



# FCC PART 18 TEST REPORT

For

## Continental Conair Limited

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Hong Kong

**FCC ID:U43WIH200**

<b>Report Type:</b> Class II Permissive Change	<b>Product Type:</b> Commercial Induction Range
<b>Report Number:</b> SZ2210430-14854E-EM-00	
<b>Report Date:</b> 2021-06-21	
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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Product	Commercial Induction Range
Tested Model	WIH200
Multiple Model	WIH200#####
Model Differences	Refer to the DoS letter
Voltage Range	AC 120V/60Hz
Highest operating frequency	28kHz
Date of Test	2021-06-16 to 2021-06-18
Sample serial number	SZ2210430-14854E-EM-S_4KM ( Assigned by Shenzhen BACL)
Received date	2021-04-30
Sample/EUT Status	Good condition

### Objective

This report is in accordance with Part 2-Subpart J, and Part 18-Subparts A, B and C of the Federal Communication Commissions rules and regulations.

The objective of the manufacturer is to determine compliance with FCC Part 18 limits.

This is a CIIPC application of the device; the differences between the original device and the current one are as follows:

- (1) Change the chip.

Based on above difference listed, the modifications will impact all test data, so in this report, all the test items were performed.

### Test Methodology

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All measurements were performed at Bay Area Compliance Laboratory Corporation. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

### Measurement Uncertainty

Parameter		uncertainty
Conducted Emissions		±1.95dB
Radiated Emissions	Below 1GHz	±4.75dB
	Above 1GHz	±4.88dB

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

## **Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West), 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

**OPERATING CONDITION/TEST CONFIGURATION**

**Justification**

The EUT was operated at maximum (continuous) RF output power. The loads consisted of water in a Boiler in the amounts specified in the test procedure.

**EUT Exercise Software**

No exercise software was used.

**Special Accessories**

No special accessory was used.

**Equipment Modifications**

No modifications were made to the EUT tested.

