TEST REPORT
Title 47 – Telecommunication

Chapter I – Federal Communications Commission

Subchapter A – General

Part 2.1093 – Radiofrequency radiation exposure evaluation: portable devices

Report Reference No.....:	394792TRFEMF	
Tested by (name, function and signature).....:	S. Tessa	(project handler)
Approved by (name, function and signature).....:	P. Barbieri	(verifier)
Date of issue.....:	2021-03-05	
Testing Laboratory.....:	**Nemko Spa**	
Address .....:	Via del Carroccio, 4 – 20853 Biassono (MB) – Italy	
Testing location	Nemko Spa	
Address .....:	Via del Carroccio, 4 – 20853 Biassono (MB) – Italy	
Registration number.....:	682159	
Applicant's name.....:	**CDVI Wireless Spa**	
Address .....:	Via Piave, 23 – 31020 S. Pietro di Feletto (TV) – Italy	
Test specification:		
Standard.....:	FCC CFR 47 Part 2 – Radiofrequency radiation exposure evaluation	
	§2.1091 – Mobile devices	☐
	§2.1093 – Portable devices	☒
Test procedure .....:	Nemko WM L0077, WM L0177 and WM L1002	
Test Report Form No.....:	FCCTRFEMF	
TRF Originator.....:	Nemko Spa	
Master TRF.....:	2019-09	

Nemko Spa, 20853 Biassono (MB), Italy. All rights reserved.

This publication may be reproduced in whole for non-commercial purposes as long as Nemko Spa is acknowledged as copyright owner and source of the material. Nemko Spa takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description .....:	**SRD International Radiators**
Trade Mark .....:	--
Manufacturer .....:	CDVI WIRELESS SPA
Address of manufacturer .....:	Via Piave, 23 – 31020 San Pietro di Feletto (TV) – Italy
Model.....:	SETR128AM2
FCC ID.....:	PWJTM128
Ratings .....:	Battery type CR2032 Lithium

This test report shall not be partially reproduced without the prior written consent of Nemko S.p.A. The phase of sampling of equipment under test is carried out by the customer. Results indicated in this test report refer exclusively to the tested samples and apply to the sample as received. This Test Report, when bearing the Nemko name and logo is only valid when issued by a Nemko laboratory, or by a laboratory having special agreement with Nemko.

Test Report No. :	394792TRFEMF	2021-03-05 Date of issue

Short description of the EuT	Copy of marking plate
The EUT a manually operated four-button radio remote control powered by internal batteries. The EUT uses a unique internal non-detachable antenna.	See photos

Number of tested samples:	1
Serial number:	394792 1/2 (Number assigned by Nemko Spa)
Operating frequency:	433.92 MHz
Accessories and detachable parts included:	The E.U.T. is composed by a single unit
Other options included:	--
Testing	
Date of receipt of test sample:	2020-03-30
Testing commenced on:	2020-04-08
Testing concluded on:	2020-04-10
Possible test case verdicts:	
test case does not apply to the test object:	N (Not applicable)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

Symbols used in this test report

☒ The crossed square indicates that the listed condition or equipment is applicable for this report.

☐ The empty square indicates that the listed condition or equipment is not applicable for this report.

Throughout this report point is used as decimal separator.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

Verdict according to the standards listed at page 5:	**Pass**

PROJECT HISTORY		
Report number	**Modification to the report / comments**	**Date**
394792TRFEMF	First release	2021-03-05
--	--	--
--	--	--
--	--	--
REMARKS		

PRODUCT VARIANTS		
Variant model	**Difference against the main model**	**Test performed**
--	--	--
--	--	--
--	--	--
--	--	--
REMARKS		

Contents

1 TEST STANDARDS 5

2 EQUIPMENT UNDER TEST 5

2.1 POWER SUPPLY SYSTEM UTILISED 5
2.2 EUT OPERATION MODES 5
2.3 EUT CONFIGURATION MODES 5
2.4 INPUT/OUTPUT PORTS 6
2.5 EQUIPMENT USED DURING TEST 6

3 TEST ENVIRONMENT 7

3.1 ADDRESS OF THE TEST LABORATORY 7
3.2 ENVIRONMENTAL CONDITIONS 7
3.3 TEST EQUIPMENT USED FOR THE MONITORING OF THE ENVIRONMENTAL CONDITIONS 7
3.4 STATEMENT OF THE MEASUREMENT UNCERTAINTY 7

4 TEST CONDITIONS AND RESULTS 8

4.1 FCC SAR EXEMPTION PER KDB 447498 8

5 EUT PHOTOS 9

1 TEST STANDARDS

The tests were performed according to following standards and procedures.

