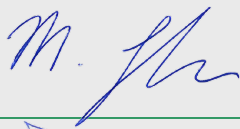


Test report nr. R25219101

Federal Communication Commission (FCC)

Customer	Xylem Service Italia S.r.l. Via Lombardi, 14 – 36075 Montecchio Maggiore (VI) – Italy	
(#) FCC ID	2AYCGXSI01	
(#) Description of item tested	Circulator with Bluetooth wireless technology	
(#) Trademark	Xylem	
(#) Model and/or type reference	Xylem Service Italia S.r.l.	
(#) Manufacturer	ECOCIRC+ 20-18F	
(#) Rating(s)	120 V ~ 60 Hz single-phase	
Test method requested, standard(s)	KDB 447498 D01 General RF Exposure Guidance v06	
Tested by (name / position & signature)	M. Segalla <i>Technician</i>	
Approved by (name / position & signature)	F. Marenda <i>Laboratory manager</i>	
Date of issue	05.11.2025	
General disclaimer	The test results presented in this report relate only to the item tested. This report shall not be reproduced, except in full, without the written approval of DEKRA Testing and Certification S.r.l.	
Report template No	FCC_SAR_mobile_DEKRA	

(#) information provided by the customer

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Competences and guarantees

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification S.r.l. has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification S.r.l. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification S.r.l. at the time of performance of the test.

DEKRA Testing and Certification S.r.l. is liable to the customer for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification S.r.l.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification S.r.l. and the Accreditation Bodies.

Data provided by the customer

Information relating to the description of the sample, components list, and software/hardware version (if reported) are provided by the customer/manufacture. DEKRA Testing and Certification S.r.l. cannot be considered responsible for this information, for any other document provided by the customer/manufacture and for any difference between the software/hardware release present in the tested sample and that present in the object intended for final sale.

In some cases, the software in the tested sample is in a version dedicated exclusively to the test, and therefore does not represent the software installed in the final version of the product.

Reference standards

Standard(s)	Description
KDB 447498 D01 General RF Exposure Guidance v06	RF exposure procedures and equipment authorization policies for mobile and portable devices

Usage of samples

Sample(s) used for testing chosen by the customer; DEKRA Testing and Certification S.r.l. cannot be considered responsible for the selection of the sample(s).

Internal identification	Serial number/Customer Id	Date of reception	Notes
P240981	202409050006	08.10.2024	--

Test sample description

Test power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☒	AC: 120 V, 60 Hz	☒	☐	☐	☒	☐
	☐	AC:	☐	☐	☐	☐	☐
	☐	DC:					
	☐	DC:					
Frequency band(s)	2400 – 2483,5 MHz						
Nominal frequencies	2402 MHz 2440 MHz 2480 MHz						
Type of equipment	☒	Transmitter unit					
	☒	Receiver unit					
Type of station	Mobile station						
Mounting position	☐	Table top equipment					
	☐	Wall/Ceiling mounted equipment					
	☒	Floor standing equipment					
	☐	Hand-held equipment					
	☐	Other, for example rack mounted, body worn, etc.					
Operating modes	N.	Operating mode of test item					
	1	EUT in continuous transmission at maximum power					

Photos of the test item



Testing period and place

Test Location	DEKRA Testing and Certification S.r.l.
FCC Registration Number	182474
Date (start)	05.11.2025
Date (finish)	05.11.2025

Document history

Report number	Date	Description
R25219101	05.11.2025	First release

List of attachments

Name	Description
Attachment 1	Measurement uncertainty, judgement of compliance and quality manual references

Environmental conditions

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment.

The climatic conditions during the tests were within the following limits:

Temperature	Humidity	Atmospheric pressure
15 °C – 35 °C	30 % - 60 %	800 hPa – 1060 hPa

If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.

Environmental conditions have been monitored with the following instruments:

Id. number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
CMC S302	Testo	175H1	40370182 610	Data Logger	May 2025	May 2026

Remarks and comments

Throughout this report a comma is used as the decimal separator.

Deviations from test specification

None.

Testing verdicts

N/A (Not Applicable)	Test case does not apply to the test object
P (Pass)	Test object meets the requirement
F (Fail)	Test object does not meet the requirement
N/E (Not Executed)	Test object was not evaluated for the requirement

Verdict summary

KDB 447498 D01 General RF Exposure Guidance v06			
Clause	Requirement – Test case	Basic standard	Verdict
7.1	RF Exposure Analysis	--	P

Test results

RF Exposure Analysis

Tested by	M. Segalla
Test date	05.11.2025
Test location (stand)	Laboratory
Basic standard(s)	KDB 447498 D01 cl. 7.1 ANSI C63.10
Supplementary information	--

Acceptance limits

For mobile devices operating at frequency f between 1500 and 100000 MHz the power density limit at 20 cm is 1 mW/cm² according to FCC Part 1.1310(e)(1) Table 1.

Results

Transmission channel (MHz)	Peak Output Power (dBμV/m)	Peak Output Power (mW)	Power Density at 20 cm (mW/cm ²)	Power Density Limit (mW/cm ²)
2402	101,01	4,15	0,001	1,000
2440	100,92	4,07	0,001	1,000
2480	100,97	4,11	0,001	1,000

$$P = (E \times d)^2 / (30 \times G) \times 1000$$

Where:

E = the measured maximum fundamental field strength in V/m

G = the numeric gain of the transmitting antenna: 0,912 (-0,40 dBi)

d = the distance in meters from which the field strength was measured (3 m)

P = the power in mW

Power Density = $(P \times G) / (4\pi R^2)$

Remarks: the measured levels have been derived from Test Report nr. R24187401.

