

Maximum Permissible Exposure Report

FCC ID: 2AVVT-CU304080000

Report No. : BTL-FCCP-4-2103T126A
Equipment : iTraMS CCU
Model Name : CU-304-0800-00
Brand Name : Bosch
Applicant : Bosch Global Software Technologies Private Limited
Address : MS/PAC, Ban 601, Post Box No 3000 Hosur Road, Adugodi, Bengaluru, Karnataka-560030, India

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

Date of Receipt : 2021/4/6
Date of Test : 2021/4/6 ~ 2021/8/26
Issued Date : 2022/12/26

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

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-4-2103T126A	R00	Original Report.	2022/2/8	Invalid
BTL-FCCP-4-2103T126A	R01	Revised applicant address.	2022/2/18	Invalid
BTL-FCCP-4-2103T126A	R02	Added the fourth antenna. (MA173. A. LBI.001)	2022/11/10	Invalid
BTL-FCCP-4-2103T126A	R03	Revised applicant information.	2022/11/22	Invalid
BTL-ISED4-2103T126A	R04	Revised typo.	2022/12/12	Invalid
BTL-ISED4-2103T126A	R05	Revised typo.	2022/12/26	Valid

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:


Group I:

Antenna	Manufacture	Part No.	Type	Connector	Frequency (MHz)	Gain (dBi)
External antenna		MA250.A.LBI.001	Dipole	SMA(M)ST	2400-2500	2.72


Group II:

Antenna	Manufacture	Part No.	Type	Connector	Frequency (MHz)	Gain (dBi)
Stubby antenna		TG.08.0723	Dipole	SMA(M)ST	2400-2500	3.29

Group III:

Antenna	Manufacture	Part No.	Type	Connector	Frequency (MHz)	Gain (dBi)
Wi-Fi 2.4GHz antenna		MA240.LBI.001	Dipole	SMA(M)	2400-2500	2.70

Group IV:

Antenna	Manufacture	Part No.	Type	Connector	Frequency (MHz)	Gain (dBi)
External antenna		MA173. A. LBI.001	N/A	SMA(M)ST	2400-2500	1.31

Note: The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

Output power including tune up tolerance

Function	Target power (dBm)	Tolerance (dB)
WLAN 2.4G	20	±1

CALCULATED RESULTS

Mode	Band	Frequency Range (MHz)	Maximum Power (dBm)	Antenna Gain (dBi)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Test Result
WLAN	-	2437	21	3.29	0.0535	1.0000	Complies

Mode	Band	Frequency Range (MHz)	Maximum Power (dBm)	Antenna Gain (dBi)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Test Result
BT	-	2441	6.82	3.29	0.0020	1.0000	Complies

Mode	Band	Frequency Range (MHz)	Maximum Power (dBm)	Antenna Gain (dBi)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Test Result
BLE	-	2440	2.03	3.29	0.0007	1.0000	Complies

Note:

1. The calculated distance is 20 cm.

COLLOCATED POWER DENSITY CALCULATIONS

So for simultaneous transmission (WLAN+BT): $0.0535/1+0.0020/1=0.0555<1$.

End of Test Report