

EMC TEST REPORT

FCC ID: 2BPI9-CX8129B

Report No. : SSP25040176-1E

Applicant : Dongguan Chenxin Electronic Technology Co., Ltd.

Product Name : Marine instruments

Model Name : CX8129B

Test Standard : FCC Part 15 Subpart B

Date of Issue : 2025-06-05







Shenzhen CCUT Quality Technology Co., Ltd.

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This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen CCUT Quality Technology Co., Ltd.

Test Report Basic Information

| | | |
|---|---|---|
| Applicant: | Dongguan Chenxin Electronic Technology Co., Ltd. Dongguan City, Houjie Town, Tongzheng Smart Park, Building B, 6th Floor, Address of Applicant.....: | China |
| Manufacturer: | Dongguan Chenxin Electronic Technology Co., Ltd. Dongguan City, Houjie Town, Tongzheng Smart Park, Building B, 6th Floor, Address of Manufacturer.....: | China |
| Product Name: | Marine instruments | |
| Brand Name: | CX | |
| Main Model: | CX8129B CX8049, CXA049, CXA029, CX8156, CX8221, CX8191, CX8307B, CX6183B, | |
| Series Models: | CX6255B | |
| Test Standard: | FCC Part 15 Subpart B ANSI C63.4-2014 | |
| Date of Test | 2025-05-10 to 2025-05-12 | |
| Test Result: | PASS | |
| Tested By |  _____ (Tate Chen) |  |
| Reviewed By: |  _____ (Lorzix Luo) | |
| Authorized Signatory: |  _____ (Lahm Peng) | |
| Note : This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen CCUT Quality Technology Co., Ltd.. All test data presented in this test report is only applicable to presented test sample. | | |

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Revision History

| Revision | Issue Date | Description | Revised By |
|----------|------------|-----------------|------------|
| V1.0 | 2025-06-05 | Initial Release | Lahm Peng |
| | | | |
| | | | |
| | | | |
| | | | |

1. General Information

1.1 Product Information

| | |
|---|--|
| Product Name: | Marine instruments |
| Trade Name: | CX |
| Main Model: | CX8129B |
| Series Models: | CX8049, CXA049, CXA029, CX8156, CX8221, CX8191, CX8307B, CX6183B, CX6255B |
| Class of Equipment: | <input type="checkbox"/> Class A <input checked="" type="checkbox"/> Class B |
| Highest Internal Frequency: | <108MHz |
| Rated Voltage: | DC 9~32V |
| Note 1: The test data is gathered from a production sample, provided by the manufacturer. | |
| Note 2: The color of appearance and model name of series models listed are different from the main model, but the circuit and the electronic construction are the same, declared by the manufacturer. | |

1.2 Test Setup Information

| | | | |
|---|--------------|---------------------|----------------------|
| List of Test Modes | | | |
| Test Mode | Description | Remark | |
| TM1 | Working | DC 12V | |
| List and Details of Auxiliary Cable | | | |
| Description | Length (cm) | Shielded/Unshielded | With/Without Ferrite |
| - | - | - | - |
| - | - | - | - |
| List and Details of Auxiliary Equipment | | | |
| Description | Manufacturer | Model | Serial Number |
| - | - | - | - |
| - | - | - | - |
| The equipment under test (EUT) was configured to measure its highest possible emission and immunity level. The test modes were adapted according to the operation manual for use. | | | |

1.3 Compliance Standards

| Compliance Standards | |
|---|--|
| FCC Part 15 Subpart B | FEDERAL COMMUNICATIONS COMMISSION, RADIO FREQUENCY DEVICES, Unintentional Radiators |
| All measurements contained in this report were conducted with all above standards | |
| According to standards for test methodology | |
| FCC Part 15 Subpart B | FEDERAL COMMUNICATIONS COMMISSION, RADIO FREQUENCY DEVICES, Unintentional Radiators |
| ANSI C63.4-2014 | American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. |
| Maintenance of compliance is the responsibility of the manufacturer or applicant. Any modification of the product, which result is lowering the emission, should be checked to ensure compliance has been maintained. | |

1.4 Test Facilities

| | |
|--|---|
| Laboratory Name: | Shenzhen CCUT Quality Technology Co., Ltd. 1F, Building 35, Changxing Technology Industrial Park, Yutang Street, Guangming District, Shenzhen, Guangdong, China |
| CNAS Laboratory No.: | L18863 |
| A2LA Certificate No.: | 6893.01 |
| FCC Registration No: | 583813 |
| ISED Registration No.: | CN0164 |
| All measurement facilities used to collect the measurement data are located at 1F, Building 35, Changxing Technology Industrial Park, Yutang Street, Guangming District, Shenzhen, Guangdong, China. | |

