



Prüfbericht-Nr.: <i>Test report no.:</i>	DE25BSOX 001	Auftrags-Nr.: <i>Order no.:</i>	1205949 30	Seite 1 von 30 Page 1 of 30
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	-	Auftragsdatum: <i>Order date:</i>	2025-12-04	
Auftraggeber: <i>Client:</i>	HERMES SELLIER SAS, 24 rue du Faubourg Saint-Honore, 75008 Paris, France			
Prüfgegenstand: <i>Test item:</i>	Hermès Baladeur Bluetooth Speaker			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	HERMES BALADEUR DVT-A-05			
Auftrags-Inhalt: <i>Order content:</i>	Prüfung der Funkparameter nach FCC & ISCED <i>Test of radio parameters acc. to FCC & ISCED</i>			
Prüfgrundlage: <i>Test specification:</i>	Teilprüfung / Partial test FCC CFR 47 Part 15 Subpart C- §15.247 ISCED RSS-247 Issue 4 July 2025			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2025-11-25 2025-12-01	For reasons of confidentiality, no photos of the EUT are included in this report. For EUT and test setup photos please see the Photo Documentation to this report Number.		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A004147517-005 (EUT)			
Prüfzeitraum: <i>Testing period:</i>	2025-12-05 - 2025-12-12			
Ort der Prüfung: <i>Place of testing:</i>	Nürnberg Nuremberg			
Prüflaboratorium: <i>Testing laboratory:</i>	Wireless Labor Wireless Test Lab			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	 X	4/29/2026	genehmigt von: <i>authorized by:</i>	 X
Datum: <i>Date:</i>	Signed by: Shrivas Naikar		Ausstellungsdatum: <i>Issue date:</i>	Signiert von: Matthias Kraeutlein
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	USA/FCC: Change in ID and C2PC filing for host product. Host product is integrated with FCC ID: 2AZI9-BALADEUR & IC: 27146-BALADEUR certified radio module.			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 2 von 30
Page 2 of 30

Anmerkungen Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
2	Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: go.tuv.com/digital-signature <i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: go.tuv.com/digital-signature</i>
3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>
5	Wenn auf dem Bericht kein Akkreditierungshinweis aufgebracht ist, wurde der Bericht nicht im akkreditierten Bereich erstellt und ist folglich auch nicht vom EA MLA abgedeckt. Unabhängig davon wurde der Bericht auf Basis der allgemeinen Regeln der ISO/IEC 17000er Reihe erstellt. Mit "#" gekennzeichnete Prüfungen sind nicht Bestandteil der Akkreditierung D-PL-14169-03-00. <i>If there is no accreditation notice on the report, the report has not been produced in the accredited area and is consequently not covered by the EA MLA. Regardless of this, the report has been prepared based on the general rules of the ISO/IEC 17000 series. Tests marked with "#" are not covered by the accreditation D-PL-14169-03-00.</i>

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 3 von 30
Page 3 of 30

Produktbeschreibung
Product description

1	Test item	Hermès Baladeur Bluetooth Speaker
2	Typ-No.	HERMES BALADEUR DVT-A-05
3	Identical Types	HERMÈS BALADEUR CABAN HERMÈS BALADEUR JAUNE MILTON HERMÈS BALADEUR VERT PEPPERMINT HERMÈS BALADEUR NATUREL POP HERMÈS BALADEUR ORANGE PRESSÉE
4	Manufacturer designation trade mark	HERMÈS BALADEUR
5	Test sample obtaining	☒ Sampling by customer ☐ Sampling by TÜV Rheinland Group ☐ others:
6	Provided Samples	A004147517-005 (EUT) A004152484-001 (Laptop)
7	Radiated measurements sample	A004147517-005
8	Serial-No.	-
9	Supported radio technologies evaluated in this report	Bluetooth BR+EDR
10	Supported radio technologies not evaluated in this report	BLE 5.0
11	Description of EUT	Bluetooth Speaker with BR+EDR & LE
12	Max RF output power (measured)	8.77dBm
13	Operating Frequency (declared)	BT: 2402 - 2480 MHz
14	Channel Bandwidth (declared)	BT:1MHz
15	Number of Channels (declared)	BT: 79
16	Modulation	BT: GFSK, DPSK, 8DPSK
17	Rated Voltage / Frequency	5V DC USB/Battery Powered
18	Radio Module Name	IDC7 Bluetooth Module
19	FCC-ID of the product	2AZI9-BALADEUR
20	IC-ID of the product	27146-BALADEUR
21	HVIN	DVT-B14
22	FVIN	EVT-R3.10
23	FCC-ID (Radio module)	2A3WYIDC777 (original) / 2AZI9-BALADEUR (change in ID)
24	IC (Radio module)	30237-IDC777 (original) / 27146-BALADEUR (change in ID)
25	Radio Module / Antenna Type	☒ Radio module with antenna on module PCB ☐ Radio module with dedicated antenna ☐ Radio module with user accessible antenna connector
26	Radio Module Certification	Report Nr.: KSCR240100007202 ☒ Certified radio module ☐ Certified radio module with given antenna
27	Antenna Name	QCC-3083
28	Antenna Type	☒ Integral antenna (designed as a fixed part of the EUT) ☐ Dedicated antenna (removable, obligation to be used) ☐ Permanent antenna connector
29	Antenna number of chains	1
30	Antenna Gain (declared)	0 dBi
31	Software / Firmware	MCU : EVTE-R3.3-debug, IDC : AA3234D, DSP : 1.23e
32	Hardware	EAMAIN B13 & EAMEDIA B10
33	Companion Device used for radio connection with the EUT	EUT in Test Mode. Therefore, no Companion Device was used.
34	Auxiliary equipment used to set up the EUT	Customer laptop was used to configure the radio

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 4 von 30
Page 4 of 30

Produktbeschreibung
Product description

35	Data Cable	USB Cable
36	I/O Ports	USB-C
37	Dimensions	11.5 x 8.2 x 4.3 cm
38	Weight	425g
39	Temperature Range	0°C - 55°C
40	Environment	Indoor and Outdoor

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 5 von 30
Page 5 of 30

Absatz Clause	Anforderungen - Prüfungen / Requirements - Tests	Bemerkungen/ Remarks	Ergebnis Result
FCC §15.203 ISED RSS-Gen sec. 6.8	Antenna Requirement		P ☐ F ☐ N/A ☐ N/T ☒
FCC §15.247 (a)(1) ISED RSS-247 sec. 6.2.2.1 a ISED RSS-247 sec. 6.2.3.1 a ISED RSS-247 sec. 6.2.4.1 a	20Bandwidth	For FHS in the 2400-2483.5 MHz band, the 20 dB Bandwidth is only to be measured but no limits apply.	P ☐ F ☐ N/A ☐ N/T ☒
FCC §15.247 (a)(2) ISED RSS-247 sec. 6.3.1 a	6dB Bandwidth	Does not apply for FHSS equipment	
RSS-Gen sec. 6.7	Occupied bandwidth 99%	only to be measured; no limits apply.	
FCC §15.247 (a)(1) ISED RSS-247 sec. 6.2.2.1.b, c	Number of Hopping Frequencies	-	P ☐ F ☐ N/A ☐ N/T ☒
FCC §15.247 (a)(1) ISED RSS-247 sec. 6.2.2.1 b, c	Time of Occupancy	-	P ☐ F ☐ N/A ☐ N/T ☒
FCC §15.247 (a)(1) ISED RSS-247 sec. 6.2.3.1	Carrier Frequency Separation	-	P ☐ F ☐ N/A ☐ N/T ☒
FCC §15.247 (b) ISED RSS-247 sec. 6.2.2.2 ISED RSS-247 sec. 6.2.3.2 ISED RSS-247 sec. 6.2.4.2 ISED RSS-247 sec. 6.3.2	Maximum Output Power	No retest necessary, as transmitter output power has been certified based on conducted power.	P ☒ F ☐ N/A ☐ N/T ☐
FCC §15.247 (e) ISED RSS-247 sec. 6.3.1 b	Power Spectral Density	Does not apply for FHSS equipment	P ☐ F ☐ N/A ☒ N/T ☐
FCC §15.247 (d) ISED RSS-247 sec. 6.6	Unwanted Emissions	-	P ☒ F ☐ N/A ☐ N/T ☐
FCC §15.207 ISED RSS-Gen sec. 8.8	AC Power Conducted Emissions	-	P ☒ F ☐ N/A ☐ N/T ☐

