



RF Test Report

For

Applicant name: SHENZHEN TENDA TECHNOLOGY CO., LTD.
Address: 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
EUT name: BE5010 Dual-band Wi-Fi 7 Ceiling Access Point
Brand name: Tenda
Model number: i36
Series model number: N/A

Issued By

Company name: BTF Testing Lab (Shenzhen) Co., Ltd.
Address: 101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China

Report number: BTF250603R01103
Test standards: ETSI EN 301 893 V2.1.1 (2017-05)
Test conclusion: Pass

Date of sample receipt: 2025-06-03
Test date: 2025-06-04 to 2025-08-15
Date of issue: 2025-08-27

Prepared by:

Chris Liu / Project engineer



Ryan.CJ / EMC Manager

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2025-08-27	Original
<i>Note:</i> <i>Once the revision has been made, then previous versions reports are invalid.</i>		

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1 Introduction

1.1 Laboratory Location

Test location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Phone number:	+86-0755-23146130
Fax number:	+86-0755-23146130

1.2 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1409**
BTF Testing Lab (Shenzhen) Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The test firm Registration No. is 695374.
- **CNAS - Registration No.: CNAS L17568**
BTF Testing Lab (Shenzhen) Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L17568.
- **A2LA - Registration No.: 6660.01**
BTF Testing Lab (Shenzhen) Co., Ltd. is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.
- (7) All entrusted information in this report is provided by the client and has been confirmed through consultation with the client; The testing items for this report have been discussed and confirmed with the client, and our company is only responsible for the content reflected in the report.

2 Product Information

2.1 Application Information

Company name:	SHENZHEN TENDA TECHNOLOGY CO., LTD.
Address:	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

2.2 Manufacturer Information

Company name:	SHENZHEN TENDA TECHNOLOGY CO., LTD.
Address:	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

2.3 General Description of Equipment under Test (EUT)

EUT name:	BE5010 Dual-band Wi-Fi 7 Ceiling Access Point
Under test model name:	i36
Series model name:	N/A
Description of model name differentiation:	N/A
Hardware version:	N/A
Software version:	N/A
Ratings:	Power:48V 800mA from adapter Adapter: MODLE:BN017-A38048E INPUT:100-240V~ 50/60Hz 1.0A OUTPUT:48V 800mA

2.4 Technical Information

Operation Frequency:	Band 1: 802.11a/n(HT20)/ac(VHT20)/ax(HE20)/be(HE20): 5180MHz to 5240MHz; 802.11n(HT40)/ac(VHT40)/ax(HE40) /be(HE40): 5190MHz to 5230MHz; 802.11ac(VHT80)/ax(HE80)/ be(HE80): 5210MHz; Band 2: 802.11a/n(HT20)/ac(VHT20)/ax(HE20) /be(HE20): 5260MHz to 5320MHz; 802.11n(HT40)/ac(VHT40)/ax(HE40) /be(HE40): 5270MHz to 5310MHz; 802.11ac(VHT80)/ax(HE80)/be(HE80): 5290MHz; Band 1+2: 802.11ac(VHT160)/ax(HE160)/be(HE160): 5250MHz;
Channel numbers:	Band 1: 802.11a/n(HT20)/ac(VHT20)/ax(HE20)/be(HE20): 4; 802.11n(HT40)/ac(VHT40)/ax(HE40)/ be(HE40): 2; 802.11ac(VHT80)/ax(HE80)/ be(HE80): 1; Band 2: 802.11a/n(HT20)/ac(VHT20)/ax(HE20) /be(HE20): 4; 802.11n(HT40)/ac(VHT40)/ax(HE40)/ be(HE40): 2; 802.11ac(VHT80)/ax(HE80)/ be(HE80): 1; Band 1+2: 802.11ac(VHT160)/ax(HE160) /be(HE160): 1;
Channel separation:	802.11a/n(HT20)/ac(VHT20)/ax(HE20)/be(HE20): 20MHz; 802.11n(HT40)/ac(VHT40)/ax(HE40) /be(HE40): 40MHz; 802.11ac(VHT80)/ax(HE80)/be(HE80): 80MHz; 802.11ac(VHT160)/ax(HE160)/be(HE160): 160MHz;
Modulation technology:	802.11a: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM); 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM); 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM);
Max. E.I.R.P Power:	16.28dBm
Antenna type:	Internal Antenna
Antenna gain:	ANT1:5.5dBi, ANT2:5.57dBi, ANT3:5.99dBi
Antenna transmit mode:	MIMO (3TX, 3RX)

Channel List:

U-NII Band 1

Bandwidth:	20MHz	Bandwidth:	40MHz	Bandwidth:	80MHz
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	/	/
44	5220	/	/	/	/
48	5240	/	/	/	/

U-NII Band 2A

Bandwidth:	20MHz	Bandwidth:	40MHz	Bandwidth:	80MHz
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290

56	5280	62	5310	/	/
60	5300	/	/	/	/
64	5320	/	/	/	/

U-NII Band 1& U-NII Band 2A

Bandwidth:	160MHz				
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
50	5250				

3 Summary of Test Results

3.1 Test Standards

The tests were performed according to following standards:

ETSI EN 301 893 V2.1.1 (2017-05): 5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

3.2 Uncertainty of Test

Measurement	Value
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3.0 dB
Unwanted Emissions, conducted	±3.0 dB
Temperature	±3 °C
Supply voltages	±3 %
Time	±5 %
Radiated Emission (30MHz ~ 1000MHz)	±4.80 dB
Radiated Emission (1GHz ~ 18GHz)	±4.82 dB

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.3 Summary of Test Result

Item	Standard	Requirement	Result
Nominal Centre frequencies	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.1	Pass
Nominal Channel Bandwidth and Occupied Channel Bandwidth	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.2	Pass
RF output power, Transmit Power Control (TPC)	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.3	Pass
Power Density	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.3	Pass
Transmitter unwanted emissions within the 5 GHz RLAN bands	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.4.2	Pass
Transmitter unwanted emissions outside the 5 GHz RLAN bands, conducted	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.4.1	Pass
Receiver spurious emissions, conducted	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.5	Pass
Transmitter unwanted emissions outside the 5 GHz RLAN bands (30MHz to 1GHz)	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.4.1	Pass
Transmitter unwanted emissions outside the 5 GHz RLAN bands (above 1GHz)	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.4.1	Pass
Adaptivity (Channel Access Mechanism)	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.7.3.2 Clause 4.2.7.3.3	Pass

Receiver Blocking	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.8	Pass
Receiver spurious emissions (30MHz to 1GHz)	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.5	Pass
Receiver spurious emissions (above 1GHz)	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.5	Pass
DFS - Channel Shutdown	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.6.2.5	Pass
User Access Restrictions	ETSI EN 301 893 V2.1.1 (2017-05)	Clause 4.2.9.2	Pass
Remark: 1. Pass: Meet the requirements. 2. N/A: not applicable.			

3.4 Additions to, deviations, or exclusions from the method

None

4 Test Configuration

4.1 Test Equipment List

RF output power, Transmit Power Control (TPC) Power Density Transmitter unwanted emissions within the 5 GHz RLAN bands Transmitter unwanted emissions outside the 5 GHz RLAN bands, conducted Receiver spurious emissions, conducted Adaptivity (Channel Access Mechanism) Receiver Blocking Nominal Centre frequencies Nominal Channel Bandwidth and Occupied Channel Bandwidth DFS - Channel Shutdown					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
RF Control Unit	Techy	TR1029-1	/	2024-10-25	2025-10-24
RF Sensor Unit	Techy	TR1029-2	/	2024-10-25	2025-10-24
Temperature Humidity Chamber	ZZCKONG	ZZ-K02A	20210928007	2024-10-25	2025-10-24
DC Power Supply	Tongmen	etm-6050c	20211026123	2024-10-25	2025-10-24
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	161997	2024-10-25	2025-10-24
Spectrum Analyzer	Keysight	N9020A	MY50410020	2024-10-25	2025-10-24
ESG Vector Signal Generator	Agilent	E4438C	MY45094854	2024-10-25	2025-10-24
MXG Vector Signal Generator	Agilent	N5182A	MY46240163	2024-10-25	2025-10-24
Test Software	TST Pass	/	Version: 2.0	/	/

Transmitter unwanted emissions outside the 5 GHz RLAN bands (30MHz to 1GHz) Transmitter unwanted emissions outside the 5 GHz RLAN bands (above 1GHz) Receiver spurious emissions (30MHz to 1GHz) Receiver spurious emissions (above 1GHz)					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	Rohde & Schwarz	ESC17	101032	2024-10-25	2025-10-24
Signal Analyzer	Rohde & Schwarz	FSQ40	100010	2024-10-25	2025-10-24
Log periodic antenna	Schwarzbeck	VULB 9168	01328	2024-10-28	2025-10-27
Preamplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9744	00246	2024-09-24	2025-09-23
Horn Antenna	Schwarzbeck	BBHA9120D	2597	2024-10-30	2025-10-29
Preamplifier (1GHz ~ 18GHz)	Schwarzbeck	BBV9718D	00008	2024-09-24	2025-09-23
Test Software	Frad	EZ_EMCC	Version: FA-03A2 RE+	/	/

4.2 Test Auxiliary Equipment

The EUT has been tested as an independent unit.

4.3 Environment Condition

ENV	Temperature (°C)	Voltage (VDC)
LTNV	0	48
NTNV	25	48
HTNV	40	48

4.4 Test Modes

No.	Test Modes
TM1	802.11a mode
TM2	802.11n(HT20) mode
TM3	802.11n(HT40) mode
TM4	802.11ac(VHT20) mode
TM5	802.11ac(VHT40) mode
TM6	802.11ac(VHT80) mode
TM7	802.11ac(VHT160) mode
TM8	802.11ax(HE20) mode
TM9	802.11ax(HE40) mode
TM10	802.11ax(HE80) mode
TM11	802.11ax(HE160) mode
TM12	Receiving mode (20MHz)
TM13	Receiving mode (40MHz)
TM14	Receiving mode (80MHz)
TM15	Receiving mode (160MHz)
TM16	Normal mode

4.5 Test Channel of EUT

U-NII Band 1

Bandwidth (MHz)	Lowest Channel (LCH) (MHz)	Middle Channel (MCH) (MHz)	Highest Channel (HCH) (MHz)
20	5180	/	5240
40	5190	/	5230
80	/	5210	/

U-NII Band 2A

Bandwidth (MHz)	Lowest Channel (LCH) (MHz)	Middle Channel (MCH) (MHz)	Highest Channel (HCH) (MHz)
20	5260	/	5320
40	5270	/	5310
80	/	5290	/

U-NII Band 1& U-NII Band 2A

Bandwidth (MHz)	Lowest Channel (LCH) (MHz)	Middle Channel (MCH) (MHz)	Highest Channel (HCH) (MHz)
160	/	5250	/

5 Evaluation Results (Evaluation)

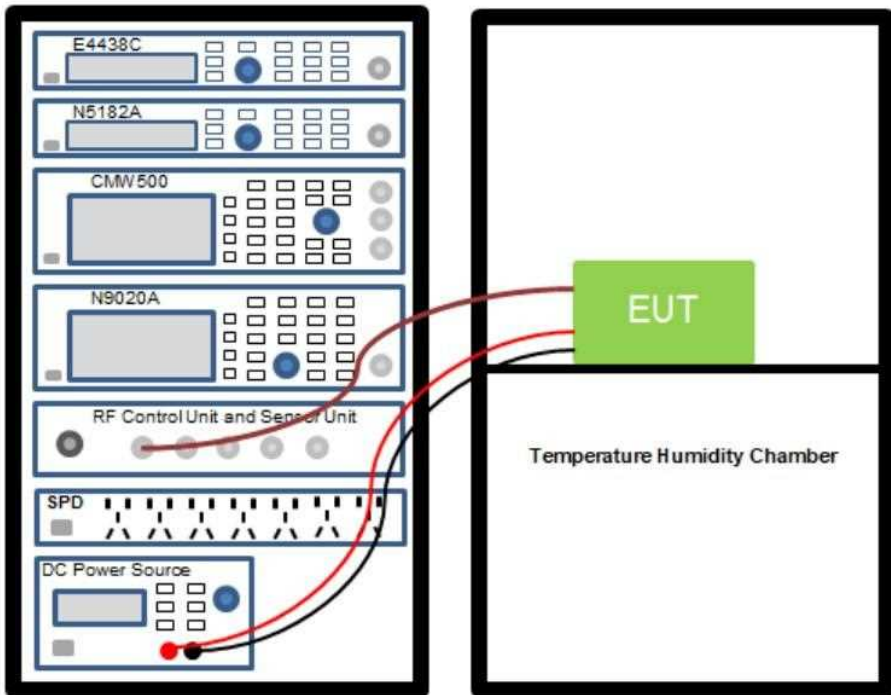
5.1 User Access Restrictions

Test Requirement:	The equipment shall be so constructed that settings (hardware and/or software) related to DFS shall not be accessible to the user if changing those settings result in the equipment no longer being compliant with the DFS requirements in clause 4.2.6. The above requirement includes the prevention of indirect access to any setting that impacts DFS. The following is a non-exhaustive list of examples of such indirect access. EXAMPLE 1: The equipment should not allow the user to change the country of operation and/or the operating frequency band if that results in the equipment no longer being compliant with the DFS requirements. EXAMPLE 2: The equipment should not accept software and/or firmware which results in the equipment no longer being compliant with the DFS requirements, e.g.: § software and/or firmware provided by the manufacturer but intended for other regulatory regimes; § modified software and/or firmware where the software and/or firmware is available as open source code; § previous versions of the software and/or firmware (downgrade).
Test Limit:	The equipment shall be so constructed that settings (hardware and/or software) related to DFS shall not be accessible to the user if changing those settings result in the equipment no longer being compliant with the DFS requirements in clause 4.2.6. The above requirement includes the prevention of indirect access to any setting that impacts DFS. The following is a non-exhaustive list of examples of such indirect access. EXAMPLE 1: The equipment should not allow the user to change the country of operation and/or the operating frequency band if that results in the equipment no longer being compliant with the DFS requirements. EXAMPLE 2: The equipment should not accept software and/or firmware which results in the equipment no longer being compliant with the DFS requirements, e.g.: § software and/or firmware provided by the manufacturer but intended for other regulatory regimes; § modified software and/or firmware where the software and/or firmware is available as open source code; § previous versions of the software and/or firmware (downgrade).
Operating Environment:	
Temperature:	22.4 °C
Humidity:	45.6 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6 Radio Spectrum Matter Test Results (RF)

6.1 Nominal Centre frequencies

Test Requirement:	Clause 4.2.1
Test Method:	Clause 5.4.2.2.1.2
Test Limit:	The <i>Nominal Centre Frequencies</i> (f_c) for a <i>Nominal Channel Bandwidth</i> of 20 MHz are defined by equation (1). See also figure 3. $f_c = 5\,160 + (g \times 20) \text{ MHz, where } 0 \leq g \leq 9 \text{ or } 16 \leq g \leq 27 \text{ and where } g \text{ shall be an integer. (1)}$ A maximum offset of the <i>Nominal Centre Frequency</i> of ± 200 kHz is permitted. Where the manufacturer decides to make use of this frequency offset, the manufacturer shall declare the actual centre frequencies used by the equipment. See clause 5.4.1, item a).