1.5 Measurement Uncertainty

| Test Item | Conditions | Uncertainty |
|-----------------------|--------------|-------------|
| Conducted Disturbance | 9kHz ~30MHz | ±1.64 dB |
| Radiated Disturbance | 30MHz ~ 1GHz | ±3.32 dB |
| Radiated Disturbance | 1GHz ~ 18GHz | ±3.50 dB |

1.6 List of Test and Measurement Instruments

| Description | Manufacturer | Model | Serial Number | Cal. Date | Due. Date |
|----------------------------|---------------|----------------|---------------|------------|------------|
| Conducted Emissions | | | | | |
| AMN | ROHDE&SCHWARZ | ENV216 | 101097 | 2024-08-07 | 2025-08-06 |
| EMI Test Receiver | ROHDE&SCHWARZ | ESPI | 100242 | 2024-08-07 | 2025-08-06 |
| EMI Test Software | FARA | EZ-EMC | EMEC-3A1+ | N/A | N/A |
| Radiated Emissions | | | | | |
| EMI Test Receiver | ROHDE&SCHWARZ | ESPI | 100154 | 2024-08-07 | 2025-08-06 |
| Spectrum Analyzer | KEYSIGHT | N9020A | MY48030972 | 2024-08-07 | 2025-08-06 |
| Amplifier | SCHWARZBECK | BBV 9743B | 00251 | 2024-08-07 | 2025-08-06 |
| Amplifier | HUABO | YXL0518-2.5-45 | -- | 2024-08-07 | 2025-08-06 |
| Loop Antenna | DAZE | ZN30900C | 21104 | 2024-08-03 | 2025-08-02 |
| Broadband Antenna | SCHWARZBECK | VULB 9168 | 01320 | 2024-08-03 | 2025-08-02 |
| Horn Antenna | SCHWARZBECK | BBHA 9120D | 02553 | 2024-08-03 | 2025-08-02 |
| EMI Test Software | FARA | EZ-EMC | FA-03A2 RE+ | N/A | N/A |

2. Summary of Test Results

| FCC Rule | Description of Test Item | Result |
|--|--------------------------|--------|
| FCC Part 15.107 | Conducted Emissions | N/A |
| FCC Part 15.109 | Radiated Emissions | Passed |
| Passed: The EUT complies with the essential requirements in the standard Failed: The EUT does not comply with the essential requirements in the standard N/A: Not applicable | | |

3. Radiated Disturbance

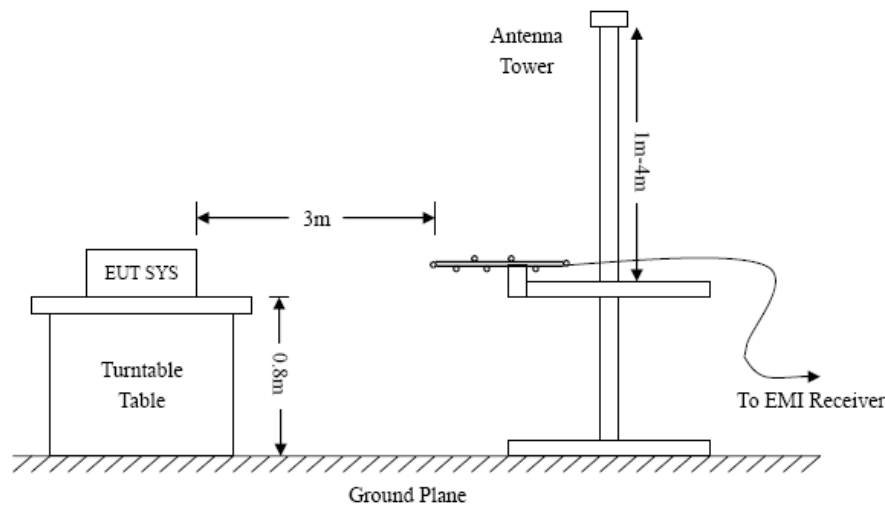
3.1 Standard and Limit

According to the rule FCC Part 15.109, Radiated emission limit for a class A and class B device as below:

| Frequency of Emission (MHz) | Class A (3m) | Class B (3m) |
|---|---------------------|---------------------|
| | Quasi-peak (dBuV/m) | Quasi-peak (dBuV/m) |
| 30-88 | 50 | 40 |
| 88-216 | 54.0 | 43.5 |
| 216-960 | 57.0 | 46 |
| Above 960 | 60 | 54 |
| Note: The more stringent limit applies at transition frequencies. | | |

3.2 Test Procedure

Test is conducting under the description of ANSI C63.4-2014 American National Standard for Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.



