RF EXPOSURE REPORT



Report No.: 18070697-FCC-R
Supersede Report No.: N/A

Applicant	CAAVO Inc		
Product Name	Remote control		
Model No.	W4-R1-100)	
Serial No.	N/A		
Test Standard	FCC 2.109	93	
Test Date	July 16 to J	luly 23, 2018	
Issue Date	July 23, 20	18	
Test Result	Pass	Fail	
Equipment complied with the specification			
Equipment did not comply with the specification			
Jaron Liang		David Huang	
Aaron Liang		David Huang	
Test Engineer		Checked By	

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Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety



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1. Report Revision History

Report No.	Report Version	Description	Issue Date
18070697-FCC-R	NONE	Original	July 23, 2018

2. Customer information

Applicant Name	CAAVO Inc
Applicant Add	1525,McCarthy Blvd, #1182, Milpitas, CA 95035
Manufacturer	Remotesolution
Manufacturer Add	326-14,Apo-daero, Nam-myeon, Gimcheon-si, Gyeongsangbuk-do, Korea 39662

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China
	518108
FCC Test Site No.	535293
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0



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4. Equipment under Test (EUT) Information

4. Equipment under 1	est (EUT) Information
Description of EUT:	Remote control
Main Model:	W4-R1-100
Serial Model:	N/A
Date EUT received:	July 15, 2018
Test Date(s):	July 16 to July 23, 2018
Antenna Gain:	BLE: -2.2dBi
Antenna Type:	Dielectric Chip Antenna
Type of Modulation:	BLE: GFSK
RF Operating Frequency (ies):	BLE: 2402-2480 MHz
Number of Channels:	BLE: 40CH
Port:	Please refer to the user's manual
Input Power:	Battery: Spec: DC 3.0V(2*1.5AAA)
Trade Name :	CAAVO W4RC
FCC ID:	2AMB8-W4RC



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5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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)] $\cdot [\sqrt{f_{(GHz)}}] \le 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, 16 where

- f_(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- 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 is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result = $P\sqrt{F}/D$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



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5.2 Test Result

BLE Mode:

Modulation	СН	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	-3.143	-2.5±1	-1.5	0.708	0.22	3
	Mid	2440	-3.019	-2.5±1	-1.5	0.708	0.22	3
	High	2480	-3.016	-2.5±1	-1.5	0.708	0.22	3

Result: Compliance

No SAR measurement is required.