Test Report

No. 1-9816-25-03-03_TR1-R03

August 19, 2026

Applicant	Kadex B.V.
Product	RF OEM Module
Model	Vigil OEM
FCC ID	2BOAU-KR101
Tested Technology	SRD
Test Standard(s)	§15.247

Verdict	☒ PASS All applicable, relevant, selected or customer specific tests according to the standard are PASS/complies. For details, please see chapter 8.2

The test results relate only to devices specified in this document

This test report is electronically signed and valid without handwritten signature.
Public keys for verification of the electronic signatures can be requested at the testing laboratory.

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1 Disclaimer

The test results of this test report relate exclusively to the test item specified in chapter “Test sample information”. cetecom advanced does not assume responsibility for any conclusions and generalizations drawn from the test results regarding other specimens or samples of the type of the equipment represented by the test item.

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Also we refer on special conditions which the applicant should fulfill according §2.927 to §2.948, special focus regarding modification of the equipment and availability of sample equipment for market surveillance tests.

The current version of test report R03 replaces the test report R02 dated June 03, 2026. The replaced test report is herewith invalid.

2 Related cetecom advanced documents

Document	Content	Reference	Total Pages
Annex 101	External photographs	1-9816-25-03-03_TR1-A101-R01	5
Annex 102	Internal photographs	-	-
Annex 103	Test set-up photographs	1-9816-25-03-03_TR1-A103-R01	8
Annex 201	Results / Diagrams Conducted	1-9816-25-03-03_TR1-A201-R02	51
Annex 202	Results / Diagrams Radiated	1-9816-25-03-03_TR1-A202-R01	17
Annex 301	Declaration provided by customer	-	-

3 Document history

3.1 Current release

Release No.:	R03
Date of release:	August 19, 2026
Applied changes:	cover page: added explanatory note to “Verdict” chapter 6.1.2: changed max conducted output power from 21 to 18 according to customer information and referenced document chapter 8.3.12: updated equipment list

3.2 Previous releases

Release No.	Applied changes		Date of release
R01	Initial release		May 26, 2026
R02	chapter 8.1: A201-R02:	added standard references overview updated unit in table from NI to dBm on pages 37, 39, 41, 43, 45, 47, 49 and 51	June 03, 2026

4 Test laboratory

4.1 Contact information

cetecom advanced GmbH
Untertuerkheimer Str. 6-10
66117 Saarbruecken
Germany

4.2 Involved test locations

	Saarbruecken lab		Essen lab
☐	Untertuerkheimer Str. 6-10 66117 Saarbruecken Germany	☒	Im Teelbruch 116 45219 Essen Germany

4.3 Subcontracted laboratories

None.

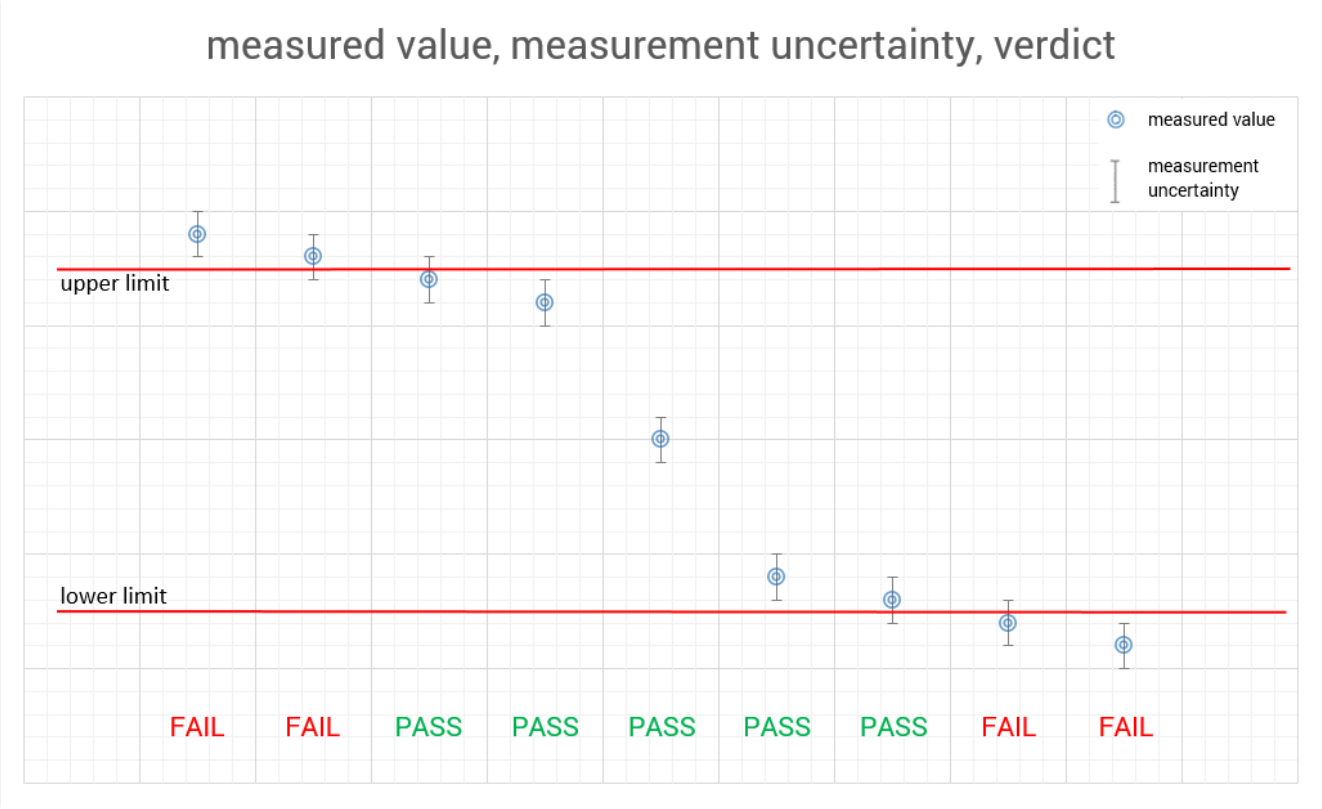
4.4 Laboratory listings and recognitions

	Saarbruecken	Essen
FCC	DE0002	DE0003

4.5 Reporting statements of conformity – decision rule

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed in chapter 8.1.

The measurement uncertainty is mentioned in this test report, see chapter 4.6, but is not taken into account - neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong."



Decision Rule for emission testing:

cetecom advanced GmbH follows ILAC G8:2019 chapter 4.2.1 (Simple Acceptance Rule) according to CISPR 16-4-2: $U_{Lab} < U_{CISPR}$. Therefore, the uncertainty is not considered for the statement of conformity in this test report.

4.6 Measurement Uncertainty valid for conducted/radiated measurements

The reported uncertainties are calculated based on the standard uncertainty multiplied with the appropriate coverage factor k, such that a confidence level of approximately 95% is achieved. For uncertainty determination, each component used in the concrete measurement set-up was taken in account and it contribution to the overall uncertainty according its statistical distribution calculated.

For the determination of the measurement uncertainty, every component and influencing factor present in the measurement chain is considered and statistically evaluated.

