

Prüfbericht-Nr.: <i>Test report no.:</i>	CN24Y22K 002	Auftrags-Nr.: <i>Order no.:</i>	168501980	Seite 1 von 25 Page 1 of 25
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2024-08-30	
Auftraggeber: <i>Client:</i>	Yanfeng Visteon(Chongqing) Automotive Electronics Co., Ltd No.8, Gang'an 2nd Road, Jiangbei District, Chongqing, P.R.China			
Prüfgegenstand: <i>Test item:</i>	MOD INFOTAINMENT SYS			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	U718/CDC1006A			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2024-09-02	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	10A8XEDX000056 10A8XEDX000053			
Prüfzeitraum: <i>Testing period:</i>	2024-09-14 - 2024-10-11			
Ort der Prüfung: <i>Place of testing:</i>	Dongguan NTC Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	<u>X Breeze Jiang</u>	genehmigt von: <i>authorized by:</i>	<u>X Lin Lin</u>	
Datum: <i>Date:</i>	2024-11-11 <small>Signed by: Breeze Jiang</small>	Ausstellungsdatum: <i>Issue date:</i>	2024-11-11 <small>Signed by: Lin Lin</small>	
Stellung / Position:	Sachverständige(r)/Expert	Stellung / Position:	Sachverständige(r)/Expert	
Sonstiges / <i>Other:</i>	FCC ID: 2BKIEU718CDC1006A This report is for Bluetooth wireless.			
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>			
<small>* Legende:</small>	<small>P(ass) = entspricht o.g. Prüfgrundlage(n)</small>	<small>F(ail) = entspricht nicht o.g. Prüfgrundlage(n)</small>	<small>N/A = nicht anwendbar</small>	<small>N/T = nicht getestet</small>
<small>* Legend:</small>	<small>P(ass) = passed a.m. test specification(s)</small>	<small>F(ail) = failed a.m. test specification(s)</small>	<small>N/A = not applicable</small>	<small>N/T = not tested</small>
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>				

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Anmerkungen
Remarks

- | | |
|---|--|
| 1 | <p>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.</p> <p><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></p> |
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Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p> |
| 4 | <p>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 115:2021, 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 bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</p> <p><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 115:2021, 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.</i></p> |

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*

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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 (Module A)

Appendix B: Test Results of Bluetooth BR & EDR (Module B)

Appendix C: Test Results of Bluetooth Low Energy

Appendix D: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

Dongguan NTC Co., Ltd.

Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, China

A2LA Certificate Registration Number: 4429.01

FCC Registration Number: 907417

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI7	100837	Mar. 12, 2024	1 Year
2.	Antenna	Schwarzbeck	VULB9162	9162-010	Mar. 23, 2024	2 Year
3.	Spectrum Analyzer	Keysight	N9020A	MY54200831	Mar. 12, 2024	1 Year
4.	Spectrum Analyzer	Keysight	N9010B	MY62170254	Aug. 07, 2024	1 Year
5.	Signal Generator	Agilent	E4421B	MY41000708	Mar. 12, 2024	1 Year
6.	Signal Generator	Agilent	N5182A	MY47071034	Mar. 12, 2024	1 Year
7.	Power Sensor	DARE	RPR3006W	15I00041SNO64	Mar. 12, 2024	1 Year
8.	Power Sensor	DARE	RPR3006W	15I00041SNO88	Mar. 12, 2024	1 Year
9.	Communication Tester	Rohde & Schwarz	CMW500	149004	Mar. 12, 2024	1 Year
10.	Horn Antenna	COM-Power	AH-118	071078	Mar. 23, 2024	2 Year
11.	Horn Antenna	COM-Power	AH-840	10100020	Mar. 23, 2024	2 Year
12.	Pre-Amplifier	HP	HP 8449B	3008A00964	Mar. 12, 2024	1 Year
13.	Pre-Amplifier	HP	HP 8447D	1145A00203	Mar. 12, 2024	1 Year
14.	Temperature & Humidity Chamber	Wanshun	SS-HWHS-80	N/A	Mar. 12, 2024	1 Year
15.	Loop Antenna	Schwarzbeck	FMZB 1513	1513-272	Mar. 23, 2024	2 Year
16.	DC Source	Maynuo	MY8811	N/A	Mar. 12, 2024	1 Year
17.	Temporary antenna connector	TESCOM	SS402	N/A	N/A	N/A
18.	Chamber	SAEMC	9*7*7m	N/A	Apr. 21, 2023	2 Year
19.	Test Software	EZ	EZ_EMG, NTC-3A1.1	N/A	N/A	N/A
20.	Test Software	MWRF	MTS 8310, V2.0.0.0	N/A	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
Radio Frequency	$\pm 0.8 \times 10^{-7}$
RF Power (conducted)	± 1.08 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	± 5.22 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	± 5.22 dB
Temperature	± 0.8 °C
Humidity	± 3.2 %
Voltage (DC)	± 0.5 %
Voltage (AC, <10kHz)	± 0.4 %

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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.

