

Prüfbericht-Nr.: <i>Test report no.:</i>	CN25CZTX 003	Auftrags-Nr.: <i>Order no.:</i>	168577723	Seite 1 von 28 Page 1 of 28	
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2025-10-09		
Auftraggeber: <i>Client:</i>	Lenovo (Beijing) Limited 201-H2-6, Floor 2, Building 2, No. 6 Shangdi West Road, Haidian District, Beijing, China				
Prüfgegenstand: <i>Test item:</i>	ThinkPad Dual-Mode Wireless ANC Foldable Headset 8550				
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	LB520NC				
Auftrags-Inhalt: <i>Order content:</i>	Test Report				
Prüfgrundlage: <i>Test specification:</i>	CFR Title 47 FCC Part 15: Subpart C Section 15.247				
Wareneingangsdatum: <i>Date of sample receipt:</i>	2025-11-19	Please refer to Photo Document			
Prüfmuster-Nr.: <i>Test sample no.:</i>	A004140302-007~024				
Prüfzeitraum: <i>Testing period:</i>	2025-12-02 - 2025-12-08				
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.				
Prüfergebnis*: <i>Test result*:</i>	Pass				
geprüft von: <i>tested by:</i>			genehmigt von: <i>authorized by:</i>		
Datum: <i>Date:</i>	2026-01-16	Signed by: Lin Lin		Ausstellungsdatum: <i>Issue date:</i>	2026-01-16
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert	
Sonstiges / <i>Other:</i>	FCC ID: A5MLB520NC				
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.: CN25CZTX 003
Test report no.:

Seite 2 von 28
Page 2 of 28

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>

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 6dB BANDWIDTH

RESULT: Pass

5.1.5 99% BANDWIDTH

RESULT: Pass

5.1.6 20dB BANDWIDTH

RESULT: Pass

5.1.7 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.8 NUMBER OF HOPPING FREQUENCY

RESULT: Pass

5.1.9 TIME OF OCCUPANCY

RESULT: Pass

5.1.10 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH

RESULT: Pass

5.1.11 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.12 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

Contents

1	GENERAL REMARKS	5
1.1	COMPLEMENTARY MATERIALS	5
2	TEST SITES	6
2.1	TEST FACILITIES	6
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	6
2.3	TRACEABILITY	7
2.4	CALIBRATION	7
2.5	MEASUREMENT UNCERTAINTY.....	7
2.6	LOCATION OF ORIGINAL DATA.....	7
2.7	STATUS OF FACILITY USED FOR TESTING.....	8
3	GENERAL PRODUCT INFORMATION	9
3.1	PRODUCT FUNCTION AND INTENDED USE.....	9
3.2	RATINGS AND SYSTEM DETAILS	9
3.3	INDEPENDENT OPERATION MODES	11
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS.....	11
3.5	SUBMITTED DOCUMENTS.....	11
4	TEST SET-UP AND OPERATION MODES	12
4.1	PRINCIPLE OF CONFIGURATION SELECTION	12
4.2	TEST OPERATION AND TEST SOFTWARE.....	12
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	12
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE.....	12
4.5	TEST SETUP DIAGRAM	13
5	TEST RESULTS	15
5.1	TRANSMITTER REQUIREMENT & TEST SUITES	15
5.1.1	<i>Antenna Requirement</i>	<i>15</i>
5.1.2	<i>Maximum Peak Conducted Output Power</i>	<i>16</i>
5.1.3	<i>Conducted Power Spectral Density</i>	<i>18</i>
5.1.4	<i>6dB Bandwidth</i>	<i>19</i>
5.1.5	<i>99% Bandwidth</i>	<i>20</i>
5.1.6	<i>20dB Bandwidth</i>	<i>21</i>
5.1.7	<i>Carrier Frequency Separation.....</i>	<i>22</i>
5.1.8	<i>Number of Hopping Frequency</i>	<i>23</i>
5.1.9	<i>Time of Occupancy</i>	<i>24</i>
5.1.10	<i>Conducted Spurious Emissions Measured in 100 kHz Bandwidth.....</i>	<i>25</i>
5.1.11	<i>Radiated Spurious Emission.....</i>	<i>26</i>
5.1.12	<i>Conducted Emission on AC Mains</i>	<i>27</i>
6	PHOTOGRAPHS OF THE TEST SET-UP	28
7	LIST OF TABLES.....	28

