



# FCC PART 15D MEASUREMENT AND TEST REPORT

For

## Global China Technology Limited

Room 308, 3/F Kwong Sang Hong Centre, 151-153 Hoi Bun Road, Kwun Tong, Hong Kong

**FCC ID: VNNDD5622**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Amplified DECT Phone (Handset Unit)
<b>Test Engineer:</b> Sula Huang	
<b>Report Number:</b> RSZ130827001-00PP	
<b>Report Date:</b> 2013-11-04	
<b>Reviewed By:</b> RF Leader	
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**Note:** This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

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## GENERAL INFORMATION

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

The *Global China Technology Limited*'s product, model number: *PowerTel 720 Assure + Twin* (FCC ID: VNNDD5622) (the "EUT") in this report was a handset unit of *Amplified DECT Phone*, which was measured approximately: 18.0 cm (L) x 5.5 cm (W) x 2.5 cm (H), rated with input voltage: 3.6V 750mAh NiMH battery

*Note: The series product, for handset unit model PowerTel 720 Assure +, PowerTel 725 Reliant +, PowerTel 720 Assure + Twin, PowerTel 730 Assure Voice +, PowerTel 735 Reliant Voice +, DD5622HER1, DD5632HER1, DD5622HER2, DD5622VHER1 and DD5632VHER1, they share the same product only named differently due to different combination per client's request. Model PowerTel 720 Assure + Twin selected for testing, the detailed information can be referred to the attached declaration letter that stated and guaranteed by the applicant.*

*\*All measurement and test data in this report was gathered from production sample serial number: 1308125 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2013-04-09.*

### Objective

This test report was based on the Electromagnetic Interference (EMI) tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.17 - 2006 and ANSI C63.4-2009.

The tests were performed in order to determine the compliance of the EUT with FCC Part 15-Subpart D, section 15.203, 15.315, 15.317, 15.319 and 15.323 rules.

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

Submitted with FCC part 15D base unit of a system with FCC ID: VNNDD5622

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.17 - 2006, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen).

The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement uncertainty with radiated emission is 5.91 dB for 30MHz-1GHz and 4.92 dB for above 1GHz, 1.95dB for conducted measurement.

## **Test Facility**

The test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on 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 December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

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.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in TBR6 mode which is provided by the manufacturer.

### Equipment Modifications

No modification was made to the EUT tested.

### Local Support Equipment List and Details

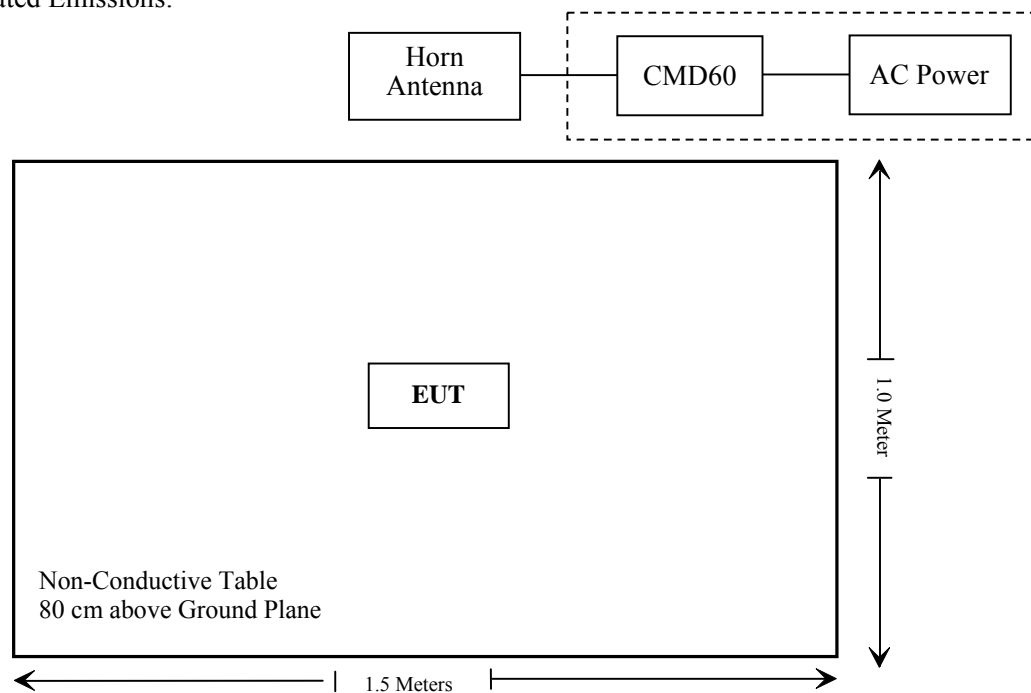
Manufacturer	Description	Model	Serial Number
R&S	Digital Radio-Communication Tester	CMD60	829902/026
Shenzhen G.Credit Electronics Co., Ltd	Amplified Cordless Phone Charger	DD5621HER1 Charger	1304038

