



TEST REPORT

Reference No...... : WTF22F03030581W002
FCC ID..... : 2ASCM-PBXATOM
Applicant..... : PowerBox Systems GmbH
Address..... : Ludwig-Auer-Strasse 5 Donauwörth, 86609 Germany
Manufacturer..... : The same as above
Address..... : The same as above
Product Name..... : ATOM
Model No...... : ATOM
Test specification..... : FCC CFR47 Part 1 Subpart 2 (Section2.1093): 2020
KDB 447498 D01 v06
Date of Receipt sample : 2022-03-22
Date of Test..... : 2022-06-16
Date of Issue..... : 2022-07-20
Test Report Form No...... : WEW-MPEA-01A
Test Result..... **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

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1 Revision History

Test Report No.	Date of Issue	Description	Status
WTF22F03030581W002	2022-07-20	Original	Valid

WALTEK



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3 General Information

3.1 General Description of E.U.T

Product Name : ATOM
Model No. : ATOM
Model Description : ---
Rated Voltage..... : DC 5-9V, 51mW
Battery Capacity : ---
Power Adapter : ---

3.2 Technical Characteristics of EUT

Frequency Range : 2402-2467MHz
RF Output Power : 12.059dBm (Conducted)
Modulation : MSK
Data Rate : 1Mbps
Quantity of Channels : 66
Channel Separation..... : 1MHz
Type of Antenna : Ceramic Antenna
Antenna Gain : 5dBi
Lowest Oscillation..... : 26MHz

3.3 Disclaimer

The antenna gain information is provided by the customer. The laboratory is not responsible for the accuracy of the antenna gain information.



4 Evaluation for separation distance $\leq 50\text{mm}$

4.1 Limits for separation distance $\leq 50\text{mm}$

According to the KDB 447498 D01 v06 section 4.3.1, for 100 MHz to 6 GHz and test separation distances $\leq 50\text{ mm}$, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where $f(\text{GHz})$ is the RF channel transmit frequency in GHz

- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

4.2 Calculation Result

Tx frequency range: 2402-2467MHz

Min. test separation distance: 30mm

Maximum Conducted Output Power: 12.06dBm

Tune-Up output power: 12.5dBm

RF channel transmit frequency: 2402MHz

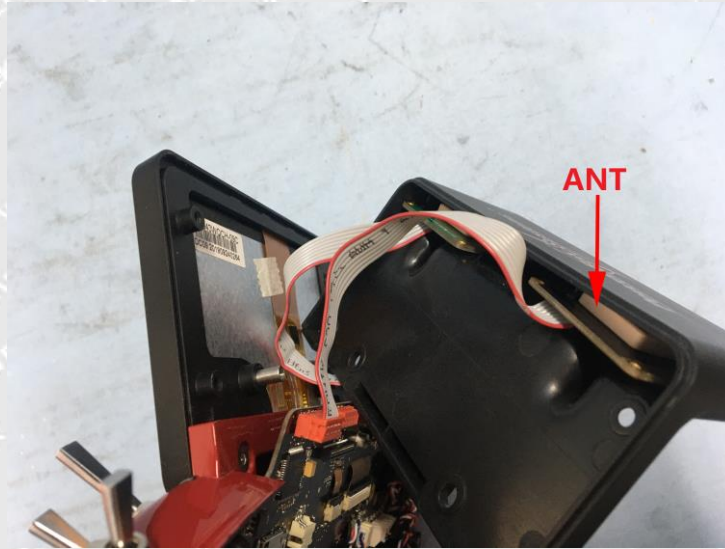
Result: 1.0

Limit: 3

The exclusion thresholds is $1.0 < 3$, so the transmitter complies with the RF exposure requirements and the SAR is not required.



4.3 Separation Distance



====End of Report====