2.7 Status of Facility Used for Testing

The Dongguan NTC Co., Ltd. Test facility located at Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, 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 MOD INFOTAINMENT SYS intended to be assembled into automotive environment, which supports Bluetooth (dual mode), 2.4GHz Wi-Fi and 5GHz Wi-Fi functions.

The EUT contains two wireless modules, details as below table:

Wireless Module	Functions
Module A (8311)	Classic BR, EDR
Module B (QCA6595)	Classic BR, EDR, BLE (1Mbps, 2Mbps), 2.4G Wi-Fi, 5.2G/5.8G Wi-Fi

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:	MOD INFOTAINMENT SYS
Type Designation:	U718/CDC1006A
FCC ID:	2BKIEU718CDC1006A
Operating Voltage:	DC 9-16V
Testing Voltage:	DC 12V
Operating Temperature Range:	-40 °C ~ +75 °C
Radiofrequency operating mode:	Bluetooth: Classic BR, EDR + BLE (1Mbps, 2Mbps) 2.4G Wi-Fi: 802.11 b/g/n20/n40 5.2G/5.8G Wi-Fi: 802.11 a/n20/n40/ac20/ac40/ac80
Technical Specification of Classic Bluetooth (Module A)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Channel Number:	79 channels
Channel Separation:	1MHz
Data Rate:	1Mbps, 2Mbps, 3Mbps
Antenna Type:	PCB Layout Antenna
Antenna Gain:	3.99 dBi (Provided by the Client)
Technical Specification of Bluetooth dual mode (Module B)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, $\pi/4$ -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, 2Mbps, 3Mbps Low Energy mode:1Mbps, 2Mbps
Antenna Type:	PCB Layout Antenna
Antenna Gain:	-0.1 dBi for ANT1 (Provided by the Client) Note: only the Max. Gain antenna test.

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

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 (Bluetooth LE mode)
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- C. On, Transmitting on Hopping channel
- D. On, Co-location radiated spurious emission (Module A with Module B)
- E. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Operation Description
- PCB Layout
- User Manual
- Block Diagram
- 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: 2013.

According to clause 3.1, all tests were performed on model U718/CDC1006A in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 6: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N
PC	Dell	Vostro 3400	H3K2XA01
Display Screen	Ford	RL7T-18B955-DE	24060 0007

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)

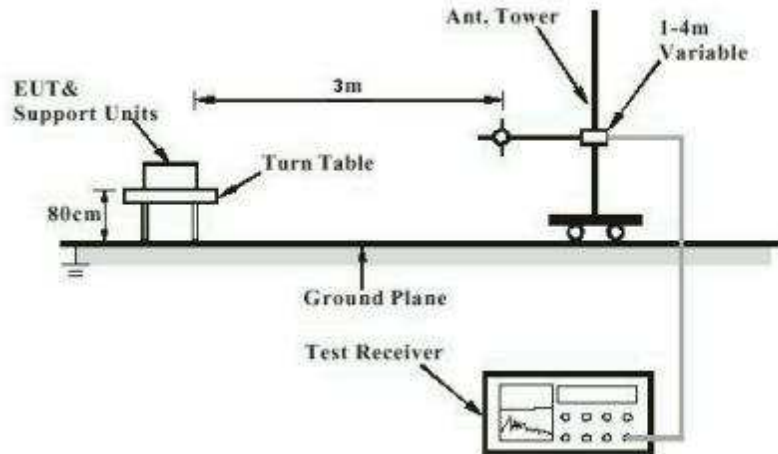


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

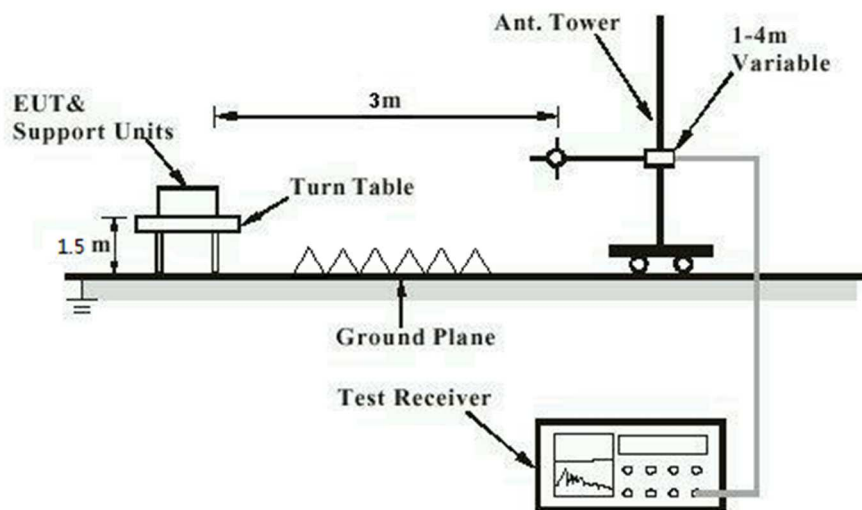
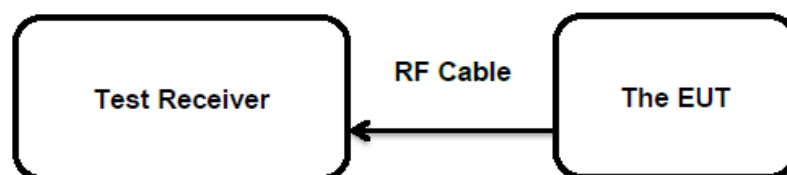


