Test report

Number	**T251-0357/25**	Project file: C20231529 Date: 2025-07-09 Pages: 10

Product:	**Vacuum cleaner**
Type reference:	**CT MIDI I (US), CT MIDI I AC (US)**
Ratings:	120 V a.c.; 60 Hz; 1200 W Class I
Trademark:	FESTOOL
Applicant:	**Festool GmbH** **Wertstrasse 20, 73240 Wendlingen, Germany**
Manufacturer:	Festool GmbH Wertstrasse 20, 73240 Wendlingen, Germany
Place of manufacture:	TTS Cleantec GmbH Pionierstr. 1, 89257 Illertissen, Germany

Summary of testing

Testing method:	Antenna pattern measurements
Testing location:	SIQ Ljubljana Mašera-Spasićeva ulica 10, SI-1000 Ljubljana, Slovenia
Remarks:	Date of receipt of test items: 2024-06-10 Number of items tested: 1 Date of performance of tests: 2025-04-28 The test results presented in this report relate only to the items tested. The test items were tested in the condition as received. The product complies with the requirements of the testing methods.

Tested by: Luka Cvajnar

Approved by: Marjan Mak

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1 GENERAL

History sheet			
Date	Report No.	Change	Revision
2025-07-09	T251-0357/25	Initial Test Report issued.	--

Environmental conditions:
Ambient temperature: 15 °C to 35 °C
Relative humidity: 30 % to 60 %
Atmospheric pressure: 860 mbar to 1060 mbar

1.1 Equipment under test

Vacuum cleaner
Type: **CT MIDI I (US), CT MIDI I AC (US)**

Tested was antenna pattern of the sample as down below.

Picture of test sample – BLE Antenna

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

1.2 Antenna pattern measurement

1.2.1 Test procedure

The radiation pattern for antenna implemented to PCB reference design has been measured in an anechoic chamber with 3 meters test distance. Test results show radiation patterns for two planes, measured with vertical and horizontal polarization of measuring antenna. All measurements were performed at 2402, 2440 and 2480 MHz frequency.

