MPE TEST REPORT

Equipment Under Test :	HSDPA/WCDMA/GSM/GPRS USB Modem
Model No. :	MF622
Market name:	MF622
Applicant :	ZTE CORPORATION
Address of Applicant :	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District,Shenzhen, Guangdong, 518057, P.R.China
Date of Issue :	2007.10.22

Standards:

COUNCIL RECOMMENDATION
Of 12 July 1999
On the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 Ghz)

In the configuration tested, the EUT complied with the standards specified above.

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Tested by :	Zengyi Zhang	Date :	2007.10.22
Approved by :	Zhiang Yuan	Date :	2007.10.22

Contents

1. General Information

1.1 Test Laboratory

GSM Lab
SGS-CSTC Standards Technical Services Co., Ltd Shanghai Branch
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1.2 Details of Applicant

Name: ZTE CORPORATION

Address: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park,

Nanshan District,Shenzhen, Guangdong, 518057, P.R.China

1.3 Description of EUT(s)

Brand name	ZTE	
Model No.	MF622	
Market Name	MF622	
Antenna Type	Inner Antenna	
Frequency range	GSM850	Tx: 824~849 MHz
		Rx: 869~894 MHz
	PCS1900	Tx: 1850~1910 MHz
		Rx: 1930~1990 MHz
	WCDMA FDD Band V	Tx: 824~849 MHz
		Rx: 869~894MHz
	WCDMA FDD Band Ⅱ	Tx: 1850 - 1910 MHz
		Rx: 1930 - 1990 MHz
Maximum RF Conducted Power	GSM850: 33.0dBm, PCS1900: 30.0dBm, WCDMA Band V: 24.0dBm WCDMA Band Ⅱ: 24.0dBm	

1.4 Test Standards and Limits

Table 2

Reference levels for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m²)
0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	4 000/f	5 000/f	—
0,025-0,8 kHz	250/f	4/f	5/f	—
0,8-3 kHz	250/f	5	6,25	—
3-150 kHz	87	5	6,25	—
0,15-1 MHz	87	0,73/f	0,92/f	—
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	—
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

2. Test Results

2.1 Summary of Results

Frequency range	Limit (W/ m²)	Result (W/ m²)	Verdict
GSM850	4.12	2.63	Pass
PCS1900	9.25	2.09	Pass
WCDMA Band V	4.12	0.245	Pass
WCDMA Band Ⅱ	9.25	0.418	Pass

2.2 Instruments List

Instrument	Model	Serial number	NO.	Date of last Calibration
R&S Universal radio communication tester	CMU200	103633	GSM-AUD-002	2006.12.19

2.3 Result of GSM850

Test Results: MPE Limit Calculation: the EUT's operating frequencies @ 824 - 845 MHz; as per the original test report the highest power is GSM850 Band, channel 251. The conducted power = 32.2 dBm (peak) with maximum peak antenna gain of -1 dBi. Therefore, maximum limit for general public RF exposure: 4.12W/m ²

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

$S = PG / 4\pi R^2$

P = Power Input to antenna (1.660 Watts)
G = Antenna Gain (0.795 numeric)
R = distance to the center of radiation of antenna (in meter) = 0.20 m
$S = (1.660 * 0.795)/ (4\pi * 0.2^2) = 2.63$ W/m²

Therefore, at 20 cm the spectral power density is less than the 4.12 W/m² limit for uncontrolled exposure.

2.4 Result of PCS1900

Test Results: MPE Limit Calculation: the EUT's operating frequencies @ 1850 - 1910 MHz;

as per the original test report the highest power is PCS1900 Band, channel 810. The conducted power = 29.0 dBm (peak) with maximum peak antenna gain of 1.2 dBi. Therefore, maximum limit for general public RF exposure: 9.25W/m ²

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

$S = PG / 4\pi R^2$

P = Power Input to antenna (0.795 Watts)
G = Antenna Gain (1.32 numeric)
R = distance to the center of radiation of antenna (in meter) = 0.20 m
$S = (0.795 * 1.32)/ (4\pi * 0.2^2) = 2.09W/m^2$

Therefore, at 20 cm the spectral power density is less than the 9.25 W/m² limit for uncontrolled exposure.

2.5 Result of WCDMA Band V

Test Results: MPE Limit Calculation: the EUT's operating frequencies @ 824 - 849 MHz; as per the original test report the highest power is WCDMA Band V, channel 4233. The conducted power = 21.9 dBm (peak) with maximum peak antenna gain of -1 dBi. Therefore, maximum limit for general public RF exposure: 4.12W/m ²

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

$S = PG / 4\pi R^2$

P = Power Input to antenna (0.155 Watts)
G = Antenna Gain (0.795 numeric)
R = distance to the center of radiation of antenna (in meter) = 0.20 m
$S = (0.155 * 0.795)/ (4\pi * 0.2^2) = 0.245W/m^2$

Therefore, at 20 cm the spectral power density is less than the 4.12 W/m² limit for uncontrolled exposure.

2.6 Result of WCDMA Band Ⅱ

Test Results: MPE Limit Calculation: the EUT's operating frequencies @ 1850 - 1910 MHz; as per the original test report the highest power is WCDMA Band Ⅱ, channel 9400. The conducted power = 21.99 dBm (peak) with maximum peak

antenna gain of 1.2 dBi. Therefore, maximum limit for general public RF exposure: 9.25W/m ²

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

$S = PG / 4\pi R^2$

P = Power Input to antenna (0.159 Watts)
G = Antenna Gain (1.32 numeric)
R = distance to the center of radiation of antenna (in meter) = 0.20 m
$S = (0.159 * 1.32)/ (4\pi * 0.2^2) = 0.418 W/m^2$

Therefore, at 20 cm the spectral power density is less than the 9.25 W/m^2 limit for uncontrolled exposure.