

# RF Exposure Evaluation Report

Product Name : Motorized Cellular Shade

Model No. : MCS1-A, MCS1-B

FCC ID : Q3V-MCS1

Applicant : NIEN MADE ENTERPRISE CO., LTD.

Address : 23F.-1, No. 98, Shizheng N. 7th Rd., Xitun Dist.,  
Taichung City 407, Taiwan (R.O.C.)

Date of Receipt : Jan. 14, 2022

Date of Declaration : Nov. 21, 2022

Report No. : 2210413R-RFUSMPEV02-A

Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Issued Date: Nov. 21, 2022

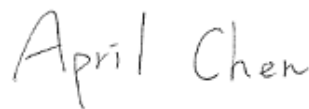
Report No.: 2210413R-RFUSMPEV02-A



Product Name	Motorized Cellular Shade	
Applicant	NIEN MADE ENTERPRISE CO., LTD.	
Address	23F.-1, No. 98, Shizheng N. 7th Rd., Xitun Dist., Taichung City 407, Taiwan (R.O.C.)	
Manufacturer	NIEN MADE ENTERPRISE CO., LTD.	
Model No.	MCS1-A, MCS1-B	
FCC ID	Q3V-MCS1	
Trade Name	NORMAN, BLINDS.COM, AMERICAN BLINDS, VENETA, ACADIA LIVING	
Applicable Standard	KDB 447498 D01 v06	<input type="checkbox"/> Minimum test separation distance $\geq 20$ cm <input checked="" type="checkbox"/> For low power devices
Test Result	Complied	

Documented By

:



(Senior Project Specialist / April Chen)

Tested By

:



(Senior Engineer / Alan Chen)

Approved By

:



(Manager / Tim Sung)

## **Revision History**

Report No.	Version	Description	Issued Date
2210413R-RFUSMPEV02-A	V1.0	Initial issue of report.	Nov. 21, 2022

## 1. GENERAL INFORMATION

### 1.1. EUT Description

Product Name	Motorized Cellular Shade
Trade Name	NORMAN, BLINDS.COM, AMERICAN BLINDS, VENETA, ACADIA LIVING
Model No.	MCS1-A, MCS1-B
FCC ID	Q3V-MCS1
Frequency Range	2415-2459MHz
Channel Number	3
Type of Modulation	GFSK
Antenna Type	PCB Antenna
Channel Control	Auto
Antenna Gain	Refer to the table "Antenna List"

### 1.2. Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	INPAQ	RFPCA310503IMAB302	PCB Antenna	1.18dBi for 2.4GHz

## 2. Test Facility

<b>USA</b>	<b>: FCC Registration Number: TW0033</b>
<b>Canada</b>	<b>: CAB Identifier Number: TW3023 / Company Number: 26930</b>

Site Description : Accredited by TAF  
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd  
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan  
Performed Location : No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C.  
Phone number : +886-3-275-7255  
Fax number : +866-3-327-8031  
Email address : [info.tw@dekra.com](mailto:info.tw@dekra.com)  
Website : <http://www.dekra.com.tw>

### 3. RF Exposure Evaluation

#### 3.1. Standard Applicable

According to KDB 447498 D01 (7.1), A minimum test separation distance  $\geq 20$  cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits.

#### 3.2. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

##### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

R = distance between observation point and center of the radiator in cm

Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq 1.0$

3.3. Test Result of RF Exposure Evaluation

Product : Motorized Cellular Shade  
Test Item : RF Exposure Evaluation

Band	Frequency (MHz)	Peak E.I.R.P Power (dBuV/3m)	Peak E.I.R.P Power (dBm)	Peak E.I.R.P Power (mW)	Power Density at R = 20 cm (mW/cm2)	Limit (mW/cm2)
2.4GHz	2415	91.73	-3.49	0.45	0.0001	1

Note: The conducted output power is refer to report No.: 2210413R-RFUSOTHV06-A from the DEKRA.

Results	PASS
---------	------