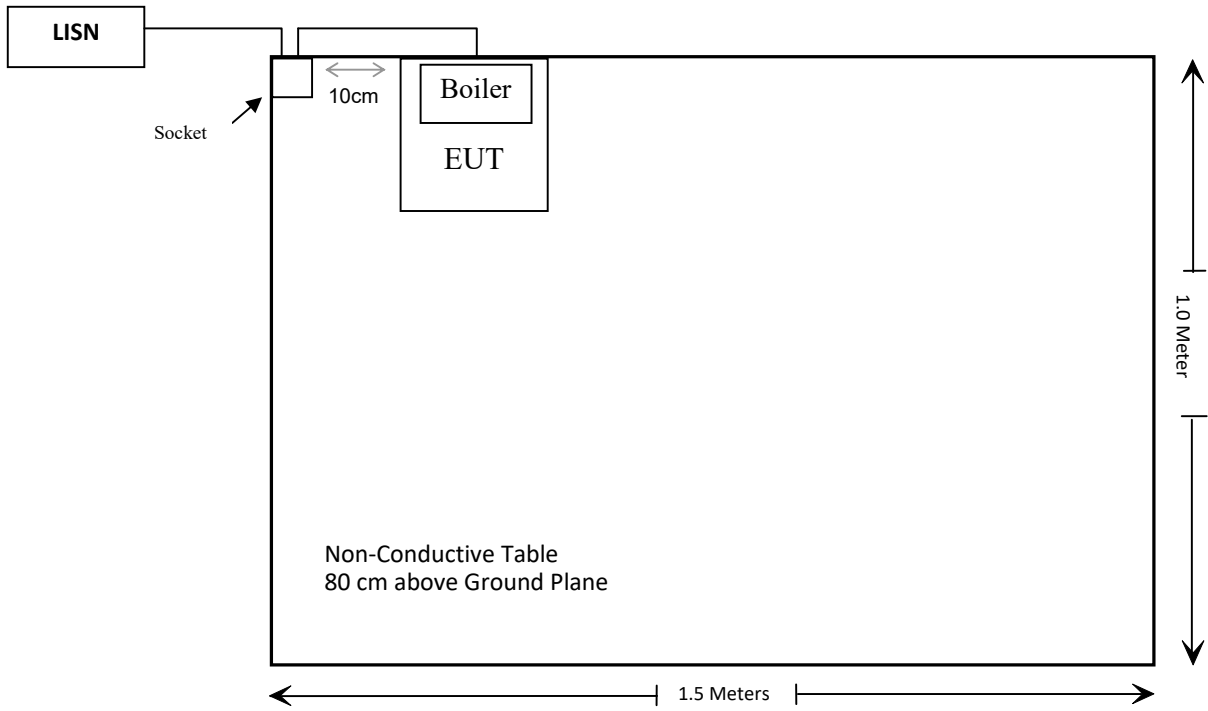
**Support Equipment List and Details**

Manufacturer	Description	Model	Serial Number
OUKE	Boiler	Unknown	Unknown

**External Cable List and Details**

Cable Description	Length (m)	From/Port	To
Unshielded Un-detachable AC cable	1.0	LISN	Socket
Unshielded Un-detachable AC cable	1.0	Socket	EUT

### Block Diagram of Test Setup



## SUMMARY OF TEST RESULT

FCC Rules	Description of Test	Results
§18.307	AC Line Conducted Emissions	Compliance
§18.305	Field Strength	Compliance

**TEST EQUIPMENT LIST**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>CONDUCTED EMISSIONS</b>					
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2020/08/04	2021/08/03
Rohde & Schwarz	LISN	ENV216	101613	2020/08/04	2021/08/03
Rohde & Schwarz	Transient Limitor	ESH3Z2	DE25985	2020/11/29	2021/11/28
Unknown	CE Cable	CE Cable	UF A210B-1-0720-504504	2020/11/29	2021/11/28
Rohde & Schwarz	CE Test software	EMC 32	V8.53.0	NCR	NCR
<b>FIELD STRENGTH</b>					
R&S	EMI Test Receiver	ESR3	102455	2020/08/04	2021/08/03
Sonoma instrument	Pre-amplifier	310 N	186238	2020/08/04	2021/08/03
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2020/12/22	2023/12/21
ETS	Passive Loop Antenna	6512	29604	2018/07/14	2021/07/13
Unknown	Cable	Chamber Cable 1	F-03-EM236	2020/11/29	2021/11/28
Unknown	Cable	Chamber Cable 4	EC-007	2020/11/29	2021/11/28
Rohde & Schwarz	Auto test software	EMC 32	V9.10	NCR	NCR
CHIGO	Temperature & Humidity Meter	HTC-1S	T-03-EM451	2021/04/07	2022/04/06