Issue No.	Measurement type	References	Frequency range of measurement		Calculated Uncertainty based on confidence level of 95.54%	Remarks
			Start [MHz]	**Stop [MHz]**		
1	Magnetic field strength	EN/FCC/ISED/JP	0.009	30	4.86	Magnetic loop antenna, Pre-amp on
2	RF-Output power (eirp) Unwanted emissions (eirp) [dB]	EN/FCC/ISED/JP	30	100	4.57	without Pre-Amp
			30	100	4.91	with PreAmp
			100	1000	4.02	without Pre-Amp
			100	1000	4.26	with PreAmp
			1000	18000	4.36	without Pre-Amp
			1000	18000	5.23	with PreAmp
			18000	33000	4.92	Schwarzbeck BBHA9170 (#20302) Antenna set-up non-mixer set-up)
			33000	50000	4.17	Set-up for Q-Band (WR-22), non-mixer set-up
			40000	60000	4.69	Set-up U-Band (WR-19), non-mixer set-up
			50000	75000	4.06	External Mixer set-up V-Band (WR-15)
			75000	110000	4.17	External Mixer set-up W-Band (WR-6)
			90000	140000	5.49	External Mixer set-up F-Band (WR-8)
			140000	225000	6.22	External Mixer set-up G-Band (WR-5)
			225000	325000	7.04	External Mixer set-up (WR-3)
			325000	500000	8.84	External Mixer set-up (WR-2.2)
3	Radiated Blocking [dB]	EN	1000	18000	2.85	Typical set-up with microwave generator and antenna, value for 7GHz calculated
			18000	33000	4.66	Typical set-up with microwave generator and antenna
			33000	50000	3.48	WR-22 set-up
			50000	75000	3.73	WR-15 set-up
			75000	110000	4.26	WR-6 set-up
4	Frequency Error UWB/FMCW [kHz]	EN/FCC/ISED/JP	116000	123000	279.87	Calculated for 123GHz carrier (FMCW)
			40000	77000	276.19	calculated for 77 GHz (FMCW) carrier
			6000	7000	33.92	calculated for 6.5GHz UWB Ch.5
	Frequency error [Hz]		11	14	20.76	calculated for 13.56MHz carrier
6	Conducted emissions AC-mains	EN/FCC/ISED	0.009	30	3.57	general EMI-measurements on AC/DC ports

5 Client information

5.1 Applicant

Name:	Kadex B.V.
Address:	Bijsterhuizen 2213 6604 LC Wijchen The Netherlands
Contact Person:	Jip Dorrestein
Contact Person's Email:	jip.dorrestein@assaabloy.com

5.2 Manufacturer

Name:	Kadex B.V.
Address:	Bijsterhuizen 2213 6604 LC Wijchen The Netherlands

6 Test sample information

The data about the test samples is given/supplied by the customer and not under control by cetecom advanced GmbH.

6.1 Generic information sample

6.1.1 General data of main EUT as declared by applicant

Firmware	☐ Normal use	☒ Special version for test execution	
Power supply	☐ AC Mains	-	
	☐ DC Mains		
	☒ Battery	2x 3.6 V (LS 14250 – Li-$SOCl_2$)	
Operational conditions	T_{nom} = +21 °C	T_{min} = -10 °C	T_{max} = +40 °C
Weight	0.02 kg		
Size [LxWxH]	70 mm x 50 mm x 10 mm		
Interfaces/Ports	-		
Remarks			

6.1.2 Detailed technical data of main EUT as declared by applicant

Frequency band	902 MHz – 928 MHz
Number of channels	64 (Hopping) [1)]
Nominal channel bandwidth	300
Type of modulation	FSK2
Max. conducted output power	18
Antenna Gain	max. -2.2 dBi
Antenna type	internal PCB-antenna
FCC label attached	No
Remarks	1) The 64 channels are divided into 15 individual NETID settings each containing 25 channels. See 6.2.7 EUT operation mode for more information

Reference documents	**Version**	**Pages**
Kadex 915 MHz radio specifications.pdf	-	2
Vigil_module_operational description_tune_up_1.5.pdf	2026-13-07	8

6.2 Equipment under test

6.2.1 EUT

EUT no. *)	Sample no.	Product	Model	Type	SN	HW	SW
EUT 1	48.023	RF OEM Module	Vigil OEM	Art. No. 219922915	-	V1.01	EFR32 (915 MHz): 07.14
EUT 2	48.404	RF OEM Module	Vigil OEM	Art. No. 219922915	-	V1.01	EFR32 (915 MHz): 07.14

*) EUT short description is used to simplify the identification of the EUT in this test report.

6.2.2 Untested variants

VAR no. *)	Sample no.	Product	Model	Type	SN	HW	SW
-	-	-	-	-	-	-	-

*) The listed additional untested model variant(s) (VAR) is/are not object of evaluation of compliance. For further information please see Annex 5: Declaration of applicant of model differences.
If the table above does not show any other line than the headline, no untested variants are available.

6.2.3 Auxiliary equipment

AE no. *)	Sample no.	Auxiliary equipment	Model	SN	HW	SW
AE 1	59.403	Programming adapter	-	-	-	-

*) AE short description is used to simplify the identification of the auxiliary equipment in this test report.
If the table above does not show any other line than the headline, no AE was used during testing nor was considered for evaluation

6.2.4 Connected cables

CAB no. *)	Sample no.	Cable type	Connectors / Details	Length
-	-	-	-	-

*) CAB short description is used to simplify the identification of the connected cables in this test report.
If the table above does not show any other line than the headline, no cable was used during testing nor was considered for evaluation

6.2.5 Software

SW no. *)	Sample no.	SW name	Description	SW status
-	-	-	-	-

*) SW short description is used to simplify the identification of the used software in this test report.
If the table above does not show any other line than the headline, no SW was used during testing nor was considered for evaluation.

6.2.6 EUT set-ups

Set-Up no. *)	Combination of EUT and AE	Description
SET 1	EUT 1 (+ AE 1)	Used for radiated measurements. AE 1 is only used for setup and removed during measurement
SET 2	EUT 2 (+ AE 1)	Used for conducted measurements AE 1 is only used for setup

*) EUT set-up no. is used to simplify the identification of the EUT set-up in this test report.

6.2.7 EUT operation mode

EUT operating mode no. *)	Operating mode	Additional information
OP 1	TX Fix low	Continuous transmission at fixed a frequency: low 902.4 MHz; PWR setting 18
OP 2	TX Fix mid	Continuous transmission at fixed a frequency: mid 914.8 MHz; PWR setting 18
OP 3	TX Fix high	Continuous transmission at fixed a frequency: high 927.6 MHz; PWR setting 18
OP 4	TX Hopping NetID 0 [1)]	Continuous transmission in hopping mode Channels 0 – 24 (902.4 MHz – 912.0 MHz)
OP 5	TX Hopping NetID 4 [1)]	Continuous transmission in hopping mode Channels 16 – 40 (908.8 MHz – 918.4 MHz)
OP 6	TX Hopping NetID 10 [1)]	Continuous transmission in hopping mode Channels 40 – 63, 0 (918.4 MHz – 927.6 MHz and 902.4 MHz)

*) EUT operating mode no. is used to simplify the test report.

Remark 1): EUT implements 16 different hopping sets with 25 channels each. For testing only NetID 0, 4 and 10 was chosen to cover the whole frequency range with one set in in the lowest, middle and highest range.

NetID Setting	Radio channels	Frequency range
0	**0-24**	**902.4-912.0**
1	4-28	904.0-913.6
2	8-32	905.6-915.2
3	12-36	907.2-917.0
4	**16-40**	**908.8-918.4**
5	20-44	910.4-920.0
6	24-48	912.0-921.6
7	28-52	913.6-923.2
8	32-56	915.2-924.8
9	36-60	916.8-926.4
10	**40-63, 0**	**918.4-927.6, 902.4**
11	44-63, 0-4	920.0-927.6, 902.4-904.0
12	48-63, 0-8	921.6-927.6, 902.4-905.6
13	52-63, 0-12	923.2-927.6, 902.4-907.2
14	56-63, 0-16	924.8-927.6, 902.4-908.8
15	60-63, 0-20	926.4-927.6, 902.4-910.4

Channel	Frequency [MHz]	Channel	Frequency [MHz]	Channel	Frequency [MHz]	Channel	Frequency [MHz]	Channel	Frequency [MHz]
0	**902.4**	13	907.6	26	912.8	39	918	52	923.2
1	902.8	14	908	27	913.2	40	918.4	53	923.6
2	903.2	15	908.4	28	913.6	41	918.8	54	924
3	903.6	16	908.8	29	914	42	919.2	55	924.4
4	904	17	909.2	30	914.4	43	919.6	56	924.8
5	904.4	18	909.6	**31**	**914.8**	44	920	57	925.2
6	904.8	19	910	32	915.2	45	920.4	58	925.6
7	905.2	20	910.4	33	915.6	46	920.8	59	926
8	905.6	21	910.8	34	916	47	921.2	60	926.4
9	906	22	911.2	35	916.4	48	921.6	61	926.8
10	906.4	23	911.6	36	916.8	49	922	62	927.2
11	906.8	24	912	37	917.2	50	922.4	**63**	**927.6**
12	907.2	25	912.4	38	917.6	51	922.8	-	-

7 Application details

7.1 Scheduling

Date of sample reception:	March 03, 2026
Date(s) of test:	April 22, 2026 to May 20, 2026

7.2 Climatic data

Temperature:	25°C ±10°C
Relative. humidity:	50%rH ±25%rH
Barometric pressure:	950hPa ±75hPa

7.3 Opinions and interpretations

None.

