



NVLAP LAB CODE 200707-0



# FCC PART 22H/24E TEST AND MEASUREMENT REPORT

For

**Beyond E-Tech Inc**

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Houston, TX 77027, USA

**FCC ID: WTID916**  
**Model: D888**

<b>Report Type:</b> Class II Permissive Change	<b>Product Type:</b> GSM &GPRS Dual Standby Mobile Phone
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<b>Report Number:</b>	RSZA08110604-2224
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\* 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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## 1 GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test (EUT)

This measurement and test report has been compiled on behalf of *Beyond E-Tech Inc* and their product model: *D888*, *FCC ID: WTID916* which is a GSM 850/1900 Dual Standby Mobile Phone.

Frequency band: GSM850: 824-849 MHz (Tx); 869-894 MHz (Rx)  
PCS1900: 1850-1910 MHz (Tx); 1930-1990 MHz (Rx)  
Bluetooth: 2402-2480 MHz (Tx/Rx)

### 1.2 EUT Photo



*Additional Photos in Exhibit C*

### 1.3 Mechanical Description

The *Beyond E-Tech Inc* product model: *D888*, FCC ID: *WTID916* or the "EUT" as referred to in this report is a *GSM&GPRS Dual Standby Mobile Phone*. The EUT measures approximately 11.57 cm L x 5.18 cm W x 1.77 cm H, input voltage: 3.7V battery.

*\* All measurement and test data in this report was gathered from production sample serial number: 0811007 (Assigned by BACL). The EUT was received on 2008-11-06.*

### 1.4 Objective

This type approval report is prepared on behalf of *Beyond E-Tech Inc* 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 RF output power, modulation characteristic, occupied bandwidth, spurious emissions at antenna terminal, field strength of spurious radiation, frequency stability, band edge, and conducted and radiated margin.

This measurement and test report only pertains to the GSM 850/1900 portion of the EUT.

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

1) Product model name changed.

	Original Model	New Model
Model	D916	D888

2) New product has been removed the IC chip of screen touched. The number of IC chip is CP2056 which it was a driver to start up touched screen, and there isn't other electrical change has made to the equipment that alters the compliance characteristics. External photos are submitted as attachments

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

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

This is a Class II permissive application. The original application was granted on 2008-11-06.

## 1.6 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 - Cellular Radiotelephone Service

Part 24 Subpart E - PCS

Applicable Standards: TIA/EIA603-C, ANSI C63.4-2003.

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

## 1.7 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 04, 2004. 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>

## 2 SYSTEM TEST CONFIGURATION

### 2.1 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.

### 2.2 EUT Exercise Software

An RFID simulation program was provided by the customer.

