

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV

Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition





The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

CTC advanced GmbH Untertürkheimer Straße 6-10, 66117 Saarbrücken

is competent under the terms of DIN EN ISO/IEC 17025:2018 to carry out tests in the following fields:

Telecommunication (FCC Requirements)

The accreditation certificate shall only apply in connection with the notice of accreditation of 09.06.2020 with the accreditation number D-PL-12076-01. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 05 pages.

Registration number of the certificate: D-PL-12076-01-05

Frankfurt am Main, 09.06.2020

by order Dipl.-Ing. (FH) Ralf Egner Head of Division

The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH. https://www.dakks.de/en/content/accredited-bodies-dakks See notes overleaf.

Deutsche Akkreditierungsstelle GmbH

Office Berlin Spittelmarkt 10 10117 Berlin Office Frankfurt am Main Europa-Allee 52 60327 Frankfurt am Main Office Braunschweig Bundesallee 100 38116 Braunschweig

The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkkS). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body mentioned overleaf.

No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attested by DAkkS.

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). DAkkS is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

The up-to-date state of membership can be retrieved from the following websites:

EA: www.european-accreditation.org

ILAC: www.ilac.org

IAF: www.iaf.nu



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Annex to the Accreditation Certificate D-PL-12076-01-05 according to DIN EN ISO/IEC 17025:2018

Valid from: 09.06.2020

Date of issue: 16.06.2020

Holder of certificate:

CTC advanced GmbH Untertürkheimer Straße 6-10, 66117 Saarbrücken

Tests in the fields:

Telecommunication (FCC Requirements)

Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C 63.4-2014 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	40 GHz
USA	Industrial, Scientific, and Medical Equipment (FCC Part 18) • Consumer ISM equipment	FCC MP-5:1986-02 FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical Equipment	325 GHz



Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	Intentional Radiators (FCC Part 15 Subpart C)	ANSI C 63.10-2013	500 GHz
		American National Standard for Testing of Unlicensed Wireless Devices	
USA	 UPCS (FCC Part 15, Subpart D) Unlicensed Personal Communication Systems devices 	ANSI C 63.17-2013 American National Standard - Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices	40 GHz
USA	 U-NII without DFS Intentional Radiators (FCC Part 15, Subpart E) Unlicensed National Information Infra- structure Devices (U-NII Devices without DFS) 	ANSI C 63.10-2013 American National Standard for Testing of Unlicensed Wireless Devices in combination with KDB Publication 789033	40 GHz
USA	 U-NII with DFS Intentional Radiators (FCC Part 15, Subpart E) Unlicensed National Information Infra- structure (U-NII) Devices with Dynamic Frequency Selection (DFS) 	FCC KDB Publication 905462 D02 UNII DFS Compliance Procedures New Rules v02 (April 8, 2016)	40 GHz
USA	UWB Intentional Radiators (FCC Part 15, Subpart F) • Ultra-wideband Operation	ANSI C 63.10-2013 American National Standard for Testing of Unlicensed Wireless Devices	200 GHz



Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	 BPL Intentional Radiators (FCC Part 15, Subpart G) Access Broadband over Power Line (Access BPL) 	ANSI C 63.10-2013 American National Standard for Testing of Unlicensed Wireless Devices	40 GHz
USA	White Space Device Intentional Radiators (FCC Part 15, Subpart H) • White Space Devices	ANSI C 63.10-2013 American National Standard for Testing of Unlicensed Wireless Devices	40 GHz
USA	Commercial Mobile Services (FCC Licensed Radio Service Equipment) • Part 22 (cellular) • Part 24 • Part 25 (below 3 GHz) • Part 27	ANSI/TIA-603-E-2016 ANSI/TIA-102.CAAA-E-2016 ANSI C63.26-2015 in combination with KDB Publication 971168	200 GHz
USA	General Mobile Radio Services (FCC Licensed Radio Service Equipment) • Part 22 (non-cellular) • Part 90 (below 3 GHz) • Part 95 • Part 97 (below 3 GHz) • Part 101(below 3 GHz)	ANSI/TIA-603-E-2016 ANSI/TIA-102.CAAA-E-2016 ANSI C63.26-2015	200 GHz
USA	Citizens Broadband Radio Services (FCC Licensed Radio Service Equipment) • Part 96	ANSI/TIA-603-E-2016 ANSI/TIA-102.CAAA-E-2016 ANSI C63.26-2015 in combination with KDB Publication 971168 and 940660	200 GHz



Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) • Part 80 • Part 87	ANSI/TIA-603-E-2016 ANSI C63.26-2015	200 GHz
USA	Microwave and Millimeter Bands Radio Services (FCC Licensed Radio Service Equipment) Part 25 Part 30 Part 74 Part 90 (above 3 GHz) Part 95 (above 3 GHz) Part 97 (Above 3 GHz) Part 101	ANSI/TIA-603-E-2016 ANSI/TIA-102.CAAA-E-2016 ANSI C63.26-2015 in combination with KDB Publication 653005	500 GHz
USA	Broadcast Radio Services (FCC Licensed Radio Service Equipment) • Part 73 • Part 74 (below 3 GHz)	ANSI/TIA-603-E-2016 ANSI/TIA-102.CAAA-E-2016 ANSI C63.26-2015	200 GHz
USA	RF ExposureDevices subject to SAR requirements	IEEE Std 1528 [™] -2013 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques in combination with KDB Publication 865664 and in combination with KDB Publication 447498	6 GHz



Section	Scope	Test Method(s)	Frequency (max. assessed)
USA	 Hearing Aid Compatibility (Part 20) HAC for Commercial mobile services 	ANSI C 63.19-2011 American National Standard for Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids	6 GHz
USA	 Signal Boosters (Part 20) Wideband Consumer signal boosters Provider-specific signal boosters Industrial signal boosters Signal Boosters (Section 90.219)	ANSI C63.26-2015 in combination with KDB Publication 935210 D03, D04 and D05	200 GHz

- [1] ANSI/TIA-603-D-2010 or ANSI/TIA-102.CAAA-D-2013 may continue to be used until the end of the transition period which is two years from the date of the publication of this KDB.
- [2] ANSI C63.19-2007, American National Standard for Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids may be used for HAC testing until August 28, 2018 per FCC 17-135.
- [3] For Signal Boosters (Part 20) accreditation is required for Commercial Mobile Services (FCC Licensed Radio Service Equipment) and for Signal Boosters (Section 90.219) accreditation is required for General Mobile Radio Services (FCC Licensed Radio Service Equipment).