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 6 von 30
Page 6 of 30

Prüfdokumentation
Test documentation

Contents

1	Registration	7
2	EUT Classification	7
2.1	Wireless technologies and frequencies supported by the EUT	7
2.2	Standard specific classification of the EUT	7
2.3	Type of equipment	7
3	Test conditions and configurations	8
3.1	Normal environmental test conditions	8
3.2	Equipment modifications	8
3.3	Antenna assemblies	8
3.4	Test Modes	8
3.5	Measurement Uncertainty	9
4	Test results in detail	10
4.1	Maximum Output Power	10
4.2	Unwanted emissions	14
4.3	AC Power Conducted Emission	23
5	Test Setup Photo	27
6	Application form	28
7	Equipment List	29
7.1	Hardware	29
7.2	Software	29
8	Change history	30

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 7 von 30
Page 7 of 30

Prüfdokumentation
Test documentation

1 Registration

The measurement facilities for conducted and radiated disturbance measurements of the TÜV Rheinland LGA Products have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules. Measurement data will be accepted in conjunction with applications for Certification under Parts 15 and 18 of the Commission's Rules.

FCC Registration Number: 939976

Bundesnetzagentur Registration Number: BNetzA-CAB-17/21-16

The measurement facilities are also recognized by Innovation, Science and Economic Development (ISED) Canada to test to Canadian radio equipment requirements.

Company Number: 11235A

CAB Identifier: DE0018

2 EUT Classification

2.1 Wireless technologies and frequencies supported by the EUT.

The named technologies are only those falling in the specification of the applied standard.

Technology	Frequency Range (TX)	TX Function	Supported by the EUT	Evaluated in this report
SRD 900 MHz	902 - 928 MHz	SISO	☐	☐
802.11b	2400 – 2483.5 MHz	SISO	☐	☐
802.11g	2400 – 2483.5 MHz	SISO	☐	☐
802.11n (20MHz)	2400 – 2483.5 MHz	SISO	☐	☐
802.11n (40MHz)	2400 – 2483.5 MHz	SISO	☐	☐
Bluetooth BR + EDR	2400 – 2483.5 MHz	SISO	☒	☒
BLE 5.0	2400 – 2483.5 MHz	SISO	☒	☐
Non-specific SRD	2400 – 2483.5 MHz	SISO	☐	☐

SISO: Single Input Single Output

2.2 Standard specific classification of the EUT

2.2.1 Test Methods and Guidance Documents

Procedures for Compliance Testing of Unlicensed Wireless Devices

ANSI C63.10-2013

ANSI C63.10-2020 + Corrigendum 1-2023 + Amendment 1-2024

FCC KDB 558074:04/19 D01 DTS Measurement Guidance v05r02 (ISED accepted alternate)

ISED RSS-Gen:04/2018 Issue 5 Amendment 2 (Feb 2021)

2.2.2 System Type

FHSS (Frequency Hopping Spread Spectrum)

2.3 Type of equipment

Hand held Equipment

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 8 von 30
Page 8 of 30

Prüfdokumentation
Test documentation

3 Test conditions and configurations

3.1 Normal environmental test conditions

Environmental condition	Parameter	Range during test
Temperature	°C	21-24
Relative humidity	%	20-60
Supply voltage	V	5V DC USB/Battery Powered

3.2 Equipment modifications

No modifications were found to be necessary to perform the tests or to achieve compliance.

3.3 Antenna assemblies

No antenna connector is prepared so tests were done in radiated mode.

3.4 Test Modes

3.4.1 Worst Case Configuration for integration tests

The EUT was tested in its worst-case configuration as stated in the test report of the radio module IDC7 Bluetooth Module

Test Report Reference: KSCR240100007202
FCC-ID: 2A3WYIDC777
IC: 30237-IDC777

Following configurations were used for the test cases:

Test case	Worst case Configuration
Maximum Output Power	2402MHz and 2480MHz
Radiated Spurious Emissions < 30 MHz	2480MHz
Radiated Spurious Emissions 30 MHz – 1 GHz	2480MHz
Radiated Spurious Emissions > 1 GHz	2480MHz

3.4.2 Test Modes Setup

Mode description	Mode configuration
All Modes	The auxiliary equipment was connected to the EUT during the test. For radiated measurement the auxiliary equipment was placed outside the chamber and the connection was grounded and filtered at the point of feed-trough.
Mode 1: TX-Mode	Power: Bluetooth Continues transmission was enabled on Low and high Channel with data rate 1Mbps and power level was set to 11 in the Bluetooth test tool provided by the customer. Tx Spurious: Bluetooth Continues transmission was enabled high Channel with data rate 1Mbps and power level was set to 11 in the Bluetooth test tool provided by the customer.
Mode 2: TX-Mode	Normal Operating Mode
Mode 3: N/A	
Mode 4: N/A	

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 9 von 30
Page 9 of 30

Prüfdokumentation
Test documentation

3.5 Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to ETSI TR 100 028-1/-2 and ETSI TS 103 051 (radiated measurements) and is documented in the quality system acc. to ISO/IEC 17025:2017.

Furthermore, component and process variability of devices similar to that tested may result in additional deviation.

The stated values are the expanded uncertainty values, the measured value lies within the assigned range of values with a probability of 95% ($k = 1.96$).

The manufacturer has the sole responsibility of continued compliance of the device.

Test	Value	Unit	Range
Frequency Error	2.7 *10 ⁻⁸	Hz	-
Frequency Stability under low voltage conditions			
Time	1.1*10 ⁻⁹	s	-
Conducted Carrier Power Conducted Spurious Emissions (RX/TX)	1.0	dB	9k-1GHz
	1.7	dB	1GHz-6GHz
	2.8	dB	6GHz-40GHz
Occupied Bandwidth (OBW)	0.1	%	-
TX Power Spectral Density	4.2	mW	9kHz - 6GHz
	1.6	dB	9kHz - 6GHz
Dwell Time	4.6 *10 ⁻⁷	Hz	-
Frequency Separation			-
Measurement of conducted emissions at the power supply connection to LISN	2.3	dB	9kHz – 150kHz
	2.2	dB	150kHz – 30MHz
Measurement of the field strength at distance 3m	1.6	dB	9k-150kHz
	4.5	dB	30-1000MHz
	5	dB	1-6GHz
	5.3	dB	6-40GHz
Temperature	0.8	K	-
Humidity	4	%	-
Voltage (AC/DC)	1.0	%	-

Measured value	Limit	Extended measurement uncertainty ($k=1.96$)	Confidence interval (95%)
19 dBm @ 2.48GHz	20 dBm	1.7 dB	17.3 dBm – 20.7 dBm