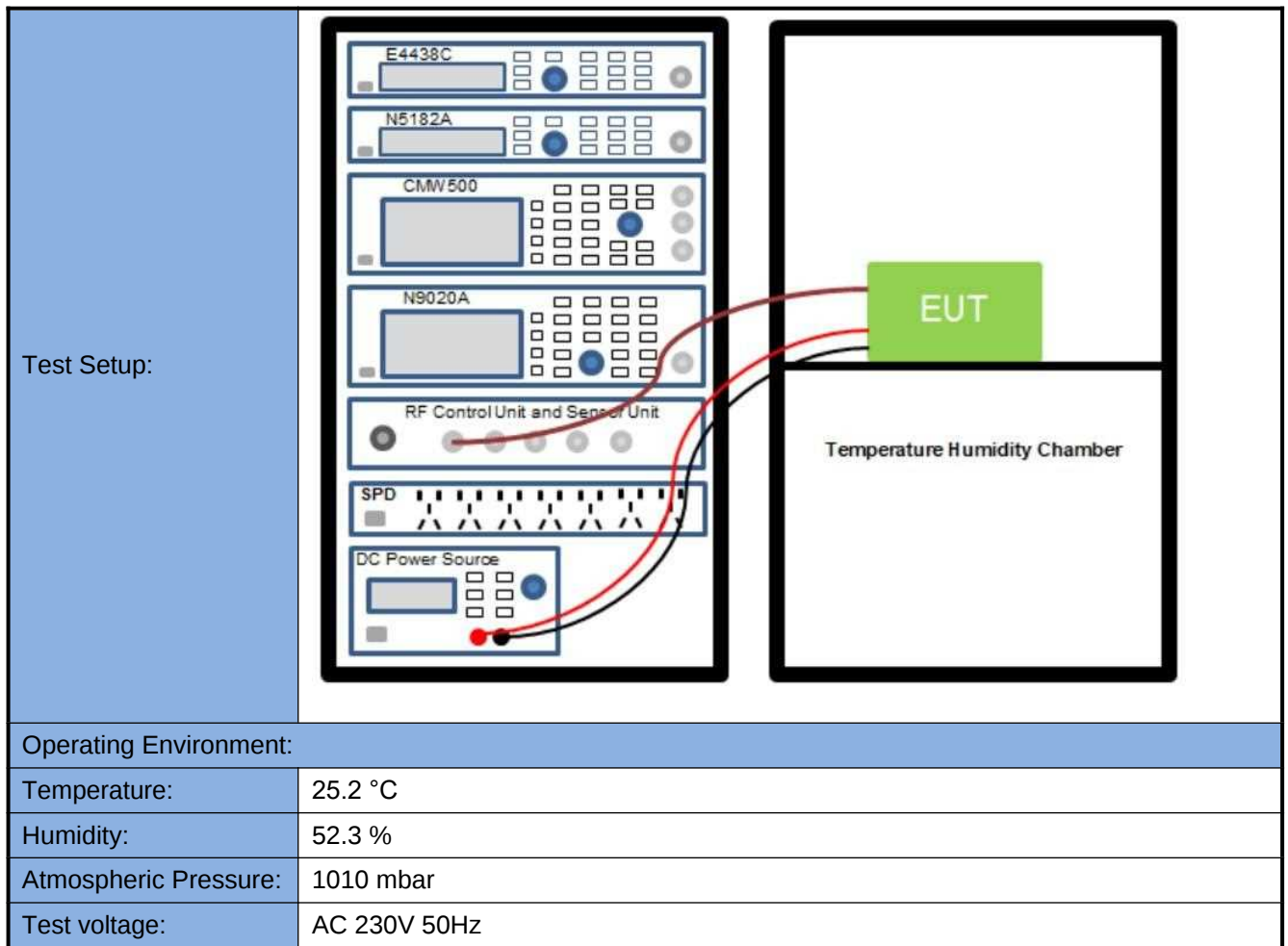
	The actual centre frequency for any given channel shall be maintained within the range $f_c \pm 20$ ppm. Equipment may have simultaneous transmissions on more than one <i>Operating Channel</i> with a <i>Nominal Channel Bandwidth</i> of 20 MHz.
Procedure:	This method is an alternative to the above method in case the UUT cannot be operated in an un-modulated mode. The UUT shall be connected to spectrum analyser. Max Hold shall be selected and the centre frequency adjusted to that of the UUT. The peak value of the power envelope shall be measured and noted. The span shall be reduced and the marker moved in a positive frequency increment until the upper, (relative to the centre frequency), -10 dBc point is reached. This value shall be noted as f1. The marker shall then be moved in a negative frequency increment until the lower, (relative to the centre frequency), -10 dBc point is reached. This value shall be noted as f2. The centre frequency is calculated as $(f1 + f2) / 2$.
Test Setup:	
Operating Environment:	
Temperature:	25.2 °C
Humidity:	52.3 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.1.1 Test Data

Please Refer to Appendix for Details.

6.2 Nominal Channel Bandwidth and Occupied Channel Bandwidth

Test Requirement:	Clause 4.2.2
Test Method:	Clause 5.4.3.2.1
Test Limit:	The <i>Nominal Channel Bandwidth</i> for a single <i>Operating Channel</i> shall be 20 MHz. Alternatively, equipment may implement a lower <i>Nominal Channel Bandwidth</i> with a minimum of 5 MHz, providing they still comply with the <i>Nominal Centre Frequencies</i> defined in clause 4.2.1 (20 MHz raster). The <i>Occupied Channel Bandwidth</i> shall be between 80 % and 100 % of the <i>Nominal Channel Bandwidth</i> . In case of smart antenna systems (devices with multiple transmit chains) each of the transmit chains shall meet this requirement. The <i>Occupied Channel Bandwidth</i> might change with time/payload. During a <i>Channel Occupancy Time (COT)</i> , equipment may operate temporarily with an <i>Occupied Channel Bandwidth</i> of less than 80 % of its <i>Nominal Channel Bandwidth</i> with a minimum of 2 MHz.
Procedure:	The measurement procedure shall be as follows: Step 1: · Connect the UUT to the spectrum analyser and use the following settings: - Centre Frequency: The centre frequency of the channel under test - Resolution Bandwidth: 100 kHz - Video Bandwidth: 300 kHz - Frequency Span: 2 × Nominal Bandwidth (e.g. 40 MHz for a 20 MHz channel) - Sweep time: > 1 s; for larger Nominal Bandwidths, the sweep time may be increased until a value where the sweep time has no impact on the RMS value of the signal - Detector Mode: RMS - Trace Mode: Max Hold Step 2: · Wait for the trace to stabilize. Step 3: · Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement. · Use the 99 % bandwidth function of the spectrum analyser to measure the <i>Occupied Channel Bandwidth</i> of the UUT. This value shall be recorded. The measurement described in step 1 to step 3 above shall be repeated in case of simultaneous transmissions in non-adjacent channels.

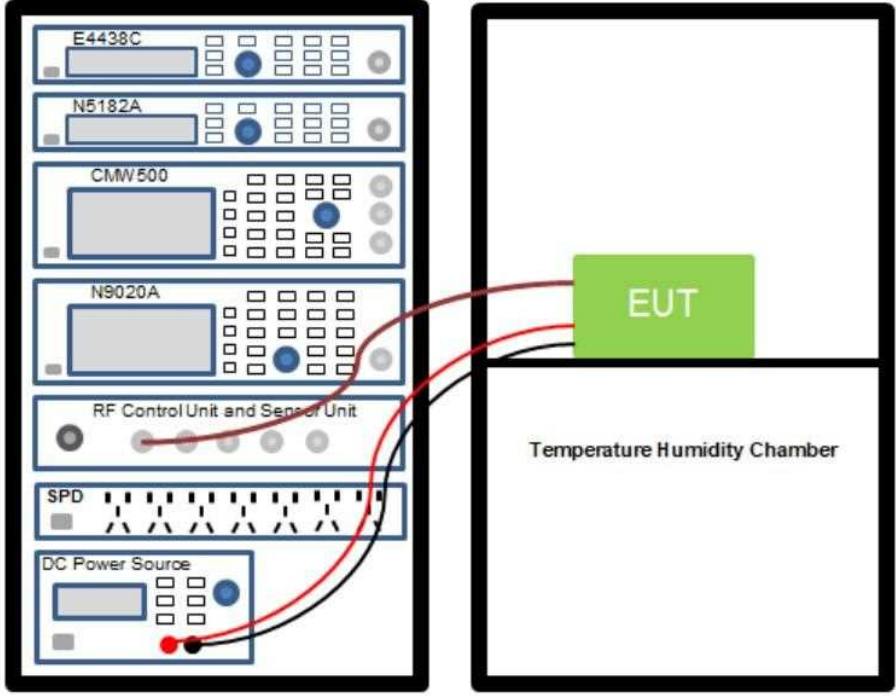


6.2.1 Test Data

Please Refer to Appendix for Details.

6.3 RF output power, Transmit Power Control (TPC)

Test Requirement:	Clause 4.2.3																							
Test Method:	Clause 5.4.4.2.1.1.2																							
Test Limit:	General The limits below are applicable to the system as a whole and in any possible configuration. This means that the antenna gain of the integral or dedicated antenna has to be taken into account as well as the additional (beamforming) gain in case of smart antenna systems (devices with multiple transmit chains). In case of multiple (adjacent or non-adjacent) channels within the same sub-band, the total <i>RF Output Power</i> of all channels in that sub-band shall not exceed the limits defined in table 2 and table 3. In case of multiple, non-adjacent channels operating in separate sub-bands, the total <i>RF Output Power</i> in each of the sub-bands shall not exceed the limits defined in table 2 and table 3. Limits for RF output power and Power Density at the highest power level TPC is not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz. For devices with TPC, the RF output power and the Power Density when configured to operate at the highest stated power level (P_H) of the TPC range shall not exceed the levels given in table 2. Devices are allowed to operate without TPC. See table 2 for the applicable limits that shall apply in this case. Table 2: Mean e.i.r.p. limits for RF output power and Power Density at the highest power level (PH)																							
	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Mean e.i.r.p. limit for PH (dBm)</th><th colspan="2">Mean e.i.r.p. density limit (dBm/MHz)</th></tr><tr><th>with TPC</th><th>without TPC</th><th>with TPC</th><th>without TPC</th></tr><tr><td>5 150 to 5 350</td><td>23</td><td>20/23 (see note 1)</td><td>10</td><td>7/10 (see note 2)</td></tr><tr><td>5 470 to 5 725</td><td>30 (see note 3)</td><td>27 (see note 3)</td><td>17 (see note 3)</td><td>14 (see note 3)</td></tr></table>					Frequency range (MHz)	Mean e.i.r.p. limit for PH (dBm)		Mean e.i.r.p. density limit (dBm/MHz)		with TPC	without TPC	with TPC	without TPC	5 150 to 5 350	23	20/23 (see note 1)	10	7/10 (see note 2)	5 470 to 5 725	30 (see note 3)	27 (see note 3)	17 (see note 3)	14 (see note 3)
	Frequency range (MHz)	Mean e.i.r.p. limit for PH (dBm)		Mean e.i.r.p. density limit (dBm/MHz)																				
		with TPC	without TPC	with TPC	without TPC																			
5 150 to 5 350	23	20/23 (see note 1)	10	7/10 (see note 2)																				
5 470 to 5 725	30 (see note 3)	27 (see note 3)	17 (see note 3)	14 (see note 3)																				
NOTE 1: The applicable limit is 20 dBm, except for transmissions whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz, in which case the applicable limit is 23 dBm. NOTE 2: The applicable limit is 7 dBm/MHz, except for transmissions whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz, in which case the applicable limit is 10 dBm/MHz. NOTE 3: Slave devices without a <i>Radar Interference Detection</i> function shall comply with the limits for the frequency range 5 250 MHz to 5 350 MHz.																								
Procedure:	This option is for equipment that operates only in one sub-band or that is capable for operation in two sub-bands simultaneously but, for the purpose of the testing, the equipment can be configured to: · operate in a continuous transmit mode or with a constant duty cycle (x), and · operate only in one sub-band. Step 1: For equipment configured into a continuous transmit mode (x = 1), proceed immediately with step 2. · The output power of the transmitter shall be coupled to a matched diode detector or equivalent thereof. The output of the diode detector shall be connected to the vertical channel of an oscilloscope. · The combination of the diode detector and the oscilloscope shall be capable of faithfully reproducing the duty cycle of the transmitter output signal. · The observed duty cycle of the transmitter (Tx on / (Tx on + Tx off)) shall be noted as x (0 < x ≤ 1), and recorded in the test report.																							