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Bluetooth BR & EDR

Appendix B: Test Results of Bluetooth LE

Appendix C: Test Results of 2.4GHz SRD

Appendix D: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, China

A2LA Certificate Number: 5162.01

FCC Registration No.: 694916

ISED Wireless Device Testing Laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (SRD-Tonscend)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2025-09-23	2026-09-22
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2025-09-23	2026-09-22
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2025-09-23	2026-09-22
DC power supply	Keysight	E3642A	MY61276100	2025-09-23	2026-09-22
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2025-09-23	2026-09-22
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2025-09-23	2026-09-22
Test Software	Tonscend	JS1120-3	N/A	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A	N/A
Shielding Room	Albatross	SR1	APC17151-SR1	2024-09-14	2027-09-13
Unwanted Emission Testing (TS9975)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	2025-09-22	2026-09-21
Signal Analyzer	R&S	FSV 40	101439	2025-09-22	2026-09-21
System Controller Interface	R&S	SCI-100	S10010038	N/A	N/A
Filterbank	R&S	Wlan	100759	2025-09-22	2026-09-21
OSP	R&S	OSP 120	102040	N/A	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2025-09-22	2026-09-21
Amplifier	R&S	SCU-18F	180070	2025-09-22	2026-09-21
Amplifier	R&S	SCU40A	100475	2025-09-22	2026-09-21
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2024-09-28	2026-09-27
Double-Ridged Antenna (1-18 GHz)	ETS-LINDGREN	3117	00218717	2024-09-28	2026-09-27

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 7 von 28
Page 7 of 28

Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-09-28	2026-09-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2024-09-28	2026-09-27
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-09-14	2027-09-13

Conducted Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102428	2026-07-18
Artificial Mains Network	R&S	ENV432	101546	2026-02-09
EMC32 Test Software	R&S	EMC32(Ver.10.60.20)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty
RF output power, conducted	± 0.99 dB
Occupied Channel Bandwidth	± 2.08 %
RF power density, conducted	± 0.99 dB
Unwanted Emissions, conducted	± 0.89 dB
All emissions, radiated	± 4.17 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.24 dB / ± 3.24 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B & C & D of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 8 von 28
Page 8 of 28

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a ThinkPad Dual-Mode Wireless ANC Foldable Headset 8550, which supports Classic Bluetooth, Bluetooth low energy and 2.4GHz SRD wireless technologies.
For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	ThinkPad Dual-Mode Wireless ANC Foldable Headset 8550
Type Designation:	LB520NC
FCC ID:	A5MLB520NC
Operating Voltage:	Battery operated (3.8Vdc, 640mAh) or USB-C operated
Operating Temperature Range:	0 °C ~ +45 °C
Technical Specification of Bluetooth BR & EDR	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Channel Number:	79 channels
Channel Separation:	1MHz
Antenna Type:	PIFA antenna
Antenna Gain:	0.6 dBi Max (Provided by the Client)
Technical Specification of Bluetooth LE	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Channel Number:	40 channels
Data Rate:	1 Mbps
Channel Separation:	2MHz
Antenna Type:	PIFA antenna
Antenna Gain:	0.6 dBi Max (Provided by the Client)
Technical Specification of 2.4GHz SRD	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Channel Number:	40 channels
Data Rate:	2 Mbps
Channel Separation:	2MHz
Antenna Type:	PIFA antenna
Antenna Gain:	0.6 dBi Max (Provided by the Client)

Note: The correctness of all data provided by customer in the test report is ensured and responsible of the customer. Any misjudgment of the test results caused by the use of incorrect data provided by customer shall be borne by the customer.

Table 4: RF Channel and Frequency of Bluetooth BR & EDR

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

Test frequencies are lowest channel: 2402 MHz, middle channel: 2441 MHz and highest channel: 2480 MHz for Bluetooth BR & EDR

Table 5: RF Channel and Frequency of Bluetooth LE

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz for Bluetooth LE

Table 6: RF Channel and Frequency of 2.4GHz SRD

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz for 2.4GHz SRD

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Classic Bluetooth transmitting mode (Low / Middle / High channel)
- B. On, Bluetooth LE transmitting mode (Low / Middle / High channel)
- C. On, Classic Bluetooth Transmitting on Hopping channel
- D. On, 2.4GHz SRD transmitting mode (Low / Middle / High channel)
- E. On, Normal working + Charging
- F. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- User Manual
- Operation Description
- ID Label and Location Info

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10:2020.

