

Testing Laboratory 0659



Maximum Permissible Exposure Report

FCC ID: 2AB9W-PP120XP

Report No. : BTL-FCCP-3-1911T047

Equipment : 3D Printer

Model Name : PartPro120 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 : 2019/11/27

Date of Test : 2019/11/27 ~ 2019/12/30

Issued Date : 2020/1/8

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

Prepared by

Approved by

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	2020/1/8

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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/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
-8.65	0.1365	13	19.9526	0.0005	1	Complies

Note: The calculated distance is 20 cm.

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For NFC:

Limits to Maximum 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 Occ	upational/Controlle	d 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	-	Til.	f/300	6
1500 to 100,000	-	H)	5	6
(B) Limits for Gen	eral Population/Un	controlled 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:

- 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
38.46	0.00008	60.77

COLLOCATED POWER DENSITY CACULATIONS

So for NFC+2.4G simultaneous transmission 0.00008/60.77+0.0005/1=0.0005<1

End of Test Report