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

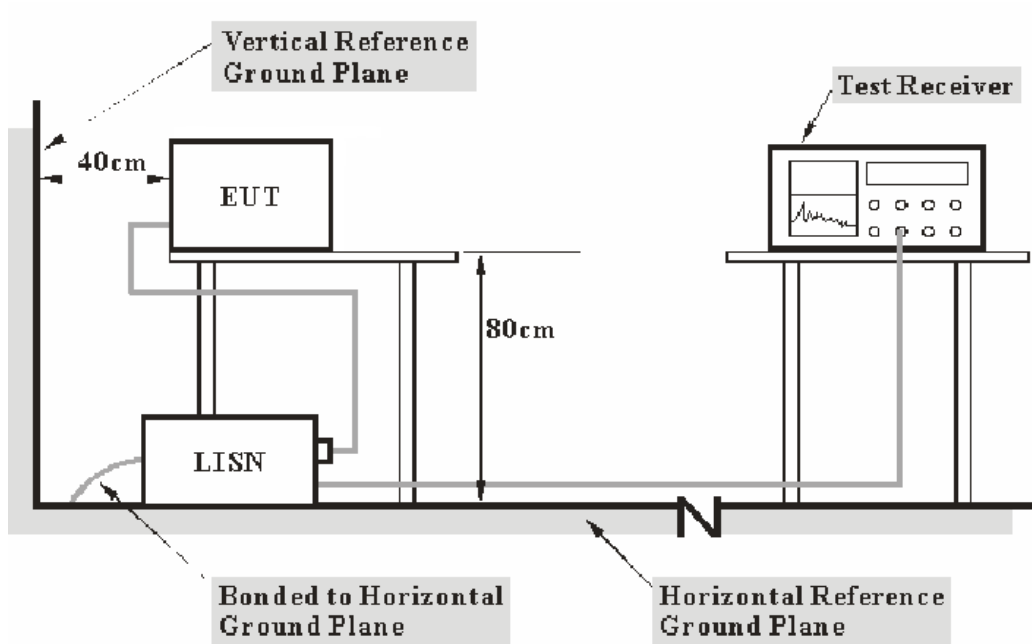


## CONDUCTED EMISSIONS

### Applicable Standard

FCC §18.307

### EUT Setup



- Note:** 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5: 1986 measurement procedure. Specification used was with the FCC Part 18.

The socket was connected to a 120 VAC/ 60Hz power source.

### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 9 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
9 kHz – 150 kHz	200 Hz
150 kHz – 30 MHz	9 kHz

**Test Procedure**

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

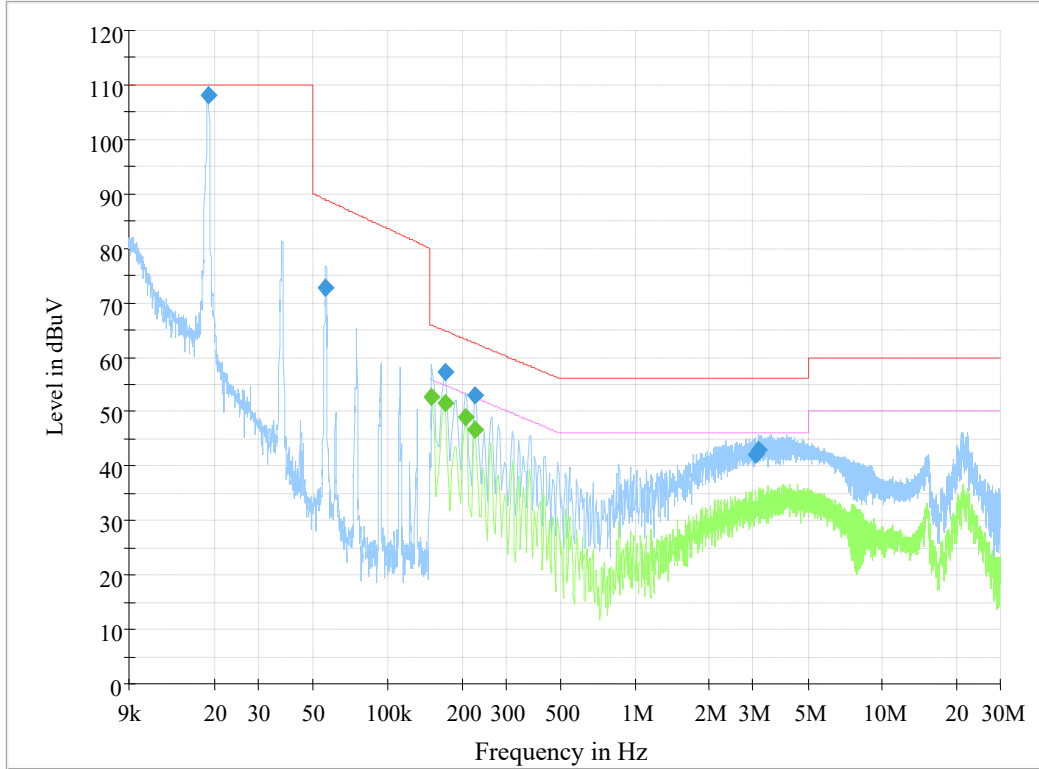
**Test Data****Environmental Conditions**

<b>Temperature:</b>	26 °C
<b>Relative Humidity:</b>	68 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Haiguo Li on 2021-06-16.*