According to clause 3.1, all tests were performed on model *LB310NC* in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 7: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

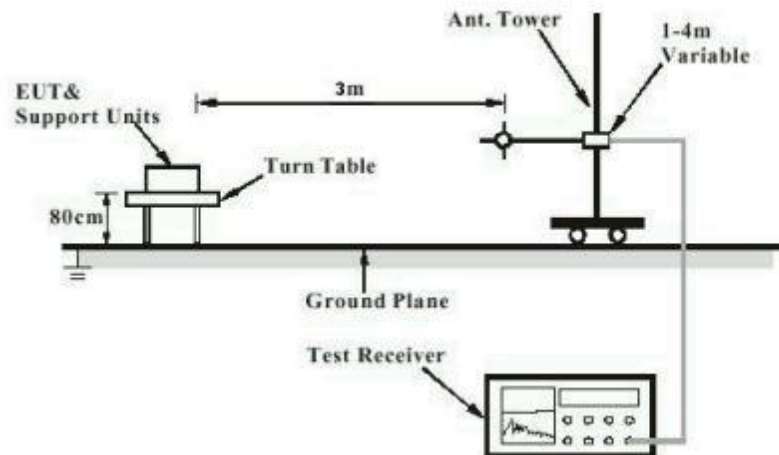


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

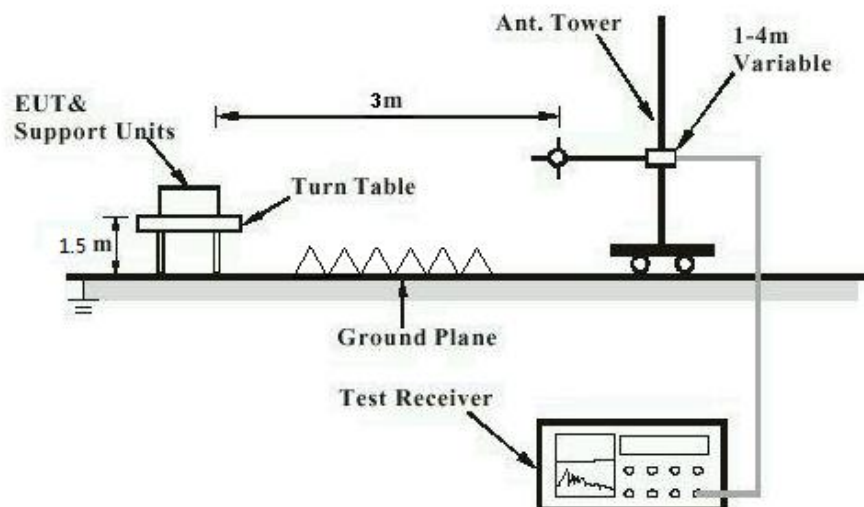


Diagram of Measurement Configuration for Mains Conduction Measurement

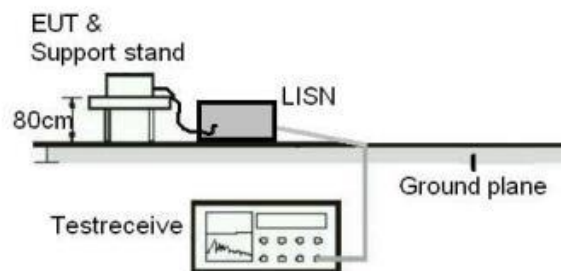
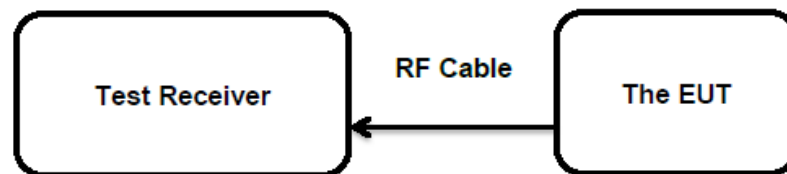


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has PIFA Antenna, permanent attachment and no consideration of replacement, refer to section 3.2 for details.

Therefore, the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 16 von 28
Page 16 of 28

5.1.2 Maximum Peak Conducted Output Power

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(b)(1)&(3)
Basic standard	: ANSI C63.10:2020
Limits	: FHSS < 0.125 Watts, DSSS < 1.0 Watts
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: B, C, D
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For details refer to following test result.