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 10 von 30
Page 10 of 30

Prüfdokumentation
Test documentation

4 Test results in detail

4.1 Maximum Output Power

4.1.1 Requirements / Limits (Antenna Gain < 6dBi; no Fixed point-to point System)

	Condition			Limit
☐	FHS	902-928 MHz band	Employing less than 50 hopping channels	FCC Part 15, Subpart C, §15.247 (b) (2); ISED RSS-247 sec. 6.2.2.2 b Peak conducted output power: 24 dBm = 0.25W
			Employing at least 50 hopping channels	FCC Part 15, Subpart C, §15.247 (b) (2); ISED RSS-247 sec. 6.2.2.2 a Peak conducted output power: 30 dBm = 1W
☒	FHS	2400-2483.5 MHz band	Employing less than 75 non-overlapping hopping channels	FCC Part 15, Subpart C, §15.247 (b) (1); ISED RSS-247 sec. 6.2.3.2 b Peak conducted output power: 21 dBm = 0.125W
			Employing at least 75 non-overlapping hopping channels	FCC Part 15, Subpart C, §15.247 (b) (1); ISED RSS-247 sec. 6.2.3.2 a Peak conducted output power: 30 dBm = 1W
☐	FHS	5725-5850 MHz band		FCC Part 15, Subpart C, §15.247 (b) (1); ISED RSS-247 sec. 6.2.4.2 a Peak conducted output power: 30 dBm = 1W
☐	DTS	902-928 and 2400-2483.5 MHz bands		FCC Part 15, Subpart C, §15.247 (b) (3); ISED RSS-247 sec. 6.3.2 Peak conducted output power: 30 dBm = 1W Alternatively: (averaged) conducted output power: 30 dBm The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level.
☐	DTS	5725-5850 MHz band		FCC Part 15, Subpart C, §15.247 (b) (3) Peak conducted output power: 30 dBm = 1W Alternatively: (Averaged) conducted output power: 30 dBm The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. ISED RSS-247 sec. 7.3.4.3 conducted output power: 30 dBm = 1W ISED RSS-247 sec. 7.1 The output power and e.i.r.p. of the equipment wanted emission shall be measured in terms of average value. If the transmission is in bursts, the provisions of RSS-Gen for pulsed operation shall apply

FHS: Frequency hopping systems; DTS: Digital transmission systems incl. Digital modulation techniques

DTS devices according ANSI C63.10 clause 11.2 (This is also accepted by ISED for DTS-Devices (see List of Alternate RF Measurement Procedures Accepted by ISED Canada):

The peak conducted output power is defined as the maximum power level measured with a peak detector using a filter with width and shape of which is sufficient to accept the full signal bandwidth.

The (averaged) conducted output power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level.

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 11 von 30
Page 11 of 30

Prüfdokumentation
Test documentation

4.1.2 Test Method (Maximum Output Power)

4.1.2.1 Radiated measurements

Measurements were done according to ANSI C63.10 clause 11.9.1.1 peak power (RBW > DTS bandwidth).
The equivalent conducted output power is calculated as follows:

$$P_{\text{Out}} = P_{\text{Rad}} - G$$

Where:

P_{Out} is the maximum conducted output power in dBm,

P_{Rad} is the maximum radiated output power in dBm EIRP,

G is the antenna directional gain in dBi.

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 12 von 30
Page 12 of 30

Prüfdokumentation
Test documentation

4.1.3 Test setup (Maximum Output Power)

4.1.3.1 Radiated measurements

EUT		A004147517-005
Chamber details		☒ 3m Fully Anechoic Chamber (FAC) ☐ 10m Semi Anechoic Chamber (SAC) ☐ Shielded room
Measurement positioning		Distance: EUT height: Antenna height: ☒ 3m ☒ 1.5m ☒ 1.5m ☐ 10m ☐ 0.8m ☐ 1m to 4m – height scan
Companion device		EUT in Test Mode. Therefore, no Companion Device was used.
Operation mode		☒ 1: TX-Mode ☐ 2: TX-Mode ☐ 3: N/A ☐ 4: N/A
Spectrum Analyzer	Resolution Bandwidth	100kHz during exploratory tests 2MHz for final measurements
	Video Bandwidth	300kHz during exploratory tests 10MHz for final measurements
	Measurement Time	2s during exploratory tests 10s for final measurements
Further parameters		-
Test engineer		Shrinivas Naikar

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 13 von 30
Page 13 of 30

Prüfdokumentation
Test documentation

4.1.4 Test results (Maximum Output Power)

4.1.4.1 Radiated measurements

Frequency [MHz]	P _{Rad} Peak [dBμV/m]	Height [cm]	Pol.	Azimuth [deg]	Elevation [deg]	Corr. [dB]	P _{out} Peak EIRP [dBm]
2401.810000	103.97	150.0	H	214.0	53.0	12.6	8.67
2480.110000	104.07	150.0	H	234.0	44.0	13.7	8.77

Measurement values from the test reports are measured radiated as field strength in dBμV/m values and are corrected to be dBm by using the following formula:

$$\text{EIRP(dBm)} = \text{E(dBμV/m)} - 95.3$$

Frequency [MHz]	P _{Rad} Peak [dBm] EIRP	Ant. Gain [dBi]	P _{out} Peak [dBm]
2401.810000	8.67	0	8.67
2480.110000	8.77	0	8.77

4.1.5 Final test result (Maximum Output Power)

Measured overall (equivalent, if measured radiated) maximum Output Power: 8.77dBm

Final test result	Pass
--------------------------	------

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 14 von 30
Page 14 of 30

Prüfdokumentation
Test documentation

4.2 Unwanted emissions

4.2.1 Requirements / Limits

☒	FCC Part 15, Subpart C, §15.247 (d); RSS-247 sec. 6.6: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) and RSS-Gen sec. 8.9 is not required. Radiated emissions which fall in the restricted bands, as defined in § 15.205(a) and RSS-Gen sec.8.10, must comply with the radiated emission limits specified in § 15.209(a) and RSS-Gen sec. 8.9.
☐	FCC Part 15, Subpart C, §15.247 (d); RSS-247 sec. 6.6: If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this test shall be 30 dB instead of 20 dB.

FCC Part 15, Subpart C, §15.209; RSS-Gen sec. 8.9; Radiated Emission Limits:

Frequency [MHz]	Measurement distance [m]	Limit [μA/m]	Limit [μV/m]	Limit [dBμV/m]	Limit @3m dBμV/m]	Detector
0.009 – 0.09	300	6.37/F	2400/F	48.5 ... 28.5	128.5 ... 108.5	AVG(Pk)
0.09 – 0.11	300	6.37/F	2400/F	28.5 ... 26.8	108.5 ... 106.8	QP
0.11 – 0.49	300	6.37/F	2400/F	26.8 ... 13.8	106.8 ... 93.8	AVG(Pk)
0.49 – 1.705	30	63.7/F	24000/F	33.8 ... 23.0	73.8 ... 63.0	QP
1.705 – 30	30	0.08	30	29.5	69.5	QP
30 – 88	3		100	40.0	40.0	QP
88 – 216	3		150	43.5	43.5	QP
216 – 960	3		200	46.0	46.0	QP
960 - 1000	3		500	54.0	54.0	QP
1000 - 40000	3		500	54.0	54.0	AVG(Pk)

F: Frequency in kHz

Used conversion factor [μA/m]->[μV/m]: Limit[μV/m] = Limit[μA/m] * 376.7Ohm

Used conversion factor [μV/m]->[dBμV/m]: Limit [dBμV/m] = 20 log (Limit [μV/m] / 1[μV/m])

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90kHz, 110–490kHz and above 1000MHz. Radiated emission limits in these three bands are based on measurements employing a linear average detector.

FCC Part 15, Subpart C, §15.31 (f)(2); RSS-Gen sec. 6.5:

At frequencies below 30MHz, the limit values are corrected with an inverse linear distance extrapolation factor (40dB/decade).

FCC Part 15, Subpart C, §15.35(b); RSS-Gen sec. 8.1:

..., there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit....

FCC Part 15, Subpart A, §15.33 (a)(1); ANSI C63.10 clause 5.5; RSS-Gen sec. 6.13.2:

For an intentional radiator operating below 10 GHz, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 15 von 30
Page 15 of 30

Prüfdokumentation
Test documentation

4.2.2 Radiated measurements with general limit (Unwanted emissions)

4.2.2.1 Test Method

Radiated unwanted Emissions were tested against the general limits specified in § 15.209(a) and RSS-Gen sec. 8.9. Emissions that fall inside the frequency band in which the intentional radiator is operating were excluded.