1.3 Test results BLE Antenna

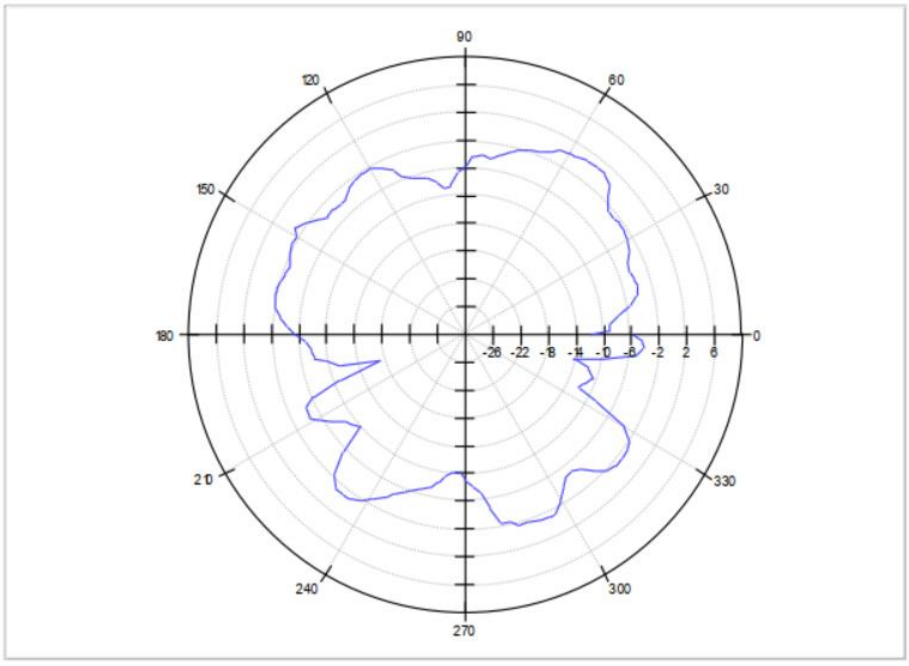
EUT Information

EUT: CT MIDI I AC
Operating Mode: TX 2402 MHz

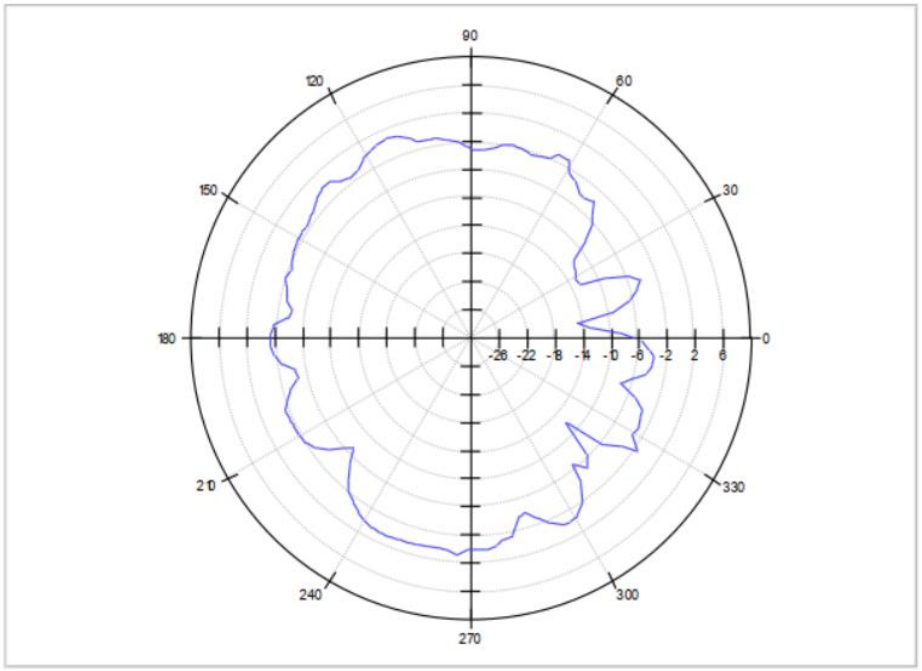
AziChart_MinMax_Eval

Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Pol min.
2402.000000	0.84	113	V	-17.09	197	H