### 2.3 Special Accessories

N/A

### 2.4 Equipment Modifications

No modifications were made to the EUT

### 2.5 Remote Support Equipment

N/A

### 2.6 Local Support Equipment

Manufacturer	Description	Model	Serial Number
HP	Laptop	T41	99-KHVP2

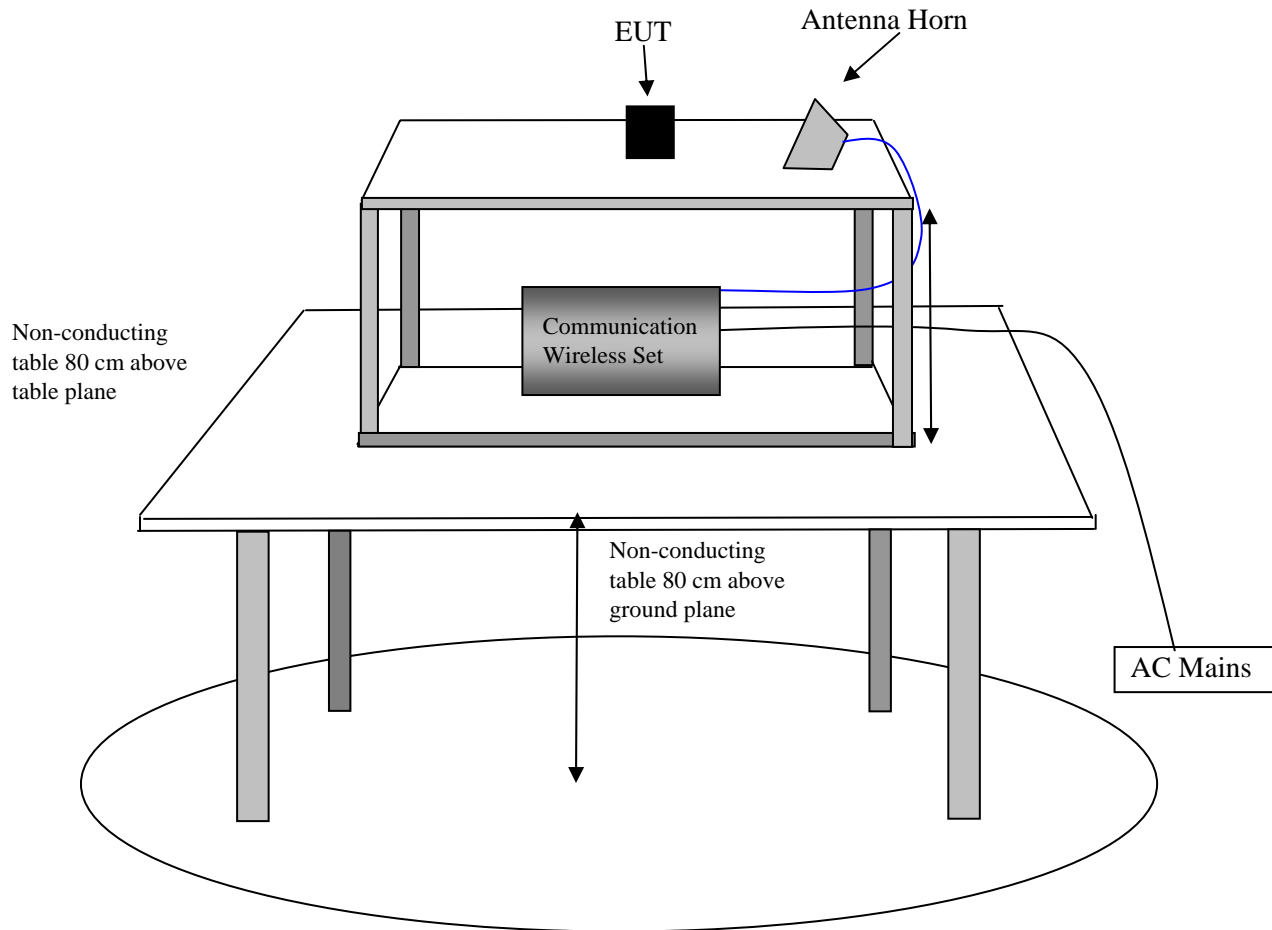
### 2.7 Power Supply and Line Filters

Manufacturer	Description	Model	Serial Number
AC/DC Adapter	USB version AC/DC Adapter	ZT-688	B1994

### 2.8 Interface Ports and Cabling

Cable Description	From	To
USB cable	EUT	AC/DC Adapter

## 2.9 Test setup Block Diagram for radiated emissions tests



### 3 SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 2.1047	Modulation Characteristics	N/A
§ 2.1053 § 22.917 (a) § 24.238 (a)	Field Strength of Spurious Radiation	Compliant
§2.1093	RF Exposure	Compliant Please See SAR report R0810314 -SAR
§ 2.1046, § 22.913 § 24.232	RF Output Power	Compliant*
§ 2.1049 § 22.917 § 24.238	Out of Band Emissions, Occupied Bandwidth	Compliant*
§ 2.1051, § 22.917 § 24.238(a)	Spurious Emissions at Antenna Terminals	Compliant*
§ 2.1055 (a) § 2.1055 (d) § 22.355 § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	Compliant*
§ 22.917 §24.238	Band Edge	Compliant*

**Note:** \* Original submission FCC ID: WTID916 filed 2008-11-06, Report No.: R0810015-2224.



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## **4 §1.1307(b) (1) & §2.1093 - RF EXPOSURE**

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### **4.1 Applicable Standard**

According to §1.1310 and §2.1093 RF exposure is calculated.