Test Setup Block Diagram

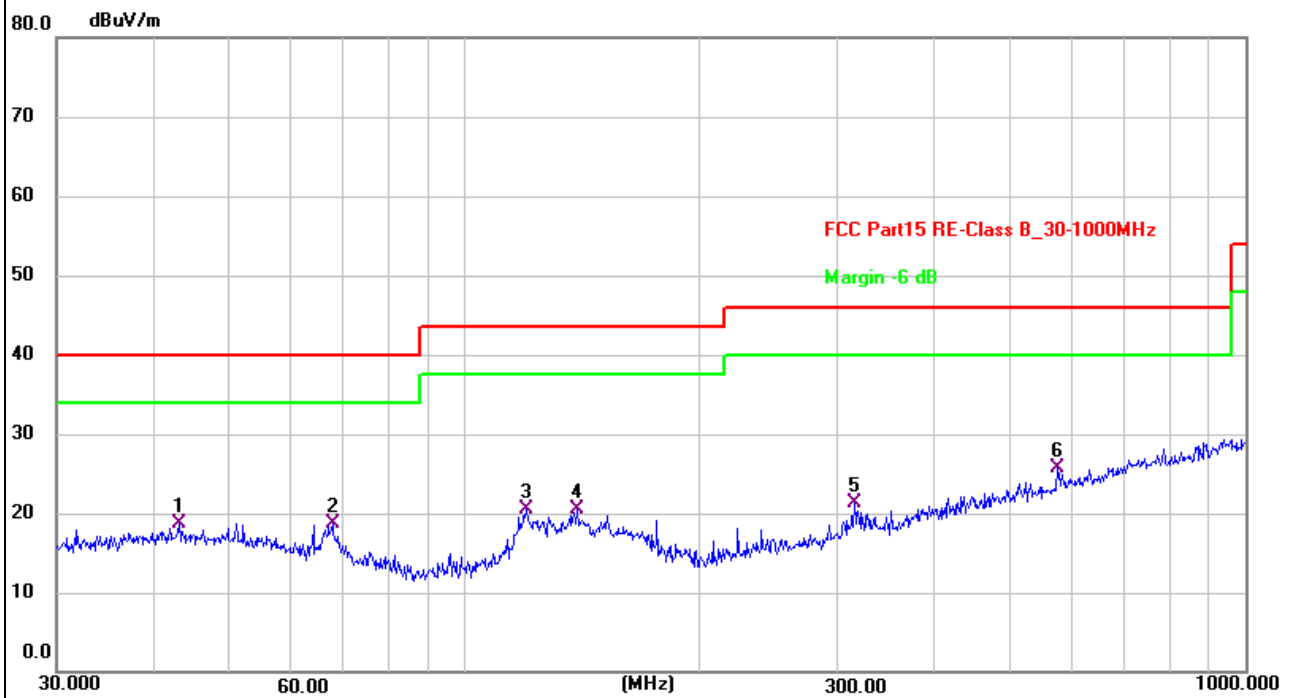
3.3 Test Data and Results

Based on all tested data, the EUT complied with the FCC Part 15.109 standard limit for a Class B device, and with the worst case as below:

Remark: Level = Reading + Factor, Margin = Level - Limit

Test Plots and Data of Radiated Emissions

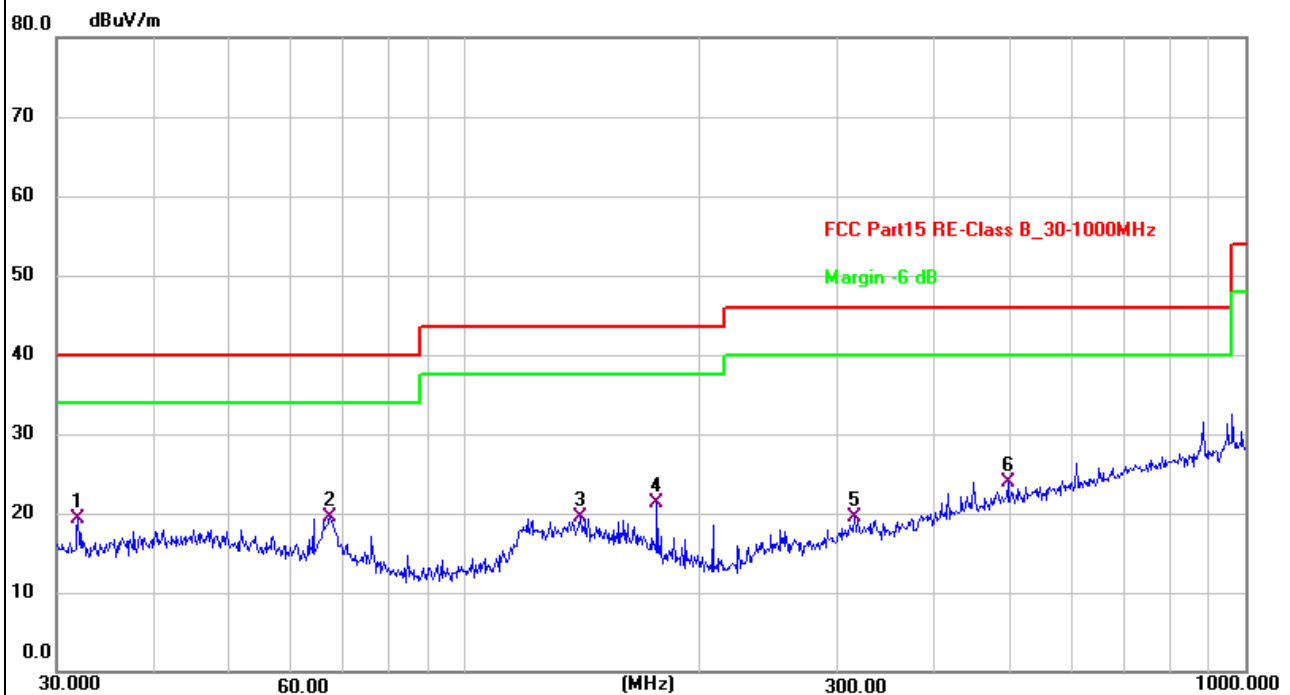
| | |
|----------------------------|------------|
| Tested Model: | CX8129B |
| Tested Mode: | TM1 |
| Test Voltage: | DC 12V |
| Test Antenna Polarization: | Horizontal |
| Remark: | |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1 | 43.0505 | 26.94 | -8.28 | 18.66 | 40.00 | -21.34 | QP | 200 | 17 | P | |
| 2 | 67.6751 | 29.94 | -11.30 | 18.64 | 40.00 | -21.36 | QP | 200 | 347 | P | |
| 3 | 119.8556 | 30.23 | -9.76 | 20.47 | 43.50 | -23.03 | QP | 200 | 27 | P | |
| 4 | 139.3613 | 28.81 | -8.26 | 20.55 | 43.50 | -22.95 | QP | 200 | 235 | P | |
| 5 | 315.4808 | 28.81 | -7.43 | 21.38 | 46.00 | -24.62 | QP | 200 | 347 | P | |
| 6 * | 574.6258 | 27.83 | -2.19 | 25.64 | 46.00 | -20.36 | QP | 200 | 89 | P | |

Test Plots and Data of Radiated Emissions

| | |
|----------------------------|----------|
| Tested Model: | CX8129B |
| Tested Mode: | TM1 |
| Test Voltage: | DC 12V |
| Test Antenna Polarization: | Vertical |
| Remark: | |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1 | 31.9546 | 28.33 | -8.97 | 19.36 | 40.00 | -20.64 | QP | 100 | 49 | P | |
| 2 * | 67.2022 | 30.75 | -11.21 | 19.54 | 40.00 | -20.46 | QP | 100 | 80 | P | |
| 3 | 140.3421 | 27.73 | -8.21 | 19.52 | 43.50 | -23.98 | QP | 100 | 348 | P | |
| 4 | 176.2686 | 31.19 | -9.88 | 21.31 | 43.50 | -22.19 | QP | 100 | 80 | P | |
| 5 | 315.4808 | 26.96 | -7.43 | 19.53 | 46.00 | -26.47 | QP | 100 | 0 | P | |
| 6 | 495.9344 | 27.37 | -3.37 | 24.00 | 46.00 | -22.00 | QP | 100 | 28 | P | |

Other emissions are attenuated 20dB below the limits from 9kHz to 30MHz, so it does not recorded in report.

***** END OF REPORT *****