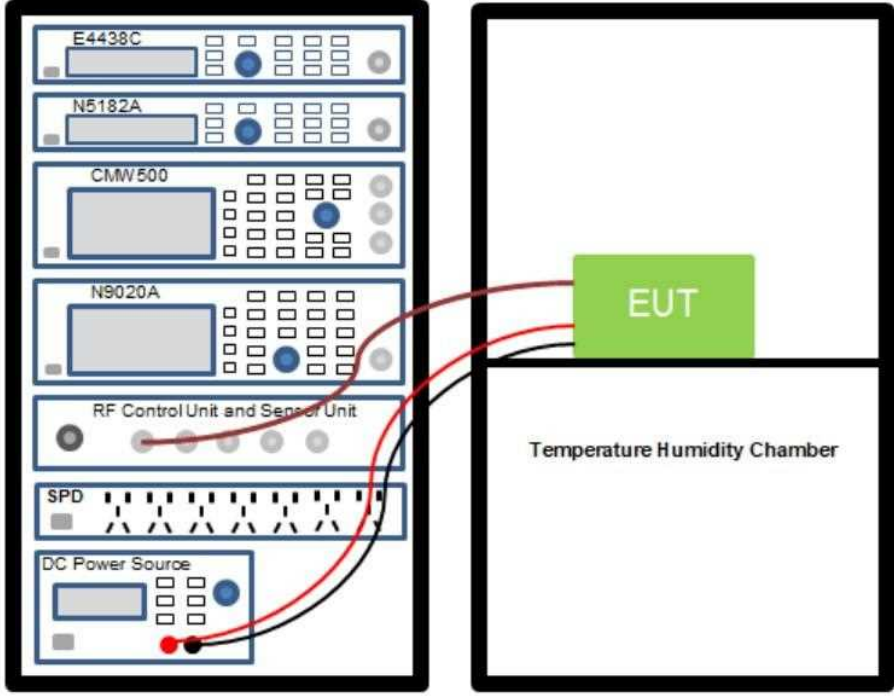
	Step 2: - The RF output power shall be determined using a wideband RF power meter with a thermocouple detector or an equivalent thereof and with an integration period that exceeds the repetition period of the transmitter by a factor 5 or more. The observed value shall be noted as A (in dBm). - In case of conducted measurements on smart antenna systems operating in a mode with multiple transmit chains active simultaneously, the output power of each transmit chain shall be measured separately to calculate the total power (value A in dBm) for the UUT. Step 3: - The RF output power at the highest power level PH (e.i.r.p.) shall be calculated from the above measured power output A (in dBm), the observed duty cycle x, the stated antenna gain G in dBi and if applicable the beamforming gain Y in dB, according to the formula below. This value shall be recorded in the test report. If more than one antenna assembly is intended for this power setting or TPC range, the gain of the antenna assembly with the highest gain shall be used. $PH = A + G + Y + 10 \times \log(1/x) \text{ (dBm). (5)}$
Test Setup:	
Operating Environment:	
Temperature:	25.2 °C
Humidity:	52.3 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.3.1 Test Data

Please Refer to Appendix for Details.

6.4 Power Density

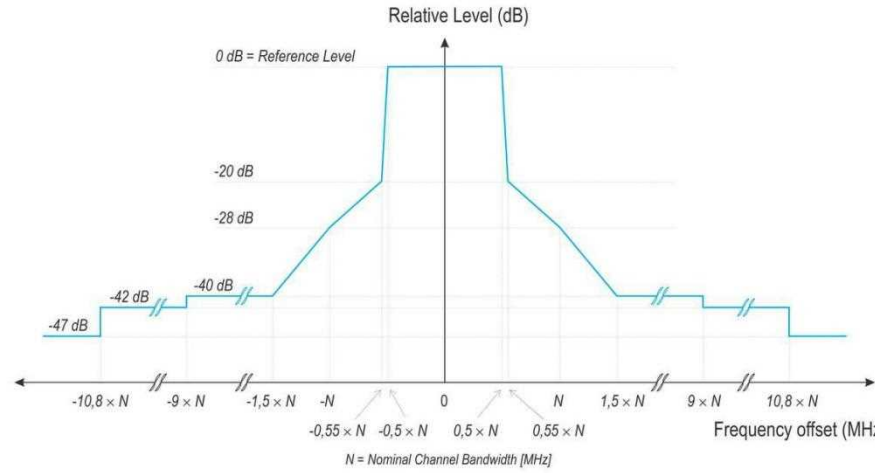
Test Requirement:	Clause 4.2.3																							
Test Method:	Clause 5.4.4.2.1.3.2																							
Test Limit:	General The limits below are applicable to the system as a whole and in any possible configuration. This means that the antenna gain of the integral or dedicated antenna has to be taken into account as well as the additional (beamforming) gain in case of smart antenna systems (devices with multiple transmit chains). In case of multiple (adjacent or non-adjacent) channels within the same sub-band, the total <i>RF Output Power</i> of all channels in that sub-band shall not exceed the limits defined in table 2 and table 3. In case of multiple, non-adjacent channels operating in separate sub-bands, the total <i>RF Output Power</i> in each of the sub.bands shall not exceed the limits defined in table 2 and table 3. Limits for RF output power and Power Density at the highest power level TPC is not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz. For devices with TPC, the RF output power and the Power Density when configured to operate at the highest stated power level (P_H) of the TPC range shall not exceed the levels given in table 2. Devices are allowed to operate without TPC. See table 2 for the applicable limits that shall apply in this case. Table 2: Mean e.i.r.p. limits for RF output power and Power Density at the highest power level (PH) <table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Mean e.i.r.p. limit for PH (dBm)</th><th colspan="2">Mean e.i.r.p. density limit (dBm/MHz)</th></tr><tr><th>with TPC</th><th>without TPC</th><th>with TPC</th><th>without TPC</th></tr><tr><td>5 150 to 5 350</td><td>23</td><td>20/23 (see note 1)</td><td>10</td><td>7/10 (see note 2)</td></tr><tr><td>5 470 to 5 725</td><td>30 (see note 3)</td><td>27 (see note 3)</td><td>17 (see note 3)</td><td>14 (see note 3)</td></tr></table> NOTE 1: The applicable limit is 20 dBm, except for transmissions whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz, in which case the applicable limit is 23 dBm. NOTE 2: The applicable limit is 7 dBm/MHz, except for transmissions whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz, in which case the applicable limit is 10 dBm/MHz. NOTE 3: Slave devices without a <i>Radar Interference Detection</i> function shall comply with the limits for the frequency range 5 250 MHz to 5 350 MHz.					Frequency range (MHz)	Mean e.i.r.p. limit for PH (dBm)		Mean e.i.r.p. density limit (dBm/MHz)		with TPC	without TPC	with TPC	without TPC	5 150 to 5 350	23	20/23 (see note 1)	10	7/10 (see note 2)	5 470 to 5 725	30 (see note 3)	27 (see note 3)	17 (see note 3)	14 (see note 3)
Frequency range (MHz)	Mean e.i.r.p. limit for PH (dBm)		Mean e.i.r.p. density limit (dBm/MHz)																					
	with TPC	without TPC	with TPC	without TPC																				
5 150 to 5 350	23	20/23 (see note 1)	10	7/10 (see note 2)																				
5 470 to 5 725	30 (see note 3)	27 (see note 3)	17 (see note 3)	14 (see note 3)																				
Procedure:	This option is for equipment that can be configured to operate in a continuous transmit mode or with a constant duty cycle (X). Step 1: · Connect the UUT to the spectrum analyser and use the following settings: - Centre Frequency: The centre frequency of the channel under test - RBW: 1 MHz - VBW: 3 MHz - Frequency Span: 2 × Nominal Bandwidth (e.g. 40 MHz for a 20 MHz channel) - Detector Mode: Peak - Trace Mode: Max Hold Step 2: · When the trace is complete, find the peak value of the power envelope and record the frequency. Step 3: · Make the following changes to the settings of the spectrum analyser:																							

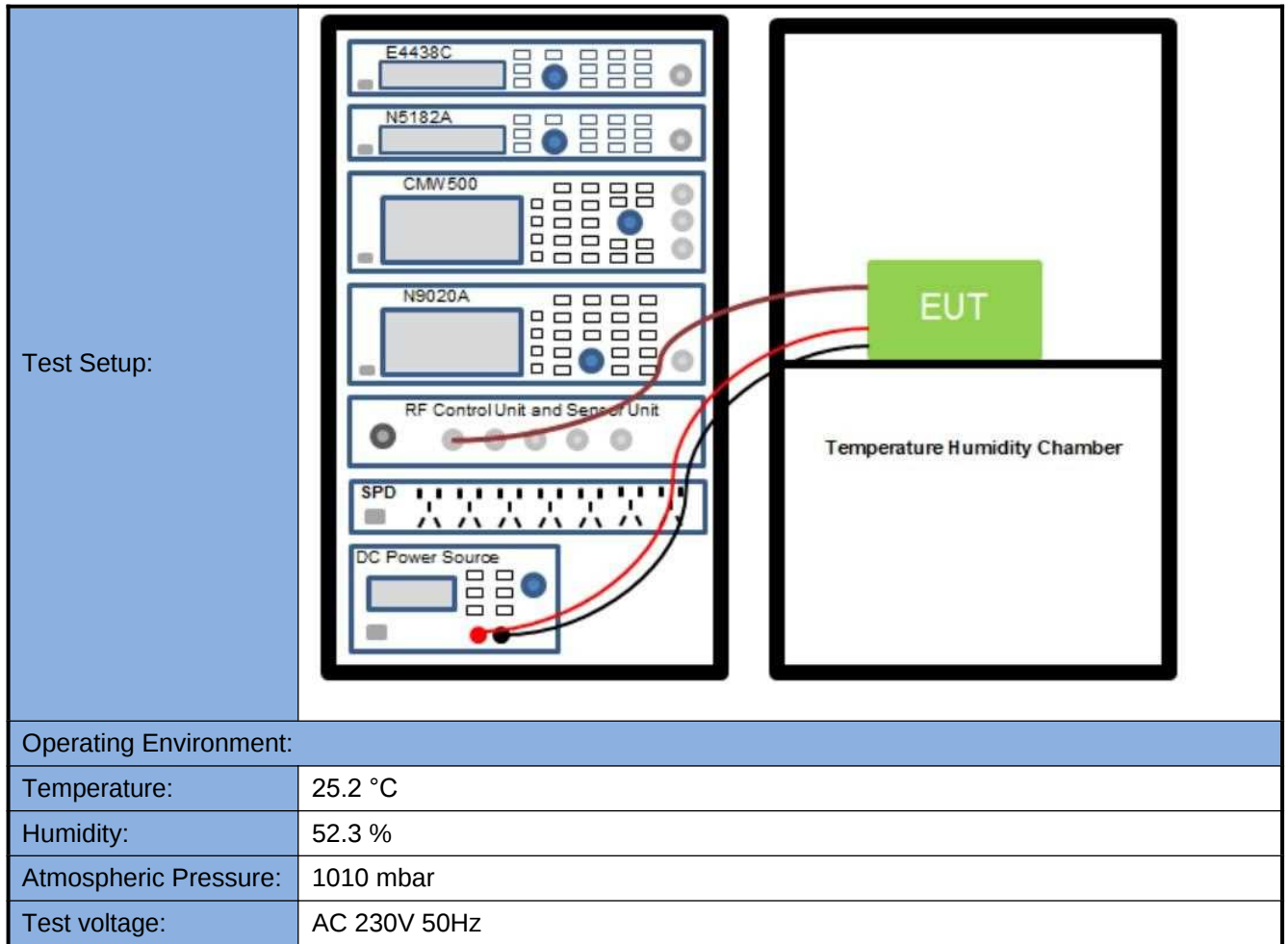
	- Centre Frequency: Equal to the frequency recorded in step 2 - Frequency Span: 3 MHz - RBW: 1 MHz - VBW: 3 MHz - Sweep Time: 1 minute - Detector Mode: RMS - Trace Mode: Max Hold Step 4: · When the trace is complete, the trace shall be captured using the "Hold" or "View" option on the spectrum analyser. · Find the peak value of the trace and place the analyser marker on this peak. This level is recorded as the highest mean power (Power Density) D in a 1 MHz band. · Alternatively, where a spectrum analyser is equipped with a function to measure spectral Power Density, this function may be used to display the Power Density D in dBm / MHz. · In case of conducted measurements on smart antenna systems operating in a mode with multiple transmit chains active simultaneously, the Power Density of each transmit chain shall be measured separately to calculate the total Power Density (value D in dBm / MHz) for the UUT. Step 5: · The maximum spectral Power Density e.i.r.p. is calculated from the above measured Power Density D, the observed duty cycle x (see clause 5.4.4.2.1.1.2, step 1), the applicable antenna assembly gain G in dBi and if applicable the beamforming gain Y in dB, according to the formula below. This value shall be recorded in the test report. If more than one antenna assembly is intended for this power setting, the gain of the antenna assembly with the highest gain shall be used: $PD = D + G + Y + 10 \times \log (1 / x) \text{ (dBm / MHz) (14)}$
Test Setup:	
Operating Environment:	
Temperature:	25.2 °C
Humidity:	52.3 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.4.1 Test Data

Please Refer to Appendix for Details.

