# RF EXPOSURE REPORT



Report No.: 14070710-FCC-H2
Supersede Report No.: N/A

Applicant	Verykool USA Inc			
Product Name	Mobile Phone			
Model No.	SL4500	SL4500		
Serial No.	N/A			
Test Standard	FCC 2.1093	FCC 2.1093		
Test Date	February 04	February 04, 2015		
Issue Date	February 05	5, 2015		
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
Wiky. Jam		Alex. Lin		
Wiky Jam Test Engineer		Alex Liu Checked By		

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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
14070710-FCC-H2	NONE	Original	February 05, 2015

# 2. Customer information

Applicant Name	Verykool USA Inc
Applicant Add	3636 Nobel Drive, Suite 325, San Diego, CA 92122, USA
Manufacturer	Shenzhen BVC Technology Co., LTD
Manufacturer Add	Rainbow Bldg., North, Hi-Tech Industrial Park, Nanshan District, Shenzhen

# 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: SL4500

Serial Model: N/A

Date EUT received: January 05, 2015

Test Date(s): February 04, 2015

GSM850/ PCS1900: -2.5 dBi

UMTS-FDD Band 5/ Band 2/ Band 4: -2.8 dBi

Antenna Gain: LTE Band 2/ Band 4/ Band 12/ Band 17: -2.5 dBi

Bluetooth/BLE: 1 dBi

WIFI: 0.5 dBi

GSM / GPRS: GMSK

EGPRS: 8PSK

UMTS-FDD: QPSK

Type of Modulation: LTE Band: QPSK, 16QAM

802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

**BLE: GFSK** 

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 5 TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

UMTS-FDD Band 2 TX:1852.4 ~ 1907.6 MHz;

RX: 1932.4 ~ 1987.6 MHz

UMTS-FDD Band 4 TX :1712.4 ~ 1752.6 MHz;

RF Operating Frequency (ies): RX : 2112.4 ~ 2152.6 MHz

LTE Band 2 TX:  $1852.5 \sim 1907.5$  MHz; RX:  $1932.5 \sim 1987.5$  MHz LTE Band 4 TX:  $1712.5 \sim 1752.5$  MHz; RX:  $2112.5 \sim 2152.5$  MHz LTE Band 12 TX:  $701.5 \sim 713.5$  MHz; RX:  $731.5 \sim 743.5$  MHz LTE Band 17 TX:  $706.5 \sim 713.5$  MHz; RX:  $736.5 \sim 743.5$  MHz

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

Bluetooth& BLE: 2402-2480 MHz



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Port: Power Port, Earphone Port, USB Port

Battery:

Model: SL4500

Spec: 3.7V 1700mAh

Limited charger voltage: 4.2V

Input Power: Adapter:

Model: DSA-5PFK-05 FUS 050100a Input: AC 100-240V; 50/60Hz 0.2A

Output: DC 5.0V; 1.0A

Trade Name : verykool

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

FCC ID: WA6SL4500



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#### 5. FCC §2.1093 - Maximum Permissible exposure

#### 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, <sup>16</sup> 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	Freq (MHz)	Conducted Power	Tune Up Power	Max Tune Up Power	Max Tune Up Power	Result	Limit
			(dBm)	(dBm)	(dBm)	(mW)		
GFSK	Low	2402	-0.513	-0.7±1	0.3	1.07	0.33	3
	Mid	2441	-1.485	-0.7±1	0.3	1.07	0.33	3
	High	2480	-0.412	-0.7±1	0.3	1.07	0.34	3
π /4 DQPSK	Low	2402	-0.553	-0.7±1	0.3	1.07	0.33	3
	Mid	2441	-1.447	-0.7±1	0.3	1.07	0.33	3
	High	2480	-0.58	-0.7±1	0.3	1.07	0.34	3
8-DPSK	Low	2402	-0.316	-0.7±1	0.3	1.07	0.33	3
	Mid	2441	-1.168	-0.7±1	0.3	1.07	0.33	3
	High	2480	-0.208	-0.7±1	0.3	1.07	0.34	3

#### WIFI Mode:

Modulation	СН	Freq (MHz)	Conducted Power	Tune Up Power	Max Tune Up Power	Max Tune Up Power	Result	Limit
			(dBm)	(dBm)	(dBm)	(mW)		
	Low	2412	8.73	8.0±1	9.0	7.94	2.47	3
802.11b	Mid	2437	8.83	8.0±1	9.0	7.94	2.48	3
	High	2462	8.95	8.0±1	9.0	7.94	2.49	3
802.11g	Low	2412	7.44	8.0±1	9.0	7.94	2.47	3
	Mid	2437	7.47	8.0±1	9.0	7.94	2.48	3
	High	2462	7.81	8.0±1	9.0	7.94	2.49	3
802.11n (20M)	Low	2412	7.39	8.0±1	9.0	7.94	2.47	3
	Mid	2437	7.55	8.0±1	9.0	7.94	2.48	3
	High	2462	7.84	8.0±1	9.0	7.94	2.49	3



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## BLE Mode:

Modulation	СН	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	-0.049	-0.5±1	0.5	1.12	0.35	3
	Mid	2440	-0.515	-0.5±1	0.5	1.12	0.35	3
	High	2480	-1.078	-0.5±1	0.5	1.12	0.35	3

Result: Compliance

No SAR measurement is required.