

# **TEST REPORT**

**FCC ID: 2AEJAGOLF9** 

**Product: Smart phone** 

Model No.: F9

**Additional Model: Sport** 

Trade Mark: GOL

Report No.: TCT160322E001

Issued Date: Mar. 31, 2016

Issued for:

GSM GLOBE.COM INC

134 N.E 1 Street, Miami, Florida, United States

Issued By:

Shenzhen Tongce Testing Lab

1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, China

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## 1. Test Certification

Product:	Smart phone				
Model No.:	F9				
Additional Model No.:	Sport				
Applicant:	GSM GLOBE.COM INC				
Address:	134 N.E 1 Street, Miami, Florida, United States				
Manufacturer:	ShenZhen Huanuo Internet Technology Co., Ltd				
Address:	Room 10G, Tower 4C, Software Industry Base, Nanshan District, ShenZhen, China				
Test Voltage:	AC 120 V/ 60 Hz, DC 5 V(PC Input AC 120 V/ 60 Hz)				
Date of Test:	Mar. 22 – Mar. 29, 2016				
Applicable Standards:	47 CFR FCC Part 15 Subpart B: 2016 ANSI C63.4: 2014				

The above equipment has been tested by Shenzhen Tongce Testing Lab and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By: Perek (ii) Date: Mar. 29, 2016

Derek Cai

**Tomsin** 

Check By: Date: Mar. 31, 2016

Joe Zhou

Approved By: Date: Mar. 31, 2016



# 2. Test Result Summary

Emission								
Test Method	Item	Result						
FCC 47 CFR Part 15 Subpart B	Conducted Emission at Mains Terminals	Pass						
1 00 47 OF RETAIL TO GUDPAIL D	Radiated Emission	Pass						

#### Note:

- 1. Pass: Test item meets the requirement.
- 2. Fail: Test item does not meet the requirement.
- 3. N/A: Test case does not apply to the test object.
- 4. The test result judgment is decided by the limit of test standard.
- 5. The information of measurement uncertainty is available upon the customer's request.



# 3. EUT Description

Product Name:	Smart phone				
Model:	F9				
Additional Model:	Sport				
Trade Mark:	GOL				
Hardware Version:	TS28_V2.0				
Software Version:	GOL_F9_S5010B_TS28_HN_VI.00				
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20))				
Highest Frequency:	2 GHz				
AC Line(PC):	☐ Shielded ☑ Unshielded, ☑ Detachable ☐ Un-detachable ☐ Not applicable ☑ Length: 1.2 m				
AC Line(Monitor):	☐ Shielded ☑ Unshielded, ☑ Detachable ☐ Un-detachable ☐ Not applicable ☑ Length: 1.2 m				
AC Line(Printer):	☐ Shielded ☑ Unshielded, ☑ Detachable ☐ Un-detachable ☐ Not applicable ☑ Length: 1.2 m				
USB Line (PC to EUT):	☐ Shielded ☐ Unshielded, ☐ Detachable ☐ Un-detachable ☐ Not applicable ☐ Length: 0.8 m				
USB Line (PC to Printer):	☐ Shielded ☑ Unshielded, ☑ Detachable ☐ Un-detachable ☐ Not applicable ☑ Length: 1.0 m				
USB Line (Mouse):	☐Shielded ☑Unshielded, ☑Detachable ☐Un-detachable ☐Not applicable ☑Length: 1.5 m				
USB Line (Keyboard):	☐Shielded ☑Unshielded, ☑Detachable ☐Un-detachable ☐Not applicable ☑Length: 1.5 m				
VGA Line:	☐Shielded ☑Unshielded, ☑Detachable ☐Un-detachable ☐Not applicable ☑Length: 1.2 m				
Earphone Line:	☐Shielded ☑Unshielded, ☑Detachable ☐Un-detachable ☐Not applicable ☑Length: 0.7 m				



# 4. Test Methodology

### 4.1. Decision of Final Test Mode

The EUT was tested together with the thereinafter additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.

The following test mode(s) were assessed:

## **Test Mode**

Mode 1: Charging + Data Transmitting

Mode 2: Charging + Camera Shooting

Mode 3: Charging + Memory Playing

Mode 4: Charging + FM receiver Mode

The following test mode was found to produce the highest emission level.

The Worst Test Mode							
Emission	Conducted Emission	Mode 2: Charging + Camera Shooting					
LIIIISSIOII	Radiated Emission	Mode 1: Charging + Data Transmitting					

## 4.2. EUT System Operation

- 1. Set up EUT with the support equipments.
- 2. Make sure the EUT work normally during the test.

