TEST REPORT NUMBER: (8524)138-0378(C)

TEST REPORT

Applicant:	GUANGDONG SYMA MODEL AIRCRAFT INDUSTRIAL CO.,LTD	Fax:	---
		E-mail:	---
Address :	NO.2 West Xingye Road Laimei Industrial Area Chenghai Shantou Guangdong China		
Test Date :	2024-5-21 to 2024-6-11		

Manufacturer or Supplier :	GUANGDONG SYMA MODEL AIRCRAFT INDUSTRIAL CO.,LTD
Address :	NO.2 West Xingye Road Laimei Industrial Area Chenghai Shantou Guangdong China
Sample Description:	DRONE
Model number:	Z3PRO
Additional Model :	Z3
FCC ID :	QV7-GC88752-101
Rated Voltage:	TX: DC6V (4*1.5V LR6 AA batteries) RX: lithium battery:3.7V 1500mAh, by DC5V form adapter
The submitted sample of the above equipment has been tested according to following standard(s)	
47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06	
CONCLUSION: The submitted sample was found to COMPLY with the test requirement.	

Assistant Manager

Name: Nick Lung

Date: JUN 24,2024

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1 Contents

2 General Information

2.1 Client Information

Applicant:	GUANGDONG SYMA MODEL AIRCRAFT INDUSTRIAL CO.,LTD
Address of Applicant:	NO.2 West Xingye Road Laimei Industrial Area Chenghai Shantou Guangdong China
Manufacturer:	GUANGDONG SYMA MODEL AIRCRAFT INDUSTRIAL CO.,LTD
Address of Manufacturer:	NO.2 West Xingye Road Laimei Industrial Area Chenghai Shantou Guangdong China

2.2 General Description of EUT

Product Name:	DRONE
Test Model No.:	Z3PRO
Trade Mark:	N/A
Software Version:	V1.0
Hardware Version:	ITM1058L-Z V2.0
EUT Power Supply:	TX: DC6V (4*1.5V LR6 AA batteries) RX: lithium battery:3.7V 1500mAh, by DC5V form adapter

2.3 General Description of 2.4G WIFI Classic

Operation Frequency:	2412MHz~2462MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channel:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Transfer Rate:	IEEE for 802.11b: 1Mbps/2Mbps/5.5Mbps/11Mbps IEEE for 802.11g : 6Mbps/9Mbps/12Mbps/18Mbps/24Mbps/36Mbps/48Mbps/54Mbps IEEE for 802.11n(HT20) : 6.5Mbps/13Mbps/19.5Mbps/26Mbps/39Mbps/52Mbps/58.5Mbps/65Mbps
Sample Type:	☒ Mobile ☐ Portable
Antenna Type:	Line antenna
Antenna Gain:	2dBi

Note：

The above parameters will directly affect the test results. The information is provided by the applicant.

3 MPE Evaluation

3.1 RF Exposure Compliance Requirement

3.1.1 Limits

The table applies to any RF source (i.e., single fixed, mobile, and portable transmitters) and specifies power and distance criteria for each of the five frequency ranges used for the MPE limits. These criteria apply at separation distances from any part of the radiating structure of at least $\lambda/2\pi$. The thresholds are based on the general population MPE limits with a single perfect reflection, outside of the reactive near-field, and in the main beam of the radiator.For mobile devices that are not exempt per Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP20cm inFormula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave Dipole.

SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

3.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3.1.3 EUT RF Exposure

For 2.4G WIFI Classic

Measurement Data

11B mode							
Test channel	Conducted AV Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
						(dBm)	(mW)
Lowest(2412 MHz)	-4.76	2	-2.76	-4.91	-5.0±1	-4.0	0.40
Middle(2437 MHz)	-5.35	2	-3.35	-5.50	-5.5±1	-4.5	0.35
Highest(2462MHz)	-4.09	2	-2.09	-4.24	-4.5±1	-3.5	0.45
11G mode							
Test channel	Conducted AV Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
						(dBm)	(mW)
Lowest(2412 MHz)	-9.91	2	-7.91	-10.06	-10.0±1	-9.0	0.13
Middle(2437 MHz)	-10.1	2	-8.10	-10.25	-10.5±1	-9.5	0.11
Highest(2462MHz)	-8.73	2	-6.73	-8.88	-8.5±1	-7.5	0.18

11N20 mode							
Test channel	Conducted AV Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
						(dBm)	(mW)
Lowest(2412 MHz)	-10.37	2	-8.37	-10.52	-10.5±1	-9.5	0.11
Middle(2437 MHz)	-10.51	2	-8.51	-10.66	-10.5±1	-9.5	0.11
Highest(2462MHz)	-9.07	2	-7.07	-9.22	-9.5±1	-8.5	0.14

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. (8524)129-0789(A) for EUT test Max Conducted AV Output Power value.
2) EUT's module is more than 20cm away from the human body.

*** END OF REPORT ***