Shenzhen Most Technology Service Co., Ltd.
No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.

RF Exposure Evaluation Report

Report Reference No......:	**MTWG22040313-H**
FCC ID..... :	**2AD6G-RP411**
Compiled by (position+printed name+signature)..:	File administrators Alisa Luo
Supervised by (position+printed name+signature)..:	Test Engineer Sunny Deng
Approved by (position+printed name+signature)..:	Manager Yvette Zhou
Date of issue.....:	**April 27,2022**
Representative Laboratory Name .:	**Shenzhen Most Technology Service Co., Ltd.**
Address .....:	No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.
Applicant's name.....:	**Rongta Technology (Xiamen) Group Co., Ltd.**
Address .....:	No. 889 Xinmin Avenue, Tongan District, Xiamen, China
Test specification/ Standard .....**:**	**47 CFR Part 1.1307;47 CFR Part 1.1310** **KDB447498D01 General RF Exposure Guidance v06**
TRF Originator.....:	Shenzhen Most Technology Service Co., Ltd.

Test item description .....:	Label Printer
Trade Mark .....:	RONGTA
Manufacturer .....:	**Rongta Technology (Xiamen) Group Co., Ltd.**
Model/Type reference.....:	RP411
Listed Models .....:	RP411A, RP411B, RP411C, RP411D, RP411G, RP411H,RP411P,AP411, AP411A, AP411H, SP422, SP411A, SP411H,MP411, MP411A,MP411H, TP411, TP411A, TP411H
Modulation Type .....:	CCK,DSSS,OFDM
Operation Frequency.....:	From 2412 - 2462MHz
Hardware Version.....	410USE_GD_V1.0_180103
Software Version	RP411GD_BOOT_20190815.hex
Rating .....:	DC 24V by Adapter
Result.....:	**PASS**

T E S T R E P O R T

Equipment under Test	:	Label Printer
Model /Type	:	RP411
Listed Models	:	RP411A, RP411B, RP411C, RP411D, RP411G, RP411H,RP411P,AP411, AP411A, AP411H, SP422, SP411A, SP411H,MP411, MP411A,MP411H, TP411, TP411A, TP411H
Remark		Only the product name, model name and appearance color are different between models
Applicant	:	**Rongta Technology (Xiamen) Group Co., Ltd.**
Address	:	No. 889 Xinmin Avenue, Tongan District, Xiamen, China
Manufacturer	:	**Rongta Technology (Xiamen) Group Co., Ltd.**
Address	:	No. 889 Xinmin Avenue, Tongan District, Xiamen, China

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2022-04-27	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
4.3.1. Standalone SAR test exclusion considerations
Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*($900/f^2$)	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	*($180/f^2$)	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
Friis Formula
Friis transmission formula: Pd = (Pout*G)/(4* Pi * R 2) Where
Pd = power density in mW/cm2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416

R = distance between observation point and center of the radiator in cm
Pd id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

Antenna Gain: 1.5dBi
Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.5 in linear scale. Output Power Into Antenna & RF Exposure Evaluation Distance:

WIFI 2.4G

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412 MHz)	12.88	12.88±1	13.88
Middle(2437MHz)	12.75	12.75±1	13.75
Highest(2462MHz)	12.46	12.46±1	13.46

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412 MHz)	12.55	12.55±1	13.55
Middle(2437MHz)	11.96	11.96±1	12.96
Highest(2462MHz)	12.13	12.13±1	13.13

802.11n(HT20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412 MHz)	11.71	11.71±1	12.71
Middle(2437MHz)	11.42	11.42±1	12.42
Highest(2462MHz)	11.05	11.05±1	12.05

802.11n(HT40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2422MHz)	10.88	10.88±1	11.88
Middle(2437MHz)	10.75	10.75±1	11.75
Highest(2452MHz)	11.05	11.05±1	12.05

WIFI

Worst case: 802.11b						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
Highest(2412 MHz)	13.88	24.43	1.5	0.0068	1.0	Pass

Note: 1) Refer to report **MTWG22030226-R1** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(24.43*1.41)/(4*3.1416*20^2)=0.0068

.....THE END OF REPORT.....