8 Measurement details

8.1 Test methodology

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2018-03) by the Deutsche Akkreditierungsstelle GmbH (DAkkS).

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number D-PL-12047-01-00.

Test standard	Date	Description
FCC – Title 47 CFR Part 15	-/-	FCC – Title 47 of the Code of Federal Regulations; Chapter I; Subchapter A; Part 15; Subpart C

Guidance	Description
ANSI C63.4-2014 including: - C63.4a-2017	American National Standard for Methods of Measurement for low-voltage electrical and electronic equipment, 9 kHz to 40 GHz
ANSI C63.10-2020 including: - ANSI/USEMCSC C63.10-2020/Cor 1-2023 - ANSI/USEMCSC C63.10a-2024 Amendment 1 - ANSI/USEMCSC C63.10a-2024 Amendment 1 Errata	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

Applied test method, standard, rule	Description
Duty-Cycle	ANSI C63.10:2020 §11.6(b)
Radiated field strength emissions below 30 MHz	ANSI C63.10-2020, chapter 6.4, 7.8, 11.12
Radiated field strength emissions 30 MHz to 1 GHz	ANSI C63.10-2020, chapter 6.5, 7.8, 11.12
Radiated field strength emissions above 1 GHz	ANSI C63.10-2020, chapter 6.6, 7.8, 11.12
Emissions in non-restricted frequency bands	ANSI C63.10:2020 §11.11, §6.10.5, §7.8.7
99% bandwidth	ANSI C63.10-2020, chapter 6.9 ANSI/USEMCSC C63.10a-2024, chapter 6.9
(DTS) Emission bandwidth	ANSI C63.10-2020, chapter 11.8
(DTS) Output power	ANSI C63.10-2020, chapter 11.9
(DTS) Power spectral density	ANSI C63.10-2020, chapter 11.10
(FHSS) Emission bandwidth	ANSI C63.10-2020, chapter 7.8
(FHSS) Carrier frequency separation	ANSI C63.10-2020, chapter 7.8.2 ANSI/USEMCSC C63.10a-2024, chapter 7.8
(FHSS) Number of hopping frequencies	ANSI C63.10-2020, chapter 7.8.3 ANSI/USEMCSC C63.10a-2024, chapter 7.8
(FHSS) Time of occupancy	ANSI C63.10-2020, chapter 7.8.4
(FHSS) Output power	ANSI C63.10-2020, chapter 7.8.5
AC-Power Lines Conducted Emissions	ANSI C63.4-2014 §7, ANSI C63.10-2020 § 6.2

8.2 Test results summary

8.2.1 Conformance Requirements

Conformance Requirements	Reference Clause No	Remark	Result
Duty cycle	§15.35(c)	-	PASSED
Radiated field strength emissions below 30 MHz	§15.209(a) §15.205(a)	-	PASSED
Radiated field strength emissions 30 MHz to 1 GHz (inclusive fundamental field strength)	§15.209(a) §15.247(d) §15.205(a)	-	PASSED
Radiated field strength emissions above 1 GHz	§15.209(a) §15.247(d) §15.205(a)	-	PASSED
Emissions in non-restricted frequency bands	§15.247(d)	-	PASSED
Conducted output power	§15.247(b)(2) §15.247(b)(3)	-	PASSED
Power spectral density	§15.247(e)	-	N/A
Emission bandwidth 20 dB (FHSS) Emission bandwidth 6 dB (DTS)	§15.247(a)(1) §15.247(a)(2)	-	PASSED
Occupied channel bandwidth 99%	2.1049(h)	-	PASSED
Time of occupancy	§15.247(a)(1)(i)	-	PASSED
Transmitter peak output power radiated	§15.247(b)(4)	-	N/A
Carrier frequency separation	§15.247(a)(1)	-	PASSED
Number of hopping frequencies	§15.247(a)(1)(i)	-	PASSED
AC-power lines conducted emissions	§15.207	-	N/A

PASSED	The EUT complies with the essential requirements in the standard.
FAILED	The EUT does not comply with the essential requirements in the standard.
N/A	Test case does not apply to the test object.
NP	The test was not performed by the cetecom advanced GmbH laboratory.

8.3 Measurements

8.3.1 Duty Cycle

Testing method:

The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

The necessary duty-cycle correction factor is determined on nominal conditions on middle channel only. It is assumed that no noticeable changes occur when tested on other channels or climatic conditions.

EUT settings:
The EUT was instructed to send with maximum power (if adjustable) according applicants instructions. Different modulation characteristics have been checked, e.g. data rates which EUT can operate.

A special firmware program is used for test purposes. In opposite to normal operating mode a higher duty-cycle is set in order to facilitate the measurements. This is maximized at the extent possible.

The necessary duty-cycle correction factor is determined on nominal conditions on one channel in each operable frequency-band. It is assumed that no noticeable changes occur when tested on other channels or climatic conditions. The Duty-Cycle was constant, means without variations.

Duty cycle calculations:
$x = {TX_{ON}}/{(TX_{ON} + TX_{OFF})}$

Duty cycle factor: DC=

Regarding power: $10 * log({1}/{x})$ dB

Regarding field strength: $20 * log({1}/{x})$ dB

8.3.1.1 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.1.2 Result

Duty-Cycle [%]	Duty-Cycle correction Power [dB]	Duty-Cycle correction Field Strength [dB]
> 98%	n/a	n/a

Conclusion:

☐ Correction factor is applied where applicable

☒ No correction necessary: Duty-Cycle > 98%

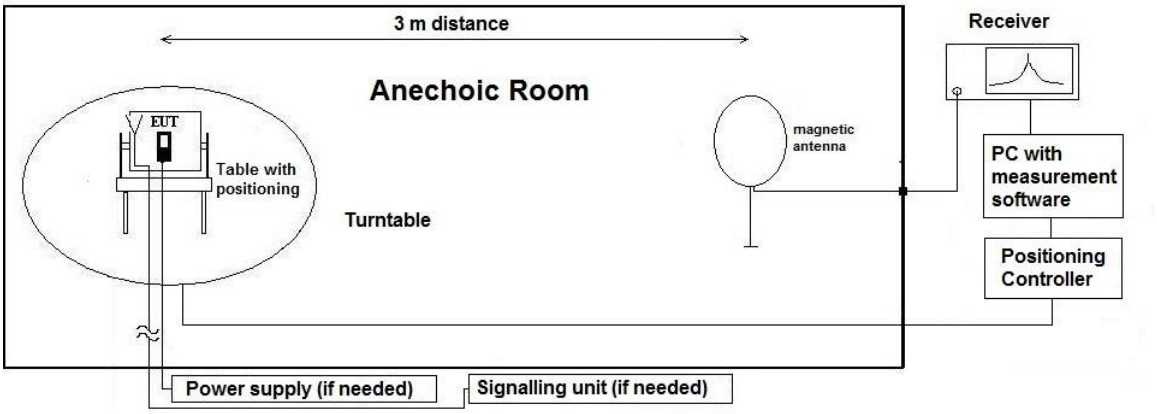
8.3.2 Radiated field strength emissions below 30 MHz

8.3.2.1 Description of the general test setup and methodology, see below example:

Evaluating the radiated field emissions are done first by an exploratory emission measurement and a final measurement for most critical frequencies determined.