6.5 Transmitter unwanted emissions within the 5 GHz RLAN bands

Test Requirement:	Clause 4.2.4.2
Test Method:	Clause 5.4.6.2.1.1
Test Limit:	 Figure 1: Transmit spectral power mask The mean Power Density (measured with a 1 MHz measurement bandwidth) of the transmitter unwanted emissions within the 5 GHz RLAN bands shall not exceed the limits of the mask provided in figure 1 or an absolute level of -30 dBm/MHz, whichever is greater. The limits in figure 1 are relative to the maximum Power Density of the RLAN device when measured with a reference bandwidth of 1 MHz. The mask is only applicable within the band of operation. Beyond the band edges the requirements of clause 4.2.4.1 apply. In case of smart antenna systems (devices with multiple transmit chains) each of the transmit chains shall meet the limits provided in figure 1. For transmitter unwanted emissions within the 5 GHz RLAN bands, simultaneous transmissions in adjacent channels may be considered as one signal with an actual <i>Nominal Channel Bandwidth</i> of "n" times the individual <i>Nominal Channel Bandwidth</i> where "n" is the number of adjacent channels used simultaneously. For simultaneous transmissions in multiple non-adjacent channels, the overall transmit spectral power mask is constructed in the following manner. First, a mask as provided in figure 1 is applied to each of the channels. Then, for each frequency point, the greatest value from the spectral masks of all the channels assessed shall be taken as the overall spectral mask requirement at that frequency.
Procedure:	The UUT shall be configured for continuous transmit mode (duty cycle equal to 100 %). If this is not possible, then option 2 shall be used. Step 1: Determination of the reference average power level. · Spectrum analyser settings: - Resolution bandwidth: 1 MHz - Video bandwidth: 30 kHz - Detector mode: Peak - Trace mode: Video Average - Sweep Time: Coupled - Centre Frequency: Centre frequency of the channel being tested - Span: $2 \times \text{Nominal Channel Bandwidth}$ · Use the marker to find the highest average power level of the power envelope of the UUT. This level shall be used as the reference level for the relative measurements. Step 2: Determination of the relative average power levels. · Adjust the frequency range of the spectrum analyser to allow the measurement to be performed within the sub-bands 5 150 MHz to 5 350 MHz and 5 470 MHz to 5 725 MHz. No other parameter of the spectrum analyser should be changed. Compare the relative power envelope of the UUT with the limits defined in clause 4.2.4.2.2.



6.5.1 Test Data

Please Refer to Appendix for Details.

6.6 Transmitter unwanted emissions outside the 5 GHz RLAN bands, conducted

Test Requirement:	Clause 4.2.4.1		
Test Method:	Clause 5.4.5.2.1		
Test Limit:	The level of transmitter unwanted emissions outside the 5 GHz RLAN bands shall not exceed the limits given in table 4. In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz. Table 4: Transmitter unwanted emission limits outside the 5 GHz RLAN bands		
	Frequency range	Maximum power	Bandwidth
	30 MHz to 47 MHz	-36 dBm	100 kHz
	47 MHz to 74 MHz	-54 dBm	100 kHz
	74 MHz to 87,5 MHz	-36 dBm	100 kHz
	87,5 MHz to 118 MHz	-54 dBm	100 kHz
	118 MHz to 174 MHz	-36 dBm	100 kHz
	174 MHz to 230 MHz	-54 dBm	100 kHz
	230 MHz to 470 MHz	-36 dBm	100 kHz
	470 MHz to 862 MHz	-54 dBm	100 kHz
	862 MHz to 1 GHz	-36 dBm	100 kHz
	1 GHz to 5,15 GHz	-30 dBm	1 MHz
	5,35 GHz to 5,47 GHz	-30 dBm	1 MHz
5,725 GHz to 26 GHz	-30 dBm	1 MHz	
Procedure:	Pre-scan The UUT shall be connected to a spectrum analyser capable of RF power measurements. This pre-scan test procedure shall be used to identify potential unwanted emissions of the UUT. Step 1: · The sensitivity of the spectrum analyser should be such that the noise floor is at least 12 dB below the limits given in clause 4.2.4.1.2, table 4. Step 2: · The unwanted emissions over the range 30 MHz to 1 000 MHz shall be identified. · Spectrum analyser settings: - Resolution bandwidth: 100 kHz - Video bandwidth: 300 kHz - Detector mode: Peak - Trace Mode: Max Hold - Sweep Points: ≥ 9 700 For spectrum analysers not supporting this number of sweep points, the frequency band may be segmented. For spectrum analysers capable of supporting twice this number of sweep points, the frequency adjustment in clause 5.4.5.2.1.2 (step 1, last bullet) may be omitted. - Sweep time: For non-continuous transmissions (duty cycle less than 100 %), the sweep time shall be sufficiently long, such that for each 100 kHz frequency step, the measurement time is greater than two transmissions of the UUT. EXAMPLE 1: For non-continuous transmissions, if the UUT is using a test sequence as described in clause 5.3.1.1 with a transmitter on + off time of 2 ms, then the sweep time has to be greater than 4 ms per 100 kHz. · Allow the trace to stabilize. Any emissions identified that have a margin of less than 6 dB with respect to the limits given in clause 4.2.4.1.2, table 4 shall be individually measured using the procedure in clause 5.4.5.2.1.2 and compared to		

the limits given in clause 4.2.4.1.2, table 4.

Step 3:

- The unwanted emissions over the range 1 GHz to 26 GHz shall be identified.
- Spectrum analyser settings:
 - Resolution bandwidth: 1 MHz
 - Video bandwidth: 3 MHz
 - Detector mode: Peak
 - Trace Mode: Max Hold
 - Sweep points: $\geq 25\,000$

For spectrum analysers not supporting this number of sweep points, the frequency band may be segmented. For spectrum analysers capable of supporting twice this number of sweep points, the frequency adjustment in clause 5.4.5.2.1.2 (step 1, last bullet) may be omitted.

- Sweep time: For non-continuous transmissions (duty cycle less than 100 %), the sweep time shall be sufficiently long, such that for each 1 MHz frequency step, the measurement time is greater than two transmissions of the UUT.

EXAMPLE 2: For non-continuous transmissions, if the UUT is using a test sequence as described in clause 5.3.1.1 with a transmitter on + off time of 2 ms, then the sweep time has to be greater than 4 ms per 1 MHz.

- Allow the trace to stabilize. Any emissions identified that have a margin of less than 6 dB with respect to the limits given in clause 4.2.4.1.2, table 4 shall be individually measured using the procedure in clause 5.4.5.2.1.2 and compared to the limits given in clause 4.2.4.1.2, table 4.

Measurement of the emissions identified during the pre-scan

The limits for transmitter unwanted emissions in clause 4.2.4.1 refer to average power levels.

The steps below shall be used to accurately measure the individual unwanted emissions identified during the pre-scan measurements above.

Continuous transmit signals:

For continuous transmit signals, a simple measurement using the RMS detector of the spectrum analyser is permitted. The measured values shall be recorded and compared with the limits in clause 4.2.4.1.2, table 4.

Non-continuous transmit signals:

For non-continuous transmit signals, the measurement shall be made only over the "on" part of the burst.

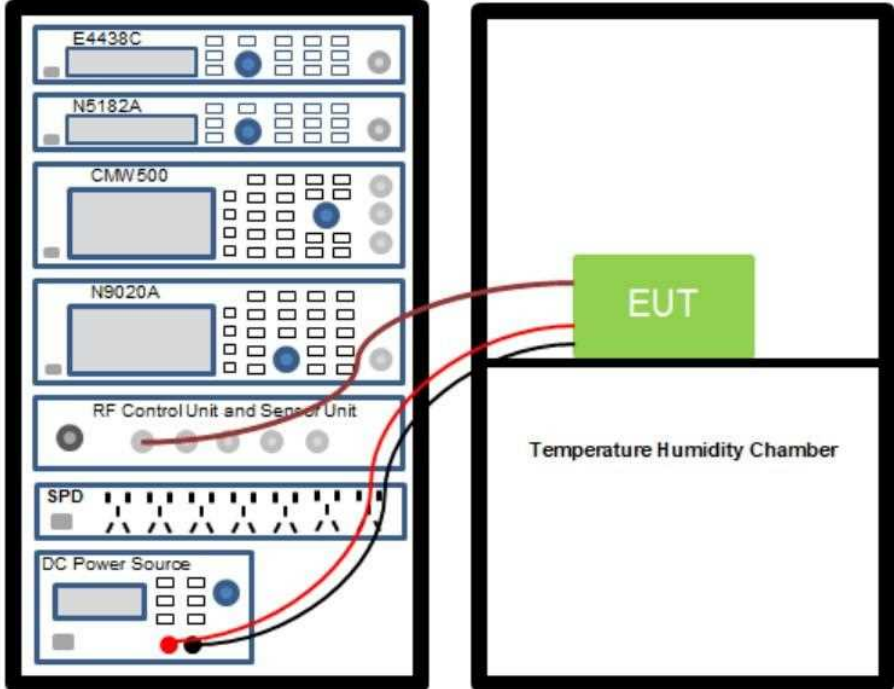
Step 1:

- The level of the emissions shall be measured in the time domain, using the following spectrum analyser settings:
 - Centre Frequency: Frequency of emission identified during the pre-scan
 - RBW: 100 kHz (< 1 GHz) / 1 MHz (> 1 GHz)
 - VBW: 300 kHz (< 1 GHz) / 3 MHz (> 1 GHz)
 - Frequency Span: 0 Hz
 - Sweep mode: Single Sweep
 - Sweep Time: Suitable to capture one transmission burst. Additional measurements may be needed to identify the length of the transmission burst. In case of continuous signals, the Sweep Time shall be set to 30 ms
 - Sweep points: Sweeptime [μs] / 1 μs with a maximum of 30 000
 - Trigger: Video (burst signals) or Manual (continuous signals)
 - Detector: RMS
 - Trace Mode: Clear/Write
- Adjust the centre frequency (fine tune) to capture the highest level of one burst of the emission to be measured.

This fine tuning can be omitted for spectrum analysers capable of supporting twice this number of sweep points required in step 2 and step 3 from the pre-scan procedure in clause 5.4.5.2.1.1.

Step 2:

- Adjust the trigger level to select the transmissions with the highest power level.
- Set a window (start and stop lines) to match with the start and end of the burst and in which the RMS power shall be measured using the Time Domain Power function.

	If the spurious emission to be measured is a continuous signal, the measurement window shall be set to match the start and stop times of the sweep. - Select RMS power to be measured within the selected window and note the result which is the RMS power of this particular spurious emission. Compare this value with the applicable limit provided by clause 4.2.4.1.2, table 4. Repeat this procedure for every emission identified during the pre-scan. The values and corresponding frequencies shall be recorded. In case of conducted measurements on smart antenna systems (equipment with multiple transmit chains), the measurements shall be repeated for each of the active transmit chains. Comparison with the applicable limits shall be done using either of the options given below: - Option 1: the results for each of the transmit chains for the corresponding 1 MHz segments shall be added and compared with the limits provided by table 4 in clause 4.2.4.1.2. - Option 2: the results for each of the transmit chains shall be individually compared with the limits provided by table 4 in clause 4.2.4.1.2 after these limits have been reduced by $10 \times \log_{10}(Tch)$ (number of active transmit chains).
Test Setup:	
Operating Environment:	
Temperature:	25.2 °C
Humidity:	52.3 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.6.1 Test Data

Please Refer to Appendix for Details.

6.7 Receiver spurious emissions, conducted

Test Requirement:	Clause 4.2.5											
Test Method:	Clause 5.4.7.2.1											
Test Limit:	The spurious emissions of the receiver shall not exceed the limits given in table 5. In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz. Table 5: Spurious radiated emission limits <table><tr><td>Frequency range</td><td>Maximum power</td><td>Measurement bandwidth</td></tr><tr><td>30 MHz to 1 GHz</td><td>-57 dBm</td><td>100 kHz</td></tr><tr><td>1 GHz to 26 GHz</td><td>-47 dBm</td><td>1 MHz</td></tr></table>			Frequency range	Maximum power	Measurement bandwidth	30 MHz to 1 GHz	-57 dBm	100 kHz	1 GHz to 26 GHz	-47 dBm	1 MHz
Frequency range	Maximum power	Measurement bandwidth										
30 MHz to 1 GHz	-57 dBm	100 kHz										
1 GHz to 26 GHz	-47 dBm	1 MHz										
Procedure:	Pre-scan The test procedure below shall be used to identify potential receiver spurious emissions of the UUT. Step 1: · The sensitivity of the spectrum analyser should be such that the noise floor is at least 12 dB below the limits given in clause 4.2.5.2, table 5. Step 2: · The emissions shall be measured over the range 30 MHz to 1 000 MHz. · Spectrum analyser settings: - Resolution bandwidth: 100 kHz - Video bandwidth: 300 kHz - Detector mode: Peak - Trace Mode: Max Hold - Sweep Points: ≥ 9 700 For spectrum analysers not supporting this number of sweep points, the frequency band may be segmented. For spectrum analysers capable of supporting twice this number of sweep points, the frequency adjustment in clause 5.4.7.2.1.2 (step 1, last bullet) may be omitted. - Sweep time: Auto · Wait for the trace to stabilize. Any emissions identified that have a margin of less than 6 dB with respect to the limits given in clause 4.2.5.2, table 5, shall be individually measured using the procedure in clause 5.4.7.2.1.2 and compared to the limits given in clause 4.2.5.2, table 5. Step 3: · The emissions shall now be measured over the range 1 GHz to 26 GHz. · Spectrum analyser settings: - Resolution bandwidth: 1 MHz - Video bandwidth: 3 MHz - Detector mode: Peak - Trace mode: Max Hold - Sweep Points: ≥ 25 000 For spectrum analysers not supporting this high number of sweep points, the frequency band may need to be segmented. For spectrum analysers capable of supporting twice this number of sweep points, the frequency adjustment in clause 5.4.7.2.1.2 (step 1, last bullet) may be omitted. - Sweep time: Auto · Wait for the trace to stabilize. Any emissions identified that have a margin of less than 6 dB with respect to the limits given in clause 4.2.5.2, table 5, shall be individually measured using the procedure in clause 5.4.7.2.1.2 and compared to the limits given in clause 4.2.5.2, table 5. Measurement of the emissions identified during the pre-scan The limits for receiver spurious emissions in clause 4.2.5 refer to average power											

levels.

