

Maximum Permissible Exposure Report

FCC ID: 2AATB-SMC-1030

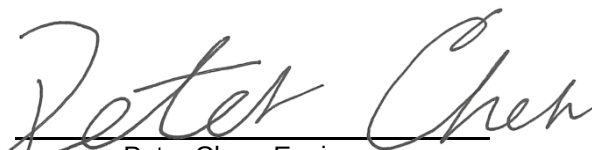
Report No. : BTL-FCCP-6-1803T076A
Equipment : Music Streamer
Model Name : SMC-1030
Brand Name : TTI
Applicant : Tatung Technology Inc.
Address : 10F, No.288, Sec 6, Civic Blvd, Xinyi Dist, Taipei City 11087, Taiwan

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 :


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Approved by :


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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 ²)	Limit of Power Density (S) (mW/cm ²)	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 ²)	Limit of Power Density (S) (mW/cm ²)	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 ²)	Limit of Power Density (S) (mW/cm ²)	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 ²)	Limit of Power Density (S) (mW/cm ²)	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