The loop antenna was placed at 1 m height above ground plane and 3 m measurement distance from set-up for investigations. Because of reduced measurement distance, correction data were applied, as stated in chapter “General Limit - Radiated field strength emissions below 30 MHz“. The tests are performed in the semi anechoic room recognized by the regulatory commission.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

Exploratory, preliminary measurements
The EUT and its associated accessories are placed on a non-conductive position manipulator (tipping device) of 0.8 m height which is placed on the turntable. By rotating the turntable (step 90°, range 0°to 360°) and the EUT itself either on 3-orthogonal axis (portable equipment) or 2-orthogonal axis (defined operational position of EUT), the emission spectrum was recorded.

The loop antenna was moved at least to 2-perpendicular axes (antenna vector in direction of EUT and parallel to EUT) in order to maximize the emissions. The results are documented in a diagram. Critical frequencies (low margin to limit) are saved within a data reduction table for further investigations. If various operating modes are supported, further investigations are made to find the worst-case. Also the interconnection cables and equipment position were varied in order to maximize the emissions.

Final measurement on critical frequencies
Based on the exploratory measurements, the most critical frequencies are re-measured by maintaining the EUT’s worst-case operation mode, cable position, etc.

First a frequency zoom around the critical frequency is done to locate the frequency more precisely. After this step, for all identified critical frequencies, the maximum peak was determined.

Following parameters were varied: the turntable angle continuously in the range 0 to 360 degree, the EUT itself either over 3-orthogonal axis (not defined usage position) or 2-orthogonal axis (defined usage position).

On the determined worst-case position, a final measurement with necessary bandwidth and detector according standard has been carried out.

Formula:

$E_C = E_R + AF + C_L + D_F - G_A$

$M = L_T - E_C$

AF = Antenna factor
C_L = Cable loss
D_F = Distance correction factor (if used)
E_C = Electrical field – corrected value
E_R = Receiver reading
G_A = Gain of pre-amplifier (if used)
L_T = Limit
M = Margin

All units are dB-units, positive margin means value is below limit.

8.3.2.2 Sample calculation

Raw-Value [dBuV/m]	Antenna factor	Distance Correction [dB]	Cable Loss	Preamplifier	Resulting correction value [dB]	Final result [dBuV/m]	Remarks
19.83	18.9	-70.75	0.18	--	-51.67	-31.83	30 to 3 m correction used according ANSI C63.10-2020

Remark: This calculation is based on an example value at 458 kHz

8.3.2.3 Correction factors due to reduced meas. distance (f < 30 MHz):

The used correction factors when the measurement distance is reduced compared to regulatory measurement distance, are calculated according Extrapolation formulas valid for EUT's with maximum dimension of 0.625xLambda. Formula 2+3+4 as presented in ANSI C63.10, Chapter 6.4.4 are used for the calculations of proper extrapolation factors

Frequency Range	f [kHz/MHz]	Lambda [m]	Far-Field Point [m]	Distance Limit accord. 15.209 [m]	1st Condition (dmeas < Dnear-field)	2nd Condition (Limit distance bigger dnear-field)	Distance Correction accord. Formula
	9	33333.33	5305.17		fullfilled	not fullfilled	-80.00
	10	30000.00	4774.65		fullfilled	not fullfilled	-80.00
	20	15000.00	2387.33		fullfilled	not fullfilled	-80.00
	30	10000.00	1591.55		fullfilled	not fullfilled	-80.00
	40	7500.00	1193.66		fullfilled	not fullfilled	-80.00
	50	6000.00	954.93		fullfilled	not fullfilled	-80.00
	60	5000.00	795.78		fullfilled	not fullfilled	-80.00
	70	4285.71	682.09		fullfilled	not fullfilled	-80.00
	80	3750.00	596.83	**300**	fullfilled	not fullfilled	-80.00
	90	3333.33	530.52		fullfilled	not fullfilled	-80.00
kHz	100	3000.00	477.47		fullfilled	not fullfilled	-80.00
	125	2400.00	381.97		fullfilled	not fullfilled	-80.00
	200	1500.00	238.73		fullfilled	fullfilled	-78.02
	300	1000.00	159.16		fullfilled	fullfilled	-74.49
	400	750.00	119.37		fullfilled	fullfilled	-72.00
	490	612.24	97.44		fullfilled	fullfilled	-70.23
	500	600.00	95.49		fullfilled	not fullfilled	-40.00
	600	500.00	79.58		fullfilled	not fullfilled	-40.00
	700	428.57	68.21		fullfilled	not fullfilled	-40.00
	800	375.00	59.68		fullfilled	not fullfilled	-40.00
	900	333.33	53.05		fullfilled	not fullfilled	-40.00
	1.00	300.00	47.75		fullfilled	not fullfilled	-40.00
	1.59	188.50	**30.00**		fullfilled	not fullfilled	-40.00
	2.00	150.00	23.87		fullfilled	fullfilled	-38.02
	3.00	100.00	15.92		fullfilled	fullfilled	-34.49
	4.00	75.00	11.94		fullfilled	fullfilled	-32.00
	5.00	60.00	9.55		fullfilled	fullfilled	-30.06
	6.00	50.00	7.96		fullfilled	fullfilled	-28.47
	7.00	42.86	6.82		fullfilled	fullfilled	-27.13
	8.00	37.50	5.97		fullfilled	fullfilled	-25.97
	9.00	33.33	5.31		fullfilled	fullfilled	-24.95
	10.00	30.00	4.77	**30**	fullfilled	fullfilled	-24.04
	10.60	28.30	4.50		fullfilled	fullfilled	-23.53
MHz	11.00	27.27	4.34		fullfilled	fullfilled	-23.21
	12.00	25.00	3.98		fullfilled	fullfilled	-22.45
	13.56	22.12	3.52		fullfilled	fullfilled	-21.39
	15.00	20.00	3.18		fullfilled	fullfilled	-20.51
	15.92	18.85	**3.00**		fullfilled	fullfilled	-20.00
	17.00	17.65	2.81		not fullfilled	fullfilled	-20.00
	18.00	16.67	2.65		not fullfilled	fullfilled	-20.00
	20.00	15.00	2.39		not fullfilled	fullfilled	-20.00
	21.00	14.29	2.27		not fullfilled	fullfilled	-20.00
	23.00	13.04	2.08		not fullfilled	fullfilled	-20.00
	25.00	12.00	1.91		not fullfilled	fullfilled	-20.00
	27.00	11.11	1.77		not fullfilled	fullfilled	-20.00
	29.00	10.34	1.65		not fullfilled	fullfilled	-20.00
	30.00	10.00	1.59		not fullfilled	fullfilled	-20.00

8.3.2.4 Measurement Location

Test site
120901 - ESS SAC3 - Radiated Emission <1GHz

8.3.2.5 Limit

Radiated emissions limits, (3 meters)

Frequency Range [MHz]	Limit [µV/m]	Limit [dBµV/m] *	Distance [m]	Detector	RBW [kHz]
0.009 – 0.09	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	0.2
0.09 – 0.11	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Quasi peak	0.2
0.11 – 0.15	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	0.2
0.15 – 0.49	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	9
0.49 – 1.705	24000 / f [kHz]	87.6 – 20Log(f) (kHz)	30	Quasi peak	9
1.705 - 30	30	29.5	30	Quasi peak	9

8.3.2.6 Result

Diagram	Channel	Mode	Maximum Level [dBµV/m]	Result
2.01	low	SET 1 / OP 1 / standing	No peaks < 6 dB margin found	PASSED
2.02	low	SET 1 / OP 1 / lying	No peaks < 6 dB margin found	PASSED
2.03	mid	SET 1 / OP 2 / standing	No peaks < 6 dB margin found	PASSED
2.04	mid	SET 1 / OP 2 / lying	No peaks < 6 dB margin found	PASSED
2.05	high	SET 1 / OP 3 / standing	No peaks < 6 dB margin found	PASSED
2.06	high	SET 1 / OP 3 / lying	No peaks < 6 dB margin found	PASSED