The steps below shall be used to accurately measure the individual unwanted emissions identified during the pre-scan measurements above. This method assumes the spectrum analyser has a Time Domain Power function.

Step 1:

· The level of the emissions shall be measured using the following spectrum analyser settings:

- Measurement Mode: Time Domain Power
- Centre Frequency: Frequency of the emission identified during the pre-scan
- Resolution Bandwidth: 100 kHz (emissions < 1 GHz) / 1 MHz (emissions > 1 GHz)
- Video Bandwidth: 300 kHz (emissions < 1 GHz) / 3 MHz (emissions > 1 GHz)
- Frequency Span: Zero Span
- Sweep mode: Single Sweep
- Sweep time: 30 ms
- Sweep points: $\geq 30\,000$
- Trigger: Video (for burst signals) or Manual (for continuous signals)
- Detector: RMS

· Adjust the centre frequency (fine tune) to capture the highest level of one burst of the emission to be measured.

This fine tuning can be omitted for spectrum analysers capable of supporting twice this number of sweep points required in step 2 and step 3 from the pre-scan procedure in clause 5.4.7.2.1.1.

Step 2:

· Set a window where the start and stop indicators match the start and end of the burst with the highest level and record the value of the power measured within this window.

· If the spurious emission to be measured is a continuous transmission, the measurement window shall be set to the start and stop times of the sweep.

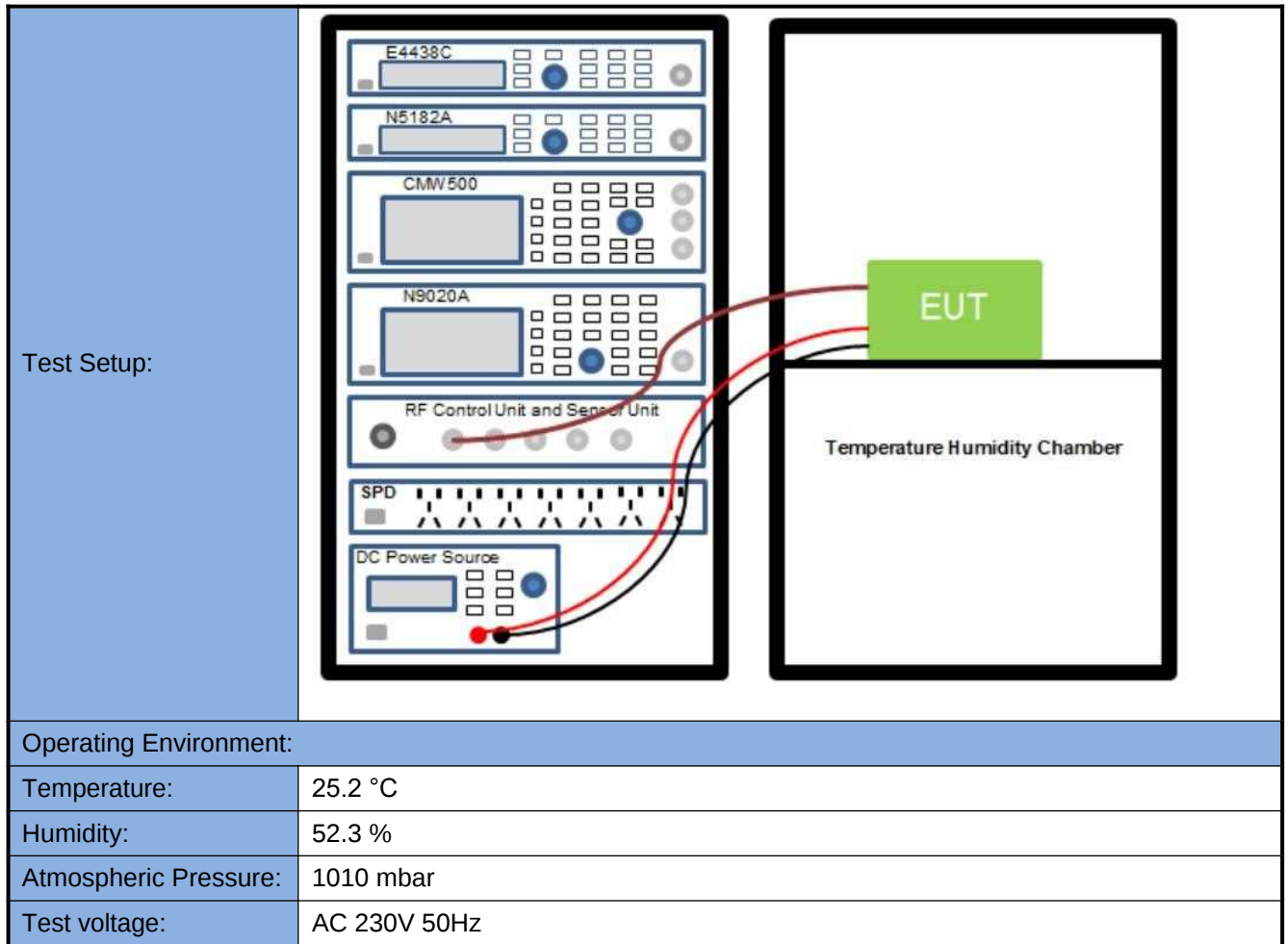
Step 3:

· In case of conducted measurements on smart antenna systems (equipment with multiple receive chains), step 2 shall be repeated for each of the active receive chains.

· Sum the measured power (within the observed window) for each of the active receive chains.

Step 4:

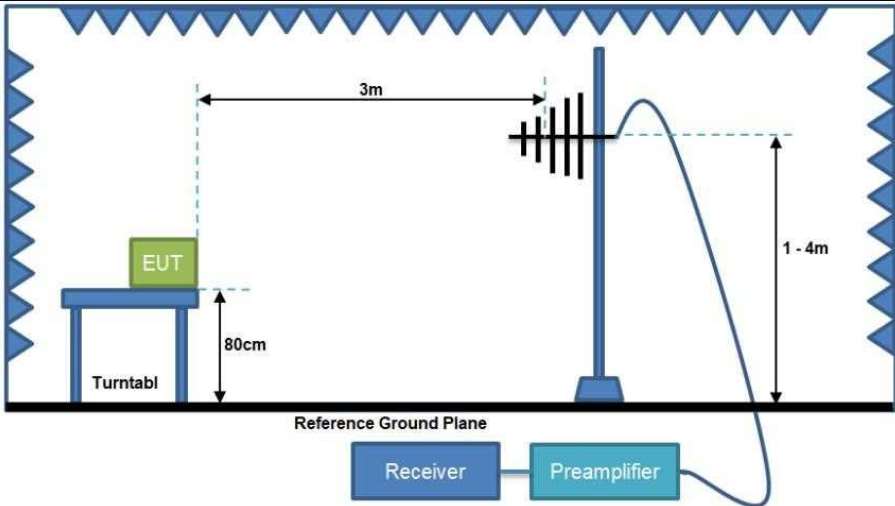
The value defined in step 3 shall be compared to the limits defined in clause 4.2.5.2, table 5.

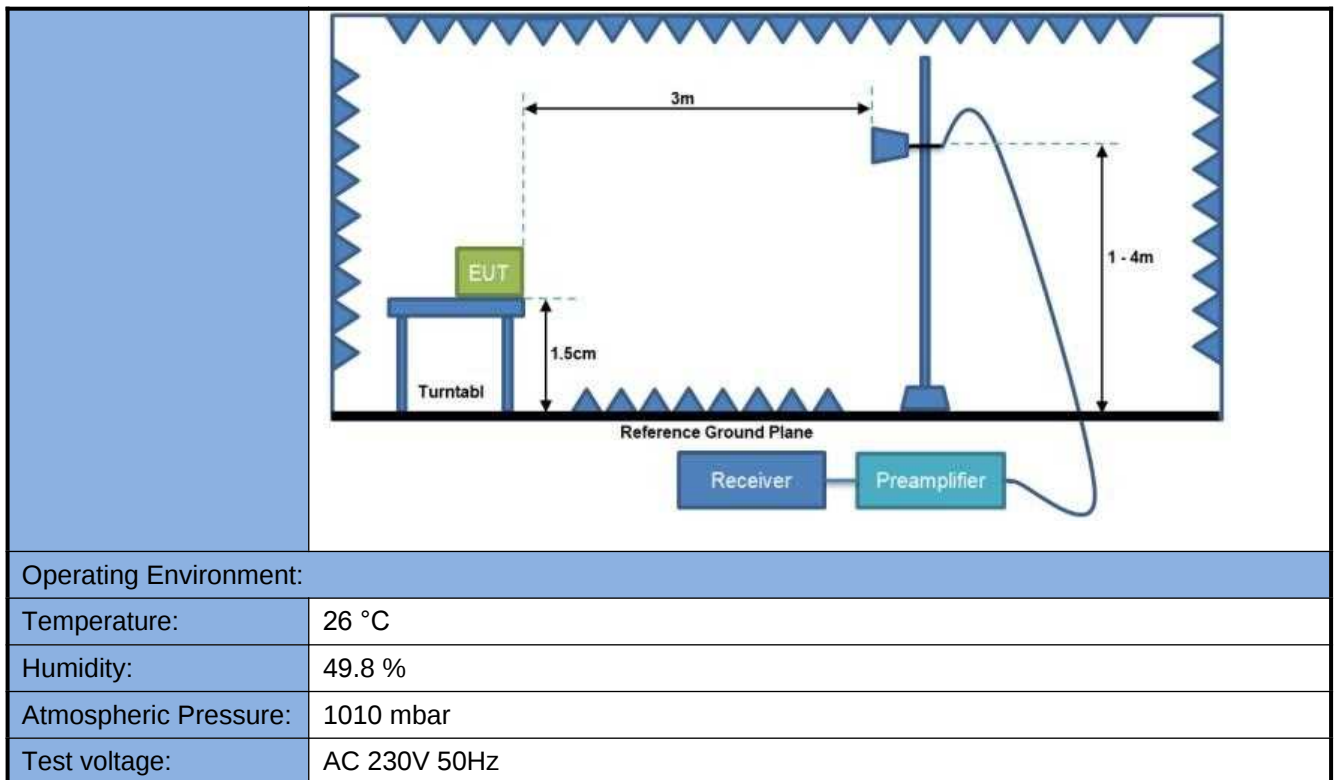


6.7.1 Test Data

Please Refer to Appendix for Details.

6.8 Transmitter unwanted emissions outside the 5 GHz RLAN bands (above 1GHz)

Test Requirement:	Clause 4.2.4.1																																							
Test Method:	Clause 5.4.5.2.2																																							
Test Limit:	The level of transmitter unwanted emissions outside the 5 GHz RLAN bands shall not exceed the limits given in table 4. In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz. Table 4: Transmitter unwanted emission limits outside the 5 GHz RLAN bands <table><tr><th>Frequency range</th><th>Maximum power</th><th>Bandwidth</th></tr><tr><td>30 MHz to 47 MHz</td><td>-36 dBm</td><td>100 kHz</td></tr><tr><td>47 MHz to 74 MHz</td><td>-54 dBm</td><td>100 kHz</td></tr><tr><td>74 MHz to 87,5 MHz</td><td>-36 dBm</td><td>100 kHz</td></tr><tr><td>87,5 MHz to 118 MHz</td><td>-54 dBm</td><td>100 kHz</td></tr><tr><td>118 MHz to 174 MHz</td><td>-36 dBm</td><td>100 kHz</td></tr><tr><td>174 MHz to 230 MHz</td><td>-54 dBm</td><td>100 kHz</td></tr><tr><td>230 MHz to 470 MHz</td><td>-36 dBm</td><td>100 kHz</td></tr><tr><td>470 MHz to 862 MHz</td><td>-54 dBm</td><td>100 kHz</td></tr><tr><td>862 MHz to 1 GHz</td><td>-36 dBm</td><td>100 kHz</td></tr><tr><td>1 GHz to 5,15 GHz</td><td>-30 dBm</td><td>1 MHz</td></tr><tr><td>5,35 GHz to 5,47 GHz</td><td>-30 dBm</td><td>1 MHz</td></tr><tr><td>5,725 GHz to 26 GHz</td><td>-30 dBm</td><td>1 MHz</td></tr></table>	Frequency range	Maximum power	Bandwidth	30 MHz to 47 MHz	-36 dBm	100 kHz	47 MHz to 74 MHz	-54 dBm	100 kHz	74 MHz to 87,5 MHz	-36 dBm	100 kHz	87,5 MHz to 118 MHz	-54 dBm	100 kHz	118 MHz to 174 MHz	-36 dBm	100 kHz	174 MHz to 230 MHz	-54 dBm	100 kHz	230 MHz to 470 MHz	-36 dBm	100 kHz	470 MHz to 862 MHz	-54 dBm	100 kHz	862 MHz to 1 GHz	-36 dBm	100 kHz	1 GHz to 5,15 GHz	-30 dBm	1 MHz	5,35 GHz to 5,47 GHz	-30 dBm	1 MHz	5,725 GHz to 26 GHz	-30 dBm	1 MHz
Frequency range	Maximum power	Bandwidth																																						
30 MHz to 47 MHz	-36 dBm	100 kHz																																						
47 MHz to 74 MHz	-54 dBm	100 kHz																																						
74 MHz to 87,5 MHz	-36 dBm	100 kHz																																						
87,5 MHz to 118 MHz	-54 dBm	100 kHz																																						
118 MHz to 174 MHz	-36 dBm	100 kHz																																						
174 MHz to 230 MHz	-54 dBm	100 kHz																																						
230 MHz to 470 MHz	-36 dBm	100 kHz																																						
470 MHz to 862 MHz	-54 dBm	100 kHz																																						
862 MHz to 1 GHz	-36 dBm	100 kHz																																						
1 GHz to 5,15 GHz	-30 dBm	1 MHz																																						
5,35 GHz to 5,47 GHz	-30 dBm	1 MHz																																						
5,725 GHz to 26 GHz	-30 dBm	1 MHz																																						
Procedure:	The test set up as described in annex B shall be used with a spectrum analyser attached to the test antenna. The test procedure is as described under clause 5.4.5.2.1.																																							
Test Setup:																																								



6.8.1 Test Data

Remark: The report only reflects the worst test data.