Azimuth Chart: Horizontal



Azimuth Chart: Vertical



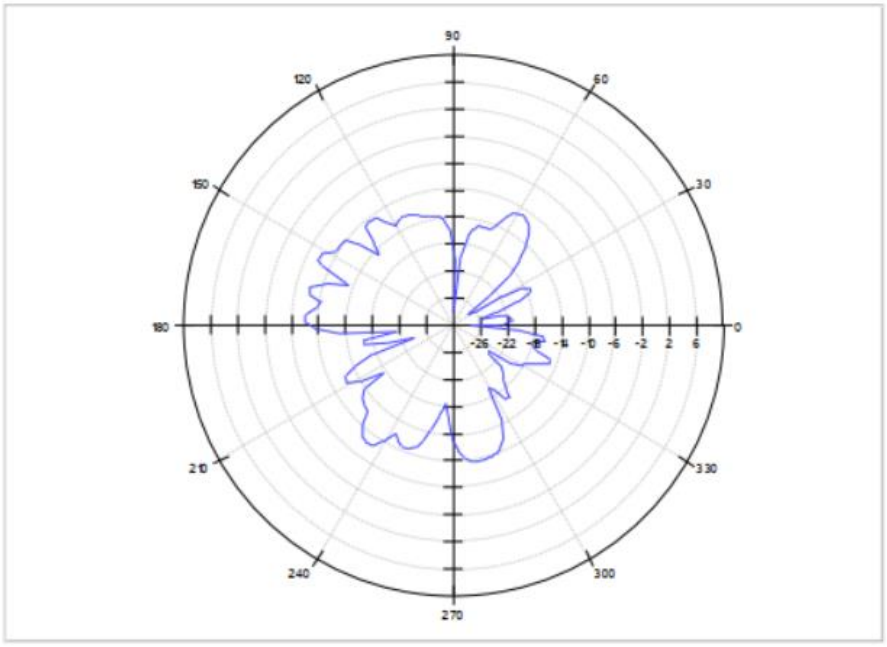
EUT Information

EUT: CT MIDI I AC
Operating Mode: TX 2440 MHz

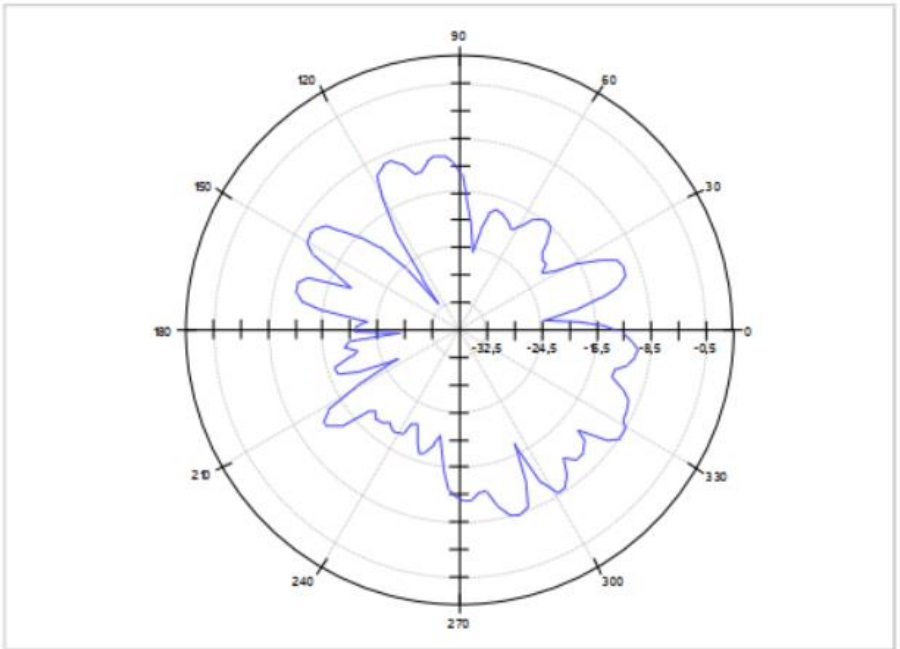
AziChart_MinMax_Eval

Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Pol min.
2440.000000	-7.62	154	H	-31.51	129	V