Table 8: Test Result of Maximum Peak Conducted Output Power, BR & EDR

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
GFSK (BR)	2402.0	12.10	0.0162	< 0.125
	2441.0	11.83	0.0152	
	2480.0	11.86	0.0153	
8DPSK (EDR)	2402.0	12.04	0.0160	
	2441.0	11.71	0.0148	
	2480.0	11.80	0.0151	
Maximum Measured Value		12.10	0.0162	

Table 9: Test Result of Maximum Peak Conducted Output Power, Bluetooth LE

Test Mode	Data Rate	Test Channel (MHz)	Measured Peak Power		Limit (W)
			(dBm)	(W)	
Bluetooth LE	1 Mbps	2402	12.23	0.0167	< 1.0
		2440	11.89	0.0155	
		2480	11.94	0.0156	
Max. Measured Value			12.23	0.0167	

Table 10: Test Result of Maximum Peak Conducted Output Power, 2.4GHz SRD

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
2.4GHz SRD	2402.0	12.09	0.0162	< 1.0
	2440.0	11.82	0.0152	
	2480.0	11.90	0.0155	
Maximum Measured Value		12.09	0.0162	

Note:

- 1) The cable loss is taken into account in results.
- 2) Antenna gain(G): 0.6 dBi for Bluetooth & 2.4G SRD

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:Seite 18 von 28
Page 18 of 28

5.1.3 Conducted Power Spectral Density

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(e)
Basic standard	: ANSI C63.10:2020
Limits	: < 8 dBm / 3kHz
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: B, D
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B, C.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:Seite 19 von 28
Page 19 of 28

5.1.4 6dB Bandwidth

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(a)(2)
Basic standard	: ANSI C63.10:2020
Limits	: > 500 kHz
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: B, D
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B, C.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 20 von 28
Page 20 of 28

5.1.5 99% Bandwidth

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(a)
Basic standard	: ANSI C63.10:2020
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: A, B, D
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A, B, C.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 21 von 28
Page 21 of 28

5.1.6 20dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
Basic standard : ANSI C63.10:2020
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-12-02 to 2025-12-08
Input voltage : Battery operated (3.8Vdc)
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 24.8 °C
Relative humidity : 55 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 22 von 28
Page 22 of 28

5.1.7 Carrier Frequency Separation

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(a)(1)
Basic standard	: ANSI C63.10:2020
Limits	: $\geq 25\text{kHz}$ or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: C
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 23 von 28
Page 23 of 28

5.1.8 Number of Hopping Frequency

RESULT:

Pass

Test Specification

Test standard	: FCC part 15.247(a)(1)(iii)
Basic standard	: ANSI C63.10:2020
Limits	: ≥ 15 non-overlapping channels
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: C
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:

Seite 24 von 28
Page 24 of 28

5.1.9 Time of Occupancy

RESULT:

Pass

Test Specification

Test standard	: FCC part 15.247(a)(1)(iii)
Basic standard	: ANSI C63.10:2020
Limits	: < 0.4s
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: C
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:Seite 25 von 28
Page 25 of 28

5.1.10 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(d)
Basic standard	: ANSI C63.10:2020
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-02 to 2025-12-08
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: A, B, C, D
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to test plots, and compliance is achieved as well.

For the measurement records, refer to the appendix A, B, C.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:Seite 26 von 28
Page 26 of 28

5.1.11 Radiated Spurious Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(d) & FCC Part 15.205
Basic standard	: ANSI C63.10:2020
Limits	: Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2025-12-04 to 2025-12-05
Input voltage	: Battery operated (3.8Vdc)
Operation mode	: A, B, D
Test channel	: Low / Middle / High
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix A, B, C.

Prüfbericht - Nr.: CN25CZTX 003
Test Report No.:Seite 27 von 28
Page 27 of 28**5.1.12 Conducted Emission on AC Mains****RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.207(a)
Basic standard	: ANSI C63.10:2020
Frequency range	: 0.15 – 30MHz
Classification	: Class B
Limits	: FCC Part 15.207(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-12-08
Input voltage	: AC 120V, 60Hz
Operation mode	: E
Ambient temperature	: 24.3 °C
Relative humidity	: 51.5 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A, B, C.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix D.

7 List of Tables

Table 1: List of Test and Measurement Equipment.....	6
Table 2: Measurement Uncertainty.....	7
Table 3: Technical Specification of EUT.....	9
Table 4: RF Channel and Frequency of Bluetooth BR & EDR	10
Table 5: RF Channel and Frequency of Bluetooth LE.....	10
Table 6: RF Channel and Frequency of 2.4GHz SRD.....	11
Table 7: List of Accessories and Auxiliary Equipment.....	12
Table 8: Test Result of Maximum Peak Conducted Output Power, BR & EDR.....	17
Table 9: Test Result of Maximum Peak Conducted Output Power, Bluetooth LE	17
Table 10: Test Result of Maximum Peak Conducted Output Power, 2.4GHz SRD	17