### External I/O Cable

Cable Description	Length (m)	From/Port	To
Un-shielding detachable Adapter Cable	1.85	Charger	Adapter

### Block Diagram of Test Setup

For Radiated Emissions:



**SUMMARY OF TEST RESULTS**

FCC Rules	Description of Test	Result
§ 1.1307, §2.1093	RF Exposure (SAR)	Compliance
§ 15.317 § 15.203	Antenna Requirement	Compliance
§ 15.315 § 15.207	Conducted Emission	Compliance
§ 15.323 (a)	Emission Bandwidth	Compliance
§ 15.319 (c)	Peak Transmit Power	Compliance
§ 15.319 (d)	Power Spectral Density	Compliance
§ 15.323 (d)	Emission Inside and Outside the sub-band	Compliance
§ 15.319 (g)	Radiated Emission	Compliance
§ 15.323 (f)	Frequency Stability Handset	Compliance
§ 15.323 (c)(e) § 15.319 (f)	Specific Requirements for UPCS	Compliance

Note: the EUT (handset) is fully identical to the original certified device with FCC ID: VNNDD5624, the difference between them are the model number and FCC ID, so all test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

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## **FCC §1.1307 & §2.1093 - RF EXPOSURE**

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### **Applicable Standard**

FCC§1.1307 and §2.1093.

### **Test Result**

Compliance, please refer to the SAR report: RSZ130827001-20.

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## **FCC§15.317&§15.203 - ANTENNA REQUIREMENT**

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### **Applicable Standard**

According to FCC § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### **Antenna Connector Construction**

The EUT has one integrated antenna arrangement, which was permanently attached and the gain was 0 dBi, fulfill the requirement of this section. Please refer to the internal photos.

**Result:** Compliant.



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## **FCC§15.315 & §15.207 - CONDUCTED EMISSIONS**

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### **Applicable Standard**

FCC§15.315 an unlicensed PCS device that is designed to be connected to the public utility (AC) power line must meet the limits specified in §15.207.

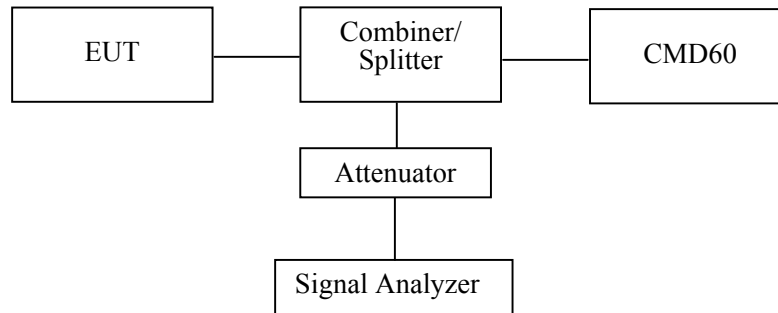
### **Test Data**

Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

**FCC§15.323 (a) - EMISSION BANDWIDTH****Applicable Standard**

Operation shall be contained within the 1920–1930 MHz band. The emission bandwidth shall be less than 2.5 MHz and greater than 50 kHz.

The emission bandwidth is measured in accordance with ANSI C63.17 sub-clause 6.1.3 using the setup below:



The width, in Hz, of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that is 26 dB down relative to the maximum level of the modulated carrier. It is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1% of the emission band-width of the device under measurement. [Extraction from 47 CFR 15, subpart D, 15.303 (C)].

**Test Data**

Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

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**FCC§15.319 (c) - PEAK TRANSMIT POWER**

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**Applicable Standard**

The peak power output as measured over an interval of time equal to the frame rate or transmission burst of the device under all conditions of modulation. Usually this parameter is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used [47 CFR 15, subpart D, 15.303].

The peak transmit power is according to ANSI C63.17-2006 §6.1.2

Per FCC Part15.319 (c) Peak transmit power shall not exceed 100 microwatts multiplied by the square root of the emission bandwidth in hertz. Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

Calculation of Peak Transmit Power Limit:

Peak Transmit Power Limit =  $100\mu\text{W} \times (\text{EBW})^{1/2}$

EBW is the transmit emission bandwidth in Hz determined in the other test item:

**Test Data**

Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

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## **FCC§15.319 (d) - POWER SPECTRAL DENSITY**

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### **Applicable Standard**

The average pulse energy in a 3 kHz bandwidth is divided by the pulse duration.

