

MPE TEST REPORT						
FCC Per 47 CFR 2.1091(b)						
Report Reference No	CTL1404240848-WM					
FCC ID: Compiled by	7					
(position+printed name+signature):	File administrators Jennifer NI					
Name of the organization performing the tests	Test Engineer Jacky Chen Tacky Chen					
(position+printed name+signature):						
Approved by ( position+printed name+signature):	Manager Tracy Qi Juny Ch:					
Date of issue	Apr. 29, 2014					
Test Firm	Shenzhen CTL Testing Technology Co., Ltd.					
Address:	Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road, Nanshan District, Shenzhen, China 518055					
Applicant's name:	Huizhou TCL Mobile Communication Co., Ltd.					
Address	No. 23 Zone, ZhongKai High-Technology Development Zone, Huizhou, 518057 China					
Test specification:						
Standard	FCC Per 47 CFR 2.1091(b)					
TRF Originator	Shenzhen CTL Testing Technology Co., Ltd.					
Master TRF	Dated 2011-01					
This publication may be reproduced in Shenzhen CTL Testing Technology Co material. Shenzhen CTL Testing Technology Co liability for damages resulting from the placement and context.	whole or in part for non-commercial purposes as long as the b., Ltd. is acknowledged as copyright owner and source of the nology Co., Ltd. takes no responsibility for and will not assume reader's interpretation of the reproduced material due to its					
Test item description	CARFONE					
FCC ID	R5CCP100					
IC ID:	11940A-CP100					
Trade Mark	Truckfone					
Model/Type reference:	CP100					
I/O Type of EUT	MiniUSB Port/ Earphone Port					
I/O Q'TY:	1/1					
GSM/WCDMA						
Transmit       2G:GSM 850: 824~849MHz, PCS 1900: 1850~1910MHz         3G:WCDMA Band II: 1850-1910MHz,         WCDMA Band V: 824~849MHz						
Receive	2G:GSM 850: 869~894MHz, PCS 1900: 1930~1990MHz					
	3G:WCDMA Band II: 1930~1990MHz, WCDMA Band V: 869~894MHz					

V1.0

Release Version	2G:R99
	3G:Rel-6
Type of modulation	2G: GMSK for GSM/GPRS/EDGE
	3G: QPSK
GPRS Type	Class B
GPRS Class	Class 12
GPS	
work frequency	1575.42MHz
Type of modulation	BPSK
Antenna Gain	2.0 dBi for GSM850 and WCDMA Band V
	5.0 dBi for PCS1900 and WCDMA Band II
Antenna type	External
IMEI	357782049812060
Result	Positive



# Test Report

Test Report No. :	CTL1404240848-WM	Apr. 29, 2014	
	012110121001011	Date of issue	
Equipment under Test	: CARFONE		
Model /Type	: CP100		
Applicant	: Huizhou TCL Mobile Com	nmunication Co., Ltd.	
Address	: No. 23 Zone, ZhongKai Hig Huizhou, 518057 China	gh-Technology Development Zone,	
Manufacturer	: Huizhou TCL Mobile Com	munication Co., Ltd.	
Address	: No. 23 Zone, ZhongKai Hig Huizhou, 518057 China	gh-Technology Development Zone,	
Test Result	CTL4	ositive	
The test report merely It is not permitted to laboratory.	corresponds to the test sample. b copy extracts of these test result with Costing Teo	nout the written permission of the tes	

# Content

<u>1.</u>	SUMMARY	5
1.1.	EUT configuration	5
1.2.	Equipment Under Test	5
1.3.	Description of the test mode	5
<u>2.</u>	TEST ENVIRONMENT	6
2.1.	Address of the test laboratory	6
2.2.	Environmental conditions	6
2.3.	Statement of the measurement uncertainty	6
3.	METHOD OF MEASUREMENT	



# 1. <u>SUMMARY</u>

#### 1.1. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

:

- - supplied by the manufacturer
- o supplied by the lab

## **1.2. Equipment Under Test**

#### Power supply system utilised

Power supply voltage

 o
 120V / 60 Hz
 o
 115V / 60Hz

 ■
 12 V DC
 o
 24 V DC

 o
 Other (specified in blank below)

