

# Maximum Permissible Exposure Report

**FCC ID: 2AATB-SMC-1030**

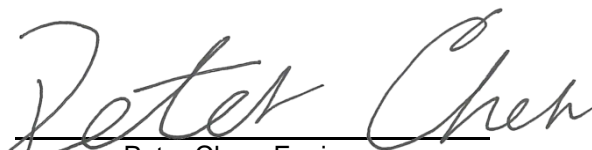
**Report No.** : BTL-FCCP-6-1803T076A  
**Equipment** : Music Streamer  
**Model Name** : SMC-1030  
**Brand Name** : TTI  
**Applicant** : Tatung Technology Inc.  
**Address** : 10F, No.288, Sec 6, Civic Blvd, Xinyi Dist, Taipei City 11087, Taiwan

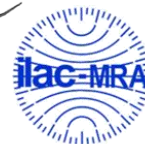
**FCC Rule Part(s)** : FCC Guidelines for Human Exposure IEEE C95.1

**Date of Receipt** : 2018/4/25  
**Date of Test** : 2018/4/25 ~ 2019/9/20  
**Issued Date** : 2019/12/11


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, Deputy 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](http://www.newbtl.com)

**REPORT ISSUED HISTORY**

Report Version	Description	Issued Date
R00	Original Issue.	2019/11/7
R01	Revised report to address TCB's comments.	2019/12/11

## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

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

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

For BT, BLE:

Ant.	Brand	Test Model	Antenna Type	Connector	Gain (dBi)
1	Ethertronics	TTI_SMC-1030	PCB	N/A	-2.03

For 2.4G WLAN:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Ethertronics	TTI_SMC-1030	PCB	I-PEX	4.8
2	Ethertronics	TTI_SMC-1030	PCB	I-PEX	4.0

For 5G RLAN:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	Ethertronics	TTI_SMC-1030	PCB	I-PEX	6.0	UNII-1
					5.2	UNII-3
2	Ethertronics	TTI_SMC-1030	PCB	I-PEX	4.3	UNII-1
					3.7	UNII-3

## TEST RESULTS

For BT, BLE:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
-2.03	0.6266	9.31	8.5310	0.00106402	1	Complies

For BLE:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
-2.03	0.6266	5.45	3.5075	0.00043747	1	Complies

For 2.4G WLAN:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
4.80	3.0200	27.56	570.1643	0.34272862	1	Complies

For 5G RLAN:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
6.00	3.9811	20.6	114.8154	0.09098093	1	Complies

Note: The calculated distance is 20 cm.

## COLLOCATED POWER DENSITY CALCULATIONS

So for 2.4G+5G simultaneous transmission:  $0.34272862/1+0.09098093/1=0.43370955<1$

**End of Test Report**