

FCC RF EXPOSURE REPORT

For

WIFI+BT Module

MODEL NUMBER: WCT54M2001

FCC ID:2AC23-WCT54

REPORT NUMBER: 4788997152-5

ISSUE DATE: July 03, 2019

Prepared for

Hui Zhou Gaoshengda Technology Co.,LTD NO.75 Zhongkai Development Area Huizhou, Guangdong China

Prepared by

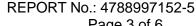
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1. ATTESTATION OF TEST RESULTS

Applicant Informati	OI	n
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Company Name: Hui Zhou Gaoshengda Technology Co.,LTD

NO.75 Zhongkai Development Area Huizhou, Guangdong China Address:

Manufacturer Information

Company Name: Hui Zhou Gaoshengda Technology Co.,LTD

Address: NO.75 Zhongkai Development Area Huizhou, Guangdong China

EUT Information

EUT Name: WIFI+BT Module Model: WCT54M2001

Sample Status: Normal **Brand Name: GSD**

Sample Received Date: May 7, 2019

Date of Tested: May 10, 2019 ~ June 17, 2019

APPLICABLE STANDARDS

STANDARD

TEST RESULTS

FCC 47CFR§2.1091 KDB-447498 D01 V06 PASS

Prepared By:

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Engineer Project Associate

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Shawn Wen

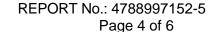
Laboratory Leader

hemy les

Approved By:

Stephen Guo

Laboratory Manager





2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 447498 D01 General RF Exposure Guidance v06.

3. FACILITIES AND ACCREDITATION

3. FACILITIES AND ACCREDITATION						
	A2LA (Certificate No.: 4102.01)					
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.					
	has been assessed and proved to be in compliance with A2LA.					
	FCC (FCC Designation No.: CN1187)					
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.					
	Has been recognized to perform compliance testing on equipment subject					
	to the Commission's Delcaration of Conformity (DoC) and Certification					
	rules					
Accreditation	ISED(Company No.: 21320)					
Certificate	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.					
	has been registered and fully described in a report filed with					
	Industry Canada. The Company Number is 21320.					
	VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)					
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.					
	has been assessed and proved to be in compliance with VCCI, the					
	Membership No. is 3793.					
	Facility Name:					
	Chamber D, the VCCI registration No. is G-20019 and R-20004					
	Shielding Room B, the VCCI registration No. is C-20012 and T-20011					

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.



4. REQUIREMENT

LIMIT

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure							
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time E ² , H ² or S (minutes)			
0.3-1.34	614	1.63	(100)*	30			
1.34-30	824/f	2.19/f	(180/f2)*	30			
30-300	27.5	0.073	0.2	30			
300-1500			f/150	30			
1500-100,000			1.0	30			

Note 1: f = frequency in MHz, * means Plane-wave equivalent power density

Note 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Note 3: The limit value 1.0mW/cm² is available for this EUT.

MPE CALCULATION METHOD

 $S = PG/(4\pi R^2)$

where: S = power density (in appropriate units, e.g. mW/cm2)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)



CALCULATED RESULTS

Radio Frequency Radiation Exposure Evaluation

BLE (Worst case)							
Operating	Max. Tune up Power	Antenna Gain Power density		Limit			
Mode	(dBm)	(dBi)	(num)	(mW/ cm ²)	Liiiii		
BLE	5	4.74	2.98	0.0019	1		

BT (Worst case)							
Operating	Max. Tune up Power	Antenna Gain		Power density	Limit		
Mode	(dBm)	(dBi)	(num)	(mW/ cm ²)	Liiiit		
ВТ	5	4.74	2.98	0.0019	1		

WIFI 2.4G (Worst case)						
Operating	Max. Tune up Power	Directional Gain		Power density	Limit	
Mode	(dBm)	(dBi)	(num)	(mW/ cm ²)		
802.11n HT20	25	7.75	5.96	0.375	1	

WIFI5G (Worst case)							
Operating	Max. Tune up Power	Directional Gain		Power density	Limit		
Mode	(dBm)	(dBi)	(num)	(mW/ cm ²)			
802.11n HT20	18	5.14	3.27	0.0411	1		

Note: the calculated distance is 20cm.

BT+WIFI = $0.0019+0.375 = 0.377 \text{ (mW/cm}^2\text{)}$

Therefor the maximum calculations of above situations are less than the "1" limit.

END OF REPORT