Prüfbericht-Nr.: *Test report no.*:	**CN23ZLNY 001**	**Auftrags-Nr.:** *Order no.*:	**168451684**	Seite 1 von 25 *Page 1 of 25*
Kunden-Referenz-Nr.: *Client reference no.*:	N/A	**Auftragsdatum:** *Order date:*	2023-11-03	
Auftraggeber: *Client*:	**Hui Zhou Gaoshengda Technology Co.,LTD** No.2, Jin-da Road, Huinan High-tech Industrial Park, Hui-ao Avenue, Huizhou City, Guangdong, China			
Prüfgegenstand: *Test item*:	WIFI+BT Module			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	WXT5EM2511 (Trademark: GSD)			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification*:	CFR47 FCC Part 15: Subpart C Section 15.247 RSS-247 Issue 3 August 2023 RSS-Gen Issue 5 February 2021			

Wareneingangsdatum: *Date of sample receipt*:	2023-11-17	Please refer to Photo Document
Prüfmuster-Nr.: *Test sample no:*	A003594964-001~005	
Prüfzeitraum: *Testing period*:	2023-11-20 - 2023-12-16	
Ort der Prüfung: *Place of testing*:	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüfergebnis*: *Test result**:	Pass	

geprüft von: tested by:	X Breeze Jiang Signed by: Breeze Jiang	**genehmigt von:** *authorized by*:	X Bell Hu Signed by: Bell Hu
Datum: *Date:* 2024-01-25		**Ausstellungsdatum:** *Issue date:* 2024-01-25	
Stellung / Position:	Sachverständige(r)/Expert	**Stellung** / Position:	Sachverständige(r)/Expert

Sonstiges / *Other*:
FCC ID: 2AC23-WXT5E
IC :12290A-WXT5E
HVIN:V1.0

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*: Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* 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*

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. *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.*
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4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, 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 bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. 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 115:2021, 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.

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

Contents

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 mode

Appendix B: Test Results of Bluetooth LE

Appendix C: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.
No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China.

FCC Accreditation Designation 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. until**
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2024-09-21
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2024-09-21
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2024-09-21
DC power supply	Keysight	E3642A	MY61276100	2024-09-21
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2024-09-21
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2024-09-21
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
Unwanted Emission Testing (TS9975)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. until**
EMI Test Receiver	R&S	ESR 7	102021	2024-07-25
Signal Analyzer	R&S	FSV 40	101439	2024-07-25
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2024-07-25
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2024-07-25
Amplifier	R&S	SCU-18F	180070	2024-07-25
Amplifier	R&S	SCU40A	100475	2024-07-25
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2024-08-06
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2024-08-06
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-08-27

Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2024-08-06
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22

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 basics 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 (k=2)
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

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B & C 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.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. 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 WIFI+BT Module, which supports Bluetooth (dual mode), 2.4G Wi-Fi and 5G Wi-Fi 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:	WIFI+BT Module
Type Designation:	WXT5EM2511
Trademark:	GSD
FCC ID:	2AC23-WXT5E
IC:	12290A-WXT5E
HVIN:	V1.0
Operating Voltage:	DC 5V
Technical Specification of Bluetooth (dual mode)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, π/4-DQPSK, 8DPSK
Channel Number:	BR & EDR mode:79 channels, Low Energy mode:40 channels
Channel Separation:	BR & EDR mode:1MHz, Low Energy mode:2MHz
Data Rate:	BR & EDR mode:(1Mbps, 3Mbps) Low Energy mode: (1Mbps, 2Mbps)
Antenna Type:	PIFA Antenna
Antenna Number:	1
Antenna Gain:	1.72 dBi (Provided by the Client)
Technical Specification of Wi-Fi 802.11 b/g/n/ax	
Operating Frequency:	2412 - 2462MHz for 802.11b/g/n(HT20)/ax20(HE20) 2422 - 2452MHz for 802.11n(HT40)/ax40(HE40)
Type of Modulation:	DSSS(DBPSK/DQPSK/CCK) OFDMA(BPSK/QPSK/16QAM/64QAM/256QAM)
Data Rate:	1/2/5.5/11 Mbps for 802.11b 6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n MCS0 ~ MCS9 for 802.11ax
Channel Number:	11 channels for 802.11b/g/n(HT20)/ax20(HE20) 7 channels for 802.11n(HT40)/ax40(HE40)
Channel Separation:	5 MHz
Antenna Type:	ANT1:PCB，ANT2:PIFA
Antenna Number:	1Tx1Rx for SISO mode, 2Tx2Rx for MIMO mode
Antenna Gain:	1.36 dBi for ANT1, 1.72 dBi for ANT2 (Provided by the Client)