Emissions that exceed the general limits were additionally tested for the further requirements of §15.247 (d) and RSS-247 sec. 6.6

For integration measurements, the transmit frequency, including fundamental components of modulation are not tested, as these emissions are assumed not to be affected by the integration.

A test program that controls instrumentation and data logging was used to automate the preliminary RF emission test procedure. Preliminary emission testing was performed inside the anechoic chamber. The measurement equipment was located outside of the chamber. A video camera was placed inside the chamber to view the EUT. The different measurement setups for each frequency range are shown below.

For final testing, the placement of EUT and cables were the same as for preliminary testing. The six highest emissions relative to the limit were measured unless such emissions were more than 20 dB below the limit. If less than six emissions are within 20 dB of the limit, then the noise level of the receiver is measured at frequencies where emissions are expected. Multiples of all oscillator and microprocessor frequencies were also checked. For the measurements in the frequency range 30 MHz to 1 GHz for each measured frequency the peak emission was maximized by manipulating the receiving antenna from 1 to 4 meters above the ground plane and placing it at the position that produced the maximum signal strength reading. The turntable was then rotated through 360° while observing the peak signal and placing the EUT at the position that produced maximum radiation.

For measurement above 1 GHz the turntable and positioner were set to continuous transmission and the antenna height was fixed.

For measurements in the frequency ranges (90-110kHz, 490 kHz-1 GHz) quasi-peak detectors were used, while average and peak detectors were used in other ranges.

Final testing was performed on an SVSWR compliant test site.

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 16 von 30
Page 16 of 30

Prüfdokumentation
Test documentation

The emission limits are calculated from the field strength limit of this section using this formula:

$$\text{Emission level} \left(\frac{\text{dB}\mu\text{V}}{\text{m}} \right) = 20 \log \text{Emission level} \left(\frac{\mu\text{V}}{\text{m}} \right)$$

When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade as per §15.31(f)(1). For this documentation a distance extrapolation factor was added to the limit that was calculated using this formula:

$$\text{Emission limit}_{\text{new}} \left(\frac{\text{dB}\mu\text{V}}{\text{m}} \right) = \text{Emission limit}_{\text{old}} + 20 \log \left(\frac{d_1}{d_2} \right)$$

Where

d_1 : old distance (e. g. 3 m)

d_2 : new distance (e. g. 10 m)

The field strength E_{final} is calculated using the following equation:

$E_{\text{final}} = \text{RawRec} + \text{Corr}$

While

$\text{Corr} = \text{AF} + \text{SigPathAtt} + \text{PreampAtt}$

Were

E_{final} : final average electric field value

RawRec: Receiver reading

AF: Antenna factor

SigPathAtt: Signalpath losses

PreampAtt: Preamplifier losses

For example, if a Receiver reading of 1dBμV was measured and the Antenna factor is 2 dB/m, the Signalpath losses are 3dB and the Preamplifier losses are -10dB, then the Correction is calculated to:

$\text{Corr} = (2+3-10) \text{ dB} = -5\text{dB}$ and the Final electric field strength E_{Final} is calculated to:

$E_{\text{Final}} = (1 + (-5)) \text{ dB}\mu\text{V/m} = -4 \text{ dB}\mu\text{V/m}$

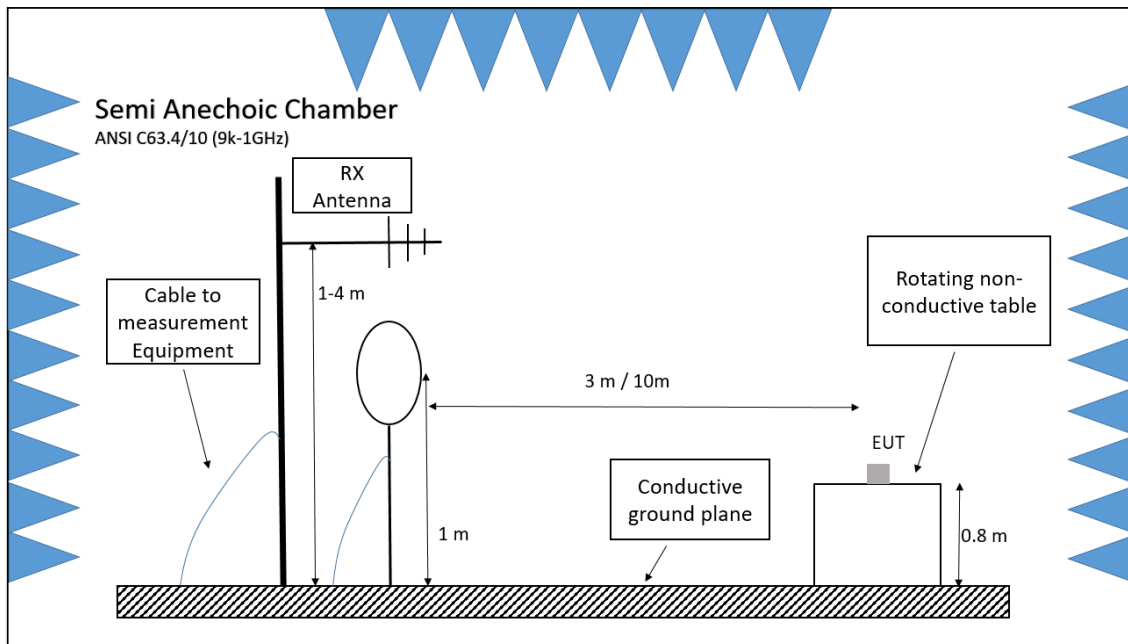
Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 17 von 30
Page 17 of 30

