



Test Report No.: FM200612N047

RF EXPOSURE REPORT

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

Manufacturer or Supplier	GUANGDONG SYMA MODEL AIRCRAFT INDUSTRIAL CO., LTD
Address	NO.2 West Xingye Road Laimei Industrial Area Chenghai Shantou Guangdong China
Product	DRONE
Brand Name	Syma
Model	X30
Additional Model & Model Difference	X500, P0220, X300, X400, S100, S200, W1PRO, T0521
Date of tests	Sep. 28, 2020~ Dec. 02, 2020

- FCC Part 2 (Section 2.1091)
- KDB 447498 D01
- IEEE C95.1

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

Tested by Evans He Project Engineer / EMC Department	Approved by David Huang Supervisor / EMC Department
<i>Evans He</i>	<i>David Huang</i>
	Date: Dec. 04, 2020

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM200612N047	Original release	Dec. 04, 2020

Bureau Veritas Shenzhen Co., Ltd.
Dongguan Branch

No. 96, Guantai Road (Houjie Section), Houjie
Town, Dongguan City, Guangdong Province.
523942. People's Republic of China.

Tel: +86 769 8998 2098
Fax: +86 769 8593 1080
Email: customerservice.dg@cn.bureauveritas.com



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1. CERTIFICATION

PRODUCT: DRONE

BRAND NAME: Syma

MODEL NO.: X30

ADDITIONAL MODEL: X500, P0220, X300, X400, S100, S200, W1PRO, T0521

FCC ID: QV7-GC88752-48

TEST SAMPLE: ENGINEERING SAMPLE

APPLICANT: GUANGDONG SYMA MODEL AIRCRAFT INDUSTRIAL CO., LTD

TESTED DATES: Sep. 28, 2020~ Dec. 02, 2020

STANDARDS: FCC Part 2 (Section 2.1091)
KDB 447498 D01
IEEE C95.1



2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$Pd = (Pout * G) / (4 * pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

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

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Frequency Band	Antenna Gain (dBi)	Antenna Type
Wi-Fi 2.4GHz	2	External Antenna
Wi-Fi 5GHz (5180MHz)	2	External Antenna
Wi-Fi 5GHz (5745MHz)	2	External Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
802.11b	2417MHz	14	+2	12	16
802.11g	2417MHz	14	+2	12	16
802.11n HT20	2417MHz	14	+2	12	16
Wi-Fi 5GHz(Band1)	5180MHz	13	+2	11	15
Wi-Fi 5GHz(Band4)	5745MHz	12	+2	10	14

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
802.11b	2417	13.97
802.11g	2417	14.41
802.11n HT20	2417	14.43
Wi-Fi 5GHz(Band1)	5180	12.7
Wi-Fi 5GHz(Band4)	5745	11.7



FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
Wi-Fi 2.4GHz	16	2	20	0.01255	1.0
Wi-Fi 5GHz	15	2	20	0.00997	1.0

CONCLUSION:

The WLAN 2.4GHz and 5GHz can not transmit simultaneously.