

#### Shenzhen Huaxia Testing Technology Co., Ltd

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# **RF Exposure Evaluation Report**

Report No.: CQASZ20180400015E-04

Applicant: Weccan Industrial Ltd

Address of Applicant: Room209, 2/F, Building W1-A, No.34 Gaoxin South 4th Street, Hi-tech Industrial

Park, Nanshan District, Shenzhen, China

Manufacturer: Weccan Industrial Ltd

Address of Room209, 2/F, Building W1-A, No.34 Gaoxin South 4th Street, Hi-tech Industrial

Manufacturer: Park, Nanshan District, Shenzhen, China

Factory: DongGuan Adoree Industrial Limited

Address of Factory: Building 10, Fuxing Industrial Area, Fucing Road, Xiagang Village, Changan

Town, Dongguang City, Guangdong Province China.

**Equipment Under Test (EUT):** 

**Product:** 2.4 G RC Drone With WIFI Camera

Model No.: DRW328

Adding Model No.: Please see Page 5

Brand Name: N/A

 FCC ID:
 Z3CDRW328F33

 Standards:
 47 CFR Part 1.1307

47 CFR Part 2.1093

KDB447498D01 General RF Exposure Guidance v06

**Date of Test:** 2018-04-20 to 2018-04-27

**Date of Issue:** 2018-04-27

Test Result : PASS\*

Tested By:

(Aaron Ma)

Reviewed By: Wen Zhou

Owen Zhou)

Approved By:

( Jack Ai)



<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.



### **Shenzhen Huaxia Testing Technology Co., Ltd**

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# 2 Version

### **Revision History Of Report**

Report No.	Version	Description	Issue Date
CQASZ20180400015E-04	Rev.01	Initial report	2018-04-27





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# 4 General Information

### 4.1 Client Information

Applicant:	Weccan Industrial Limited	
Address of Applicant:	Rm209,2/F,Building W1-A, No.34 Gaoxin South 4th Street, Hi-Tech Industrial Park, Nanshan District, Shenzhen City,China	
Manufacturer:	Weccan Industrial Limited	
Address of Manufacturer:	Rm209,2/F,Building W1-A, No.34 Gaoxin South 4th Street, Hi-Tech Industrial Park, Nanshan District, Shenzhen City,China	
Factory:	Dongguan Adoree Industrial Limited	
Address of Factory:	Address of Factory:  Building 10, Fuxing Industrial Area, Fuxing Road, Xiagang Village, Changan Town, Dongguang City, Guangdong Province, China	

# 4.2 General Description of EUT

Product Name:	2.4 G RC Drone With WIFI Camera	
Model No.:	DRW328	
Adding Model No.:	SG-F33, SG-F1, SG-F2, SG-F3, SG-F4, SG-F5, SG-F6, SG-F7, SG-F8, SG-F9, SG-F10, SG-F11, SG-F12, SG-F13, SG-F14, SG-F15, SG-F16, SG-F17, SG-F18, SG-F19, SG-F19, SG-F20, SG-F21, SG-F22, SG-F23, SG-F24, SG-F25, SG-F26, SG-F27, SG-F28, SG-F29, SG-F30, SG-F31, SG-F32, SG-F34, SG-F35, SG-F36, SG-F37, SG-F38, SG-F39, SG-F40, SG-F41, SG-F42, SG-F43, SG-F44, SG-F45, SG-F46, SG-F47, SG-F48, SG-F49, SG-F50, SG-F51, SG-F52, SG-F53, SG-F54, SG-F55, SG-F56, SG-F57, SG-F58, SG-F59, SG-F60, SG-F61, SG-F62, SG-F63, SG-F64, SG-F65, SG-F66, SG-F67, SG-F68, SG-F69, SG-F70, SG-F71, SG-F72, SG-F73, SG-F74, SG-F75, SG-F76, SG-F77, SG-F78, SG-F79, SG-F80, SG-F81, SG-F82, SG-F83, SG-F84, SG-F85, SG-F86, SG-F87, SG-F88, SG-F89, SG-F90, SG-F91, SG-F92, SG-F93, SG-F94, SG-F95, SG-F96, SG-F97, SG-F98, SG-F99, SG-F99, SG-F90,	
Trade Mark :	N/A	
Hardware Version:	V1.0	
Software Version:	V1.0	
Frequency Range:	2424 MHz ~ 2480MHz	
Modulation Type:	GFSK	
Number of Channels:	57 (declared by the client)	
Sample Type:	Portable production	
Test Software of EUT:	RF test (manufacturer declare )	
Antenna Type:	Integral antenna	
Antenna Gain:	1.3dBi	
Power Supply:	4 x AAA battery, DC6V	

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### 5 SAR Evaluation

### **5.1** RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### **5.1.2 Limits**

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  $\le 7.5$  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<sup>17</sup>

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

#### 5.1.3 EUT RF Exposure

eirp = pt x gt =  $(E \times d)^2/30$ 

where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

 $E = electric field strength in V/m, ---10^{((dB\mu V/m)/20)}/10^6$ ,

d = measurement distance in meters (m)---3m,

So pt =  $(E \times d)^2/30 / gt$ 

The worst case (refer to report CQASZ20180400015E-03) is below:

For 2.4G wireless:

Field strength = 93.58dBµV/m @3m

Ant. gain 1.3dBi; so Ant numeric gain=1.35

So pt= $\{[10^{(93.58/20)}/10^6x3]^2/30/1.35\}x1000mW = 0.507mW$ 

So  $(0.507 \text{mW/5mm})x \sqrt{2.480 \text{GHz}} = 0.16$ ,

0.16<3.0 for 1-g SAR

So the SAR report is not required.