

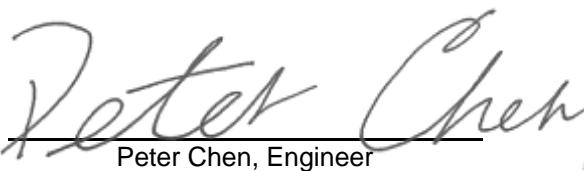
Maximum Permissible Exposure Report

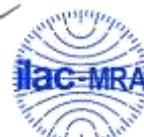
FCC ID: 2AB9W-PP150XP

Report No. : BTL-FCCP-3-1908T080
Equipment : 3D Printer
Model Name : PartPro150 xP
Brand Name : XYZprinting
Applicant : XYZprinting, Inc.
Address : 10F., No.99, Sec. 5, Nanjing E. Rd., Songshan Dist., Taipei City 10571, Taiwan (R.O.C.)
Manufacturer : Cal-Comp Electronics (Thailand) Public Company Limited
Address : 138, Moo 4, Phechkasem Road, Sapang, Koawyoi, Petchaburi 76140, Thailand.
Factory : Cal-Comp Electronics (Thailand) Public Company Limited
Address : 138, Moo 4, Phechkasem Road, Sapang, Koawyoi, Petchaburi 76140, Thailand.
FCC Rule Part(s) : FCC Guidelines for Human Exposure IEEE C95.1
Date of Receipt : 2019/9/20
Date of Test : 2019/9/20 ~ 2019/11/14
Issued Date : 2020/1/9

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by


Peter Chen, Engineer



Approved by


Scott Hsu, Manager

BTL Inc.

No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan

Tel: +886-2-2657-3299

Fax: +886-2-2657-3331

Web: www.newbtl.com

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	2019/12/19
R01	Revised report to address TCB's comments.	2019/12/23
R02	Revised report to address TCB's comments.	2020/1/9

MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	PCB	N/A	-8.65

TEST RESULTS

For WLAN:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Average Output Power (dBm)	Max. Average Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
-8.65	0.1365	13.5	22.3872	0.00060807	1	Complies

Note: The calculated distance is 20 cm.

For NFC:

Limits to 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 Exposure				
0.3 to 3.0	614	1.63	100 (Note 2)	6
3.0 to 30	1842/f	4.89/f	900/f ² (Note 2)	6
30 to 300	61.4	0.163	1.0	6
300 to 1500	-	-	f/300	6
1500 to 100,000	-	-	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3 to 1.34	614	1.63	100 (Note 2)	30
1.34 to 30	824/f	2.19/f	180/f ² (Note 2)	30
30 to 300	27.5	0.073	0.2	30
300 to 1500	-	-	f/1500	30
1500 to 100,000	-	-	1.0	30

Notes:

1. f = frequency in MHz
2. Power density is plane wave equivalent power density.

Max H-field strength (dBuV/m)	E-field strength (V/m)	Limit
46.86	0.000220293	60.77

COLLOCATED POWER DENSITY CALCULATIONS

So for NFC+2.4G simultaneous transmission $0.000220293/60.77+0.00060807/1=0.000611695 < 1$

End of Test Report