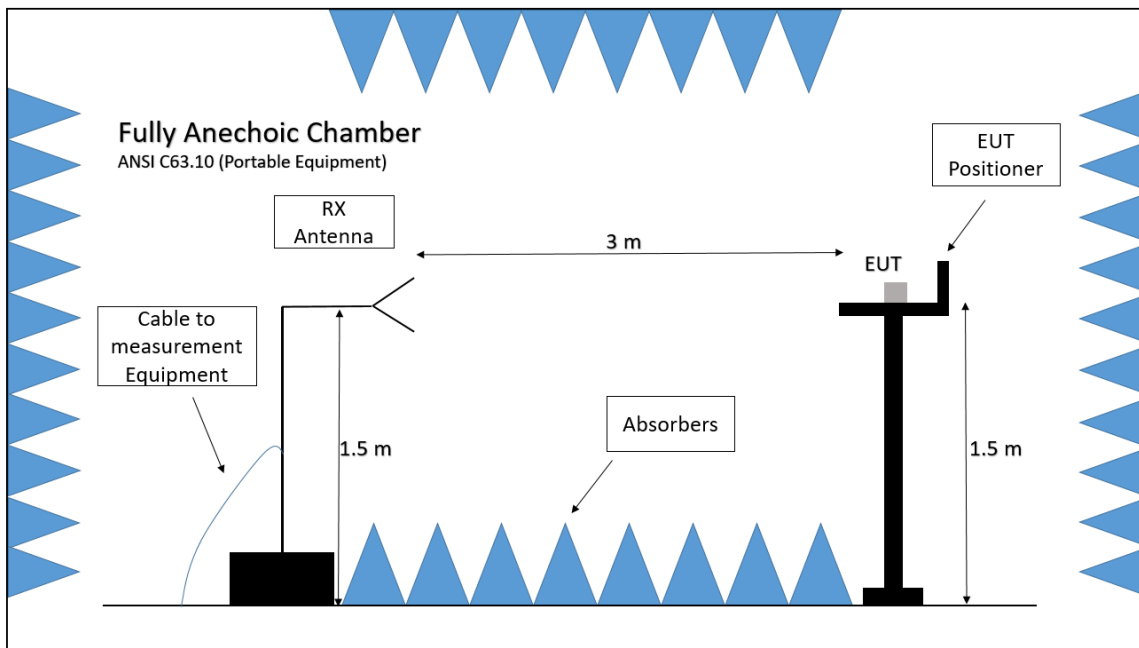
Prüfdokumentation
Test documentation

4.2.2.2 EUT positioning (Radiated measurements with general limit; Unwanted emissions)

4.2.2.2.1 EUT positioning below 1GHz



4.2.2.2.2 EUT positioning above 1GHz



Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 18 von 30
Page 18 of 30

Prüfdokumentation
Test documentation

4.2.2.3 Measurement Setup (Radiated measurements with general limit; Unwanted emissions)

4.2.2.3.1 Measurement Setup 9kHz - 30MHz

Test Site	SAC (Semi Anechoic Chamber)
Receiving Antenna	Loop antenna (HFH 2)
Receiving Antenna Height	1m (lowest height of Loop antenna)
Receiving Antenna Polarization	Parallel and perpendicular to the EUT (EUT without Loop antenna) According to ANSI C63.10 clause 6.4.6
EUT Table	1.0m x 1.5m non-conductive table 80cm above the floor
EUT Turn Table Step Size	45° during exploratory tests Linear during maximizations for final measurements
Receiver Configurations	Average and peak detectors (9-90kHz and 110-490kHz) Quasi Peak detector (90-110kHz and 490kHz-30MHz)
	RBW: 200Hz (9 - 150kHz) and 9 kHz (150kHz – 30MHz)
	Step Size: 50Hz (9-150kHz) and 2.25kHz (150k-30MHz)
	Sweep Time: 100ms (FFT) during exploratory tests Sweep Time: 1s for final measurements

4.2.2.3.2 Measurement Setup 30MHz - 1GHz

Test Site	Semi-anechoic chamber
Receiving Antenna	Hybrid Antenna VULB 9168
Receiving Antenna height	Varied (1m to 4m, step size 1m) during exploratory tests Linear during maximizations for final measurements
Receiving Antenna Polarization	Horizontal and Vertical
EUT Table	1.0m x 1.5m non-conductive table 80cm above the floor
EUT Turn Table Step Size	45° during exploratory tests Linear during maximizations for final measurements
Receiver Configurations	Average and peak detector
	RBW :120 kHz
	Step Size: 30kHz (30-1000MHz)
	Sweep Time: 100ms (FFT) during exploratory tests Sweep Time: 1s for final measurements

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 19 von 30
Page 19 of 30

Prüfdokumentation
Test documentation

4.2.2.3.3 Measurement Setup above 1GHz

Test Site	Fully-anechoic chamber
Receiving Antenna	Horn Antenna HF907 (1-18GHz), 3116C-PA (18-40GHz)
Receiving Antenna Height	1.5m
Receiving Antenna Polarization	Horizontal – Vertical
EUT Positioner	40cm x 60cm non-conductive positioner 1.5m above the floor Step size elevation angle 45°
EUT Turn Table Step Size	Continues rotation
Spectrum Analyzer	Average and peak detectors
	RBW: 1 MHz
	Sweep Time: 60s during exploratory tests Sweep Time: 10s for final measurements

4.2.2.4 Test Setup (Radiated measurements with general limit; Unwanted emissions)

EUT	A004147517-005
Companion device	EUT in Test Mode. Therefore, no Companion Device was used.
Operation mode	☒ 1: TX-Mode ☐ 2: TX-Mode ☐ 3: N/A ☐ 4: N/A
Further parameters	-
Test engineer	Shrinivas Naikar

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

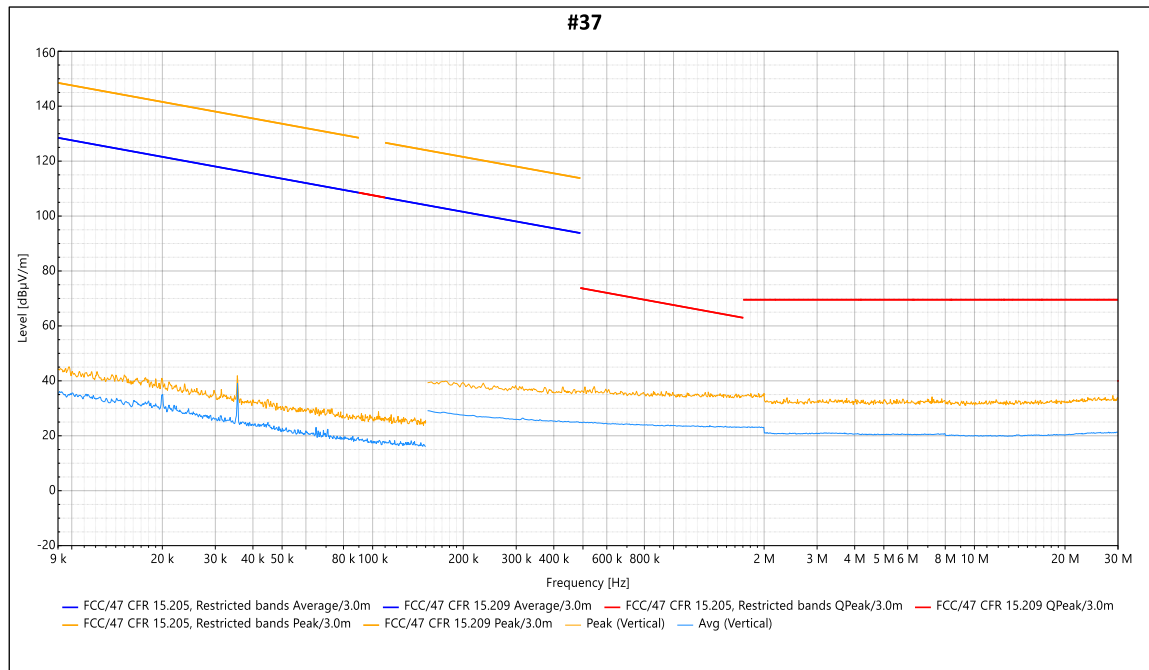
Seite 20 von 30
Page 20 of 30

Prüfdokumentation
Test documentation

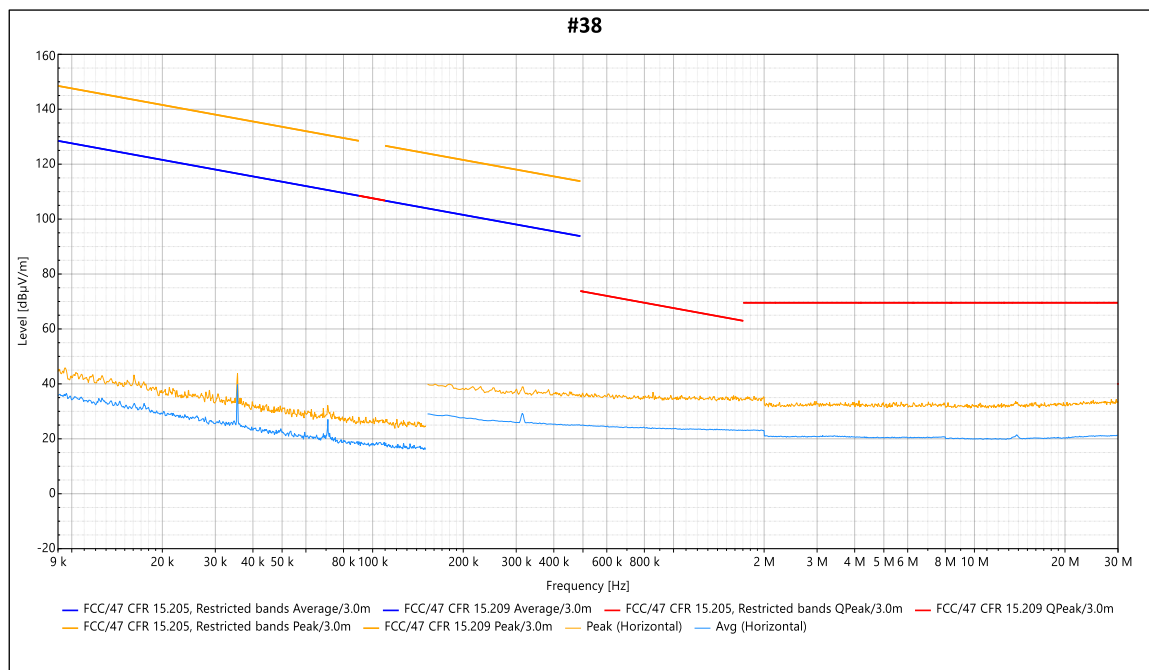
4.2.2.5 Test results (Radiated measurements with general limit; Unwanted emissions)

