



Test Report No.: FM2303WDG0160





# RF EXPOSURE REPORT

Applicant	DOUBLEEAGLE INDUSTRY (CHINA)LIMITED
Address	XINGDA INDUSTRIAL PARK, CHENGHAI, SHANTOU CITY, GUANGDONG PROVINCE, CHINA

Manufacturer or Supplier	DOUBLEEAGLE INDUSTRY (CHINA)LIMITED
Address	XINGDA INDUSTRIAL PARK, CHENGHAI, SHANTOU CITY, GUANGDONG PROVINCE, CHINA
Product	BUILDING BLOCK SERIES
Brand Name	N/A
Model	C61042W
Additional Models & Model Difference	C31009W, C31010W, C31021W, etc.; see item 1
Date of tests	Mar. 22, 2023 ~ Jun. 03, 2023

- FCC Part 2 (Section 2.1093)
- KDB 447498 D01 v06
- IEEE C95.1

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Loren Luo Project Engineer / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	  Date: Jun. 19, 2023

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2303WDG0160	Original release	Jun. 19, 2023

**Bureau Veritas Shenzhen Co., Ltd.**  
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# 1. CERTIFICATION

<b>FCC ID:</b>	2AAFASY-C61042W-06
<b>PRODUCT:</b>	BUILDING BLOCK SERIES
<b>BRAND NAME:</b>	N/A
<b>MODEL NO.:</b>	C61042W
<b>ADDITIONAL NO.:</b>	C31009W, C31010W, C31021W, C31022W, C31023W, C31024W, C31025W, C61001W, C61002W, C61003W, C61004W, C61005W, C61006W, C61007W, C61008W, C61009W, C61010W, C61011W, C61012W, C61013W, C61014W, C61015W, C61016W, C61017W, C61018W, C61019W, C61020W, C61021W, C61022W, C61023W, C61024W, C61025W, C61026W, C61027W, C61028W, C61029W, C61030W, C61031W, C61032W, C61033W, C61034W, C61035W, C61036W, C61037W, C61038W, C61039W, C61040W, C61041W, C61043W, C61045W, C61049W, C61050W, C61051W, C61071W, C61081W, C66001W, C71001W, C71002W, C71003W, C71004W, C71005W, C71006W, C71007W, C71008W, C71009W, C71010W, C71012W, C81001W, C81002W, C81003W, C81004W, C81005W, C81006W, C81007W, C81008W, C81009W, C81010W, C81011W, C81012W
<b>APPLICANT:</b>	DOUBLEEAGLE INDUSTRY (CHINA)LIMITED
<b>STANDARDS:</b>	FCC Part 2 (Section 2.1093)
	KDB 447498 D01 v06
	IEEE C95.1

## 2. RF EXPOSURE DEFINE

The corresponding SAR Exclusion Threshold condition, listed below:

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

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, 16 where

- $f(\text{GHz})$  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  $\leq 50$  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.

- 2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following:
- a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100MHz to 1500 MHz
  - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at  $> 1500$  MHz and  $\leq 6$  GHz
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
- a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm.
  - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm.
  - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

## 3. CLASSIFICATION

The antenna of this product, under normal use condition, is at less than 20cm away from the body of the user. So, this device is classified as **Portable Device**.

## 4. SAR TEST EXCLUSION THRESHOLDS

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
TX	2405-2475	-17	+2	-19	-15

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBuV/m)	Averaged Power (dBm)
TX	2475	78.48	-16.75

Note:

$$E = \frac{\sqrt{30 PG}}{d}$$

E = Electric field strength in v/m

$$V/m = 10^{(dBuV/m - 120)/20}$$

P = Power in Watts

G = Antenna gain in dBi

d = Measurement distance in metres

Power  $\approx$  0.021141 (mW)

$$dBm = 10 * \log_{10}(0.021141) \approx -16.75(dBm)$$

### SAR Test Exclusion Thresholds

Frequency (MHz)	Maximum source-based time averaged conducted output power (dBm)	Minimum separation distance (mm)	Result of Eq. 1	Limit for 1-g SAR	Limit for 10-g extremity SAR	Verdict
2426-2474	-15	5	0.00995	3.0	7.5	Exempt from SAR

### Conclusion

Therefore this device complies with FCC's RF radiation exposure limits for general population without SAR evaluation.