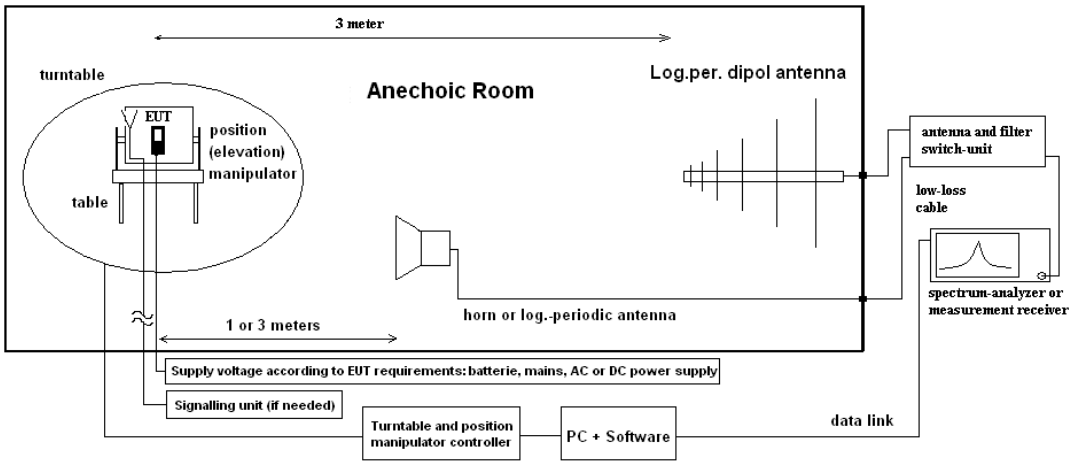
Remark: for more information and graphical plot see annex A202

8.3.3 Radiated field strength emissions 30 MHz – 1 GHz

8.3.3.1 Description of the general test setup and methodology, see below example:

Evaluating the field emissions have to be done first by an exploratory emissions measurement and a final measurement for most critical frequencies. The tests are performed in a NSA-compliant semi anechoic room (SAR) recognized by the regulatory commissions.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

Exploratory, preliminary measurements
The EUT and its associated accessories are placed on a non-conductive position manipulator (tipping device) of 0.8 m height which is placed on the turntable. By rotating the turntable (range 0° to 360°, step 90°) and the EUT itself either on 3-orthogonal axis (portable equipment) or 2-orthogonal axis (defined operational position of EUT) the emission spectrum and its characteristics were recorded with an EMI-receiver, broadband antenna and software.
Measurement antenna: horizontal and vertical, heights: 1,0 m and 1,82 m as worst case determined by an exploratory emission measurement. The results are documented in a diagram. Critical frequencies (low margin to limit) are saved within a table for further investigations. If various operating modes are supported, further investigations are carried out to find the worst case of them. Also, the interconnection cables and equipment position were varied to maximize the emissions.

Final measurement on critical frequencies
Based on the exploration measurements, the most critical frequencies are re-measured by maintaining the EUT's worst-case operation mode, cable position, etc. either on 10m OATS or 3m semi-anechoic room.

First a frequency zoom around the critical frequency is done to locate the frequency more precisely. After this step, for all identified critical frequencies, the maximum peak was determined.

Following parameters were varied: the turntable angle continuously in the range 0 to 360 degree, the EUT itself either over 3-orthogonal axis (not defined usage position) or 2-orthogonal axis (defined usage position) and the measurement antenna height between 1 m and 4 m.

On the determined worst-case position, a final measurement with necessary bandwidth and detector according to standard has been carried out

Formula:

$E_c = E_R + AF + C_L + D_F + G_A$ (1)

$M = L_T - E_C$ (2)

AF = Antenna factor
C_L = Cable loss
D_F = Distance correction factor (if used)
E_C = Electrical field – corrected value
E_R = Receiver reading
G_A = Gain of pre-amplifier (if used)
L_T = Limit
M = Margin

All units are dB-units, positive margin means value is below limit.

8.3.3.2 Sample calculation

Raw-Value [dBuV/m]	Antenna factor	Distance Correction [dB]	Cable Loss + Preamplifier	Resulting correction value [dB]	Final result [dBuV/m]	Remarks
29.37	41.20	--	24.28	16.92	46.3	CableLoss and PreAmp data in one data correction file

Remark: This calculation is based on an example value at 800.4MHz

8.3.3.3 Measurement Location

Test site
120901 - ESS SAC3 - Radiated Emission <1GHz

8.3.3.4 Limits

Radiated emissions limits, (3 meters)

Frequency Range [MHz]	Limit [µV/m]	Limit [dBµV/m]	Detector	RBW / VBW [kHz]
30 - 88	100	40.0	Quasi peak	100 / 300
88 - 216	150	43.5	Quasi peak	100 / 300
216 - 960	200	46.0	Quasi peak	100 / 300
960 - 1000	500	54.0	Quasi peak	100 / 300

8.3.3.5 Result

Diagram	Channel	Mode	Maximum Level [dBµV/m]	Result
3.01	low	SET 1 / OP 1 / standing	No peaks < 6 dB margin found	PASSED
3.02	low	SET 1 / OP 1 / lying	No peaks < 6 dB margin found	PASSED
3.03	mid	SET 1 / OP 2 / standing	No peaks < 6 dB margin found	PASSED
3.04	mid	SET 1 / OP 2 / lying	No peaks < 6 dB margin found	PASSED
3.05	high	SET 1 / OP 3 / standing	No peaks < 6 dB margin found	PASSED
3.06	high	SET 1 / OP 3 / lying	No peaks < 6 dB margin found	PASSED

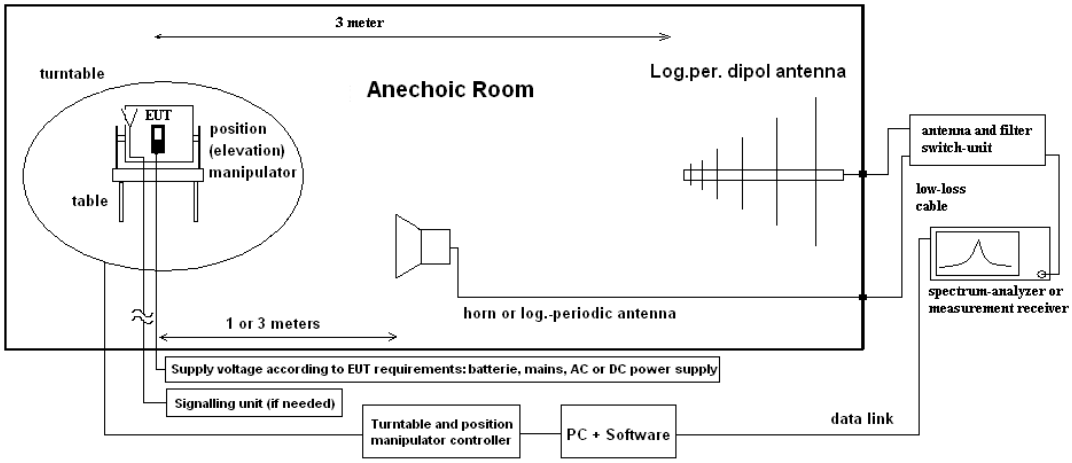
Remark: for more information and graphical plot see annex A202

8.3.4 Radiated field strength emissions above 1 GHz

8.3.4.1 Description of the general test setup and methodology, see below example:

Evaluating the emissions have to be done first by an exploratory emissions measurement and a final measurement for most critical frequencies. The tests are performed in a CISPR 18-1-4:2010 compliant fully anechoic room (FAR) recognized by the regulatory commission. The measurement distance was set to 3 meters for frequencies up to 18 GHz and 2 meters above 18 GHz. A logarithmic periodic antenna is used for the frequency range 30 MHz to 1 GHz. Horn antennas are used for frequency range 1 GHz to 40 GHz. The EUT is aligned within 3 dB beam width of the measurement antenna with three orthogonal axis measurements on the EUT.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

Exploratory, preliminary measurements
The EUT and its associated accessories are placed on a non-conductive position manipulator (tipping device) of 1.55 m height which is placed on the turntable. By rotating the turntable (range 0° to 360°, step 15°) and the EUT itself either on 3-orthogonal axis (portable equipment) or 2-orthogonal axis (defined operational position of EUT) the emission spectrum and its characteristics were recorded with an EMI-receiver, broadband antenna and software.
The measurements are performed in horizontal and vertical polarization of the measurement antennas. The results are documented in a diagram. Critical frequencies (low margin to limit) are saved within a table for further investigations. If various operating modes are supported, further investigations are made to find the worst case of them. Also, the interconnection cables and equipment position were varied to maximize the emissions.

