



MPE REPORT

No. 2011SAR127

FCC ID: Q78-WP658
Applicant: ZTE CORPORATION
Product: GSM Wireless Phone
Model: ZTE WP658
Issued Date: 2011-11-09

Test Laboratory:

Shanghai Tejet Communications Technology Co., Ltd Testing Center.
Room 6205-6208, Building 6, No.399 Cailun Rd. Zhangjiang Hi-Tech Park, Shanghai,
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Note:

The following test results relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of the test laboratory.

General Information

Product Name	GSM Wireless Phone	Model Name	ZTE WP658
Applicant	ZTE CORPORATION		
Manufacturer	ZTE CORPORATION		
Reference Standard	FCC RULES 47 CFR2.1091: Radiofrequency radiation exposure evaluation: mobile device		
	OET65C-97-01: Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields		
Test Results	Pass		

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Date 2011.11.9

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Date 2011.11.9

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GM of Tejet
Wang Jianrong

Date 2011.11.9

(Stamp)



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1. Test Laboratory

1.1 Testing Location:

Company: Shanghai Tejet Communications Technology Co., Ltd Testing Center.
Address: Room 6205-6208, Building 6, No.399 Cailun Rd. Zhangjiang Hi-Tech Park,
Shanghai, China
Post Code : 210203
Tel: +86-21-61650880
Fax: +86-21-61650881
Website: www.tejet.cn

1.2 Laboratory Environment

Temperature 20° C~ 25 ° C
Relative humidity 20%~70%

1.3 Testing date

The test is performed on Sep15th~Oct 8th 2011.

2. Client Information

2.1 Applicant information

Company Name: ZTE Corporation
Address: ZTE Plaza ,Keji Road South ,Hi-Tech Industrial Park ,Nanshan
District, Shenzhen, Guangdong,518057,P.R.China
Post Code : 518057
Country: China
Tel: 021-68897541
Fax: 021-50801070

2.2 Manufacturer Information

Company Name: ZTE Corporation
Address: ZTE Plaza ,Keji Road South ,Hi-Tech Industrial Park ,Nanshan
District, Shenzhen, Guangdong,518057,P.R.China
Post Code : 518057
Country: China
Tel: 021-68897541
Fax: 021-50801070

3. Equipment Under Test (EUT) and Accessory Equipment (AE)

3.1 Information of EUT

Device type	Portable device	
Product name	GSM Wireless Phone	
Device operation configuration:		
IMEI	355421040454349	
S/N	341122010010	
Operating mode(s):	GSM850	
	GSM1900	
Test modulation	(GSM)GMSK	
Rated output power	GSM 850:33dBm	
	GSM1900: 30dBm	
Operating frequency range(s):	Band	Tx(MHz)
	GSM850	869.2~893.8
	GSM1900	1930.2~1989.8
Power class	GSM850: 4, test with power level 5	
	GSM1900: 1, test with power level 0	
HW Version	fd9C	
SW Version	LT_WP657+PV1.0.0B03	

3.2 Information Of AE

AE ID*	Description
AE1	Battery
AE2	Travel Adaptor

AE1

Model	Ni3608T30P3S534416
Manufacturer	ZTE CORPORATION
Capacitance	800mAh
Nominal Voltage	3.6V

AE2

Model	STC-A22O50C35-C
Manufacturer	ZTE CORPORATION
Length of DC line	120cm

*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents

4.1 Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
OET65C	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields	1997-01

4.2 RF Exposure Limit

According to OET65C: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation .

Table 1. *FCC Limits for Maximum Permissible Exposure (MPE)*

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	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

5. Friis Formula

Friis transmission formula : $P_d = (P_{out} * G) * DutyFactor / (4 * \pi * r^2)$

where

P_d = power density in **mW/cm²**

P_{out} = output power to antenna in **mW**

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in **cm**

P_d is the limit of MPE. If we know the maximum Gain of the antenna and the total power input to the antenna, through the calculation, we will know the MPE value at distance 20cm.

Of GSM Duty Factor=1: 8.3.

6. Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

7. Test Results

7.1 The maximum antenna gain

The maximum antenna gain for external antenna is

GSM 850: 0.67dBi

GSM1900: 2.07dBi

7.2 Output Power Into Antenna & RF Exposure value at distance 20cm

Frequency band	Output Power (dBm)	Power Density (mW/cm ²)	Limit of Power Density (W/m ²)
GSM850	31.31	0.038	0.55
GSM 1900	29.14	0.032	1

So the limit is kept.

ANNEX A: EUT Photograph



EUT



Battery



Travel Adaptor

ANNEX B: Test Instruments

No.	Name	Type	S/N	Calibration Date	Valid Period
01	BTS	CMU200	121464	Oct 14 st , 2011	One year

ANNEX C: Measurement Uncertainty

Expanded uncertainty (confidence interval of 95 %) (k=2)	0.4 dB
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ANNEX D: Change History

Version	Change Contents	Author	Date
V1.0	First edition	Yin xiaoming	2011-10-18
V2.0	Page 1: FCC ID change remove "ZTE". Page10:Change the output power and antenna gain of GSM850.	Yin xiaoming	2011-11-01
V3.0	Page 1,2 : mode name "ZTEMP658" change to "ZTE WP658" Page 2,8: "oet65 B" change to "oet65C"	Yin xiaoming	2011-11-09

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