# 5. Setup of Equipment under Test

# 5.1. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
SD Card	SR-8C4	N/A	DOC	SONY
PC BM6620 D1F		D1PFCG008HP	DOC	ASUS
Monitor	VX239	VX239H	DOC	ASUS
Keyboard PK1100UE		04G104180039DP	DOC	ASUS
Printer	L11121E	FE2-2902	DOC	CANON
Mouse	MOBTUO	04G125610170DP	DOC	ASUS
Earphone H275P		N/A	DOC	Edifier

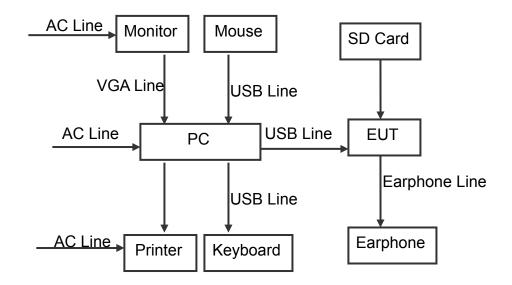
#### Note:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.





# 5.2. Configuration of System Under Test



(EUT: Smart phone)



### 6. Facilities and Accreditations

### 6.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

• FCC - Registration No.: 572331

Shenzhen Tongce Testing Lab

The 3m Semi-anechoic chamber has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

• IC - Registration No.: 10668A-1

The 3m Semi-anechoic chamber of Shenzhen TCT Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

• CNAS - Registration No.: CNAS L6165

Shenzhen TCT Testing Technology Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6165.

#### 6.2. Location

Shenzhen Tongce Testing Lab

Address: 1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, China

Tel: 86-755-36638142

## 6.3. Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	±2.56dB
2	RF power, conducted	±0.12dB
3	Spurious emissions, conducted	±0.11dB
4	All emissions, radiated(<1G)	±3.92dB
5	All emissions, radiated(>1G)	±4.28dB
6	Temperature	±0.1°C
7	Humidity	±1.0%



#### **Emission Test 7**.

### 7.1. Conducted Emission at Mains Terminals

### 7.1.1. Test Specification

Test Requirement:	FCC 47 CFR Part 15 Subpart B
Test Method:	ANSI C63.4:2014
Frequency Range:	150 kHz to 30 MHz

#### 7.1.2. Limits

Frequency	Class B dB(uV)						
(MHz)	Quasi-peak	Average					
0.15 - 0.5	66 – 56 <sup>a</sup>	56 – 46ª					
0.50 - 5.0	56	46					
5.0 - 30.0 60 50							
a. Decreases with the logarithm of the frequency							

Decreases with the logarithm of the frequency

#### 7.1.3. Test Instruments

Conducted Emission Shielding Room Test Site (843)									
Equipment Manufacturer Model Serial Number Calibration D									
EMI Test Receiver	R&S	ESCS30	100139	Sep. 11, 2016					
LISN	Schwarzbeck	NSLK 8126	8126453	Sep. 16, 2016					
LISN	AFJ	LS16C	16010947251	Sep. 11, 2016					
Coax cable	TCT	CE-05	N/A	Sep. 11, 2016					

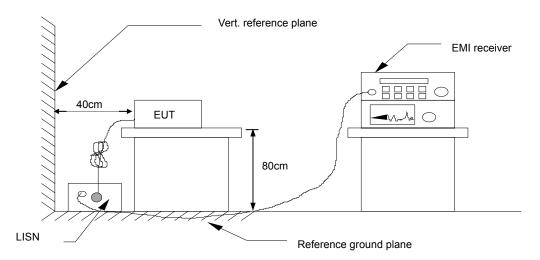
Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

#### 7.1.4. Test Method

The AMN was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. This distance was between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the AMN. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN



### 7.1.5. Block Diagram of Test Setup



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

#### 7.1.6. Test Results

Test Environment:	Temp.:	23	$^{\circ}\!$	Humid.:	54 %	Press.:	96 kPa
Test Mode:	Mode 2						
Test Voltage:	AC 120 \	<b>/</b> / 60	Hz				
Test Result:	Pass						

#### Note:

L1 = Live Line / N = Neutral Line

"---" denotes the emission level was or more than 2dB below the Average limit, so no re-check anymore.

