



NVLAP LAB CODE 200707-0



FCC PART 22 H/24 E

## MEASUREMENT AND TEST REPORT

For

**FIYING TECHNOLOGY DEVELOPMENT CO., LTD**

Rm.2312, 23/F. Metropolis tower, 10 Metroplis Drive,  
Hung Hom, Kowloon, Hong Kong

**FCC ID: XJS20070901**

<b>Report Type:</b> Class II Permissive Change	<b>Product Type:</b> GSM&GPRS Dual Standby Mobile Phone
<b>Test Engineer:</b>	Phoenix Liu <i>Phoenix Liu</i>
<b>Report Number:</b>	RSZA09063001-22H&24E
<b>Report Date:</b>	2009-07-17
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<b>Reviewed By:</b>	EMC Engineer
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**Note:** This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP\*, NIST, or any agency of the Federal Government.

\* This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "\*" (Rev.2)

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## GENERAL INFORMATION

### Product Description for Equipment Under Test (EUT)

The *FIYING TECHNOLOGY DEVELOPMENT CO., LTD*'s product, model number: *F818, F828, D9*(FCC ID: *XJS20070901*) or the "EUT" as referred to in this report is a *GSM & GPRS Dual Standby Mobile Phone*, which measures approximately: 10.3 cm L x 5.3 cm W x 1.8 cm H, rated input voltage: DC 3.7V battery.

#### Frequency Range:

Cellular Band: 824-849 MHz (TX), 869-894 MHz (RX)  
PCS Band: 1850-1910 MHz (TX), 1930-1990 MHz (RX)  
Bluetooth: 2400-2483.5 MHz (TX/RX)  
Wi-Fi: 2412-2462 MHz (TX/RX)

Modulation Mode: GMSK (GSM/PCS), GFSK (Bluetooth) , Wi-Fi (DSSS/OFDM)

#### Transmitter Output Power:

Cellular Band: 33±2 dBm  
PCS Band: 30±2 dBm  
Bluetooth: -10~4 dBm  
Wi-Fi: 10±2 dBm

*All measurement and test data in this report was gathered from production sample serial number: 0906099(Assigned by BACL, Shenzhen). The EUT was received on 2009-06-30.*

*\*Note: The series products, model F818, F828, D9, we select F818 to test, the difference of these models is in model name, there is no electrical change has been made to the equipment, which was explained in the attached Declaration Letter.*

### EUT Photo



*Please see additional photos in Exhibit B&C*

## Objective

This Type approval report is prepared on behalf of *FIYING TECHNOLOGY DEVELOPMENT CO., LTD* in accordance with Part 2, Subpart J, Part 22 Subpart H, and Part 24 Subpart E of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for spurious radiated emission.

This measurement and test report only pertains to the Part 22H/24E portion of the EUT; for measurement and test results to the Bluetooth and Wi-Fi functions please refer to report RSZA09063001-BT and RSZA09063001-WiFi issued by Shenzhen BACL.

This is the C2PC application of the device. The difference between the original device and the current one is as follows:

Modification	Original	New
Enclosure	Plastic Enclosure	Metal Enclosure
Model Number	F8(Tested), F009, F999, D9a	F818(Tested), F828, D9

For the changes made to the device, spurious emission testing was performed.

## Related Submittal(s)/Grant(s)

This is a C2PC application. The original application was granted on 2009-07-16.

## Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services  
Part 24 Subpart E - Personal Communication Services

Applicable Standards: TIA/EIA 603-C, ANSI C63.4-2003.

All radiated and conducted emissions measurements were performed at Bay Area Compliance Laboratories Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp.(Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 21, 2007. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



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The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2007070.htm>

## SYSTEM TEST CONFIGURATION

### Justification

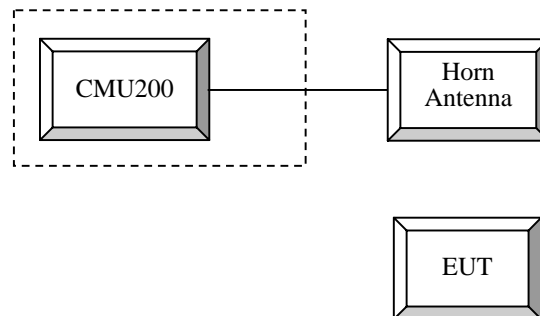
The EUT was configured for testing according to TIA/EIA-603-C.

The final qualification test was performed with the EUT operating at normal mode.

