

RF Exposure Evaluation Report

Product : Astronomy Camera
Trade mark : SVBONY
Model/Type reference : SC001
Serial Number : N/A
Report Number : EED32O80230802
FCC ID : 2A3NOSC001
Date of Issue : Apr. 13, 2022
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Test result : PASS

Prepared for:

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2 Version

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4 General Information

4.1 Client Information

Applicant:	ZHENGZHOU YSAIR TECHNOLOGY CO.,LTD
Address of Applicant:	ROOM 709, SANJIANG BUILDING, NO.170 NANYANG ROAD, HUIJI DISTRICT, ZHENGZHOU HENAN, CHINA
Manufacturer:	ZHENGZHOU YSAIR TECHNOLOGY CO.,LTD
Address of Manufacturer:	ROOM 709, SANJIANG BUILDING, NO.170 NANYANG ROAD, HUIJI DISTRICT, ZHENGZHOU HENAN, CHINA
Factory:	Hong Kong Svbon Technology Co.,Ltd
Address of Factory:	Unit B, 5th Floor, Gallo Commercial Building, 114-118 Lockhart Road, Wanchai, Hong Kong

4.2 General Description of EUT

Product Name:	Astronomy Camera
Model/Type reference:	SC001
Test Model No:	SC001
Trade mark:	SVBONY

4.3 Product Specification subjective to this standard

Frequency Range:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20&HT40): OFDM (64QAM, 16QAM,QPSK,BPSK)
Test Power Grade:	Default
Test Software of EUT:	SecureCRT
Antenna Type:	External Antenna
Antenna Gain:	2.5dBi
Function :	☒ SISO ☐ 2x2 MIMO ☐ 3x3 MIMO ☐ 4x4MIMO
Power Supply:	Lithium battery: DC 3.7V USB Port DC 5.0V
Max Conducted Peak Output Power:	2.4G WIFI:13.82dBm The Max Conducted Peak Output Power data refer to the report EED32O80230801.
Sample Received Date:	Feb. 23, 2022
Sample tested Date:	Feb. 23, 2022 to Mar. 31, 2022
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d (m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

2.4G WIFI:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
1	2412	24.099	1.778	20	0.0085	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32O80230801 for EUT external and internal photos.

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 CTI, this report can't be reproduced except in full.

*** End of Report ***