*Test mode: Cooking*

**AC 120V/60 Hz, Line**



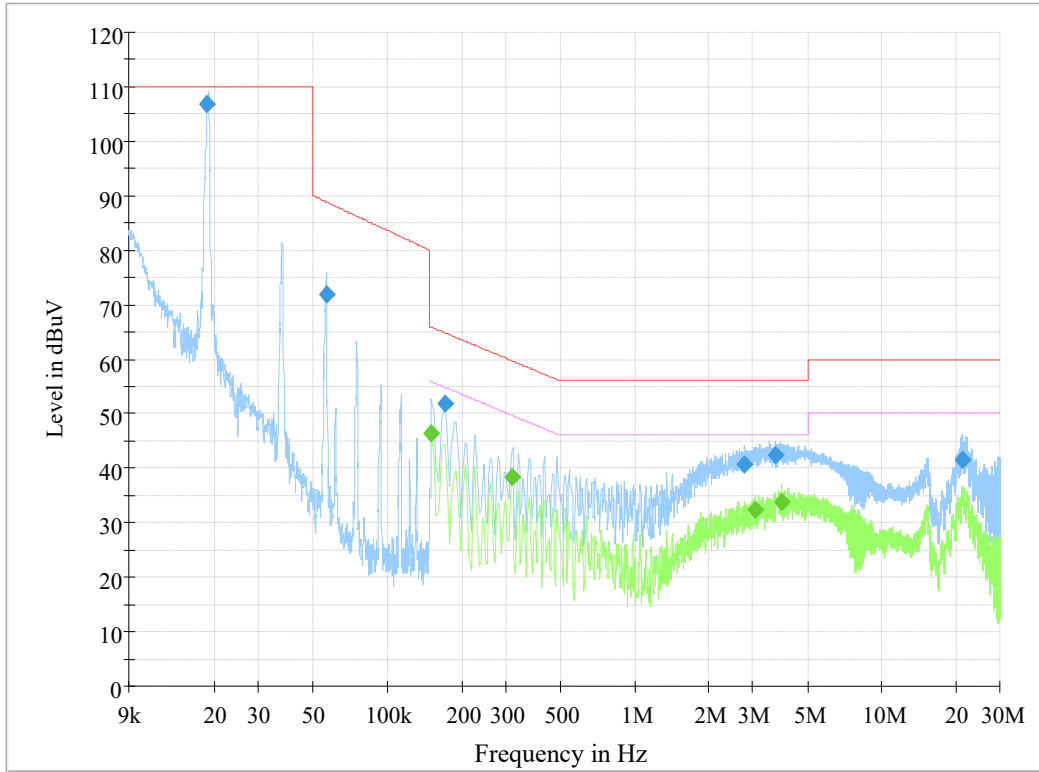
**Final Result 1**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.018737	108.8	0.200	L1	20.4	1.2	110.0
0.056227	72.7	0.200	L1	19.9	16.2	88.9
0.170000	57.3	9.000	L1	19.9	7.6	64.9
0.226000	53.1	9.000	L1	19.8	9.4	62.5
3.078000	42.0	9.000	L1	19.9	14.0	56.0
3.142000	42.9	9.000	L1	19.9	13.1	56.0

**Final Result 2**

Frequency (MHz)	Average (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	52.6	9.000	L1	19.8	3.3	55.9
0.170000	51.5	9.000	L1	19.9	3.4	54.9
0.206000	49.0	9.000	L1	19.8	4.3	53.3
0.226000	46.7	9.000	L1	19.8	5.8	52.5

**AC 120V/60 Hz, Neutral**



**Final Result 1**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.018699	106.8	0.200	N	20.6	3.2	110.0
0.056452	71.8	0.200	N	19.8	17.1	88.9
0.170000	51.8	9.000	N	19.9	13.1	64.9
2.778000	40.7	9.000	N	19.9	15.3	56.0
3.690000	42.3	9.000	N	19.9	13.7	56.0
21.106000	41.6	9.000	N	20.4	18.4	60.0

