

Test Report No.:
RZCE2021-0124-H

RF Test Report

EUT : module
MODEL : YGC-C302
BRAND NAME : N/A
CLIENT : HANGZHOU YAGUAN
TECHNOLOGY CO.,LTD
Classification Of Test : Commission Test

Vkan Certification & Testing Co., Ltd.



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Client		Name :HANGZHOU YAGUAN TECHNOLOGY CO.,LTD Address :33rd Floor, T4 US Center, European and American Financial City, Yuhang District, Hangzhou, Zhejiang, China	
Manufacturer		Name :Shenzhen SiboZhilian Technology Co., Ltd Address :903, building8, Chuangxin Valley, Dashi 2nd Road, Nanshan District, Shenzhen	
Equipment Under Test		Name :module Model/Type:YGC-C302 Trade mark :N/A SerialNO.:N/A Sampe NO.:1-1	
Date of Receipt.	2021.02.24	Date of Testing	2021.02.24~2021.03.11
Test Specification		Test Result	
FCC Part 2 (Section 2.1091) KDB 447498 D01 IEEE C95.1		PASS	
Evaluation of Test Result		The equipment under test was found to comply with the requirements of the standards applied. Issue Date: 2021.03.11	
Tested by: Robert Cheng_____ Name Signature		Reviewed by: Andy Zhu_____ Name Signature	Approved by: Sam Tung_____ Name Signature
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			
This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.			



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RZCE2021-0124-H	Original release	2021.03.11



1. GERTIFICATION

FCC ID	2AYYQ-YGC-C302
PRODUCT	module
BRAND	N/A
MODEL	YGC-C302
ADDITIONAL MODEL	N/A
APPLICANT	HANGZHOU YAGUAN TECHNOLOGY CO.,LTD
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

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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	PCB Antenna
BT-LE(GFSK)	2	PCB Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED AV 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	2412-2462MHz	13	+2	11	15
802.11g	2412-2462MHz	14	+2	12	16
802.11n HT20	2412-2462MHz	14	+2	12	16
BT-LE (GFSK)	2402-2480MHz	6	+2	4	8

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
BT-LE (GFSK)	2480	6.44
802.11b	2437	12.82
802.11g	2437	14.60
802.11n HT20	2437	14.42



FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
Wi-Fi 2.4GHz	39.811	2	20	0.012552	1.0
BT-LE (GFSK)	6.310	2	20	0.001989	1.0

CONCLUSION:

The BT and WLAN can transmit simultaneously, the formula of calculated the MPE is:

$$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

$$(0.012552/1) + (0.001989/1) = 0.014541 < 1, \text{ which is less than the "1" limit.}$$



Important

- (1) The test report is valid with the official seal of the laboratory and the signatures of Test engineer, Author and Reviewer simultaneously.
- (2) The test report is invalid if altered.
- (3) Any photocopies or part photocopies in the test report are forbidden without the written permission from the laboratory.
- (4) Objections to the test report must be submitted to the laboratory within 15 days.
- (5) Generally, commission test is responsible for the tested samples only.

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