Azimuth Chart: Horizontal



Azimuth Chart: Vertical



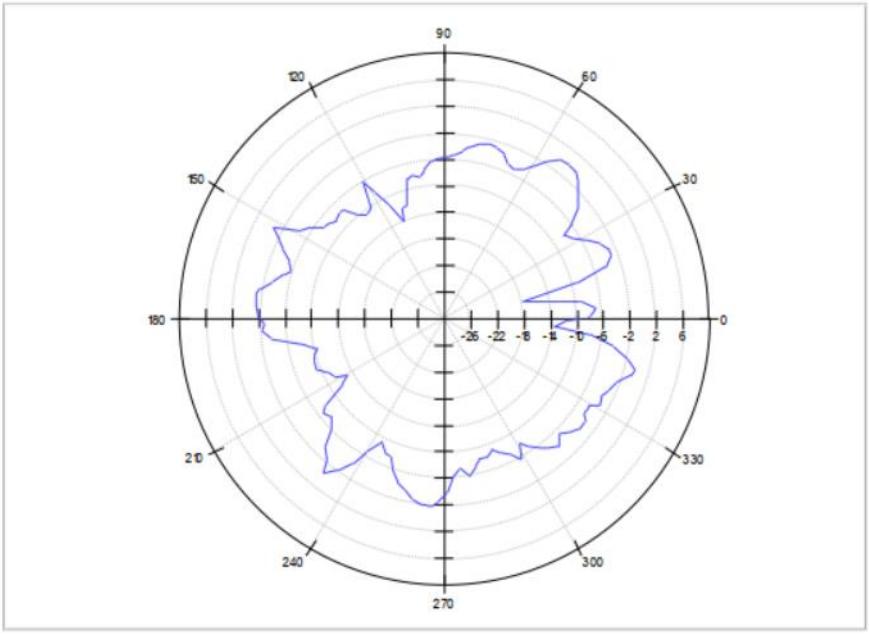
EUT Information

EUT: CT MIDI I AC
Operating Mode: TX 2480 MHz

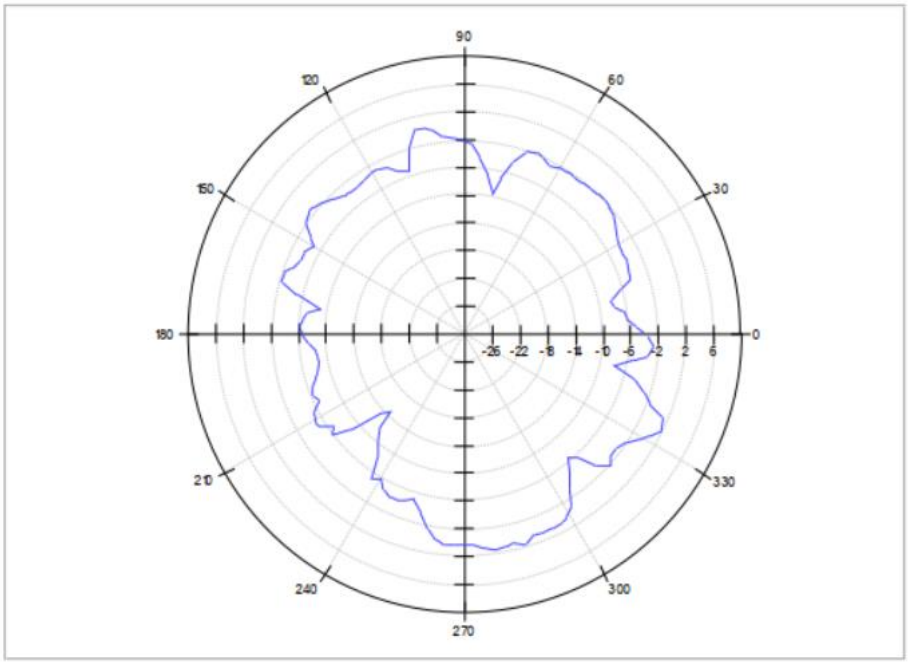
AziChart_MinMax_Eval

Frequency (MHz)	Max. Value (dBm)	Azimuth max. (deg)	Pol max.	Min. Value (dBm)	Azimuth min. (deg)	Pol min.
2480.000000	1.68	334	V	-17.97	12	H

Azimuth Chart: Horizontal



Azimuth Chart: Verfical



1.4 Maximum BLE antenna gain

DUT Frequency (MHz)	Maximum antenna gain (dBi)
2402.000000	0.84
2440.000000	-7.62
2480.000000	1.68

2 USED TEST EQUIPMENT

Antenna pattern measurement

Manufacturer	Model No.	Used	Calibrated	Calibrated until
Comtest engineering, SAC2 (together with controlling equipment)	SAC 3m	X	2025-03-27	2028-03-27
Maturo, Turn table (2 m diameter)	TT 2.0 SI	X	/	/
Maturo, Bore-sight antenna mast	BAM-4.0-P	X	/	/
Maturo, positioning equipment	NCD	X	/	/
Rohde & Schwarz, RFI receiver	ESW 44	X	2024-09-26	2026-03-26
R&S, Ultra Broadband Antenna	HL562E		2023-09-26	2026-09-26
R&S, Horn Antenna	HF907	X	2023-08-22	2026-08-22

----------END OF TEST REPORT----------