Freq. = Emission frequency in MHz

Reading level  $dB(\mu V)$  = Receiver reading

Corr. Factor (dB) = Attenuator factor + Cable loss

Level  $dB(\mu V)$  = Reading level  $dB(\mu V)$  + Corr. Factor (dB)

Limit  $dB(\mu V)$  = Limit stated in standard

Margin (dB) = Level dB( $\mu$ V) – Limits dB( $\mu$ V)

Q.P. =Quasi-Peak

AVG=Average

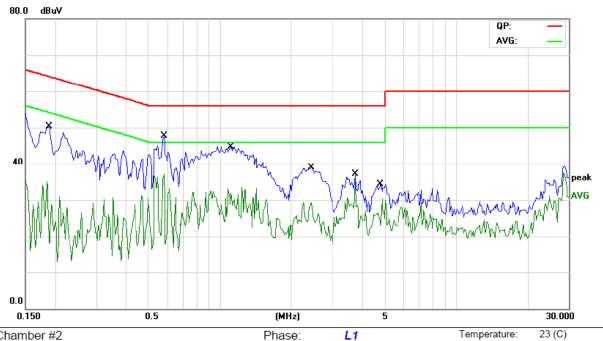


Humidity:

54 %



### Please refer to following diagram for individual



AC 120V/60Hz

Site Chamber #2

Limit: FCC Part 15B Class B Conduction(QP)

Mode: Charging and Camera Shooting

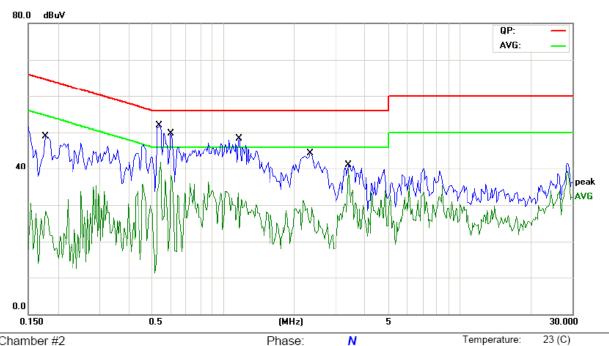
Note:

No. N	Лk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	C	0.1891	29.36	11.47	40.83	64.07	-23.24	QP	
2	C	0.1891	11.15	11.47	22.62	54.07	-31.45	AVG	
3 *	, C	).5797	34.05	11.26	45.31	56.00	-10.69	QP	
4	C	).5797	21.71	11.26	32.97	46.00	-13.03	AVG	
5	1	1.1148	30.13	11.23	41.36	56.00	-14.64	QP	
6	1	1.1148	14.49	11.23	25.72	46.00	-20.28	AVG	
7	2	2.4352	20.76	11.52	32.28	56.00	-23.72	QP	
8	2	2.4352	8.81	11.52	20.33	46.00	-25.67	AVG	
9	3	3.7461	18.59	11.06	29.65	56.00	-26.35	QP	
10	3	3.7461	8.40	11.06	19.46	46.00	-26.54	AVG	
11	4	1.7891	18.16	10.69	28.85	56.00	-27.15	QP	
12	4	1.7891	8.19	10.69	18.88	46.00	-27.12	AVG	

Power:



Humidity:



AC 120V/60Hz

Site Chamber #2

Limit: FCC Part 15B Class B Conduction(QP)

Mode: Charging and Camera Shooting

Note:

No. N	Иk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1773	30.77	11.48	42.25	64.61	-22.36	QP	
2		0.1773	16.69	11.48	28.17	54.61	-26.44	AVG	
3 *	k	0.5406	38.40	11.29	49.69	56.00	-6.31	QP	
4		0.5406	26.78	11.29	38.07	46.00	-7.93	AVG	
5		0.6031	34.83	11.26	46.09	56.00	-9.91	QP	
6		0.6031	20.45	11.26	31.71	46.00	-14.29	AVG	
7		1.1694	31.68	11.26	42.94	56.00	-13.06	QP	
8		1.1694	15.11	11.26	26.37	46.00	-19.63	AVG	
9		2.3374	25.86	11.56	37.42	56.00	-18.58	QP	
10		2.3374	12.18	11.56	23.74	46.00	-22.26	AVG	
11		3.3945	24.71	11.18	35.89	56.00	-20.11	QP	
12		3.3945	12.37	11.18	23.55	46.00	-22.45	AVG	

Power:



## 7.2. Radiated Emission

## 7.2.1. Test Specification

Test Requirement:	FCC 47 CFR Part 15 Subpart B
Test Method:	ANSI C63.4:2014
Frequency Range:	30 MHz to 6000 MHz
Measurement Distance:	3 m
Antenna Polarization:	Horizontal & Vertical

### 7.2.2. Limits

Fraguency (MU=)	Class B (at 3m)				
Frequency (MHz)	dBuV/m				
30 ~ 88	40.0				
88 ~ 216	43.5				
216 ~ 960	46.0				
960 ~ 1000	54.0				
Above 1000	74.0(Peak) 54.0(Average)				

#### Note

- 1. The lower limit shall apply at the transition frequencies.
- 2. Emission level  $dB(\mu V/m) = 20 \log Emission level (\mu V/m)$ .

