MPE TEST REPORT

Applicant	ZTE Corporation
FCC ID	SRQ-MC801A
Product	5G CPE
Model	MC801A
Report No.	R2112A1085-M1
Issue Date	January 12, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 1.1310.** The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Fangying Wei Approved by: Guangchang Fan

TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

1.3 Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City:	Shanghai
Post code:	201201
Country:	P. R. China
Contact:	Fan Guangchang
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	http://www.ta-shanghai.com
E-mail:	fanguangchang@ta-shanghai.com

1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C

Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment under Test

Client Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

General Technologies

Model	MC801A
IMEI	863671043881410
Hardware Version	MC801AHW-1.0.0
Software Version	BD_TLCMXMC801AV1.0.0B01
Date of Sample Received	December 1, 2021
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. 2. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.	

3 Maximum tune-up tolerance and antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by
Numeric gain (G)=10^(antenna gain/10)

Band	Maximum tune-up tolerance		Antenna Gain (dBi)	Numeric gain
	(dBm)	(mW)		
WCDMA Band II	24.50	281.838	2.00	1.585
WCDMA Band IV	24.50	281.838	2.00	1.585
WCDMA Band V	24.50	281.838	1.50	1.413
LTE Band 2	25.50	354.813	2.00	1.585
LTE Band 4	25.50	354.813	2.00	1.585
LTE Band 5	25.50	354.813	1.50	1.413
LTE Band 7	25.50	354.813	2.50	1.778
LTE Band 38	25.50	354.813	2.00	1.585
LTE Band 66	26.50	446.684	2.00	1.585
NR n77	24.50	281.838	4.00	2.512
NR n78	24.50	281.838	4.00	2.512
Wi-Fi 2.4G	23.50	223.872	2.50	1.778
Wi-Fi 5G	20.00	100.000	4.00	2.512

4 Test Result

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following

TABLE 1 – LIMITS FOR MAXIMUN PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0 ……	614	1.63	*(100)	6
3-30 ……	1842/f	4.89/f	*(900/f2)	6
30-300 ……	61.4	0.163	1.0	6
300-1500 ……	……	……	f/300	6
1500-100,000 ……	……	……	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34 ……	614	1.63	*(100)	30
1.34-30 ……	824/f	2.19/f	*(180/f2)	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

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 300~1500 MHz is f/1500, for 1500~100,000MHz is 1.0.So

Band	The maximum permissible exposure (mW/cm^2)
WCDMA Band II	1.000
WCDMA Band IV	1.000
WCDMA Band V	0.549
LTE Band 2	1.000
LTE Band 4	1.000
LTE Band 5	0.549
LTE Band 7	0.466
LTE Band 38	0.518
LTE Band 66	1.000
NR n77	1.000
NR n78	1.000
Wi-Fi 2.4GHz	1.000
Wi-Fi 5GHz	1.000

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided. This calculation is based on the conducted power, considering maximum power and antenna gain. The formula shown in KDB 447498 D01 is used in the calculation.

Equation from KDB 447498 D01 General RF Exposure Guidance v06 (10/23/2015) is:

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

Where: S = power density (in appropriate units, e.g. mW/cm^2)

P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)

G = the numeric gain of the antenna

R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	Antenna Gain (dBi)	Maximum tune-up tolerance (dBm)	Maximum EIRP (dBm)	PG (mW)	Test Result (mW/cm^2)	Limit Value (mW/cm^2)
WCDMA Band II	2.000	24.500	26.500	446.684	0.089	1.000
WCDMA Band IV	2.000	24.500	26.500	446.684	0.089	1.000
WCDMA Band V	1.500	24.500	26.000	398.107	0.079	0.549
LTE Band 2	2.000	25.500	27.500	562.341	0.112	1.000
LTE Band 4	2.000	25.500	27.500	562.341	0.112	1.000
LTE Band 5	1.500	25.500	27.000	501.187	0.100	0.549
LTE Band 7	2.500	25.500	28.000	630.957	0.126	0.466
LTE Band 38	2.000	25.500	27.500	562.341	0.112	0.518
LTE Band 66	2.000	26.500	28.500	707.946	0.141	1.000
NR n77	4.000	24.500	28.500	707.946	0.141	1.000
NR n78	4.000	24.500	28.500	707.946	0.141	1.000
Wi-Fi 2.4GHz	2.500	23.500	26.000	398.107	0.079	1.000
Wi-Fi 5GHz	4.000	20.000	24.000	251.189	0.050	1.000

Note: **R** = 20cm

π= 3.1416

The MPE ratio = Mac Test Result÷Limit Value

1. This MPE analysis is applicable to any collocated transmitters with EIRP for Wi-Fi is less than or equal to 26dBm.

Note: For transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.

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

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.