NEMKO WM L0177: General routines for using instruments at Nemko

NEMKO WM L1002: Measurement Uncertainty - Policy and Statement

NEMKO WM L0077: General routines to perform EMC tests

FCC CFR 47 Part 2.1091
Radiofrequency radiation exposure evaluation: mobile devices

FCC CFR 47 Part 2.1093
Radiofrequency radiation exposure evaluation: portable devices

KDB 447498 D01 General RF Exposure Guidance v06 (October 23, 2015)

2 EQUIPMENT UNDER TEST

2.1 Power supply system utilised

Power supply voltage:	☐	230V/50 Hz / 1ϕ	☐	115V/60Hz / 1ϕ
	☐	400V/50 Hz 3PE	☐	400V/50 Hz 3NPE
	☒	3 V DC	☐	6 V DC

2.2 EuT operation modes

Mode	Description
1	Continuous TX mode

2.3 EuT configuration modes

The EuT was configured to measure its highest possible radiation level. The test modes selected are according to EuT instruction manual.

Mode	Description
1	The EUT has been tested supplied by its internal batteries

2.4 Input/Output Ports

Port	Name	Type*	Cable Max. >3m	Cable Shielded	Description
0	Enclosure	N/E	—	—	—

*Note:

AC = AC Power Port DC = DC Power Port N/E = Non-Electrical

I/O = Signal/Control Input or Output Port TP = Telecommunication Ports

2.5 Equipment Used During Test

Use*	Product Type	Manufacturer	Model	Comments
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—

Note: * Use

EUT - Equipment Under Test

AE - Auxiliary/Associated Equipment (Not Subjected to Test)

SIM - Simulator (Not Subjected to Test)

3 TEST ENVIRONMENT

3.1 Address of the test laboratory

Nemko Spa
Via del Carroccio, 4
20853 Biassono (MB) – Italy

Tests site/benches are in accordance with applicable standard/s, and have been utilized by Nemko Spa testing engineer(s).

3.2 Environmental conditions

Unless different values are declared in the test case, following ambient conditions apply for the tests:

Ambient temperature:	18÷33 °C
Relative Humidity:	30÷60 %
Atmospheric pressure:	980÷1060 hPa

3.3 Test equipment used for the monitoring of the environmental conditions

Equipment	Manufacturer	Model	Serial N°
Thermohygrometer data loggers	Testo	175-H2	20012380/305
Thermohygrometer data loggers	Testo	175-H2	38203337/703
Barometer	Castle	GPB 3300	072015

3.4 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16-4-2 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the Nemko Spa Technical Procedure WML1002. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device. Hereafter the best measurement capability for Nemko Spa laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
EMF	Lighting Equipment	26%	(1)
	Other Equipment	20%	

NOTES:
(1) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$ which has been derived from the assumed normal probability distribution with infinite degrees of freedom and for a coverage probability of 95 %.

4 TEST CONDITIONS AND RESULTS

4.1 FCC SAR Exemption per KDB 447498

Declaration of RF exposure compliance for exemption from routine evaluation limits

During normal operation, user extremities can come within 20 cm of the internal antenna and therefore product is considered as “Portable”.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at Test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW) ÷ (min. test separation distance, mm)] × [$\sqrt{F(GHz)}$] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- F(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to section 4.1(f) is applied to determine SAR test exclusion

Calculation based on the above formula (for the max measured power value see test report no 394792-1TRFWL issued by Nemko S.p.A. the 2021-03-04):

Separation Distance = 5 mm

Max Power = -35.9 dBm = 0.01 mW

Frequency = 0.43392 GHz

Calculation = $(1 \div 5) \times \sqrt{0.43392}$ = 0.14 < 3

The calculation is below the threshold, therefore the product exempt from the SAR test requirements

5 EUT PHOTOS

End of report