Attachment 1

Measurement uncertainty

Test	Test Setup	Expanded uncertainty	Note
Conducted emission CISPR 16 LISN 50uH 0,009-0,0150 MHz	PE001_01	3,5 dB	1
Conducted emission CISPR 16 LISN 50uH 0,150-30,0 MHz	PE001_01	2,9 dB	1
Conducted emission CISPR 16 Voltage Probe 0,15-30 MHz	PE001_02	2,2 dB	1
Conducted emission CISPR 16 Current Probe 0,15-30 MHz	PE001_03	2,5 dB	1
Conducted emission CISPR 16 ISN 0,15-30 MHz	PE001_04	4,7 dB	1
Clic CISPR 16 LISN 50uH 0,150-30,0 MHz	PE001_05	2,9 dB	1
Radiated Emission CDNE 30-300 MHz	PE001_06	3,3 dB	1
Disturbance Power 30-300 MHz	PE002_X1	3,8 dB	1
Radiated Emission LAS 0,15-30 MHz	PE003_01	2,0 dB	1
Radiated Emission CISPR 16 Loop Ant. 0,15-30 MHz	PE004_X1	4,1 dB	1
Radiated Emission CISPR 16 Bicon. Ant. 30-300 MHz	PE004_X2	4,7 dB	1
Radiated Emission CISPR 16 LogP. Ant. 300-1000 MHz	PE004_X3	4,6 dB	1
Radiated Emission CISPR 16 Horn Ant. 1-18 GHz	PE004_X4	4,7 dB	1
Human Exposure to electromagnetic fields	PE005_01	16,2 %	1
Harmonics	PE006_01	10 mA + 2,9 %	1
Flicker	PE007_01	3,40 %	1
Radiated Immunity 80 MHz - 6 GHz	PE102_XX	2,43 dB 0,97 V/m a 3V/m	1
Conducted Immunity 0,15 - 230 MHz	PE105_XX	1,26 dB 0,47 V a 3V	1
AC Magnetic field	PE106_01	1,55 % 0,15 A/m a 10A/m	1
Pulse Magnetic field	PE107_01	6,21 % 18,6 A/m a 300A/m	1
Dumped Magnetic field	PE108_01	6,21 % 1,86 A/m a 30A/m	1
Common mode conducted immunity	PE112_01	2,11 % 0,21 V a 10V	1

Test	Test Setup	Expanded uncertainty	Note
Power/Spurious 9kHz-30MHz	PR001_X1	4,1 dB	1
Power/Spurious ERP 30-1000MHz d=10m/3m	PR001_X2+X3	4,8 dB	1
Misura della potenza EIRP 1-18GHz d=3m	PR001_X4+X5	4,7 dB	1
Misura della potenza EIRP 18-40GHz d=3m	PR001_X6	5,1 dB	1
Frequency error	PR002_01+02	< 1x10 ⁻⁷	1
Timing zero span (1001pts.)	PR002_01+02	0,2 % SWT	1
Modulation bandwidth	PR002_01+02	< 1x10 ⁻⁷	1
Conducted RF power and spurious emission	PR002_01+02	1,1 dB	1
Adjacent channel power	PR002_01+02	1,1 dB	1
Blocking	PR002_01+02	1,1 dB	1

Test	Test Setup	Expanded uncertainty	Note
Electrostatic discharge immunity test	PE101_0X		2
Electrical fast transients / burst immunity test	PE103_0X		2
Surge immunity test	PE104_0X		2
Short interruption immunity test	PE109_01		2
Ring Wave immunity test	PE110_01		2
Low frequency immunity test	PE111_01		2
Dumped Oscillatory immunity test	PE113_01		2
Rev_25_01 date 26/02/2025			

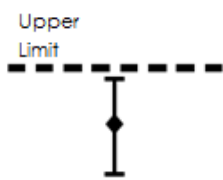
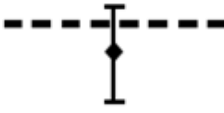
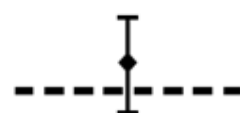
Note 1:

The expanded uncertainty reported according to the document EA-4-02 is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of p = 95%

Note 2:

It has been demonstrated that the used test equipment meets the specified requirements in the standard with at least a 95% confidence, covering factor k=2

Judgement of compliance

Case 1	Case 2	Case 3	Case 4
 The sample complies with the requirements. The measurement results is within the specification limit when the measurement uncertainty is taken into account.	 The sample complies with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty although the measurement result is below the limit.	 The sample does not comply with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty also the measurement result is upper the limit.	 The sample does not comply with the requirements. The measurement results is outside the specification limit when the measurement uncertainty is taken into account.

In agreement with ILAC-G8:09/2019 cl.4.2.1 Guidelines on Decision Rules and Statements of Conformity

Quality manual references – Internal procedure

Internal Procedure PM001 rev. 4.1 (Quality Manual)	Measure procedure
Internal Procedure INC_M rev. 10.1 (Quality Manual)	Measurement uncertainty calculation