**Final Result 2**

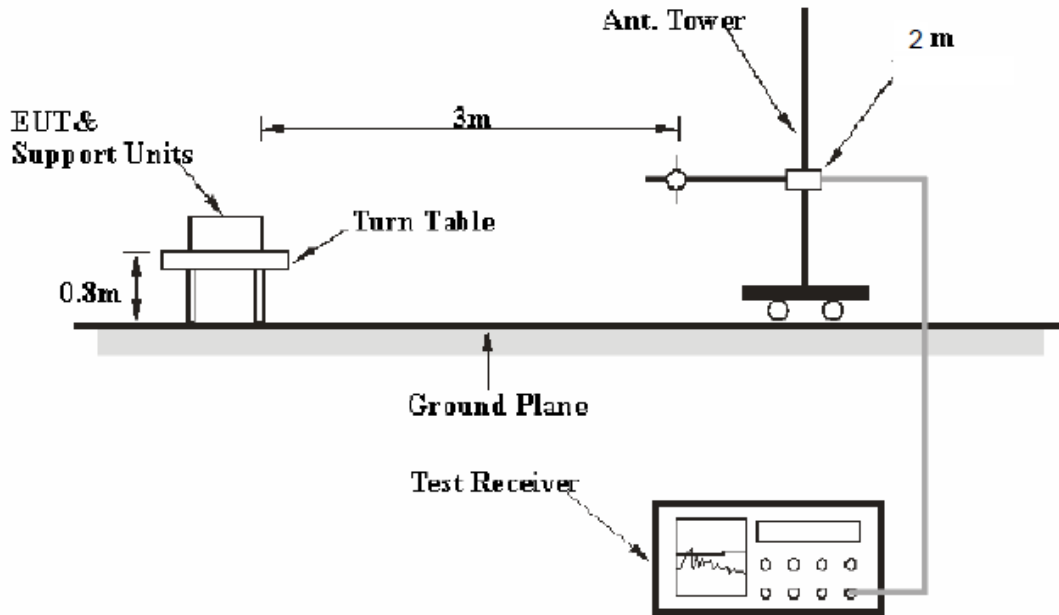
Frequency (MHz)	Average (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	46.5	9.000	N	19.8	9.4	55.9
0.318000	38.4	9.000	N	19.7	11.3	49.7
3.086000	32.2	9.000	N	19.9	13.8	46.0
3.934000	33.7	9.000	N	19.9	12.3	46.0

## FCC §18.305 – FIELD STRENGTH

### Applicable Standard

FCC §18.305(b)

### EUT Setup



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the FCC MP - 5.

The EUT was connected to 120 VAC/60 Hz power source.

### EMI Test Receiver Setup and Spectrum Analyzer Setup

The system was investigated from 9 kHz to 30MHz.

During the radiated emission test, the EMI test receiver and Spectrum Analyzer were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
9 kHz - 150 kHz	200 Hz	1 kHz	200 Hz	QP
150 kHz – 30 MHz	9 kHz	30 kHz	9 kHz	QP

## Test Procedure

Maximizing procedure was performed on the six (6) highest emissions to ensure that the EUT complied with all installation combinations.

The EUT was in the normal (naïve) operating mode during the final qualification test to represent the worst results.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 18,

## Test Data and Plots

### Environmental Conditions

<b>Temperature:</b>	24.2°C
<b>Relative Humidity:</b>	60%
<b>ATM Pressure:</b>	100.9 kPa

*The testing was performed by Harris He on 2021-06-18.*

*Test mode: Cooking*

**9 kHz –30 MHz**

Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Detector (PK/QP)	Antenna height (m)	Turntable position (degree)	Correction Factor (dB/m)	Limit (dB $\mu$ V/m)	Margin (dB)
0.81	49.14	QP	2.0	112.0	48.0	103.52	54.38
1.36	48.23	QP	2.0	205.0	46.2	103.52	55.29
4.10	44.76	QP	2.0	97.0	36.4	103.52	58.76
11.99	46.49	QP	2.0	149.0	32.3	103.52	57.03
14.22	49.61	QP	2.0	357.0	32.2	103.52	53.91
18.07	43.58	QP	2.0	231.0	32.1	103.52	59.94

**Note:**

- 1) Corrected Amplitude = Meter Reading + Correction Factor
- 2) Correction Factor = Antenna Factor + Cable Loss - Amplifier Gain
- 3) Margin = Limit – Corrected Amplitude
- 4) The data below 20dB to the limit was not recorded.
- 5) The radiation limit (3m distance) =  $20 \cdot \log 1500 + 40 \cdot \log (30/3) = 103.52$

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