Technical Specification of Wi-Fi 802.11 a/n/ac/ax	
Operating Frequency:	5180-5320MHz, 5500-5720MHz, 5745-5825MHz
Operating Mode	802.11 a/n20/n40/ac20/ac40/ac80/ax20/ax40/ax80
Type of Modulation:	OFDM(BPSK/QPSK/16QAM/64QAM/256QAM)
Channel Number:	5180-5320MHz, 14CHs 5500-5700MHz, 13CHs 5745-5825MHz, 8CHs
Channel Separation:	20 MHz, 40MHz, 80MHz
Antenna Type:	ANT1:PCB， ANT2:PIFA
Antenna Number:	1Tx1Rx for SISO mode, 2Tx2Rx for MIMO mode
Antenna Gain:	2.17 dBi for ANT1, 2.57 dBi for ANT2 (Provided by the Client)

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 BLE

3.3 Independent Operation Modes

The basic operation modes are:

A. On, Bluetooth transmitting mode (BR & EDR mode)
    1) Low Channel
    2) Middle Channel
    3) High Channel

B. On, Bluetooth transmitting mode (BLE)
    1) Low Channel
    2) Middle Channel
    3) High Channel

C. On, Transmitting on Hopping channel

D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

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

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: 2013.

According to clause 3.1, all tests were performed on model WXT5EM2511 in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 6: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
DC power Supply	Topward	3303D	809332	0-30 Volts, 0-3 Amps
Laptop	Lenovo	T480	PF-16A6N8	N/A

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)