### 7.2.3. Test Instruments

	Radiated Emission Test Site (966)													
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due										
EMI Test Receiver	R&S	ESVD	100008	Sep. 11, 2016										
Spectrum Analyzer	R&S	FSEM	848597-001	Sep. 11, 2016										
Amplifier	HP	8447D	2727A05017	Sep. 11, 2016										
Amplifier	EM	EM30265	07032613	Sep. 11, 2016										
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 13, 2016										
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 13, 2016										
Antenna Mater	CCS	CC-A-4M	N/A	Sep.15 , 2016										



Coax cable	TCT	RE-low-01	N/A	Sep. 11, 2016
Coax cable	TCT	RE-high-02	N/A	Sep. 11, 2016
Coax cable	TCT	RE-low-03	N/A	Sep. 11, 2016
Coax cable	TCT	RE-high-04	N/A	Sep. 11, 2016

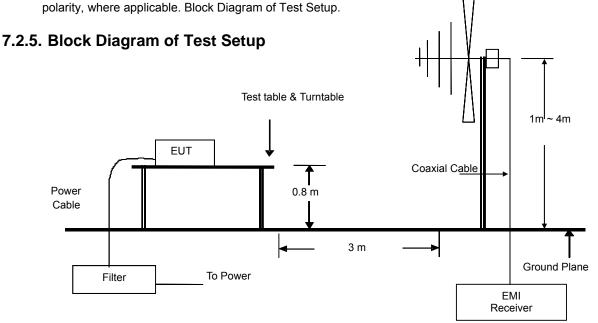
**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

#### 7.2.4. Test Method

For the radiated emission test above 1GHz:

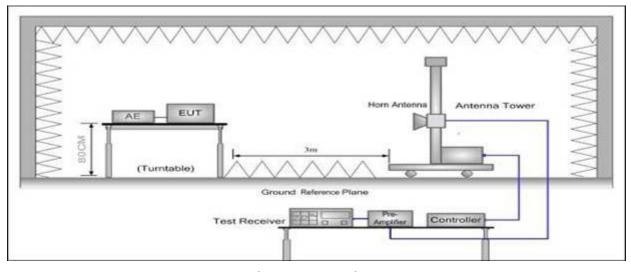
Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

Measurements were made in a 3-meter semi-anechoic chamber or Open Area Test Site that complies to CISPR 16. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3 meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements (quasi-peak) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna



(30MHz to 1GHz)





(Above 1GHz)

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration

#### 7.2.6. Test Results

Test Environment:	Temp.: 25 ℃ Humid.: 54 % Press.: 96 kPa									
Test Mode:	Mode 1									
Test Voltage:	DC 5 V(PC Input AC 120 V/ 60 Hz)									
Test Result:	Pass									

#### Note:

Freq. = Emission frequency in MHz

Reading level  $dB(\mu V)$  = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss

Measurement  $dB(\mu V/m)$  = Reading level  $dB(\mu V)$  + Corr. Factor (dB)

Limit  $dB(\mu V/m)$  = Limit stated in standard

Margin (dB) = Measurement dB( $\mu$ V/m) – Limits dB( $\mu$ V/m)

Q.P. =Quasi-Peak



### Please refer to following diagram for individual



Limit: FCC Part 15B Class B RE 3 m Mode: Charging and DATA Transmtting

Site

Note: DC 5V(PC Input AC 120V/60Hz)

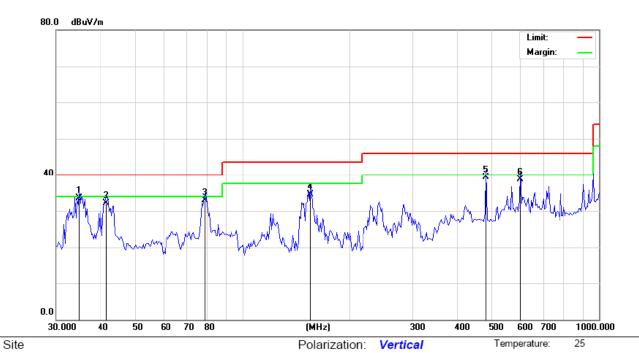
Polarization: Horizontal Temperature: 25
Power: Humidity: 54 %