Final measurement on critical frequencies
Based on the exploratory measurements, the most critical frequencies are re-measured by maintaining the EUT's worst-case operation mode, cable position, etc.

First a frequency zoom around the critical frequency is done to locate the frequency more precisely. After this step, for all identified critical frequencies, the maximum peak was determined.

Following parameters were varied: the turntable angle continuously in the range 0 to 360 degree, the EUT itself over 3-orthogonal axis and the height for EUT with large dimensions or three axis scans for portable/small equipment.

On the determined worst-case position, a final measurement with necessary bandwidth and detector according to standard has been carried out.

Formula:

$E_c = E_R + AF + C_L + D_F + G_A$ (1)

$M = L_T - E_C$ (2)

AF = Antenna factor
C_L = Cable loss
D_F = Distance correction factor (if used)
E_C = Electrical field – corrected value
E_R = Receiver reading
G_A = Gain of pre-amplifier (if used)
L_T = Limit
M = Margin

All units are dB-units, positive margin means value is below limit.

8.3.4.2 Measurement Location

Test site
120904 - FAC1 - Radiated Emissions

8.3.4.3 Limit

Frequency range [MHz]	Limit [µV/m]	Limit [dBµV/m]	Detector
Above 1000	500	54	Average
Above 1000	5000	74	Peak

8.3.4.4 Result

Diagram	Channel	SET / OP	Maximum level [dBµV/m]	Result
4.01	low	SET 1 / OP 1	55.66 (AV) @ 8120.61 MHz	PASSED
4.02	mid	SET 1 / OP 2	No peaks <6 dB margin found	PASSED
4.03	high	SET 1 / OP 3	No peaks <6 dB margin found	PASSED

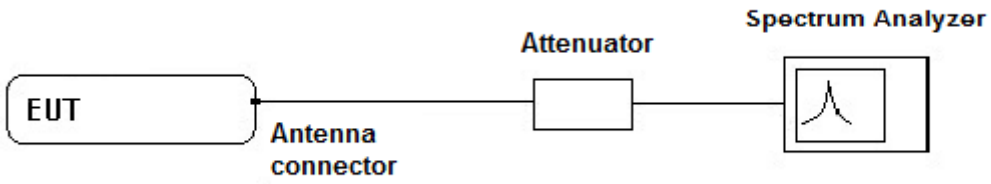
Remark: for more information and graphical plot see annex A202

8.3.5 Emission in non-restricted frequency bands

8.3.5.1 Description of the general conducted test setup and methodology, see below example:

The EUT's RF-signal is coupled out by a suitable antenna coupling connector (1). The signal is first attenuated (2) then connected to spectrum-analyzer (4) for RF-conducted measurements. The specific attenuation loss is determined prior to the measurement within a set-up attenuation measurement. These are then taken into account by correcting the measurement readings of the spectrum-analyzer.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

The measurements were performed with the RBW set to 100 kHz & maximum carrier level was indicated with MAX-Hold positive peak detector using markers. Then a frequency line was set 20 or 30 dB below this measured maximum carrier level.

Then using RBW 100 kHz & spectrum analyzer span from 150 kHz to 9.5 GHz in multiple steps. Spurious emissions were measured with MAX-Hold positive peak detector.

The sweep time set as long as necessary to capture the full signal burst per hopping channel. The burst on-period is captured by setting appropriate markers in the rising and falling edges.

EUT settings
The EUT was instructed to send with maximum power (if adjustable) according applicants instructions. Different modulation characteristics have been checked e.g. data rates which EUT can operate.

8.3.5.2 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.5.3 Limit

Frequency Range [MHz]	Mode	Limit [dBc]
0.15 – 9500	DTS/FHSS	20 [1]
		30 [2]

Remark 1: limit where conducted power measurement complies based on peak detector
Remark 2: limit where conducted power measurement complies based on RMS detector

8.3.5.4 Result

Diagram	Channel	SET / OP	Maximum level [dBm]	Limit [dBm]	Result
-	low	SET 2 / OP 1 [1)]	No peaks < 6 dB margin found	-2.48	PASSED
-	mid	SET 2 / OP 2 [1)]	No peaks < 6 dB margin found	-5.41	PASSED
-	high	SET 2 / OP 3 [1)]	No peaks < 6 dB margin found	-3.62	PASSED
-	hopping low [2)]	SET 2 / OP 4 [1)]	No peaks < 6 dB margin found	-7.16	PASSED
-	hopping high [2)]	SET 2 / OP 6 [1)]	No peaks < 6 dB margin found	-5.23	PASSED

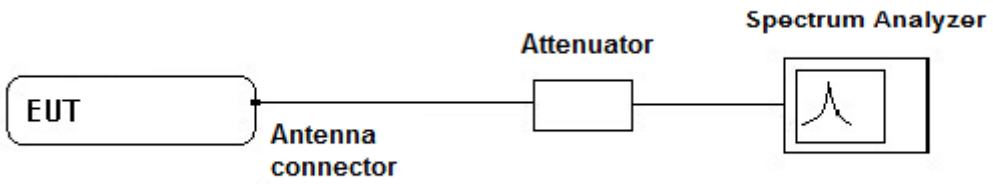
Remark: for more information and graphical plot see annex A201. No restricted band nearby, therefore only dBc limit applies
Remark 1): conducted spurious were measured with maximum power setting 20 which is more stringent than the final setting
Remark 2): in hopping mode only the band-edge compliance is checked

8.3.6 Conducted output power

8.3.6.1 Description of the general test setup and methodology, see below example:

The EUT's RF-signal is coupled out by a suitable antenna coupling connector (1). The signal is first attenuated (2) then connected to power meter (3) or spectrum-analyzer (4) for RF-conducted measurements. The specific attenuation loss is determined prior to the measurement within a set-up attenuation measurement. These are then taken into account by correcting the measurement readings.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

Test method
Peak Power with spectrum analyzer

EUT settings
The EUT was instructed to send with maximum power (if adjustable) according applicants instructions. Different modulation characteristics have been checked, e.g. data rates which EUT can operate

8.3.6.2 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.6.3 Limit

Frequency Range [MHz]	Mode	Limit [W]	Limit [dBm]
902 - 928	DTS	1	30
	FHSS > 50 channel	1	30
	FHSS < 50 channel	**0.25**	**24**

8.3.6.4 Result

Diagram	Channel	Mode	Peak power [dBm]	Result
-	low	SET 2 / OP 1	17.96	PASSED
-	mid	SET 2 / OP 2	16.98	PASSED
-	high	SET 2 / OP 3	16.44	PASSED

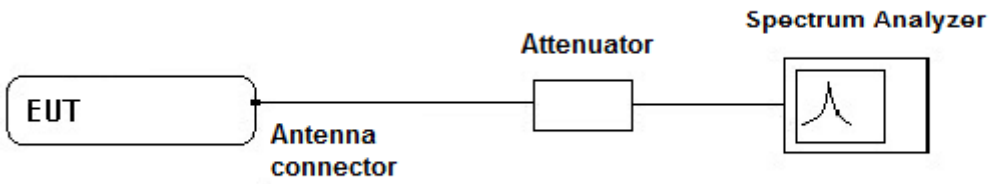
Remark: for more information and graphical plot see annex A201