4.2.2.5.1 9 kHz to 30 MHz, highest Channel

4.2.2.5.1.1 Perpendicular Polarization



4.2.2.5.1.2 Parallel Polarization



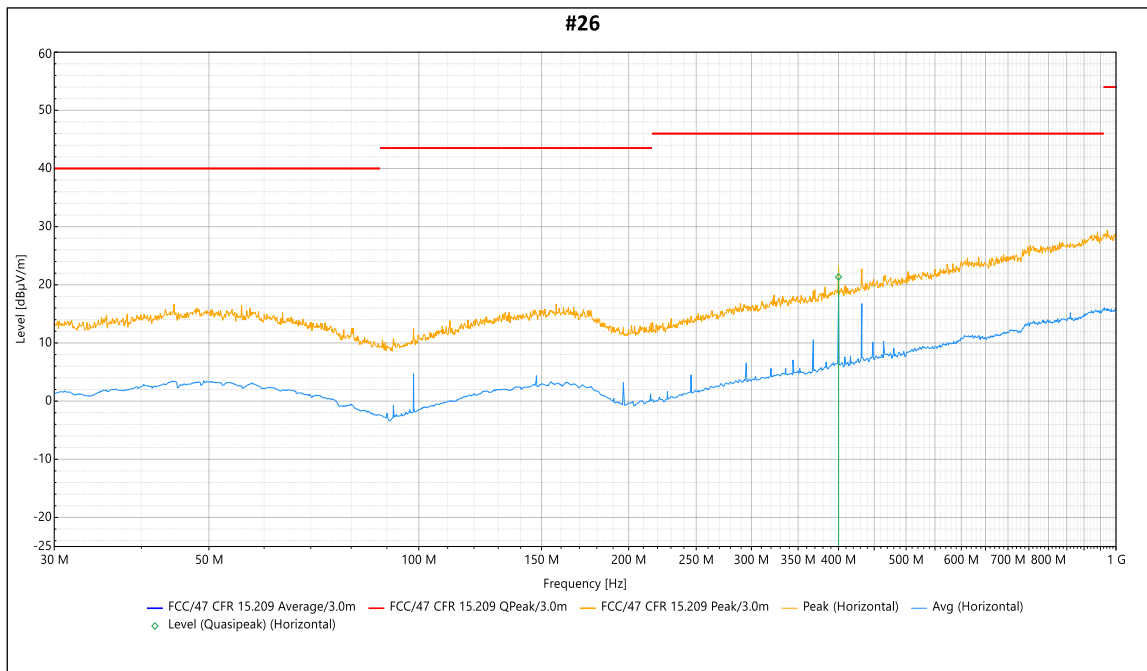
Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 21 von 30
Page 21 of 30