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		41.7406	41.10	-12.40	28.70	40.00	-11.30	QP		0	
2		77.4680	40.80	-16.37	24.43	40.00	-15.57	QP		0	
3		167.8136	47.60	-13.92	33.68	43.50	-9.82	QP		0	
4		331.7858	38.70	-7.60	31.10	46.00	-14.90	QP		0	
5	*	481.5111	43.40	-3.56	39.84	46.00	-6.16	QP		0	
6		965.4741	35.10	4.89	39.99	54.00	-14.01	QP		0	



54 %

Humidity:



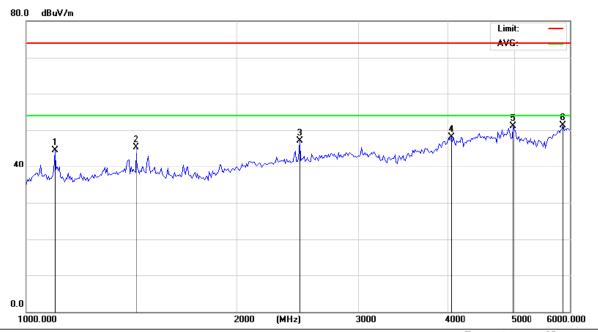
Limit: FCC Part 15B Class B RE\_3 m

Mode: Charging and DATA Transmitting Note: DC 5V(PC Input AC 120V/60Hz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	34.7704	46.60	-13.13	33.47	40.00	-6.53	QP		0	
2		41.4483	44.50	-12.42	32.08	40.00	-7.92	QP		0	
3		78.5644	49.30	-16.37	32.93	40.00	-7.07	QP		0	
4		155.3305	49.20	-14.78	34.42	43.50	-9.08	QP		0	
5	4	481.5111	42.80	-3.56	39.24	46.00	-6.76	QP		0	
6	(	602.9287	40.50	-1.87	38.63	46.00	-7.37	QP		0	

Power:



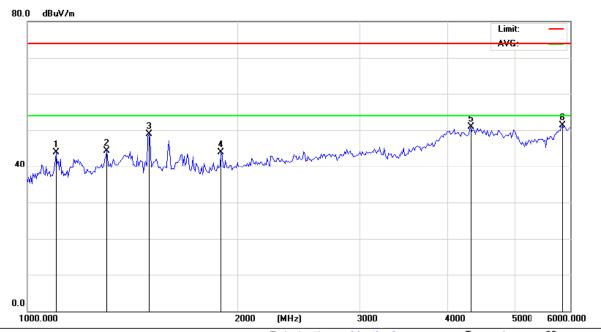


Site Polarization: Horizontal Temperature: 25 Limit: FCC Part 15B Class B Above 1GHz RE(PK) Power: Humidity: 54 %

Mode: Charging and Data Transmitting Note: DC 5V(PC Input AC 120V/60Hz)

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1097.855	56.85	-12.44	44.41	74.00	-29.59	peak		0	
2		1437.148	57.02	-11.72	45.30	74.00	-28.70	peak		0	
3		2462.718	54.25	-7.08	47.17	74.00	-26.83	peak		0	
4		4056.713	45.73	2.43	48.16	74.00	-25.84	peak		0	
5		4978.074	45.84	5.21	51.05	74.00	-22.95	peak		0	
6	*	5872.117	42.25	8.98	51.23	74.00	-22.77	peak		0	





Site Polarization: Vertical Temperature: 25 Limit: FCC Part 15B Class B Above 1GHz RE(PK) Power: Humidity: 54 %

Mode: Charging and Data Transmitting Note: DC 5V(PC Input AC 120V/60Hz)

No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1097.855	56.43	-12.44	43.99	74.00	-30.01	peak		0	
2		1299.684	56.30	-11.95	44.35	74.00	-29.65	peak		0	
3		1495.048	60.62	-11.74	48.88	74.00	-25.12	peak		0	
4		1894.859	54.95	-10.99	43.96	74.00	-30.04	peak		0	
5		4327.568	48.02	2.84	50.86	74.00	-23.14	peak		0	
6	*	5851.070	42.39	8.87	51.26	74.00	-22.74	peak		0	

# \*\*\*\*\*END OF REPORT\*\*\*\*