# RF EXPOSURE REPORT



Report No.: 16071294-FCC-H2
Supersede Report No.: N/A

Applicant	Verykool USA Inc			
Product Name	Mobile Pho	Mobile Phone		
Model No.	s5019			
Serial No.	s5021			
Test Standard	FCC 2.109	3:2015		
Test Date	November	11 to Novemb	er 17, 2016	
Issue Date	November	18, 2016		
Test Result	Pass	Fail		
Equipment compl	Equipment complied with the specification			
Equipment did not comply with the specification				
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Test result presented in this test report is applicable to the tested sample only

#### Issued by:

#### SIEMIC (SHENZHEN-CHINA) LABORATORIES

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### **Laboratories Introduction**

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

#### **Accreditations for Conformity Assessment**

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety



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## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
16071294-FCC-H2	NONE	Original	November 18, 2016

## 2. Customer information

Applicant Name	Verykool USA Inc
Applicant Add	3636 Nobel Drive, Suite 325, San Diego, California 92122 United States
Manufacturer	HUAWO TECHNOLOGY LIMITED
Manufacturer Add	3 floor west, B building, New world shopping plaza,Gushu 2nd road,
	Xixiang street, Baoan District, Shenzhen , China

## 3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES		
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park		
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China		
	518108		
FCC Test Site No.	718246		
IC Test Site No.	4842E-1		
Test Software	Radiated Emission Program-To Shenzhen v2.0		



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#### 4. Equipment under Test (EUT) Information

Description of EUT: Mobile Phone

Main Model: s5019

Serial Model: s5021

Date EUT received: November 10, 2016

Test Date(s): November 11 to November 17, 2016

GSM850: -0.83dBi PCS1900: -0.59dBi

UMTS-FDD Band V: -0.81dBi

Antenna Gain: UMTS-FDD Band II: -0.55dBi

Bluetooth: 0.25dBi WIFI: 0.26dBi GPS: -0.55dBi

Antenna Type: PIFA antenna

RF Operating Frequency (ies):

GSM / GPRS: GMSK

EGPRS: GMSK

UMTS-FDD: QPSK

Type of Modulation: 802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

**GPS:BPSK** 

GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz;

RX: 1932.4 ~ 1987.6 MHz

WIFI: 802.11b/g/n(20M): 2412-2462 MHz

Bluetooth: 2402-2480 MHz

GPS: 1575.42 MHz



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GSM 850: 124CH PCS1900: 299CH

UMTS-FDD Band V: 102CH

Number of Channels: UMTS-FDD Band II: 277CH

WIFI:802.11b/g/n(20M): 11CH

Bluetooth: 79CH

GPS:1CH

Port: USB Port, Earphone Port

Adapter:

Model: QU050070USB01

Input: AC100-240V~50/60Hz,0.15A

Output: DC 5.0V-700mA

Input Power: Battery:

Model: 365778

Spec: 3.7V, 2000mAh(7.4Wh) Limited charger voltage: 4.2V

Trade Name: verykool

GPRS/EGPRS Multi-slot class 8/10/12

FCC ID: WA6S5019



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## 5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

#### 5.1 RF Exposure

#### Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]  $\cdot \sqrt{f_{(GHz)}} \le 3.0$  for 1-g SAR and  $\le 7.5$  for 10-g extremity SAR,  $^{16}$  where

- f<sub>(GHz)</sub> is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $\leq 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result =  $P\sqrt{F}/D$ 

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



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### 5.2 Test Result

## Bluetooth Mode:

Modulation	СН	Frequ ency	Conducted Power	Tune Up Power	Max Tune Up Power	Max Tune Up Power	Result	Limit
		(MHz)	(dBm)	(dBm)	(dBm)	(mW)		
GFSK	Low	2402	4.822	5±1	6	3.981	1.23	3
	Mid	2441	4.907	5±1	6	3.981	1.24	3
	High	2480	5.633	5±1	6	3.981	1.25	3
π /4 DQPSK	Low	2402	6.866	6.5±1	7.5	5.623	1.74	3
	Mid	2441	6.885	6.5±1	7.5	5.623	1.76	3
	High	2480	6.535	6.5±1	7.5	5.623	1.77	3
8-DPSK	Low	2402	4.863	5.5±1	6.5	4.467	1.38	3
	Mid	2441	4.999	5.5±1	6.5	4.467	1.40	3
	High	2480	5.599	5.5±1	6.5	4.467	1.41	3

#### WIFI Mode:

		Freque	Conducted	Tune Up	Max Tune	Max Tune		
Modulation	СН	ncy	Power	Power	Up Power	Up Power	Result	Limit
		(MHz)	(dBm)	(dBm)	(dBm)	(mW)		
802.11b	Low	2412	8.53	8±1	9	7.943	2.47	3
	Mid	2437	8.37	8±1	9	7.943	2.48	3
	High	2462	8.74	8±1	9	7.943	2.49	3
802.11g	Low	2412	8.38	8±1	9	7.943	2.47	3
	Mid	2437	8.86	8±1	9	7.943	2.48	3
	High	2462	8.69	8±1	9	7.943	2.49	3
802.11n (20M)	Low	2412	8.27	8±1	9	7.943	2.47	3
	Mid	2437	8.36	8±1	9	7.943	2.48	3
	High	2462	8.35	8±1	9	7.943	2.49	3

Result: Compliance

No SAR measurement is required.