MPE TEST REPORT

Applicant	Asiatelco Technologies Co.
FCC ID	XYO-J912
Product	LTE CPE
Brand	ATEL
Model	AOL-J912
Report No.	R2111A0991-M1
Issue Date	December 6, 2021

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.

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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
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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	Asiatelco Technologies Co.
Applicant address	#68 HuaTuo Road, Building-8, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201204, China
Manufacturer	Asiatelco Technologies Co.
Manufacturer address	#68 HuaTuo Road, Building-8, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201204, China

General Technologies

Model	AOL-J912
IMEI	869710030051985
Hardware Version	J91-P1
Software Version	CPE3_WT_J91_00_v1.0.3
Date of Sample Received:	November 9, 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 conducted output power (measured) 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 Power		Antenna Gain (dBi)	Numeric gain
	(dBm)	(mW)		
WCDMA Band II	25.000	316.228	9	7.943
WCDMA Band IV	25.000	316.228	7	5.012
WCDMA Band V	25.000	316.228	2	1.585
LTE Band 2	25.000	316.228	9	7.943
LTE Band 4	25.000	316.228	7	5.012
LTE Band 5	25.000	316.228	2	1.585
LTE Band 7	25.000	316.228	10	10.000
LTE Band 12	25.000	316.228	2	1.585
LTE Band 13	25.000	316.228	2	1.585
LTE Band 14	25.000	316.228	2	1.585
LTE Band 17	25.000	316.228	0.6	1.148
LTE Band 25	25.000	316.228	10	10.000
LTE Band 26	25.000	316.228	2	1.585
LTE Band 30	25.000	316.228	3	1.995
LTE Band 38	25.000	316.228	10	10.000
LTE Band 41	25.000	316.228	10	10.000
LTE Band 66	25.000	316.228	7	5.012

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	1.000
LTE Band 12	0.466
LTE Band 13	0.518
LTE Band 14	0.525
LTE Band 17	0.469
LTE Band 25	1.000
LTE Band 26	0.543
LTE Band 30	1.000
LTE Band 38	1.000
LTE Band 41	1.000
LTE Band 66	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	Maximum tune up (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	PG (mW)	Test Result (mW/cm^2)	Limit Value (mW/cm^2)
WCDMA Band II	25.000	9	34.000	2511.888	0.500	1.000
WCDMA Band IV	25.000	7	32.000	1584.894	0.315	1.000
WCDMA Band V	25.000	2	27.000	501.188	0.100	0.549
LTE Band 2	25.000	9	34.000	2511.888	0.500	1.000
LTE Band 4	25.000	7	32.000	1584.894	0.315	1.000
LTE Band 5	25.000	2	27.000	501.188	0.100	0.549
LTE Band 7	25.000	10	35.000	3162.280	0.629	1.000
LTE Band 12	25.000	2	27.000	501.188	0.100	0.466
LTE Band 13	25.000	2	27.000	501.188	0.100	0.518
LTE Band 14	25.000	2	27.000	501.188	0.100	0.525
LTE Band 17	25.000	0.6	25.600	363.078	0.072	0.469
LTE Band 25	25.000	10	35.000	3162.280	0.629	1.000
LTE Band 26	25.000	2	27.000	501.188	0.100	0.543
LTE Band 30	25.000	3	28.000	630.958	0.126	1.000
LTE Band 38	25.000	10	35.000	3162.280	0.629	1.000
LTE Band 41	25.000	10	35.000	3162.280	0.629	1.000
LTE Band 66	25.000	7	32.000	1584.894	0.315	1.000
Note: **R** = 20cm **π**= 3.1416						

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.