



Test report

Number: T251-0031/22
Project file: C20220152
Date: 2022-01-18
Pages: 4

Product: Vacuum cleaner with BLE

Type reference: CTLC MIDI, CTLC MINI I, CTMC MIDI I, CTC MIDI I, CTLC MAXI I, CTMC MAXI I

Ratings: 230 V ac; 50 Hz

Trademark: FESTOOL

Applicant: FESTOOL GmbH
Wertstrasse 20, 73240 Wendlingen, Germany

Manufacturer: FESTOOL GmbH
Wertstrasse 20, 73240 Wendlingen, Germany

Place of manufacture: FESTOOL GmbH
Wertstrasse 20, 73240 Wendlingen, Germany

Summary of testing

Testing method: RSS-102 Issue 5 Amendment 1

Testing location: SIQ Ljubljana, Mašera-Spasičeva ulica 10, SI-1000 Ljubljana, Slovenia

Remarks: Date of receipt of test items: 2021-09-09
Number of items tested: 1
Date of performance of tests: 2021-09-23
The test results presented in this report relate only to the items tested.
The product complies with the requirements of the testing methods.

Tested by: Luka Tosetto

Approved by: Marjan Mak

The report shall not be reproduced except in full.



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1 GENERAL

History sheet			
Date	Report No.	Change	Revision
2022-01-18	T251-0031/22	Initial test report issued.	--

1.1 General product information

IC ID: 22501-CTCCOM

1.2 Equipment under test

Vacuum cleaner with BLE

Type: **CTC MIDI I**

Environment: Uncontrolled / General Public

Assessment frequency (f): 2402-2480 MHz (highest power)

Assessment distance: 10 mm

All products on first page contain the same RF module and are all covered with this report.



2 LIMITS

According to RSS-102 Issue 5, 2.5.2 Exemption Limits for Routine Evaluation — RF Exposure Evaluation.

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in table below;

Table 1: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance^{4,5}

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

3 MEASUREMENTS / CALCULATIONS

Measured values for each configuration are listed in the following table:

Frequency (MHz)	Maximum* Power with antenna gain (dBm)	Maximum* Power with antenna gain (W)	Maximum Power with antenna gain and maximum tune-up tolerance** (W)	Exclusion power limit (W)
2402-2480	5.7	0.0037	0.0059	0.0069

* Gated power with Duty Cycle calculated in

** maximum tolerance provided from manufacturer is ±2dB.

Conclusion: PASS; SAR evaluation is not required due to exclusion power limit is met.

There is no simultaneous transmission between any other transmitter.