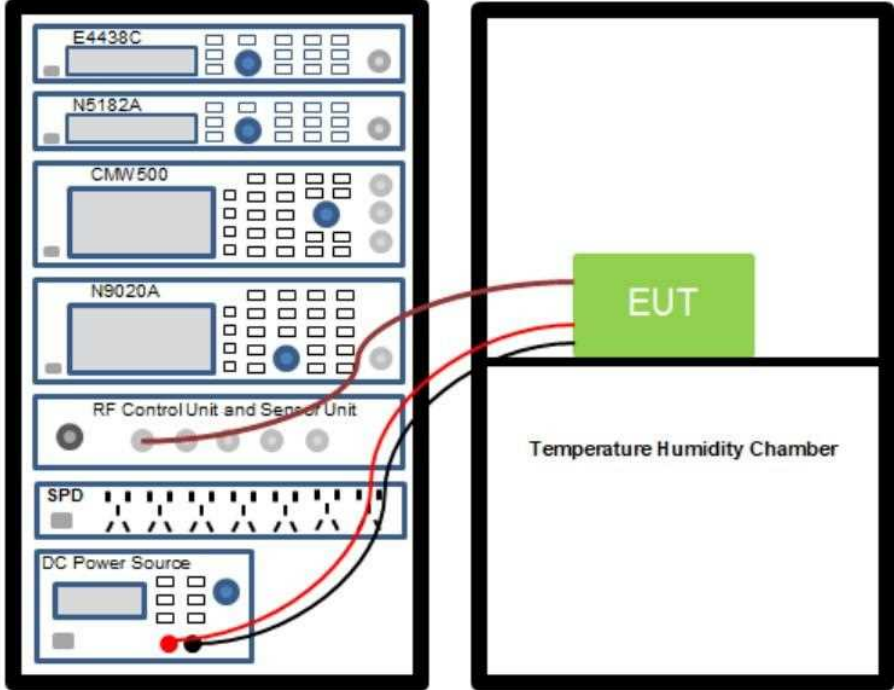
Warning: This report only reflects the worst test data.

Test Frequency Range: 5150MHz~5350MHz				
802.11a mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
533.39	Horizontal	-66.43	-54.00	PASS
880.13	Horizontal	-61.03	-36.00	
10360.00	Horizontal	-48.45	-30.00	
15540.00	Horizontal	-50.99	-30.00	
637.39	Vertical	-67.10	-54.00	
866.12	Vertical	-59.13	-36.00	
10360.00	Vertical	-47.99	-30.00	
15540.00	Vertical	-50.39	-30.00	
802.11n (HT20) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
502.94	Horizontal	-68.23	-54.00	PASS
849.68	Horizontal	-62.83	-36.00	
10360.00	Horizontal	-50.25	-30.00	
15540.00	Horizontal	-52.79	-30.00	
606.94	Vertical	-68.90	-54.00	
835.67	Vertical	-60.93	-36.00	
10360.00	Vertical	-49.79	-30.00	
15540.00	Vertical	-52.19	-30.00	
802.11n (HT40) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
553.73	Horizontal	-67.52	-54.00	PASS
900.47	Horizontal	-62.12	-36.00	
10380.00	Horizontal	-49.54	-30.00	
15570.00	Horizontal	-52.08	-30.00	
657.73	Vertical	-68.19	-54.00	
886.46	Vertical	-60.22	-36.00	
10380.00	Vertical	-49.08	-30.00	
15570.00	Vertical	-51.48	-30.00	

Test Frequency Range: 5150MHz~5350MHz				
802.11ac (VHT20) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
542.87	Horizontal	-68.80	-54.00	PASS
889.61	Horizontal	-63.40	-36.00	
10360.00	Horizontal	-50.82	-30.00	
15540.00	Horizontal	-53.36	-30.00	
646.87	Vertical	-69.47	-54.00	
875.60	Vertical	-61.50	-36.00	
10360.00	Vertical	-50.36	-30.00	
15540.00	Vertical	-52.76	-30.00	
802.11ac (VHT40) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
521.94	Horizontal	-66.38	-54.00	PASS
868.68	Horizontal	-60.98	-36.00	
10380.00	Horizontal	-48.40	-30.00	
15570.00	Horizontal	-50.94	-30.00	
625.94	Vertical	-67.05	-54.00	
854.67	Vertical	-59.08	-36.00	
10380.00	Vertical	-47.94	-30.00	
15570.00	Vertical	-50.34	-30.00	
802.11ac (VHT80) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
552.81	Horizontal	-66.82	-54.00	PASS
899.55	Horizontal	-61.42	-36.00	
10420.00	Horizontal	-48.84	-30.00	
15630.00	Horizontal	-51.38	-30.00	
656.81	Vertical	-67.49	-54.00	
885.54	Vertical	-59.52	-36.00	
10420.00	Vertical	-48.38	-30.00	
15630.00	Vertical	-50.78	-30.00	
802.11ac (VHT160) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
592.24	Horizontal	-67.33	-54.00	PASS
822.98	Horizontal	-61.93	-36.00	
10500.00	Horizontal	-49.35	-30.00	
15750.00	Horizontal	-51.89	-30.00	
580.24	Vertical	-68.00	-54.00	
808.97	Vertical	-60.03	-36.00	
10500.00	Vertical	-48.89	-30.00	
15750.00	Vertical	-51.29	-30.00	

6.9 Adaptivity (Channel Access Mechanism)

Test Requirement:	Clause 4.2.7.3.2																																																		
	Clause 4.2.7.3.3																																																		
Test Method:	Clause 5.4.9.3.2																																																		
Test Limit:	If a <i>Channel Occupancy</i> consists of more than one transmission the transmissions may be separated by gaps. The <i>Channel Occupancy Time</i> is the total duration of all transmissions and all gaps of 25 μs duration or less within a <i>Channel Occupancy</i> and shall not exceed the maximum <i>Channel Occupancy Time</i> in table 7 and table 8. The duration from the start of the first transmission within a <i>Channel Occupancy</i> until the end of the last transmission in that same <i>Channel Occupancy</i> shall not exceed 20 ms. The <i>Initiating Device</i> may have data to be transmitted in different <i>Priority Classes</i> and therefore the <i>Channel Access Mechanism</i> is allowed to operate different <i>Channel Access Engines</i> as described in clause 4.2.7.3.2.6 simultaneously (one for each implemented <i>Priority Class</i>). Table 7: Priority Class dependent Channel Access parameters for <i>Supervising Devices</i> <table><tr><th>Class #</th><th>p0</th><th>CWmin</th><th>CWmax</th><th>Maximum Channel Occupancy Time (COT)</th></tr><tr><td>4</td><td>1</td><td>3</td><td>7</td><td>2 ms</td></tr><tr><td>3</td><td>1</td><td>7</td><td>15</td><td>4 ms</td></tr><tr><td>2</td><td>3</td><td>15</td><td>63</td><td>6 ms (see note 1 and note 2)</td></tr><tr><td>1</td><td>7</td><td>15</td><td>1 023</td><td>6 ms (see note 1)</td></tr></table> NOTE 1: The maximum <i>Channel Occupancy Time</i> (COT) of 6 ms may be increased to 8 ms by inserting one or more pauses. The minimum duration of a pause shall be 100 μs. The maximum duration (Channel Occupancy)before including any such pause shall be 6 ms. Pause duration is not included in the channel occupancy time. NOTE 2: The maximum Channel Occupancy Time (COT) of 6 ms may be increased to 10 ms by extending CW to $CW \times 2 + 1$ when selecting the random number q for any backoff(s) that precede the Channel Occupancy that may exceed 6 ms or which follow the Channel Occupancy that exceeded 6 ms. The choice between preceding or following a Channel Occupancy shall remain unchanged during the operation time of the device. NOTE 3: The values for p0, CWmin, CWmaxare minimumvalues. Greater values are allowed. Table 8: Priority Class dependent Channel Access parameters for <i>Supervised Devices</i> <table><tr><th>Class #</th><th>p0</th><th>CWmin</th><th>CWmax</th><th>Maximum Channel Occupancy Time (COT)</th></tr><tr><td>4</td><td>2</td><td>3</td><td>7</td><td>2 ms</td></tr><tr><td>3</td><td>2</td><td>7</td><td>15</td><td>4 ms</td></tr><tr><td>2</td><td>3</td><td>15</td><td>1 023</td><td>6 ms (see note 1)</td></tr><tr><td>1</td><td>7</td><td>15</td><td>1 023</td><td>6 ms (see note 1)</td></tr></table> NOTE 1: The maximum <i>Channel Occupancy Time</i> (COT) of 6 ms may be increased to 8 ms by inserting one or more pauses. The minimum duration of a pause shall be 100 μs. The maximum duration (Channel Occupancy)before including any such pause shall be 6 ms. Pause duration is not included in the channel occupancy time.	Class #	p0	CWmin	CWmax	Maximum Channel Occupancy Time (COT)	4	1	3	7	2 ms	3	1	7	15	4 ms	2	3	15	63	6 ms (see note 1 and note 2)	1	7	15	1 023	6 ms (see note 1)	Class #	p0	CWmin	CWmax	Maximum Channel Occupancy Time (COT)	4	2	3	7	2 ms	3	2	7	15	4 ms	2	3	15	1 023	6 ms (see note 1)	1	7	15	1 023	6 ms (see note 1)
	Class #	p0	CWmin	CWmax	Maximum Channel Occupancy Time (COT)																																														
	4	1	3	7	2 ms																																														
	3	1	7	15	4 ms																																														
	2	3	15	63	6 ms (see note 1 and note 2)																																														
1	7	15	1 023	6 ms (see note 1)																																															
Class #	p0	CWmin	CWmax	Maximum Channel Occupancy Time (COT)																																															
4	2	3	7	2 ms																																															
3	2	7	15	4 ms																																															
2	3	15	1 023	6 ms (see note 1)																																															
1	7	15	1 023	6 ms (see note 1)																																															

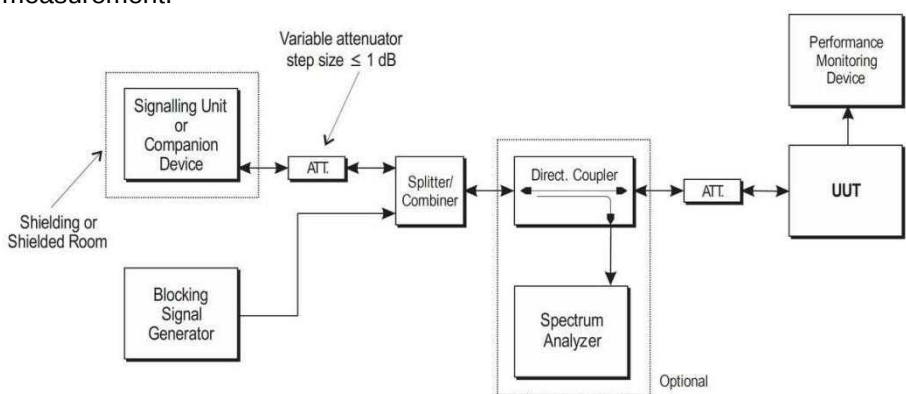
	NOTE 2: The values for p_0, CW_{min}, CW_{max} are minimum values. Greater values are allowed. The <i>ED Threshold Level (TL)</i> depends on the type of equipment: Option 1: For equipment that for its operation in the 5 GHz bands is conforming to IEEE 802.11™-2016 [9], clause 17, clause 19 or clause 21, or any combination of these clauses, the <i>ED Threshold Level (TL)</i> is independent of the equipment's maximum transmit power (P_H). Assuming a 0 dBi receive antenna the <i>ED Threshold Level (TL)</i> shall be: $TL = -75 \text{ dBm/MHz (2)}$ Option 2: For equipment conforming to one or more of the clauses listed in Option 1, and to at least one other operating mode, and for equipment conforming to none of the clauses listed in Option 1, the <i>ED Threshold Level (TL)</i> shall be proportional to the equipment's maximum transmit power (P_H). Assuming a 0 dBi receive antenna the <i>ED Threshold Level (TL)</i> shall be: For $P_H \leq 13 \text{ dBm}$: $TL = -75 \text{ dBm/MHz}$ For $13 \text{ dBm} < P_H < 23 \text{ dBm}$: $TL = -85 \text{ dBm/MHz} + (23 \text{ dBm} - P_H) (3)$ For $P_H \geq 23 \text{ dBm}$: $TL = -85 \text{ dBm/MHz}$ Equipment shall consider a channel to be occupied as long as other RLAN transmissions are detected at a level greater than the TL. The use of Short Control Signalling Transmissions is constrained as follows: · within an observation period of 50 ms, the number of <i>Short Control Signalling Transmissions</i> by the equipment shall be equal to or less than 50; and the total duration of the equipment's <i>Short Control Signalling Transmissions</i> shall be less than 2 500 μs within said observation period.
Procedure:	Clause 5.4.9.2.4 Clause 5.4.9.3.2
Test Setup:	 The diagram illustrates the test setup. On the left, a rack of test equipment includes a spectrum analyzer (E4438C), a signal generator (N5182A), a microwave power meter (CMW500), a network analyzer (N9020A), an RF control unit and sensor unit, a signal path device (SPD), and a DC power source. On the right, a Temperature Humidity Chamber (THC) contains the Equipment Under Test (EUT). Red and black cables connect the RF control unit and the DC power source to the EUT inside the chamber.
Operating Environment:	
Temperature:	25.2 °C
Humidity:	52.3 %

