





MPE TEST REPORT

Applicant Alcatel-Lucent Shanghai Bell Co.Ltd.

FCC ID 2ADZRG240WF

Product G-240W-F

Model G-240W-F

Report No. RXA1704-0102MPE01R1

Issue Date May 31, 2017

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.

Performed by: Jiangpeng Lan

Jiang peng Lan

Approved by: Kai Xu

Kai Xu

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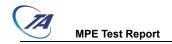


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1 Test Laboratory

1.1 Notes of the Test Report

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(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. This report must not be used by the

client to claim product certification, approval, or endorsement by any government agencies.

1.2 Test facility

CNAS (accreditation number:L2264)

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation

Service for Conformity Assessment (CNAS).

FCC (recognition number is 428261)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission

list of test facilities recognized to perform electromagnetic emissions measurements.

IC (recognition number is 8510A)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic

emission measurement.

VCCI (recognition number is C-4595, T-2154, R-4113, G-766)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Japan to perform electromagnetic

emission measurement.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory

Accreditation to perform electromagnetic emission measurement.

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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: Xu Kai

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

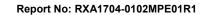
Fax: +86-021-50791141/2/3-8000
Website: http://www.ta-shanghai.com

E-mail: xukai@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.





Description of Equipment under Test

Client Information

Applicant	Alcatel-Lucent Shanghai Bell Co.Ltd.	
Applicant address	388-389#,Ningqiao Road,Pudong Jinqiao, Shanghai P. R. China	
Manufacturer	TAICANG T&W ELECTRONICS CO., LTD	
Manufacturer address	Jiangnan Road 89, Loudong Street, Taicang, Jiangsu, P. R. China	

General Technologies

g		
Product	G-240W-F	
Model G-240W-F		
IMEI	/	
Hardware Version	V1.0	
Software Version	V1.0	
Date of Testing	April 17, 2017 ~ May 5, 2017	

ONT Mnemonic	Kit Code	EMA Code	Part Description	Power Adaptor MPN
G-240W-F	G-240W-F BAA BAA		GPON indoor ONT, 2POTS, 4GE, WIFI 100mW, SC/APC, VietTel Logo, 5dBi antenna. 1.5m CAT-5E Ethernet cable with RJ-45 endpoint, 1.5m RJ-11 cable, AC/DC power adapter, VietTel user manual	UES18W3-1201 50SPAV
G-240W-F	GPON indoor ONT, 2POTS, 4GE, WIFI 100mW, SC/APC, Nokia Logo, 5dBi antenna.		UES18W3-1201 50SPAV	
G-240W-F	GPON indoor ONT, 2POTS, 4GE, WIFI 1000 SC/APC, Nokia Logo, 5dBi antenna. 1.5m CAT-5E Ethernet cable with RJ-45		1.5m CAT-5E Ethernet cable with RJ-45 endpoint, 1.5m RJ-11 cable, AC/DC power	UES18W3-1201 50SPAU
G-240W-F	3FE46649C 3FE46597A		GPON indoor ONT, 2POTS, 4GE, WIFI 100mW, SC/APC, Nokia Logo, 5dBi antenna. 1.5m CAT-5E Ethernet cable with RJ-45 endpoint, 1.5m RJ-11 cable, AC/DC power adapter	UES18W3-1201 50SPABE



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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 Conducted Output Power (dBm)	Antenna Gain (dBi)	Numeric gain (dB)
	802.11b	13	5.00	3.162
Antonno 1	802.11g	14	5.00	3.162
Antenna 1	802.11n HT20	11	5.00	3.162
	802.11n HT40	11	5.00	3.162
	802.11b	14	5.00	3.162
Antenna 2	802.11g	15	5.00	3.162
	802.11n HT20	12	5.00	3.162
	802.11n HT40	10	5.00	3.162
MIMO	802.11n HT20	14	5.00	3.162
IVIIIVIO	802.11n HT40	14	5.00	3.162

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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	Electric Field	Magnetic Field	Power Density	Averaging Time		
(MHz)	Strength	Strength				
90000 No.	(V/m)	(A/m)	(mW/cm2)	(minutes)		
	(A) Limits for Occu	upational/Controlle	d 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

- 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.

^{* =} Plane-wave equivalent power density



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

Band	The maximum permissible exposure
Wi-Fi 2.4G	1.0mW/cm ²

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

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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 /
$$4 \square R^2$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

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)

Wi-Fi PG = 15dBm + (3.162dB) = 18.162 dBm = 65.49mW

Band	PG (mW)	Test Result (mW/cm ²)	Limit Value (mW/cm²)	The MPE ratio	
Wi-Fi 65.49 0.013 1.0 0.013					
Note: The MPE ratio = Mac Test Result ÷ Limit Value					

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