8.3.7 Emission Bandwidth 20 dB / 6 dB

8.3.7.1 Description of the general test setup and methodology, see below example:

The EUT's RF-signal is coupled out by a suitable antenna coupling connector (1). The signal is first attenuated (2) then connected to power meter (3) or spectrum-analyzer (4) for RF-conducted measurements. The specific attenuation loss is determined prior to the measurement within a set-up attenuation measurement. These are then taken into account by correcting the measurement readings.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

8.3.7.2 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.7.3 Limit

Mode	Limit [dBm]
DTS	6 dB BW ≥ 500 kHz
FHSS	**20 dB BW ≤ 500 kHz**

8.3.7.4 Result

Diagram	Channel	Mode	Bandwidth [kHz]	Result
-	low	SET 2 / OP 1	309	PASSED
-	mid	SET 2 / OP 2	309	PASSED
-	high	SET 2 / OP 3	309	PASSED

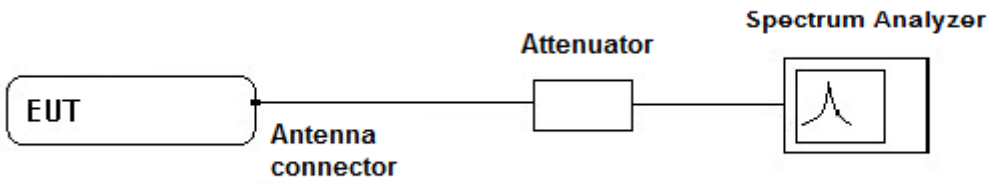
Remark: for more information and graphical plot see annex A201

8.3.8 Occupied channel bandwidth 99%

8.3.8.1 Description of the general test setup and methodology, see below example:

The EUT's RF-signal is coupled out by a suitable antenna coupling connector (1). The signal is first attenuated (2) then connected to power meter (3) or spectrum-analyzer (4) for RF-conducted measurements. The specific attenuation loss is determined prior to the measurement within a set-up attenuation measurement. These are then taken into account by correcting the measurement readings.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

8.3.8.2 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.8.3 Limit

When the occupied bandwidth limit is not stated in the applicable reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth, as calculated or measured.

8.3.8.4 Result

Diagram	Channel	Mode	Bandwidth [kHz]	Result
-	low	SET 2 / OP 1	302.669	PASSED
-	mid	SET 2 / OP 2	302.257	PASSED
-	high	SET 2 / OP 3	301.385	PASSED

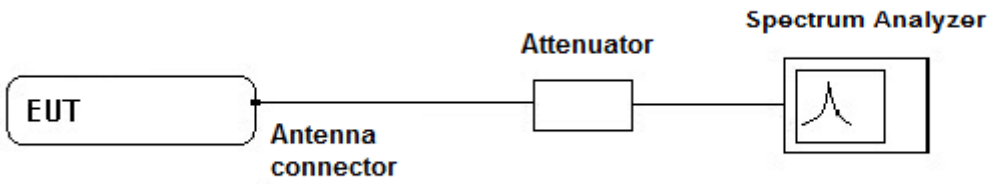
Remark: for more information and graphical plot see annex A201

8.3.9 Time of occupancy

8.3.9.1 Description of the general test setup and methodology, see below example:

The EUT's RF-signal is coupled out by a suitable antenna coupling connector (1). The signal is first attenuated (2) then connected to power meter (3) or spectrum-analyzer (4) for RF-conducted measurements. The specific attenuation loss is determined prior to the measurement within a set-up attenuation measurement. These are then taken into account by correcting the measurement readings.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

8.3.9.2 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.9.3 Limit

Bandwidth [kHz]	# Channel	Limit
≥ 250	**≥ 25**	**0.4 s within 10 s**
≤ 250	≥ 50	0.4 s within 20 s

8.3.9.4 Result

Diagram	Channel	Mode	dwell time single [s]	# transmissions	dwell time 10 s [s]	Result
-	Hopping	SET 2 / OP 4	0.00580	66	0.38	PASSED

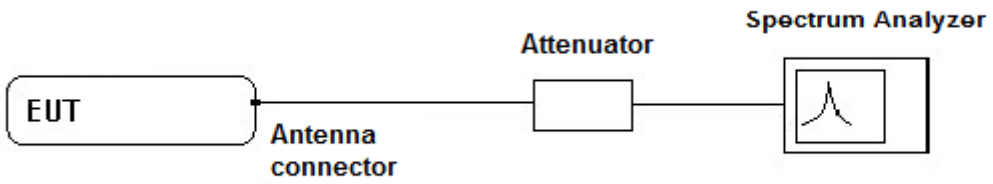
Remark: for more information and graphical plot see annex A201

8.3.10 Carrier frequency separation

8.3.10.1 Description of the general test setup and methodology, see below example:

The EUT's RF-signal is coupled out by a suitable antenna coupling connector (1). The signal is first attenuated (2) then connected to power meter (3) or spectrum-analyzer (4) for RF-conducted measurements. The specific attenuation loss is determined prior to the measurement within a set-up attenuation measurement. These are then taken into account by correcting the measurement readings.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

8.3.10.2 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.10.3 Limit

Limit [kHz]
25
≥ 20 dB bandwidth

8.3.10.4 Result

Diagram	Channel	Mode	Frequency separation[kHz]	Limit [kHz]	Result
-	Hopping	SET 2 / OP 4	401.91	309	PASSED
-	Hopping	SET 2 / OP 5	410.60	309	PASSED
-	Hopping	SET 2 / OP 6	400.10	309	PASSED

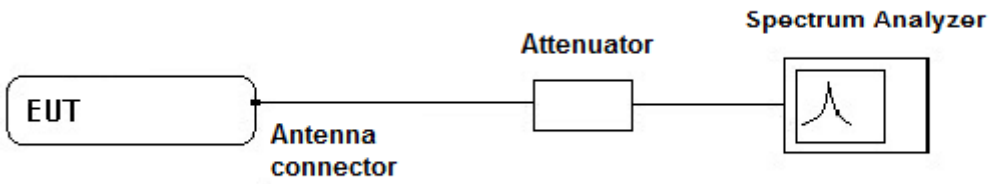
Remark: for more information and graphical plot see annex A201

8.3.11 Number of hopping frequencies

8.3.11.1 Description of the general test setup and methodology, see below example:

The EUT's RF-signal is coupled out by a suitable antenna coupling connector (1). The signal is first attenuated (2) then connected to power meter (3) or spectrum-analyzer (4) for RF-conducted measurements. The specific attenuation loss is determined prior to the measurement within a set-up attenuation measurement. These are then taken into account by correcting the measurement readings.

Schematic:



Testing method:
The measurement is made according to relevant reference clauses:
(See Tables Measurement details on page 14)

8.3.11.2 Measurement Location

Test site
120910 - Radio Laboratory 1 (TS 8997)

8.3.11.3 Limit

20 dB Bandwidth [kHz]	Limit [# frequencies]
< 250	≥ 50
≥ 250	**≥ 25**

8.3.11.4 Result

Diagram	Channel	Mode	# of hopping channels	Result
-	Hopping	SET 2 / OP 4	25	PASSED
-	Hopping	SET 2 / OP 5	25	PASSED
-	Hopping	SET 2 / OP 6	25	PASSED