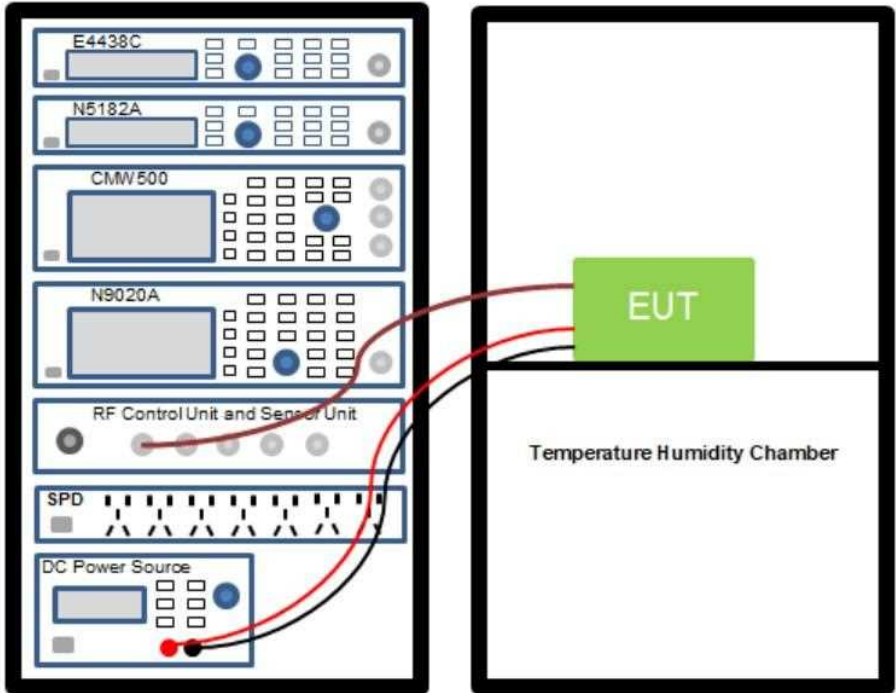
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.9.1 Test Data

Please Refer to Appendix for Details.

6.10 Receiver Blocking

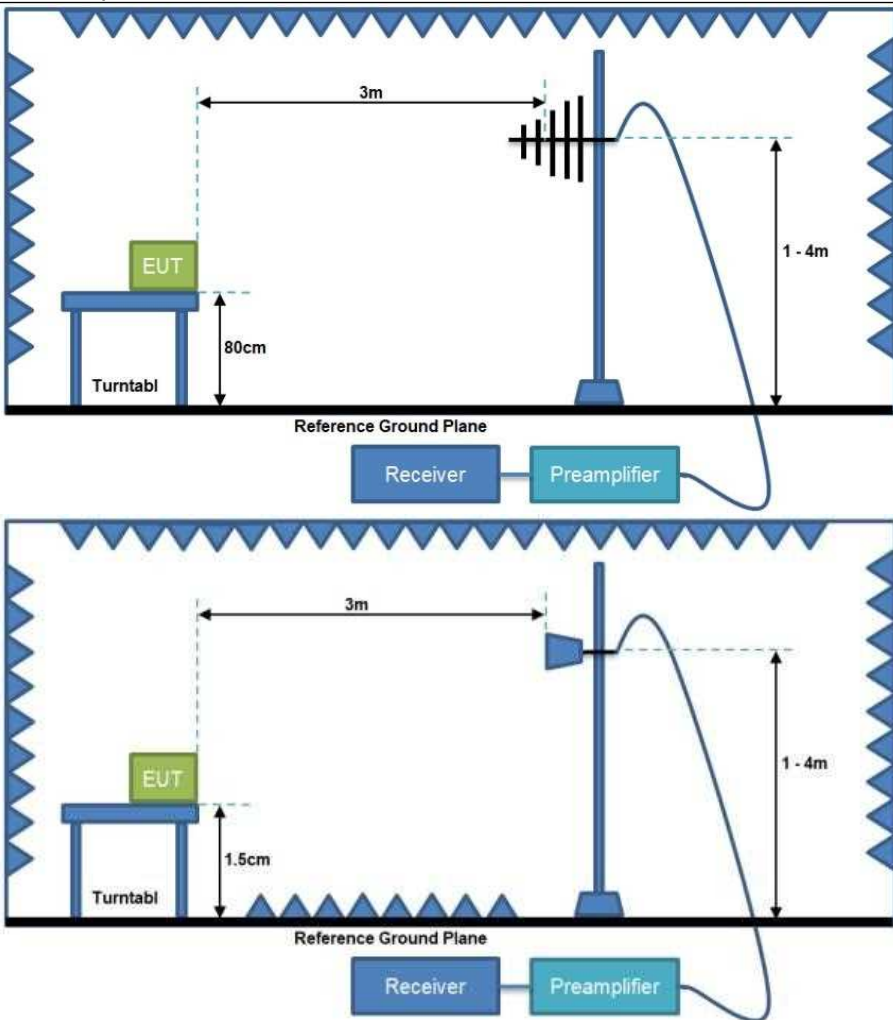
Test Requirement:	Clause 4.2.8																	
Test Method:	Clause 5.4.10.2.1																	
Test Limit:	While maintaining the minimum performance criteria as defined in clause 4.2.8.3, the blocking levels at specified frequency offsets shall be equal to or greater than the limits defined in table 9. Table 9: Receiver Blocking parameters <table><tr><th rowspan="2">Wanted signal mean power from companion device (dBm)</th><th rowspan="2">Blocking signal frequency (MHz)</th><th colspan="2">Blocking signal power (dBm) (see note 2)</th><th rowspan="2">Type of blocking signal</th></tr><tr><th>Master or Slave with radar detection (see table D.2, note 2)</th><th>Slave without radar detection (see table D.2, note 2)</th></tr><tr><td>P_{min} + 6 dB</td><td>5 100</td><td>-53</td><td>-59</td><td>Continuous Wave</td></tr><tr><td>P_{min} + 6 dB</td><td>4 900 5 000 5 975</td><td>-47</td><td>-53</td><td>Continuous Wave</td></tr></table> NOTE 1: P_{min} is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined clause 4.2.8.3 in the absence of any blocking signal. NOTE 2: The levels specified are levels in front of the UUT antenna. In case of conducted measurements, the same levels should be used at the antenna connector irrespective of antenna gain.	Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)		Type of blocking signal	Master or Slave with radar detection (see table D.2, note 2)	Slave without radar detection (see table D.2, note 2)	P _{min} + 6 dB	5 100	-53	-59	Continuous Wave	P _{min} + 6 dB	4 900 5 000 5 975	-47	-53	Continuous Wave
Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)			Blocking signal power (dBm) (see note 2)			Type of blocking signal											
		Master or Slave with radar detection (see table D.2, note 2)	Slave without radar detection (see table D.2, note 2)															
P _{min} + 6 dB	5 100	-53	-59	Continuous Wave														
P _{min} + 6 dB	4 900 5 000 5 975	-47	-53	Continuous Wave														
Procedure:	For systems using multiple receive chains only one chain need to be tested. All other receiver inputs shall be terminated. Figure 18 shows the test set-up which can be used for performing the receiver blocking test. The companion device may require appropriate shielding or may need to be put in a shielded room to prevent it may have a negative impact on the measurement.  Figure 18: Test Set-up for receiver blocking The steps below define the procedure to verify the receiver blocking requirement as described in clause 4.2.8. Step 1: · The UUT shall be set to the first operating frequency to be tested (see clause 5.3.2). Step 2: · The blocking signal generator is set to the first frequency as defined in table 9.																	

	Step 3: - With the blocking signal generator switched off a communication link is set up between the UUT and the associated companion device using the test setup shown in figure 18. The attenuation of the variable attenuator shall be increased in 1 dB steps to a value at which the minimum performance criteria as specified in clause 4.2.8.3 is still met. The resulting level for the wanted signal at the input of the UUT is P_{min}. - This signal level (P_{min}) is increased by 6 dB resulting in a new level ($P_{min} + 6$ dB) of the wanted signal at the UUT receiver input. Step 4: - The level of the blocking signal at the UUT input is set to the level provided in table 9. It shall be verified and recorded in the test report that the performance criteria as specified in clause 4.2.8.3 are met. - If the performance criteria as specified in clause 4.2.8.3 are met, the level of the blocking signal at the UUT may be further increased (e.g. in steps of 1 dB) until the level whereby the performance criteria as specified in clause 4.2.8.3 are no longer met. The highest level at which the performance criteria are met is recorded in the test report. Step 5: - Repeat step 4 for each remaining combination of frequency and level as specified in table 9. Step 6: Repeat step 2 to step 5 with the UUT operating at the other operating frequencies at which the blocking test has to be performed. See clause 5.3.2.
Test Setup:	
Operating Environment:	
Temperature:	25.2 °C
Humidity:	52.3 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.10.1 Test Data

Please Refer to Appendix for Details.

6.11 Receiver spurious emissions

Test Requirement:	Clause 4.2.5									
Test Method:	Clause 5.4.7.2.2									
Test Limit:	The spurious emissions of the receiver shall not exceed the limits given in table 5. In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz. Table 5: Spurious radiated emission limits <table><tr><td>Frequency range</td><td>Maximum power</td><td>Measurement bandwidth</td></tr><tr><td>30 MHz to 1 GHz</td><td>-57 dBm</td><td>100 kHz</td></tr><tr><td>1 GHz to 26 GHz</td><td>-47 dBm</td><td>1 MHz</td></tr></table>	Frequency range	Maximum power	Measurement bandwidth	30 MHz to 1 GHz	-57 dBm	100 kHz	1 GHz to 26 GHz	-47 dBm	1 MHz
Frequency range	Maximum power	Measurement bandwidth								
30 MHz to 1 GHz	-57 dBm	100 kHz								
1 GHz to 26 GHz	-47 dBm	1 MHz								
Procedure:	The test set up as described in annex B shall be used with a spectrum analyser attached to the test antenna. The test procedure is as described under clause 5.4.7.2.1.									
Test Setup:										
Operating Environment:										
Temperature:	26 °C									
Humidity:	49.8 %									

Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.11.1 Test Data

Remark: The report only reflects the worst test data.