The power spectral density shall not exceed 3mW in any 3 kHz bandwidth as measured with a spectrum analyzer having a resolution bandwidth of 3 kHz.

The power spectral density is measured in accordance with ANSI C63.17.2006 Clause 6.1.5.

### **Test Data**

Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

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## **FCC§15.323 (d) - EMISSION INSIDE AND OUTSIDE THE SUB-BAND**

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### **Applicable Standard**

Emissions inside the sub-band must comply with the following emission mask:

1. In the bands between 1B and 2B measured from the center of the emission bandwidth the total power emitted by the device shall be at least 30 dB below the transmit power permitted for that device;
2. in the bands between 2B and 3B measured from the center of the emission bandwidth the total power emitted by an intentional radiator shall be at least 50 dB below the transmit power permitted for that radiator;
3. in the bands between 3B and the sub-band edge the total power emitted by an intentional radiator in the measurement bandwidth shall be at least 60 dB below the transmit power permitted for that radiator.

Where B = emission bandwidth

Emission Outside the sub-band shall be attenuated below a reference power of 112 mw (20.5 dBm) as follows:

1. 30 dB between the sub-band and 1.25 MHz above or below the sub-band;
2. 50 dB between 1.25 and 2.5 MHz above or below the sub-band;
3. 60 dB at 2.5 MHz or greater above or below the sub-band.

### **Test Data**

Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

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## **FCC§15.319 (g) - RADIATED EMISSIONS**

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### **Applicable Standard**

According to FCC§15.319(g), notwithstanding other technical requirements specified in this subpart, attenuation of emissions below the general emission limits in §15.209 is not required.

### **Test Data**

Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

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**FCC§15.323 (f) - FREQUENCY STABILITY**

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**Applicable Standard**

Per §15.323(f), the frequency stability of the carrier frequency of the intentional radiator shall be maintained within  $\pm 10$  ppm over 1 hour or the interval between channel access monitoring, whichever is shorter. The frequency stability shall be maintained over a temperature variation of  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  at normal supply voltage, and over a variation in the primary supply voltage of 85 percent to 115 percent of the rated supply voltage at a temperature of  $20^{\circ}\text{C}$ . For equipment that is capable only of operating from a battery, the frequency stability tests shall be performed using a new battery without any further requirement to vary supply voltage

**Test Data**

Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00, which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)

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## **FCC§15.323 (c) (e) & §15.319(f) – SPECIFIC REQUIREMENTS FOR UPCS DEVICE**

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Test data is referred to FCC ID: VNNDD5624 granted on 2013-10-31, report No.: RSZ130409003-00,  
which was tested by Bay Area Compliance Laboratories Corp. (Shenzhen)



**PRODUCT SIMILARITY DECLARATION LETTER**

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Room 308, 3/F Kwong Sang Hong Centre, 151-153 Hoi Bun Road,  
Kwun Tong, Hong Kong.  
Tel: (852)34262106 Fax: (852)31508489

2013-9-27

**Product Similarity Declaration**

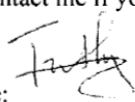
To Whom It May Concern,

We, Global China Technology Limited hereby declare that our Amplified DECT Phone, Model PowerTel 720 Assure + Twin with FCC ID:VNNDD5622,US:7ARW400BDD5622 that was certified by BACL. Due to marketing purposes, we would like to list series models on reports, they share the same product only named differently due to different combination as client's request.

For details as below:

Model No	The Entire package					Description as Packaged & Marketed
	Handset Unit	Base Unit	Wrist Shaker	Handset charger	Wrist Shaker charger	
PowerTel 720 Assure +	●	●				Amplified Cordless Phone with Answering Machine
PowerTel 725 Reliant +	●	●	●		●	Amplified Cordless Phone with Answering Machine and Wrist Shaker
PowerTel 720 Assure + Twin	●	●		●		Amplified Cordless Phone with Answering Machine, and Additional Cordless Accessory Handset
PowerTel 730 Assure Voice +	●	●				Amplified Cordless Phone with Answering Machine and Voice Navigation
PowerTel 735 Reliant Voice +	●	●	●		●	Amplified Cordless Phone with Answering Machine, Voice Navigation and Wrist Shaker
DD5622HER1	●	●				Cordless Amplified DECT with Answering Machine
DD5632HER1	●	●				Cordless Amplified DECT with Answering Machine
DD5622HER2	●	●		●		Amplified Cordless Phone with Answering Machine and Accessory Handset
DD5622VHER1	●	●				Amplified Cordless Phone with Answering Machine and Voice Navigation
DD5632VHER1	●	●	●		●	Amplified Cordless Phone with Answering Machine, Voice Navigation and Wrist Shaker

Please contact me if you have any question.

Signature:   
Yip Timothy/R&D Director

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