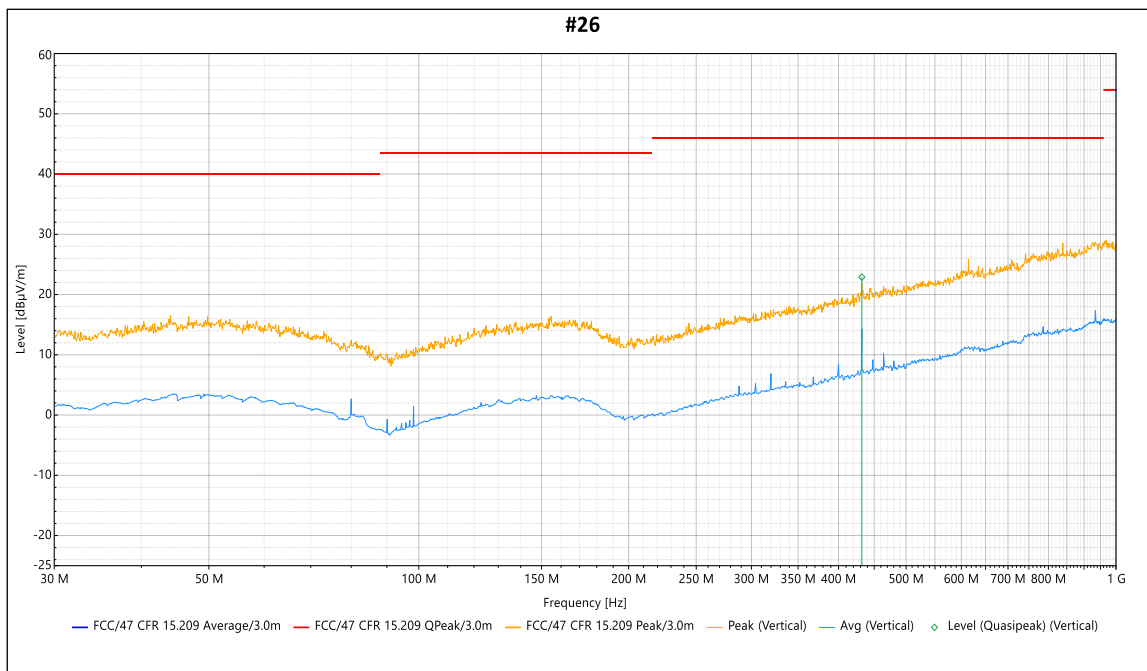
Prüfdokumentation
Test documentation

4.2.2.5.2 30 MHz to 1 GHz, highest Channel

4.2.2.5.2.1 Horizontal Polarization



4.2.2.5.2.2 Vertical Polarization



4.2.2.5.2.3 Results

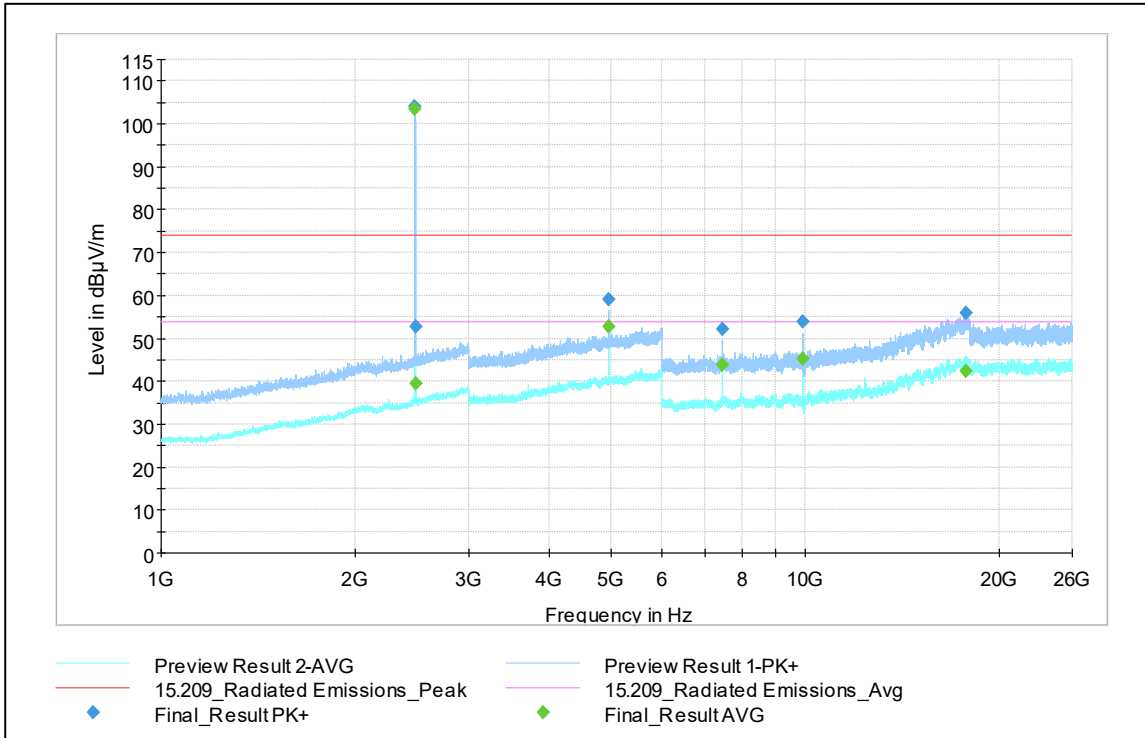
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Azimuth (deg)	Height (m)	Corr. (dB)
400.029	21.3	46.0	-24.7	H	17.4	1.05	-7.3
432.031	22.9	46.0	-23.1	V	83.2	1.64	-6.4

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 22 von 30
Page 22 of 30

Prüfdokumentation
Test documentation

4.2.2.5.3 1 to 26GHz, Highest Channel



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2480.110	---	103.61	Fundamental frequency			1000.000	150.0	H	234.0	44.0	13.7
2480.110	104.07	---	Fundamental frequency			1000.000	150.0	H	234.0	44.0	13.7
2483.500	---	39.50	54.00	14.50	10000	1000.000	150.0	H	45.0	58.0	13.5
2483.500	52.86	---	74.00	21.14	10000	1000.000	150.0	H	45.0	58.0	13.5
4960.290	---	52.87	54.00	1.13	10000	1000.000	150.0	H	211.0	86.0	10.0
4960.290	58.96	---	74.00	15.04	10000	1000.000	150.0	H	211.0	86.0	10.0
7440.430	---	43.93	54.00	10.07	10000	1000.000	150.0	V	233.0	-6.0	-3.2
7440.430	52.26	---	74.00	21.74	10000	1000.000	150.0	V	233.0	-6.0	-3.2
9920.630	---	45.12	54.00	8.88	10000	1000.000	150.0	V	135.0	94.0	0.2
9920.630	53.83	---	74.00	20.17	10000	1000.000	150.0	V	135.0	94.0	0.2
17787.88	---	42.48	54.00	11.52	10000	1000.000	150.0	H	73.0	-25.0	11.4
17787.88	55.91	---	74.00	18.09	10000	1000.000	150.0	H	73.0	-25.0	11.4

4.2.3 Final test result

Final test result	Pass
-------------------	------

4.3 AC Power Conducted Emission

4.3.1 Requirements / Limits

AC power-line conducted emission measurements shall be made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz, to determine the line-to-ground radio-noise voltage that is conducted from all of the EUT current-carrying power input terminals that are directly (or indirectly via separate transformers or power supplies) connected to a public power network.

FCC Part 15, Subpart C, §15.207 (a)

... for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN).

FCC Part 15, Subpart C, §15.207, Conducted Emission Limits

Frequency [MHz]	Conducted Limit [dB μ V]	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

*Decreases with logarithm of the frequency

FCC Part 15, Subpart C, §15.207 (c)

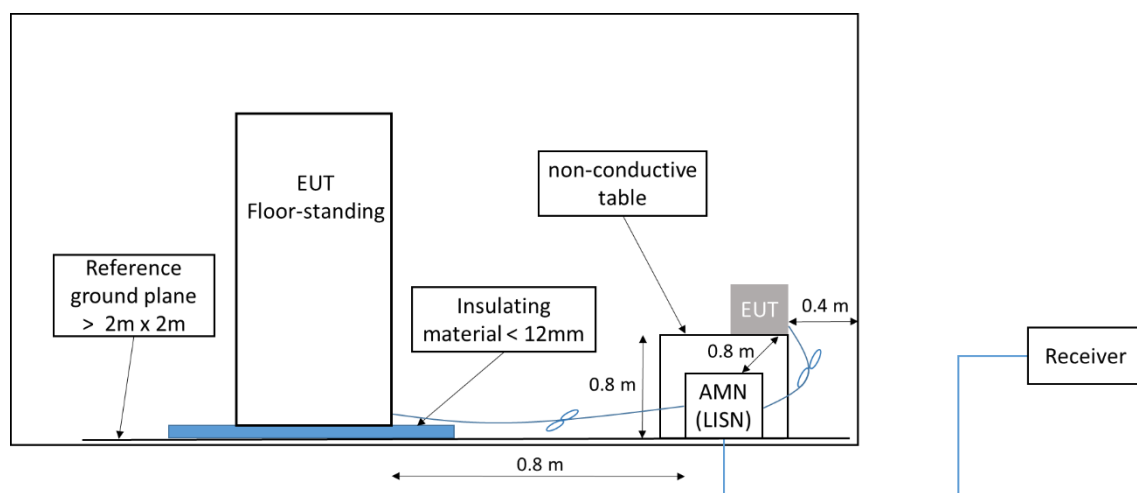
... Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

KDB174176 D01 Line Conducted FAQ v01r01:

For a device operating at or below 30 MHz, the FCC will accept measurements performed with a suitable dummy load in lieu of the antenna within the transmitter's fundamental emission band.

4.3.2 Test Method

The test setup was made according to ANSI C63.10 clauses 6.2.2 & 6.2.3 as shown in the photograph



Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 24 von 30
Page 24 of 30

Prüfdokumentation
Test documentation

4.3.3 Test Setup (AC Power Conducted Emission)

EUT	A004147517-005
Companion device	EUT in Test Mode. Therefore, no Companion Device was used.
Operation mode	☐ 1: TX-Mode ☒ 2: TX-Mode ☐ 3: N/A ☐ 4: N/A
Further parameters	-
Test engineer	Shrinivas Naikar

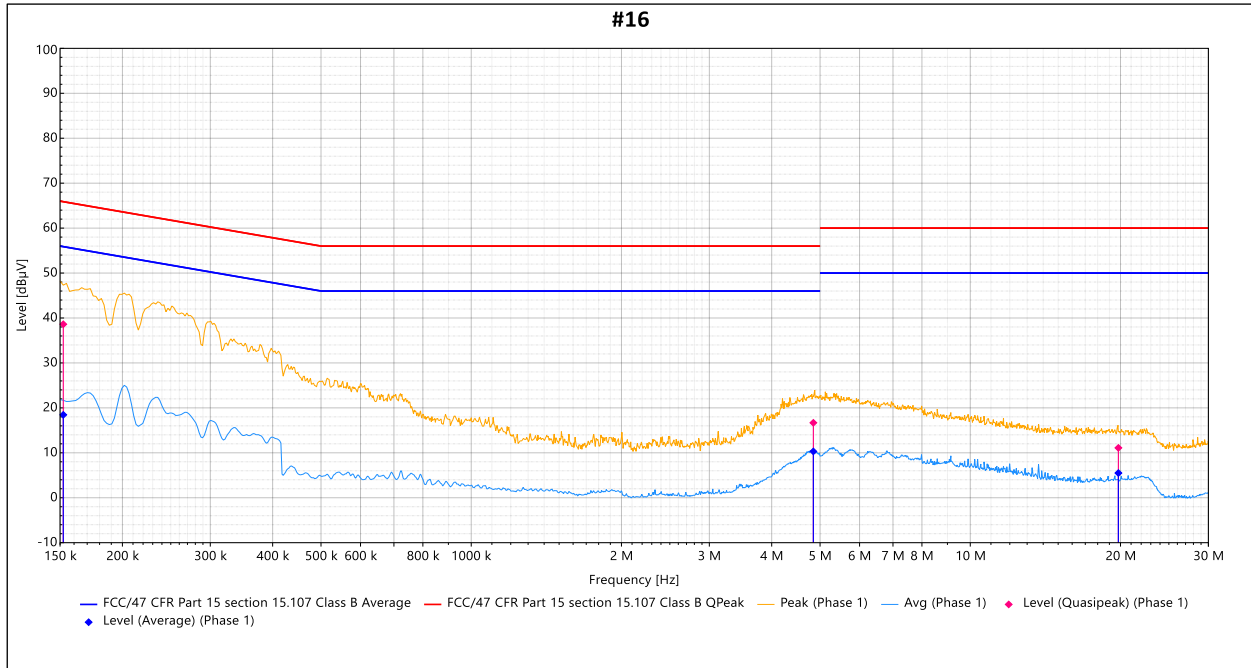
Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 25 von 30
Page 25 of 30

