FCC RF EXPOSURE REPORT

FCC ID:2AEMI-PHOTON

Project No.	**: 1504C213B**
Equipment	**: PHOTON**
Model	**: PHOTONH**
Applicant	**: Particle Industries, Inc**
Address	**: 1475 Folsom Street, Suite 200, San Francisco, CA 94103**
According:	**: FCC Guidelines for Human Exposure IEEE C95.1**

BTL INC.

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, China.
TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

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	ACX	AT7020 -E3R0HBA	Chip	N/A	1.30
2	CRMX$_{TM}$	104-1004	Dipole	RP-TNC	2.15

TEST RESULTS

Chip antenna

EUT：	PHOTON	Model Name :	PHOTONH
Temperature：	25 ℃	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
1.3	1.3490	18.25	66.8344	0.01794529	1	Complies
1.3	1.3490	18.33	68.0769	0.01827891	1	Complies
1.3	1.3490	18.69	73.9605	0.01985868	1	Complies

EUT：	PHOTON	Model Name :	PHOTONH
Temperature：	25 ℃	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX G MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
1.3	1.3490	19.26	84.3335	0.02264386	1	Complies
1.3	1.3490	19.96	99.0832	0.02660421	1	Complies
1.3	1.3490	19.44	87.9023	0.02360208	1	Complies

EUT：	PHOTON	Model Name :	PHOTONH
Temperature:	25 ℃	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
1.3	1.3490	19.08	80.9096	0.02172453	1	Complies
1.3	1.3490	19.17	82.6038	0.02217943	1	Complies
1.3	1.3490	19.49	88.9201	0.02387538	1	Complies

Dipole antenna

EUT：	PHOTON	Model Name :	PHOTONH
Temperature:	25 ℃	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
2.15	1.6406	19.51	89.3305	0.02917094	1	Complies
2.15	1.6406	19.67	92.6830	0.03026568	1	Complies
2.15	1.6406	19.42	87.4984	0.02857264	1	Complies

EUT：	PHOTON	Model Name :	PHOTONH
Temperature：	25 ℃	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX G MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
2.15	1.6406	20.01	100.2305	0.03273033	1	Complies
2.15	1.6406	22.13	163.3052	0.05332740	1	Complies
2.15	1.6406	20.29	106.9055	0.03491004	1	Complies

EUT：	PHOTON	Model Name :	PHOTONH
Temperature:	25 ℃	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N20 MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
2.15	1.6406	18.93	78.1628	0.02552410	1	Complies
2.15	1.6406	20.99	125.6030	0.04101572	1	Complies
2.15	1.6406	20.18	104.2317	0.03403693	1	Complies

Note: the calculated distance is 20 cm.