Diagram of Measurement Configuration for Conducted Transmitter Measurement



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

According to the manufacturer declared, the EUT has two PCB Layout Antennas, the directional gain of antenna is 3.99dBi for Classic Bluetooth(Module A) and 0.1dBi Max. for Bluetooth dual mode(Module B), 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)
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	: 2024-09-14 to 2024-09-18
Input voltage	: DC 12V
Operation mode	: A, B
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 46 %
Atmospheric pressure	: 100 kPa

For details refer to following test result.

Table 7: Test Result of Maximum Peak Power, Bluetooth BR & EDR (Module A)

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
GFSK (BR)	2402.0	4.11	0.0026	< 0.125
	2441.0	7.22	0.0053	
	2480.0	5.31	0.0034	
8DPSK (EDR)	2402.0	3.46	0.0022	
	2441.0	6.54	0.0045	
	2480.0	4.60	0.0029	
Maximum Measured Value		7.22	0.0053	

Table 8: Test Result of Maximum Peak Power, Bluetooth BR & EDR (Module B)

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
GFSK (BR)	2402.0	5.08	0.0032	< 0.125
	2441.0	5.75	0.0038	
	2480.0	2.40	0.0017	
8DPSK (EDR)	2402.0	3.90	0.0025	
	2441.0	4.55	0.0029	
	2480.0	1.00	0.0013	
Maximum Measured Value		5.75	0.0038	

Table 9: Test Result of Maximum Peak Power, Bluetooth LE (Module B)

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
Bluetooth LE (1 Mbps)	2402	11.27	0.0134	< 1.0
	2440	12.21	0.0166	
	2480	8.20	0.0066	
Bluetooth LE (2 Mbps)	2402	13.88	0.0244	
	2440	13.79	0.0239	
	2480	9.73	0.0094	
Max. Measured Value		13.88	0.0244	

Note:

- 1) The cable loss is taken into account in results.
- 2) Antenna gain(G): 3.99dBi for Classic Bluetooth (Module A)
 0.1dBi Max. for Bluetooth dual mode (Module B)

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5.1.3 Conducted Power Spectral Density

RESULT:**Pass****Test Specification**

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

Test Setup

Date of testing : 2024-09-14 to 2024-09-18
Input voltage : DC 12V
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 46 %
Atmospheric pressure : 100 kPa

For the measurement records, refer to the appendix C.

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5.1.4 6dB Bandwidth

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(a)(2)
Basic standard : ANSI C63.10: 2013
Limits : > 500 kHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 2024-09-14 to 2024-09-18
Input voltage : DC 12V
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 46 %
Atmospheric pressure : 100 kPa

For the measurement records, refer to the appendix C.

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5.1.5 99% Bandwidth

RESULT:**Pass****Test Specification**

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

Test Setup

Date of testing : 2024-09-14 to 2024-09-18
Input voltage : DC 12V
Operation mode : A, B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 46 %
Atmospheric pressure : 100 kPa

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

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5.1.6 20dB Bandwidth

RESULT:**Pass****Test Specification**

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

Test Setup

Date of testing : 2024-09-14 to 2024-09-18
Input voltage : DC 12V
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 46 %
Atmospheric pressure : 100 kPa

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

5.1.7 Carrier Frequency Separation

RESULT:**Pass****Test Specification**

Test standard	:	FCC Part 15.247(a)(1)
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	:	2024-09-14 to 2024-09-18
Input voltage	:	DC 12V
Operation mode	:	C
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	46 %
Atmospheric pressure	:	100 kPa

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

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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: 2013
Limits : ≥ 15 non-overlapping channels
Kind of test site : Shielded Room

Test Setup

Date of testing : 2024-09-14 to 2024-09-18
Input voltage : DC 12V
Operation mode : C
Ambient temperature : 25 °C
Relative humidity : 46 %
Atmospheric pressure : 100 kPa

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

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5.1.9 Time of Occupancy

RESULT:**Pass****Test Specification**

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

Test Setup

Date of testing : 2024-09-14 to 2024-09-18
Input voltage : DC 12V
Operation mode : C
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 46 %
Atmospheric pressure : 100 kPa

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

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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: 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 : 2024-09-14 to 2024-09-18
Input voltage : DC 12V
Operation mode : A, B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 46 %
Atmospheric pressure : 100 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.

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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: 2013
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	:	2024-09-29 to 2024-10-11
Input voltage	:	DC 12V
Operation mode	:	A, B, D
Test channel	:	Low / Middle / High
Ambient temperature	:	Refer to test result
Relative humidity	:	Refer to test result
Atmospheric pressure	:	100 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.

6 Photographs of the Test Set-Up

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

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