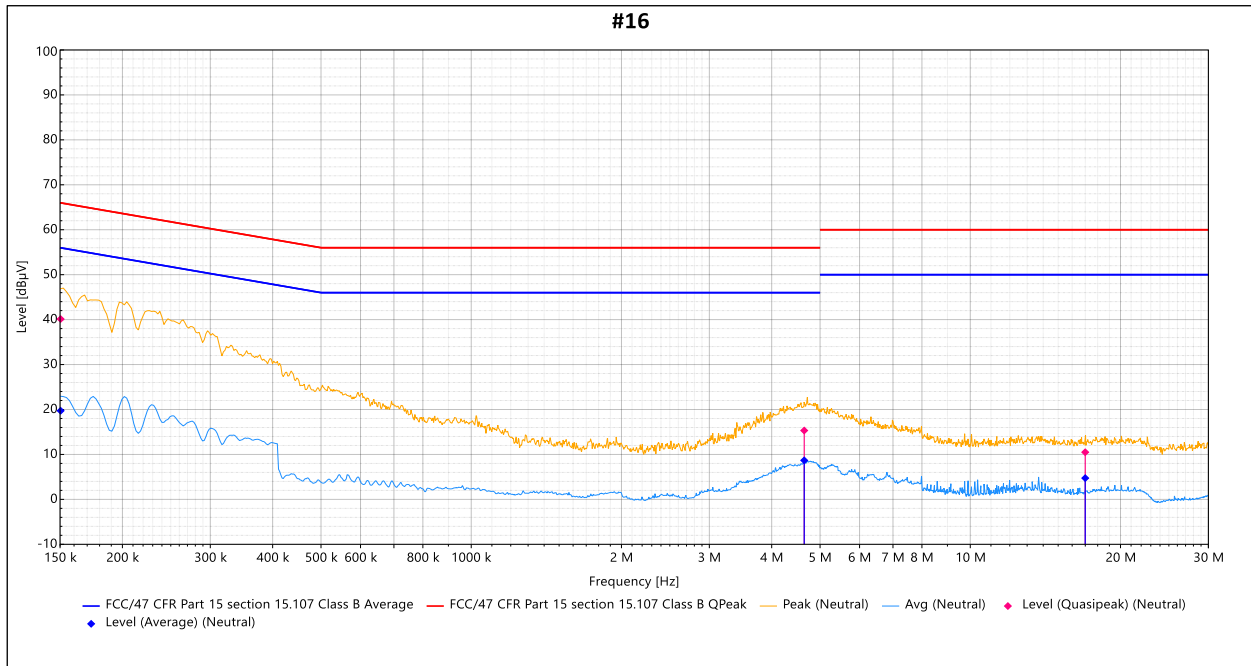
Prüfdokumentation
Test documentation

4.3.4 Test results (AC Power Conducted Emission)

Line: Phase 1



Line: Neutral



Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 26 von 30
Page 26 of 30

Prüfdokumentation
Test documentation

QuasiPeak:

Frequency (Hz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Line	Correction (dB)	Result
150 k	40.1	66.0	-25.9	Neutral	10.0	Pass
152.25 k	38.6	65.9	-27.3	Phase	10.0	Pass
4.648 M	15.3	56.0	-40.7	Neutral	10.2	Pass
4.848 M	16.7	56.0	-39.3	Phase	10.1	Pass
16.996 M	10.5	60.0	-49.5	Neutral	10.5	Pass
19.806 M	11.1	60.0	-48.9	Phase	10.3	Pass

Average:

Frequency (Hz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Line	Correction (dB)	Result
150 k	19.7	56.0	-36.3	Neutral	19.7	Pass
152.25 k	18.4	55.9	-37.4	Phase	18.4	Pass
4.648 M	8.7	46.0	-37.3	Neutral	8.7	Pass
4.848 M	10.3	46.0	-35.7	Phase	10.3	Pass
16.996 M	4.7	50.0	-45.3	Neutral	4.7	Pass
19.806 M	5.5	50.0	-44.5	Phase	5.5	Pass

4.3.5 Final test result (AC Power Conducted Emission)

Final test result	Pass
-------------------	------

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 27 von 30
Page 27 of 30

Fotodokumentation
Photo documentation

5 Test Setup Photo

For reasons of confidentiality, no photos of the EUT are included in this report.
For EUT and test setup photos please see the Photo Documentation to this report Number.

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 28 von 30
Page 28 of 30

Zusatzdokumentation
Additional documentation

6 Application form

The following information was provided by the customer and form the basis for the execution of the tests and the assessment of conformity. The given information can affect the results of both.

No application form was provided.

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 29 von 30
Page 29 of 30

Liste der verwendeten Prüfmittel
List of used test equipment

7 Equipment List

7.1 Hardware

Prüfmittel Test equipment		Prüfmittel-Nr. / ID- Nr. Equipment-No. / ID- No.	Nächste Kalibrierung Next calibration	
Fully Anechoic Room	Albatross Projects GmbH	2959749	13.02.2026	*
Signal Analyzer FSV 30	Rohde & Schwarz	2789106	27.08.2027	
Signal Analyzer UXA N9041B	Keysight	2971644	24.06.2026	
RSE-Filtersystem	Rohde & Schwarz	9002802	06.02.2026	*
Antenna HF907 1-18GHz	Rohde & Schwarz	2856263	10.09.2027	
Horn Antenna 3116C-PA 18-40GHz	ETS LINDGREN	2900393	19.12.2025	
Semi-Anechoic Chamber	Siemens	9049495	03.09.2027	
Receiver ESU 26	Rohde & Schwarz	2728898	25.03.2026	
Antenna HFH 2 (Loop) 9kHz-30MHz	Rohde & Schwarz	2728893	05.08.2027	
Antenna VULB 9168 30MHz – 1GHz	Schwarzbeck	2728136	05.10.2026	
Receiver ESU 8	Rohde & Schwarz	2728844	19.08.2026	
Limiter ESH3-Z2	Rohde & Schwarz	9017596	05.09.2026	
LISN ESH2-Z5	Rohde & Schwarz	2731908	16.07.2027	

*Equipment only verified and not calibrated

7.2 Software

Test Software	Developer	Version
EMC32	Rohde & Schwarz	10.60.20
BAT-EMC	NEXIO	2022.0.19.0

Prüfbericht-Nr.: DE25BSOX 001
Test report no.:

Seite 30 von 30
Page 30 of 30

Änderungsverzeichnis
Change history

8 Change history

Revision Number	List of revisions
001	Initial Release
Note: Latest revision report will replace all previous reports.	

Ende des Prüfberichts
End of Test Report