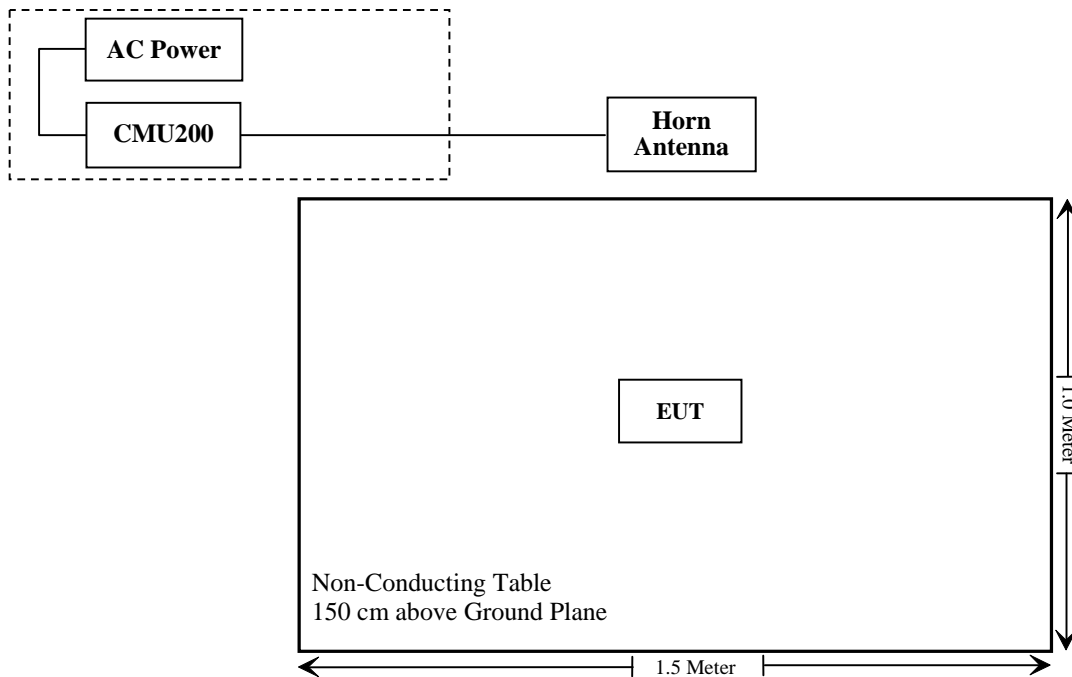
### Equipment Modifications

No modifications were made to the EUT.

### Configuration of Test Setup



### Block Diagram of Test Setup



**SUMMARY OF TEST RESULTS**

FCC Rules	Description of Test	Result
§1.1307, §2.1093	RF Exposure (SAR)	Compliance *
§2.1046; § 22.913 (a), § 24.232 (c)	RF Output Power	Compliance **
§ 2.1047	Modulation Characteristics	N/A
§ 2.1049, § 22.905 § 22.917, § 24.238	99% & -26 dB Occupied Bandwidth	Compliance **
§ 2.1051, § 22.917 (a), § 24.238 (a)	Spurious Emissions at Antenna Terminal	Compliance **
§ 2.1053 § 22.917 (a), § 24.238 (a)	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a), § 24.238 (a)	Out of Band Emission, Band Edge	Compliance **
§ 2.1055 § 22.355, § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	Compliance **

Note: \* Please refer to SAR test report released by BACL, report number: R0906227-FCC-SAR

\*\* Please refer to original report, report number: RSZ09062102-22H&24E.

## **§2.1053, §22.917 & §24.238 - SPURIOUS RADIATED EMISSIONS**

### **Applicable Standards**

CFR 47 § 2.1053, §22.917 and § 24.238.

### **Test Procedure**

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 lg (TXpwr in Watts/0.001) – the absolute level

Spurious attenuation limit in dB = 43 + 10 Log<sub>10</sub> (power out in Watts)

### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Horn Antenna	DRH-118	A052604	2008-09-25	2009-09-25
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2009-03-11	2010-03-11
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2008-08-28	2009-08-27
HP	Preamplifier	8449B	3008A00277	2008-09-12	2009-09-11
HP	Signal Generator	HP8657A	2849U00982	2008-10-16	2009-10-15
HP	Amplifier	HP8447D	2944A09795	2008-08-02	2009-08-02
HP	Synthesized Sweeper	8341B	2624A00116	2008-11-07	2009-11-06
COM POWER	Dipole Antenna	AD-100	041000	2008-09-25	2009-09-25
A.H. System	Horn Antenna	SAS-200/571	135	2009-05-17	2010-05-17
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	109038	2009-05-09	2010-05-09

**\* Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.



**Test Data****Environmental Conditions**

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	56 %
<b>ATM Pressure:</b>	100.0kPa

The testing was performed by Phoenix Liu on 2009-07-13.