### **4.2 Test Result**

**Compliant:** The EUT is a hand portable device and thus requires SAR evaluation, please see BACL SAR Report R0810314 -SAR for measurement and testing details.

## 5 §2.1053 - SPURIOUS RADIATED EMISSIONS

### 5.1 Applicable Standard

Requirements: CFR 47, § 2.1053, § 22.917, § 24.238.

### 5.2 Test Procedure

TIA/EIA-603-C Section 2.2.12 – Unwanted Emission: Radiated Spurious

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 =  $10 \log (\text{TX Power in Watts}/0.001)$  – the absolute level

Spurious attenuation limit in dB =  $43 + 10 \log_{10} (\text{power out in Watts})$

### 5.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2007-11-15	2008-11-15
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2008-10-16	2009-10-16
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2008-03-11	2009-03-11
HP	Amplifier	8449B	3008A00277	2008-09-29	2009-09-29
Sunol Sciences	Horn Antenna	DRH-118	A052604	2008-09-25	2009-09-25
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2008-05-09	2009-05-09

\* **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.

## 5.4 Summary of Test Results

### Environmental Conditions

<b>Temperature:</b>	21 °C ~ 25 °C
<b>Relative Humidity:</b>	40 % ~ 60 %
<b>ATM Pressure:</b>	101.1 kPa ~ 101.6 kPa

\* Testing performed by Phoenix Liu on 2008-11-12.

Worst case reading as follows:

Mode: Transmitting		
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)
18.36	1673.34	Vertical

GSM 850 Band: 30MHz -10GHz Middle channel

Indicated		Azimuth (degree)	Test Antenna		Substituted				Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Freq. (MHz)	Amp. (dBuV)		Height (m)	Polar (H/V)	Freq. (MHz)	Level (dBm)	Antenna Gain (dBi)	Cable Loss (dB)			
1673.34	68.73	150	1.5	V	1673.34	-34.20	7.4	4.56	-31.36	-13	18.36
2505.01	67.27	60	1.3	V	2505.01	-35.60	8.3	6.88	-34.18	-13	21.18
1673.34	62.70	60	1.3	H	1673.34	-39.20	7.4	4.56	-36.36	-13	23.36
3334.67	60.63	0	1.5	H	3334.67	-41.50	9.2	4.85	-37.15	-13	24.15
3334.67	57.24	60	1.3	V	3334.67	-46.40	9.2	4.85	-42.05	-13	29.05
4164.32	50.94	90	1.5	H	4164.32	-49.70	10	4.32	-44.02	-13	31.02
4200.40	53.40	60	1.3	V	4200.40	-50.20	10	4.32	-44.52	-13	31.52
1962.00	49.34	200	1.4	V	1962.00	-51.50	7.6	4.9	-48.80	-13	35.80
2505.01	60.63	225	1.3	H	2505.01	-51.50	8.3	6.88	-50.08	-13	37.08

## GSM 1900 Band: 30MHz -20GHz Middle channel

Indicated		Azimuth (degree)	Test Antenna		Substituted				Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Freq. (MHz)	Amp. (dBuV)		Height (m)	Polar (H/V)	Freq. (MHz)	Level dBm	Antenna Gain (dBi)	Cable Loss (dB)			
3763.50	54.97	90	1.5	H	3763.50	-43.80	9.4	4.34	-38.74	-13	25.74
3763.53	50.07	150	1.5	V	3763.53	-48.10	9.4	4.34	-43.04	-13	30.04
2464.40	49.55	0	1.5	H	2464.40	-48.70	8.2	6.72	-47.22	-13	34.22
2464.80	46.19	60	1.3	V	2464.80	-53.50	8.2	6.72	-52.02	-13	39.02
5643.28	43.41	0	1.2	H	5643.28	-57.10	11.4	6.69	-52.39	-13	39.39
5643.32	43.11	60	1.3	V	5643.32	-57.20	11.4	6.69	-52.49	-13	39.49