT-245-RWD-002

Reception No. : 2403001012

Applicant : NuriFlex Inc

Address : 2300-10900 NE 4th Suite Bellevue, Washington 98004-5882, USA

Manufacturer : NuriFlex Inc

Address : 2300-10900 NE 4th Suite Bellevue, Washington 98004-5882, USA

Type of Equipment : AMI Wireless Module

FCC ID. : 2BF2ENAMR-P229

Model Name : NAMR-P229SR

Multiple Model Name: N/A

Serial number : N/A

Total page of Report : 7 pages (including this page)

Date of Incoming : March 15, 2024

Date of issue : May 03, 2024

SUMMARY

The equipment complies with the regulation; CFR §2.1093

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

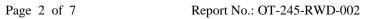
This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.

Tested by

Ha-Ram, Lee / Sr. Engineer ONETECH Corp.

Reviewed by Tae-Ho, Kim / Chief Engineer ONETECH Corp. Approved by Jae-Ho, Lee / Chief Engineer ONETECH Corp.

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Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-245-RWD-002	May 03, 2024	Initial Release	All





1. VERIFICATION OF COMPLIANCE

Applicant : NuriFlex Inc

Address : 2300-10900 NE 4th Suite Bellevue, Washington 98004-5882, USA

Contact Person: Elevas Park / Senior Software Engineer

Telephone No. : +1-201-554-8494

FCC ID : 2BF2ENAMR-P229

Model Name : NAMR-P229SR

Brand Name : NURI, AiMiR

Serial Number : N/A

Date : May 03, 2024

E.U.T. DESCRIPTION	AMI Wireless Module			
THIS REPORT CONCERNS	Original Grant			
MEASUREMENT PROCEDURES	KDB 447498 D01 General RF Exposure Guidance v06			
TYPE OF EQUIPMENT TESTED	Pre-Production			
KIND OF EQUIPMENT				
AUTHORIZATION REQUESTED	Certification			
Modifications on the Equipment to				
Achieve Compliance	None			

^{-.} The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.





2. GENERAL INFORMATION

2.1 Product Description

The NuriFlex Inc, Model NAMR-P229SR (referred to as the EUT in this report) is a AMI Wireless Module. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	AMI Wireless Module
Temperature Range	-40 °C ~ 70 °C
OPERATING FREQUENCY	903.5 MHz ~ 926.5 MHz
MODULATION TYPE	2GFSK
RF OUTPUT POWER	13.92 dBm
ANTENNA TYPE	Whip Antenna
ANTENNA GAIN	-2.247 dBi
List of each Osc. or crystal	
Freq.(Freq. >= 1 MHz)	24 MHz, 40 MHz

2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

3. EUT MODIFICATIONS

-. None



4. MAXIMUM PERMISSIBLE EXPOSURE

4.1 RF Exposure Calculation

According to the FCC rule 1.1310 table 1B, the limit for the maximum permissible RF exposure for an uncontrolled environment are f/1500 mW/cm² for the frequency range between 300 MHz and 1 500 MHz and 1.0 mW/cm² for the frequency range between 1 500 MHz and 100 000 MHz.

The electric field generated for a 1 mW/cm² exposure is calculated as follows:

$$E = \sqrt{(30 * P * G)} / d$$
, and $S = E^2 / Z = E^2 / 377$, because 1 mW/cm² = 10 W/m²

Where

S = Power density in mW/cm², Z = Impedance of free space, 377 Ω

E = Electric filed strength in V/m, G = Numeric antenna gain, and d = distance in meter

Combing equations and rearranging the terms to express the distance as a function of the remaining variable

$$d = \sqrt{(30 * P * G) / (377 * 10 S)}$$

Changing to units of mW and cm, using P(mW) = P(W) / 1000, d(cm) = 0.01 * d(m)

$$d = 0.282 * \sqrt{(P * G) / S}$$

Where

d = distance in cm, P = Power in mW, G = Numeric antenna gain, and S = Power density in mW/cm²

4.2 EUT Description

Kind of EUT	AMI Wireless Module			
	☐ Portable (< 20 cm separation)			
Device Category	☐ Mobile (> 20 cm separation)			
	■ Others			
_	■ MPE			
Exposure	□ SAR			
Evaluation Applied	□ N/A			



4.3 Calculated MPE Safe Distance

According to above equation, the following result was obtained.

Operating Freq. Band (MHz)	Operating Mode	Target Power W/tolerance (dBm)	Max tune up power		Antenna Gain		Safe Distance	Power Density (mW/cm²)	Limit (mW/
			(dBm)	(mW)	Log	Linear	(cm)	@ 20 cm Separation	cm²)
903.5 MHz ~ 926.5 MHz	900 MHz	13.92 ± 1.0	14.92	31.05	-2.247	0.596	1.213	0.003 68	0.602

According to above table, for 903.5 ~ 926.5 MHz Band, safe distance,

$$D = 0.282 * \sqrt{(31.05 * 0.596)/1.00} = 1.213 \text{ cm}.$$

For getting power density at 20 cm separation in above table, following formula was used.

$$S = P * G / (4\pi * R^2) = 31.05 * 0.596 / (4 * \pi * 20^2) = 0.003 68$$

Where:

S = Power Density,

P = Power input to the external antenna (Output power from the EUT antenna port (dBm) - cable loss (dB)),

G = Gain of Transmit Antenna (linear gain), R = Distance from Transmitting Antenna