Remark: for more information and graphical plot see annex A201

8.3.12 Equipment list

ID	Description	Manufacturer	SerNo	CheckType	Last Check	Interval	Next Check
	120901 - ESS SAC3 - Radiated Emission <1GHz			chk	2025-Mar-29	chk: 18M	2026-Sep-29
20341	Digital Multimeter Fluke 112	Fluke Deutschland GmbH / Glottertal	81650455	cal	2026-May-07	cal: 36M	2029-May-07
20442	Semi Anechoic Chamber SAC3	ETS-Lindgren Gmbh / Taufkirchen	without	chk	2025-Sep-05	chk: 12M	2026-Sep-05
20482	Filter Matrix SAC3	cetecom advanced GmbH / Essen	without	cnn	-	-	-
20574	Biconilog Hybrid Antenna BTA-L	Frankonia GmbH / Heideck	980026L	cal	2025-Jun-06	cal: 36M	2028-Jun-06
20620	EMI Test Receiver ESU26	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100362	cal	2026-May-06	cal: 12M	2027-May-06
20885	Power Supply EA3632A	Agilent Technologies Deutschland GmbH	75305850	cnn	-	-	-
20979	Loop Antenna HFH2-Z2	Rohde & Schwarz Messgerätebau GmbH / Memmingen	872096/61	cal	2024-Sep-16	36M	2027-Sep-16
25555	Measurement Software EMC32 (SAC3)	Rohde & Schwarz Messgerätebau GmbH / Memmingen	-	cnn	-	-	-

ID	Description	Manufacturer	SerNo	CheckType	Last Check	Interval	Next Check
	120910 - Radio Laboratory 1 (TS 8997)			chk	2026-Jun-19	chk: 12M	2027-Jun-19
20866	Signal Analyzer FSV3030	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101247	cal	2025-Jun-10	cal: 12M	2026-Jun-10
20559	Vector Signal Generator SMU200A	Rohde & Schwarz Messgerätebau GmbH / Memmingen	103736.00	cal	2025-May-07	cal: 24M	2027-May-07
20691	Open Switch and control Platform OSP157W 8 Port Plus	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100950.00	cal	2026-Jun-15	cal: 36M	2029-Jun-15
20904	Climatic Chamber ClimeEvent C/1000/70a/5	Weiß Technik GmbH / Reiskirchen-Lindenstruth	58226223240010.00	cal	2025-Jan-23	cal: 24M	2027-Jan-23
20927	Signal Generator SMF 100A	Rohde & Schwarz Messgerätebau GmbH / Memmingen	102109.00	cal	2026-Feb-10	cal: 36M	2029-Feb-10
20972	Signal- and Spectrum Analyzer FSW50	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101929.00	cal	2026-May-07	cal: 12M	2027-May-07
20978	HMP2020 2-CH power Supply 188W	Rohde & Schwarz Messgerätebau GmbH / Memmingen	121649.00	cpu	-	-	-
20980	USB Wideband power Sensor U2021XA	Keysight Technologies Deutschland GmbH / Böblingen	MY64330007	cal	2026-May-06	cal: 12M	2027-May-06
40169	Vector Signal Generator SMW200A	Rohde & Schwarz Messgerätebau GmbH / Memmingen	109923.00	cal	2023-Dec-12	cal: 12M	2026-Dec-31
80682	Switch Matrix USM	cetecom advanced GmbH / Saarbrücken	D001	chk	2026-Jun-19	chk: 12M	2027-Jun-19

ID	Description	Manufacturer	SerNo	CheckType	Last Check	Interval	Next Check
	120904 - FAC1 - Radiated Emissions			chk	2026-Jun-12	chk: 12M	2027-Jun-12
20020	Double-Ridged Waveguide Horn Antenna 3115 (Subst 1)	EMCO Elektronik GmbH / Gilching	9107-3699	calchk	2025-Mar-21	cal: 36M chk: 12M	2027-Sep-11
20066	Notch Filter WRCT 1900/2200-5/40-10EEK	Wainwright Instruments GmbH / Andechs	5	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20121	Notch Filter WRCB 1879,5/1880,5EE	Wainwright Instruments GmbH / Andechs	15	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20122	Notch Filter WRCB 1747/1748	Wainwright Instruments GmbH / Andechs	12	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20254	High Pass Filter 5HC 2600/12750-1.5KK	Trilithic	23042	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20287	Pre-Amplifier 25MHz - 4GHz AMF-2D-100M4G-35-10P	Miteq Inc.	379418	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20290	Notch Filter WRCA 901,9/903,1SS	Wainwright Instruments GmbH / Andechs	3RR	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20291	High Pass Filter WHJ 2200-4EE	Wainwright Instruments GmbH / Andechs	14	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20338	Pre-Amplifier JS4-00102600-38-5P	Miteq Inc.	838697	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20341	Digital Multimeter Fluke 112	Fluke Deutschland GmbH / Glottertal	81650455	cal	2026-May-21	cal: 36M	2029-May-13
20448	Notch Filter WRCT 1850.0/2170.0-5/40-10SSK	Wainwright Instruments GmbH / Andechs	5	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20449	Notch Filter WRCT 824.0/894.0-5/40-8SSK	Wainwright Instruments GmbH / Andechs	1	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20484	Pre-Amplifier 2,5GHz - 18GHz AMF-5D-02501800-25-10P	Miteq Inc.	1244554	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20489	EMI Test Receiver ESU40	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100030	cal	2025-Mar-21	cal: 12M	2027-May-05
20512	Notch Filter WRCA 800/960-02/40-6EEK (GSM 850)	Wainwright Instruments GmbH / Andechs	24	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20549	Log. Per. Antenna HL025	Rohde & Schwarz Messgerätebau GmbH / Memmingen	1000060	calchk	2024-Oct-08	cal: 36M	2027-Oct-08
20558	Fully Anechoic Chamber 1	ETS-Lindgren GmbH / Taufkirchen	without	chk	2025-Mar-28	chk: 24M	2027-Mar-28
20608	Ultrabroadband-Antenna HL562	Rohde & Schwarz Messgerätebau GmbH / Memmingen	830547/009	cal	2023-Jul-04	cal: 36M	2026-Jul-04
20611	Power Supply E3632A	Agilent Technologies Deutschland GmbH	KR 75305854	cpu			
20690	Spectrum Analyzer FSU26	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100302/026	cal	2025-May-07	cal: 24M	2027-May-07
20720	Measurement Software EMC32 [FAC]	Rohde & Schwarz Messgerätebau GmbH	V10.xx	cnn	-	-	-
20868	High Pass Filter AFH-07000	AtlanTecRF / Braintree, Essex	16071300004	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20883	Open Switch and control Platform OSP-B200S2 Satellite	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101432	chk	2026-Jun-12	chk: 12M	2027-Jun-12
20884	Open Switch and control Platform OSP320	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101391	chk	2026-Jun-12	chk: 12M	2027-Jun-12

20977	Wideband Radio Communication Tester CMW500	Rohde & Schwarz Messgerätebau GmbH / Memmingen	172340	cal	2025-Mar-21	cal: 12M	2026-Jul-24

ID	Description	Manufacturer	SerNo	CheckType	Last Check	Interval	Next Check
20412	Fully Anechoic Chamber 2	ETS-Lindgren Gmbh / Taufkirchen	without	chk	2024-Oct-31	chk: 24M	2026-Oct-31
20811	Horn Antenna ASY-SGH-124-SMA	Antenna Systems Solutions S.L	29F14182337	cal	2024-Oct-08	cal: 36M	2027-Oct-08
20816	SGH Antenna SGH-26-WR10	Anteral S.L.	1144	cnn	-	-	-
20836	1-18 GHz Amplifier	Wright Technologies, Inc., Inc. / Roseville	0001	chk	2024-Oct-18	chk: 24M	2026-Oct-18
20913	Phase Amplitude Stable Cable Assembly DC-40GHz	RF-Lambda Europe GmbH	AC19040001	cnn	-	-	-
25457	DRG Horn Antenna SAS-574	A.H. Systems, Inc. / Chatsworth	383	cal	2025-Jun-03	cal: 36M	2028-Jun-03
20972	Signal- and Spectrum Analyzer FSW50	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101929.00	cal	2026-May-07	cal: 12M	2027-May-07

Note / remarks	Interval of calibration & Verification
12M	12 months
24M	24 months
36M	36 months
10Y	10 Years

Abbreviation Check Type	Description
cnn	Calibration and verification not necessary
cal	Calibration
calchk	Calibration plus intermediate Verification
chk	Verification
cpu	Verification before usage

8.4 Results from external laboratory

None -

8.5 Opinions and interpretations

None -

8.6 List of abbreviations

None -

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