Test Frequency Range: 5150MHz~5350MHz				
802.11a mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
341.65	Horizontal	-64.24	-57.00	Pass
831.69	Horizontal	-62.17	-57.00	
10360.00	Horizontal	-58.24	-47.00	
15540.00	Horizontal	-55.24	-47.00	
318.02	Vertical	-65.17	-57.00	
817.95	Vertical	-61.27	-57.00	
10360.00	Vertical	-59.24	-47.00	
15540.00	Vertical	-54.54	-47.00	
802.11n (HT20) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
303.23	Horizontal	-64.69	-57.00	Pass
793.27	Horizontal	-62.62	-57.00	
10360.00	Horizontal	-58.69	-47.00	
15540.00	Horizontal	-55.69	-47.00	
279.60	Vertical	-65.62	-57.00	
779.53	Vertical	-61.72	-57.00	
10360.00	Vertical	-59.69	-47.00	
15540.00	Vertical	-54.99	-47.00	
802.11n (HT40) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
320.78	Horizontal	-65.38	-57.00	Pass
810.82	Horizontal	-63.31	-57.00	
10380.00	Horizontal	-59.38	-47.00	
15570.00	Horizontal	-56.38	-47.00	
297.15	Vertical	-66.31	-57.00	
797.08	Vertical	-62.41	-57.00	
10380.00	Vertical	-60.38	-47.00	
15570.00	Vertical	-55.68	-47.00	

Test Frequency Range: 5150MHz~5350MHz			
802.11ac (VHT20) mode Lowest channel			
Frequency (MHz)	Spurious Emission	Limit (dBm)	Test Result

	Polarization	Level(dBm)		
295.63	Horizontal	-64.26	-57.00	Pass
785.67	Horizontal	-62.19	-57.00	
10360.00	Horizontal	-58.26	-47.00	
15540.00	Horizontal	-55.26	-47.00	
272.00	Vertical	-65.19	-57.00	
771.93	Vertical	-61.29	-57.00	
10360.00	Vertical	-59.26	-47.00	
15540.00	Vertical	-54.56	-47.00	
802.11ac (VHT40) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
363.47	Horizontal	-66.39	-57.00	Pass
853.51	Horizontal	-64.32	-57.00	
10380.00	Horizontal	-60.39	-47.00	
15570.00	Horizontal	-57.39	-47.00	
339.84	Vertical	-67.32	-57.00	
839.77	Vertical	-63.42	-57.00	
10380.00	Vertical	-61.39	-47.00	
15570.00	Vertical	-56.69	-47.00	
802.11ac (VHT80) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
275.30	Horizontal	-64.26	-57.00	Pass
765.34	Horizontal	-62.19	-57.00	
10420.00	Horizontal	-58.26	-47.00	
15630.00	Horizontal	-55.26	-47.00	
251.67	Vertical	-65.19	-57.00	
751.60	Vertical	-61.29	-57.00	
10420.00	Vertical	-59.26	-47.00	
15630.00	Vertical	-54.56	-47.00	
802.11ac (VHT160) mode Lowest channel				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	Polarization	Level(dBm)		
77.68	Horizontal	-69.25	-57.00	Pass
218.68	Horizontal	-70.25	-57.00	
10500.00	Horizontal	-64.25	-47.00	
15750.00	Horizontal	-61.25	-47.00	
236.98	Vertical	-66.28	-57.00	
377.98	Vertical	-67.28	-57.00	
10500.00	Vertical	-65.25	-47.00	

15750.00	Vertical	-60.55	-47.00	
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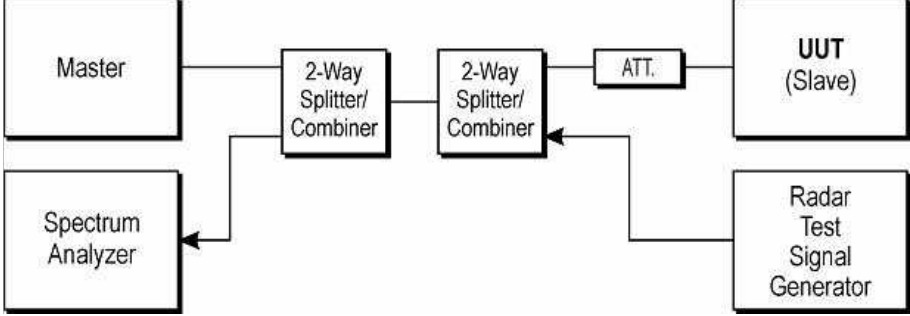
6.12 DFS - Channel Shutdown

Test Requirement:	Clause 4.2.6.2.5																			
Test Method:	Clause 5.4.8.2.1.6																			
Test Limit:	The <i>In-Service Monitoring</i> shall be used to monitor each <i>Operating Channel</i> . The <i>In-Service-Monitoring</i> shall start immediately after the RLAN device has started transmissions on a channel. During the <i>In-Service Monitoring</i> , the RLAN device shall be capable of detecting any of the radar test signals that fall within the ranges given by table D.4 with a level above the <i>Radar Detection Threshold Level</i> defined in table D.2. The RLAN device shall comply with the minimum detection probability associated with a given radar test signal as defined in table D.5.																			
	Table D.1: DFS requirement values																			
	<table><tr><td>Parameter</td><td>Value</td></tr><tr><td>Channel Availability Check Time</td><td>60 s (see note 1)</td></tr><tr><td>Minimum Off-Channel CAC Time</td><td>6 minutes (see note 2)</td></tr><tr><td>Maximum Off-Channel CAC Time</td><td>4 hours (see note 2)</td></tr><tr><td>Channel Move Time</td><td>10 s</td></tr><tr><td>Channel Closing Transmission Time</td><td>1 s</td></tr><tr><td>Non-Occupancy Period</td><td>30 minutes</td></tr></table>						Parameter	Value	Channel Availability Check Time	60 s (see note 1)	Minimum Off-Channel CAC Time	6 minutes (see note 2)	Maximum Off-Channel CAC Time	4 hours (see note 2)	Channel Move Time	10 s	Channel Closing Transmission Time	1 s	Non-Occupancy Period	30 minutes
	Parameter	Value																		
	Channel Availability Check Time	60 s (see note 1)																		
	Minimum Off-Channel CAC Time	6 minutes (see note 2)																		
	Maximum Off-Channel CAC Time	4 hours (see note 2)																		
	Channel Move Time	10 s																		
	Channel Closing Transmission Time	1 s																		
	Non-Occupancy Period	30 minutes																		
NOTE 1: For channels whose nominal bandwidth falls completely or partly within the band 5 600 MHz to 5 650 MHz, the <i>Channel Availability Check Time</i> shall be 10 minutes. NOTE 2: For channels whose nominal bandwidth falls completely or partly within the band 5 600 MHz to 5 650 MHz, the <i>Off-Channel CAC Time</i> shall be within the range 1 hour to 24 hours.																				
Table D.2: Radar Detection Threshold Levels																				
<table><tr><td>e.i.r.p. Spectral Density (dBm/MHz)</td><td>Value (see note 1 and note 2)</td></tr><tr><td>10</td><td>-62 dBm</td></tr></table>						e.i.r.p. Spectral Density (dBm/MHz)	Value (see note 1 and note 2)	10	-62 dBm											
e.i.r.p. Spectral Density (dBm/MHz)	Value (see note 1 and note 2)																			
10	-62 dBm																			
NOTE 1: This is the level at the input of the receiver of an RLAN device with a maximum e.i.r.p. density of 10 dBm/MHz and assuming a 0 dBi receive antenna. For devices employing different e.i.r.p. spectral density and/or a different receive antenna gain G (dBi) the Radar Detection Threshold Level at the receiver input follows the following relationship: DFS Detection Threshold (dBm) = -62 + 10 - e.i.r.p. Spectral Density (dBm/MHz) + G (dBi); however the Radar Detection Threshold Level shall not be less than -64 dBm assuming a 0 dBi receive antenna gain. NOTE 2: Slave devices with a maximum e.i.r.p. of less than 23 dBm do not have to implement radar detection unless these devices are used in fixed outdoor point to point or fixed outdoor point to multipoint applications (see clause 4.2.6.1.3).																				
Table D.3: Parameters of the reference DFS test signal																				
<table><tr><td>Pulse width W (µs)</td><td colspan="2">Pulse repetition frequency PRF (PPS)</td><td colspan="2">Pulses per burst (PPB)</td></tr><tr><td>1</td><td colspan="2">700</td><td colspan="2">18</td></tr></table>						Pulse width W (µs)	Pulse repetition frequency PRF (PPS)		Pulses per burst (PPB)		1	700		18						
Pulse width W (µs)	Pulse repetition frequency PRF (PPS)		Pulses per burst (PPB)																	
1	700		18																	
Table D.4: Parameters of radar test signals																				
<table><tr><td rowspan="2">Radar test signal # (see note 1 to note 1)</td><td colspan="2">Pulse width W (µs)</td><td colspan="2">Pulse repetition frequency PRF (PPS)</td><td rowspan="2">Number of different PRFs</td><td rowspan="2">Pulses per burst for each PRF (PPB) (see note 5)</td></tr><tr><td>Min</td><td>Max</td><td>Min</td><td>Max</td></tr></table>						Radar test signal # (see note 1 to note 1)	Pulse width W (µs)		Pulse repetition frequency PRF (PPS)		Number of different PRFs	Pulses per burst for each PRF (PPB) (see note 5)	Min	Max	Min	Max				
Radar test signal # (see note 1 to note 1)	Pulse width W (µs)		Pulse repetition frequency PRF (PPS)		Number of different PRFs		Pulses per burst for each PRF (PPB) (see note 5)													
	Min	Max	Min	Max																

	3)						
	1	0,5	5	200	1 000	1	10 (see note 6)
	2	0,5	15	200	1 600	1	15 (see note 6)
	3	0,5	15	2 300	4 000	1	25
	4	20	30	2 000	4 000	1	20
	5	0,5	2	300	400	2/3	10 (see note 6)
	6	0,5	2	400	1 200	2/3	15 (see note 6)
	NOTE 1: Radar test signals #1 to #4 are constant PRF based signals. See figure D.1. These radar test signals are intended to simulate also radars using a packet based Staggered PRF. See figure D.2. NOTE 2: Radar test signal #4 is a modulated radar test signal. The modulation to be used is a chirp modulation with a ±2,5 MHz frequency deviation which is described below. NOTE 3: Radar test signals #5 and #6 are single pulse based Staggered PRF radar test signals using 2 or 3 different PRF values. For radar test signal #5, the difference between the PRF values chosen shall be between 20 PPS and 50 PPS. For radar test signal #6, the difference between the PRF values chosen shall be between 80 PPS and 400 PPS. See figure D.3. NOTE 4: Apart for the Off-Channel CAC testing, the radar test signals above shall only contain a single burst of pulses. See figure D.1, figure D.3 and figure D.4. For the Off-Channel CAC testing, repetitive bursts shall be used for the total duration of the test. See figure D.2 and figure D.5. See also clause 4.2.6.2.3, clause 5.4.8.2.1.4.2 and clause 5.4.8.2.1.4.3. NOTE 5: The total number of pulses in a burst is equal to the number of pulses for a single PRF multiplied by the number of different PRFs used. NOTE 6: For the CAC and Off-Channel CAC requirements, the minimum number of pulses (for each PRF) for any of the radar test signals to be detected in the band 5 600 MHz to 5 650 MHz shall be 18.						
	Table D.5: Detection probability						

Parameter	Detection Probability (Pd)	
	Channels whose nominal bandwidth falls partly or completely within the 5 600 MHz to 5 650 MHz band	Other channels
CAC, Off-Channel CAC	99,99 %	60 %
In-Service Monitoring	60 %	60 %
NOTE: Pd gives the probability of detection per simulated radar burst and represents a minimum level of detection performance under defined conditions. Therefore Pd does not represent the overall detection probability for any particular radar under real life conditions.		

Procedure:	Clause 5.4.8.2.1.6
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Test Setup:	
Operating Environment:	
Temperature:	25.2 °C
Humidity:	52.3 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 230V 50Hz

6.12.1 Test Data

Please Refer to Appendix for Details.

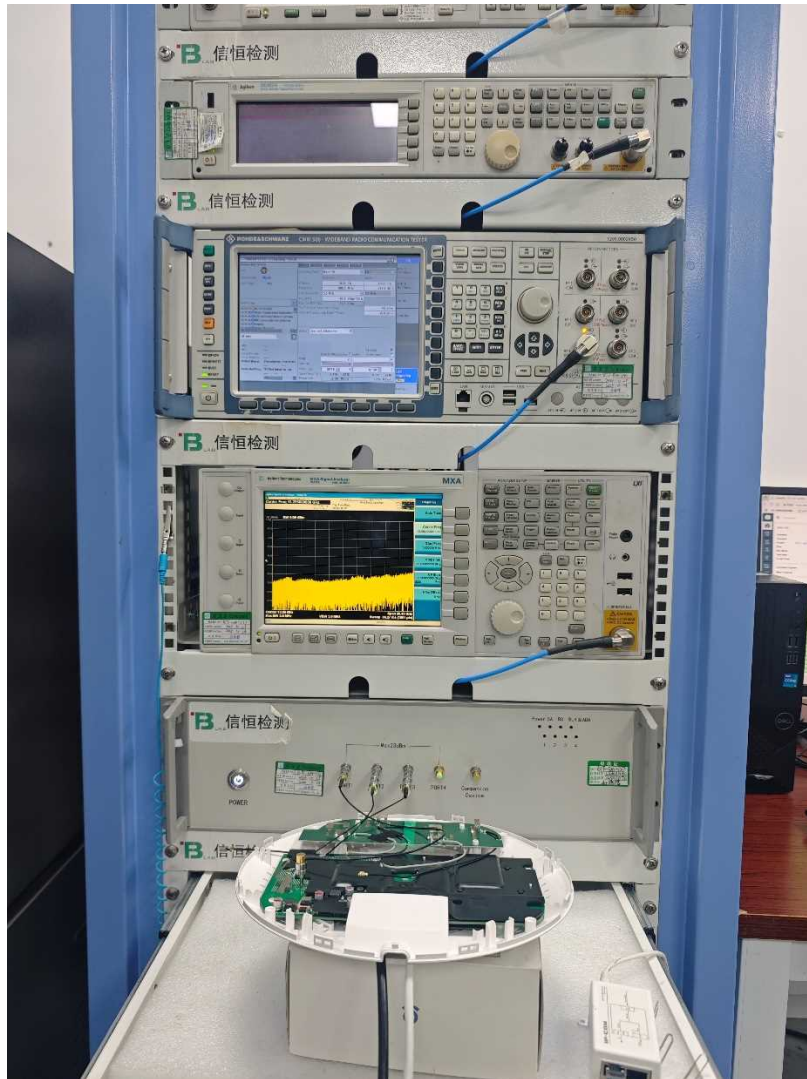
7 Test Setup Photos

Transmitter unwanted emissions outside the 5 GHz RLAN bands (30MHz to 1GHz)
Receiver spurious emissions (30MHz to 1GHz)



Transmitter unwanted emissions outside the 5 GHz RLAN bands (above 1GHz)
Receiver spurious emissions (above 1GHz)



DFS Test

8 EUT Constructional Details (EUT Photos)

Please refer to BTF250603R01101.



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-- END OF REPORT --