Test mode: Transmitting

**Below 1 GHz:****Cellular Band (Part 22H)**

Indicated		Table Angle Degree	Test Antenna		Substituted				Absolute Level (dBm)	FCC Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Reading (dBμV)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Ant. Gain (dBi)	Cable Loss (dB)			
Middle Channel											
960.85	48.42	124	1.5	H	960.85	-49.4	0	0.80	-50.20	-13	37.20
640.55	46.95	205	1.0	H	640.55	-50.5	0	0.77	-51.27	-13	38.27
732.00	46.45	78	1.5	V	732.00	-51.9	0	0.76	-52.66	-13	39.66
550.30	46.31	125	1.2	V	550.30	-52.3	0	0.65	-52.95	-13	39.95

**PCS Band (Part24E)**

Indicated		Table Angle Degree	Test Antenna		Substituted				Absolute Level (dBm)	FCC Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Reading (dBμV)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Ant. Gain (dBi)	Cable Loss (dB)			
Middle Channel											
525.62	48.04	120	1.5	H	525.62	-49.3	0	0.65	-49.95	-13	36.95
730.99	48.99	200	1.0	H	730.99	-49.7	0	0.74	-50.44	-13	37.44
915.30	45.01	240	1.2	V	915.30	-54.4	0	0.76	-55.16	-13	42.16
980.88	41.78	80	1.5	V	980.88	-56.8	0	0.80	-57.60	-13	44.60

**Above 1 GHz:****Cellular Band (Part 22H)**

Indicated		Table Angle Degree	Test Antenna		Substituted				Absolute Level (dBm)	FCC Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Reading (dBμV)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Ant. Gain (dBi)	Cable Loss (dB)			
Middle Channel											
1134.26	52.12	70	1.2	V	1134.26	-47.9	6.3	0.8	-42.40	-13	29.40
1134.26	50.00	85	1.8	H	1134.26	-50.1	6.3	0.8	-44.60	-13	31.60
1673.20	45.42	84	1.3	V	1673.20	-56.6	6.2	1.02	-51.42	-13	38.42
1673.20	41.63	130	1.9	H	1673.20	-60.0	6.2	1.02	-54.82	-13	41.82
2509.80	42.33	80	1.2	V	2509.80	-59.9	7.3	1.19	-53.79	-13	40.79
2509.80	41.91	114	1.9	H	2509.80	-59.7	7.3	1.19	-53.59	-13	40.59
3346.60	42.23	140	1.3	V	3346.60	-61.5	6.7	1.38	-56.18	-13	43.18
3346.60	41.10	123	2	H	3346.60	-62.4	6.7	1.38	-57.08	-13	44.08

**PCS Band (Part24E)**

Indicated		Table Angle Degree	Test Antenna		Substituted				Absolute Level (dBm)	FCC Limit (dBm)	Margin (dB)
Frequency (MHz)	S.A. Reading (dBμV)		Height (m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Ant. Gain (dBi)	Cable Loss (dB)			
Middle Channel											
3760	43.85	160	1.2	V	3760	-59.5	6.9	1.47	-54.07	-13	41.07
3760	42.16	120	1.9	H	3760	-61.4	6.9	1.47	-55.97	-13	42.97
5640	44.62	140	1.2	V	5640	-55.5	8.3	1.76	-48.96	-13	35.96
5640	42.89	80	1.9	H	5640	-57.2	8.3	1.76	-50.66	-13	37.66
7520	42.23	180	1.2	V	7520	-56.8	7.6	2.09	-51.29	-13	38.29
7520	41.46	85	1.9	H	7520	-57.6	7.6	2.09	-52.09	-13	39.09

## **DECLARATION LETTER**

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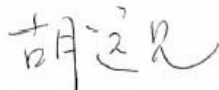
### **Product Similarity Declaration**

To Whom It May Concern,

We, FIYING TECHNOLOGY DEVELOPMENT CO.,LTD, hereby declare that our GSM&GPRS Dual Standby Mobile Phone, Model Number: F828,D9 are electrically identical with the Model Number: F818 that was certified by BACL. F828,D9 and F818 are named differently due to marketing purposes.

Please contact me if you have any question.

Signature:



Print Name: Yuanjian Hu

Title: Engineering Manager

Date:2009-07-13

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