#### 1.3. Description of the test mode

CTL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode	
Mode 1: GSM850	S NO T
Mode 2: PCS1900	e states and the
Mode 3: GPRS850	
Mode 4: GPRS1900	3 AU AUG OF O
Mode 5: EDGE 850	8
Mode 6: EDGE 1900	
Mode 7: WCDMA Bar	nd II
Mode 8: WCDMA Bar	nd V Teoris Teoris
	usund to

Note:

1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

2. For the ERP/EIRP and radiated emission test, every axis (X, Y, Z) was verified, and show the worst result on this report.

#### V1.0

# 2. TEST ENVIRONMENT

#### 2.1. Address of the test laboratory

Shenzhen CTL Testing Technology Co., Ltd. Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road, Nanshan District, Shenzhen, China 518055

The sites are constructed in conformance with the requirements of ANSI C6230, ANSI C63.4 (2003) and CISPR Publication 22.

#### 2.2. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:15-35 ° CHumidity:30-60 %Atmospheric pressure:950-1050mbar

#### 2.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Shenzhen CTL Testing Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CTL laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10dB	(1)
Radiated Emission	1~12.75GHz	4.32dB	(1)
Conducted Disturbance	0.15~30MHz	3.22dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

# Page 7 of 8

# 3. Method of measurement

#### 3.1. Applicable Standard

According to §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.

According to §1.1310 and §2.1091 RF exposure is calculated.

#### 3.2. Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time				
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm²)	(minute)				
	Limits for Oc	cupational/Controll	ed Exposure					
0.3 – 3.0	614	1.63	(100) *	6				
3.0 – 30	1842/f	4.89/f	(900/f)*	6				
30 – 300	61.4	0.163	1.0	6				
300 – 1500	/	/	f/300	6				
1500 - 100,000	/	/	5	6				
•								

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time		
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm <sup>2</sup> )	(minute)		
Limits for Occupational/Controlled Exposure						
0.3 – 3.0	614	1.63	(100) *	30		
3.0 – 30	824/f	2.19/f	(180/f)*	30		
30 – 300	27.5	0.073	0.2	30		
300 – 1500	/	/	f/1500	30		
1500 - 100,000	/	/	1.0	30		

F=frequency in MHz

\*=Plane-wave equivalent power density

## 3.3. MPE Calculation Method

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

S=PG/4πR<sup>2</sup>

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna is 2.0dBi for GSM850/WCDMA Band V, 5.0 dBi for PCS1900/WCDMA Band II, 0 dBi for WIFI, Bluetooth and BLE, the RF power density can be obtained.

Technol

# **TEST RESULTS**

#### GSM 850/GPRS 850/EDGE 850/WCDMA Band V

Test Frequency (MHz)	Minimum Separation Distance (cm)	Maximum Output Power (dBm)	Maximum Output Power (mW)	Antenna Gain (Nemeric)	Power Density Limit (mW/cm <sup>2</sup> )	Power Density At 20 cm (mW/cm <sup>2</sup> )	Test Results
824.2	20.00	32.31	1702.1585	1.5849	0.5495	0.5367	Pass
836.6	20.00	31.82	1520.5475	1.5849	0.5577	0.4794	Pass
848.6	20.00	31.65	1462.1772	1.5849	0.5659	0.4610	Pass

#### PCS1900/GPRS 1900/EDGE/1900/WCDMA Band II

Test Frequency (MHz)	Minimum Separation Distance (cm)	Maximum Output Power (dBm)	Maximum Output Power (mW)	Antenna Gain (Nemeric)	Power Density Limit (mW/cm <sup>2</sup> )	Power Density At 20 cm (mW/cm <sup>2</sup> )	Test Results
1850.2	20.00	29.98	995.4054	3.1623	1.0000	0.6262	Pass
1880.0	20.00	30.24	1056.8175	3.1623	1.0000	0.6649	Pass
1909.8	20.00	30.42	1101.5393	3.1623	1.0000	0.6930	Pass

# 4.Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 (b) for the controlled RF Exposure.