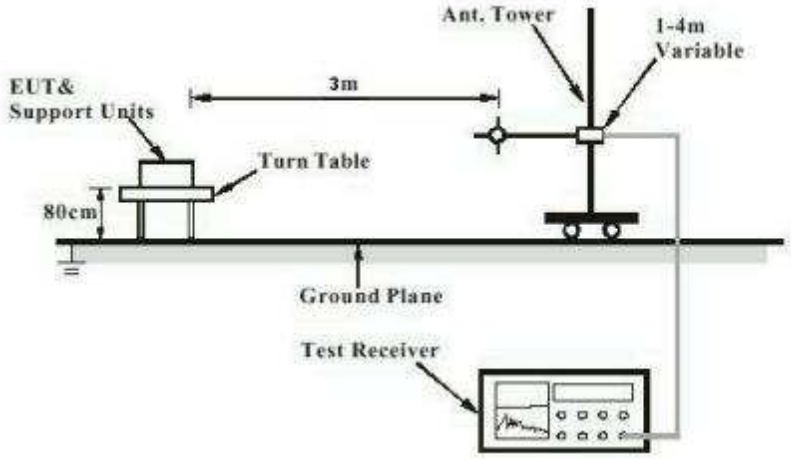


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

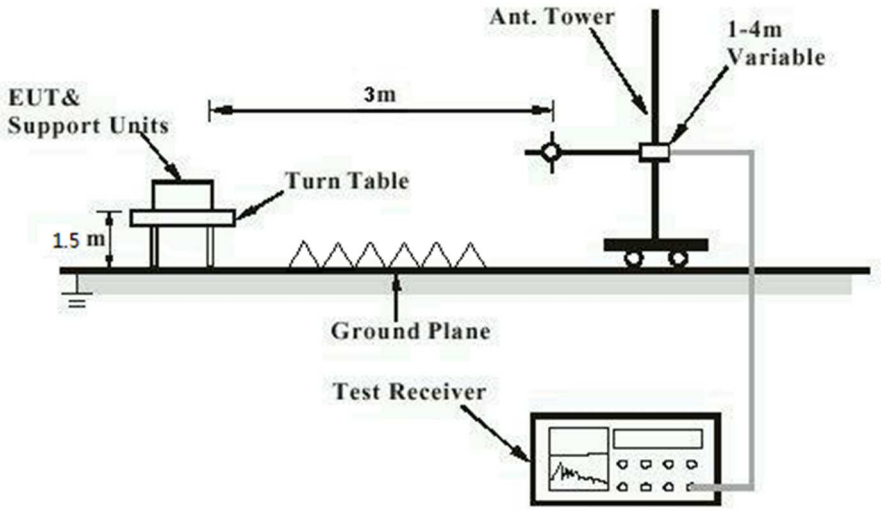
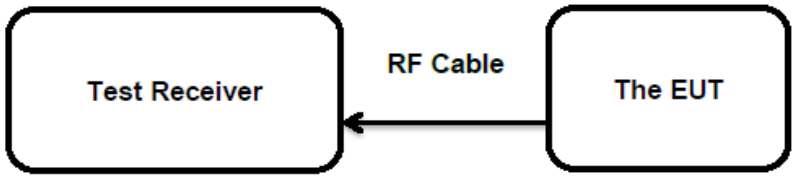


Diagram of Measurement Configuration for Conducted Transmitter Measurement



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
RSS-Gen Clause 6.8

According to the manufacturer declared, the EUT has a PIFA Antenna, the directional gain of antenna is 1.72 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement.

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

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(b)(1)&(3) RSS-247 Clause 5.4(b)&(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	FHSS < 0.125 Watts, DSSS < 1.0 Watts
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 7: Test Result of Maximum Peak Conducted Output Power, Bluetooth BR & EDR

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
GFSK (BR)	2402.0	6.88	0.0049	< 0.125
	2441.0	6.85	0.0048	
	2480.0	6.92	0.0049	
Maximum Measured Value		6.92	0.0049	
Test Mode	**Test Channel (MHz)**	**Measured Peak Power**		**Limit (W)**
		(dBm)	**(W)**	
8DPSK (EDR)	2402.0	9.43	0.0088	< 0.125
	2441.0	9.15	0.0082	
	2480.0	9.42	0.0087	
Maximum Measured Value		9.43	0.0088	
Max. e.i.r.p=9.43dBm+1.72dBi=11.15dBm, which is less than 36dBm=4W.				

Table 8: Test Result of Maximum Peak Conducted Output Power, Bluetooth LE

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
Bluetooth LE (1 Mbps)	2402	6.00	0.0040	< 1.0
	2440	6.00	0.0040	
	2480	6.01	0.0040	
Max. Measured Value		6.01	0.0040	
Test Mode	**Test Channel (MHz)**	**Measured Peak Power**		**Limit (W)**
		(dBm)	**(W)**	
Bluetooth LE (2 Mbps)	2402	6.00	0.0040	< 1.0
	2440	5.99	0.0040	
	2480	5.97	0.0040	
Max. Measured Value		6.00	0.0040	
Max. e.i.r.p=6.01dBm+1.72dBi=7.73dBm, which is less than 36dBm=4W.				

Note:

1) The cable loss is taken into account in results.
2) Antenna gain(G) of Bluetooth: 1.72 dBi

5.1.3 Conducted Power Spectral Density

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(e) RSS-247 Clause 5.2(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 8 dBm / 3kHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.4 6dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(2) RSS-247 Clause 5.2(a)
Basic standard	:	ANSI C63.10: 2013
Limits	:	> 500 KHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.5 99% Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a) RSS-Gen Clause 6.7
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

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

5.1.6 20dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(a)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.7 Carrier Frequency Separation

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	C
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.8 Number of Hopping Frequency

RESULT: **Pass**

Test Specification

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	C
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.9 Time of Occupancy

RESULT: **Pass**

Test Specification

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 0.4s
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	C
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.10 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	:	ANSI C63.10: 2013
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	:	2023-11-20 to 2023-12-07
Input voltage	:	DC 5V
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	25.3 ℃
Relative humidity	:	35 %
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.

5.1.11 Radiated Spurious Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Section 8.9 & 8.10
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	2023-12-14 to 2023-12-16
Input voltage	:	DC 5V
Operation mode	:	A, B
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.

6 Photographs of the Test Set-Up

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

7 List of Tables