



FCC PART 15B Supplier's Declaration of Conformity Report

For

Shenzhen Qi Jie Electronics Co., Ltd.

Product Name:	Beetle Clip Invisible
Trademark:	/
Model Number:	Beetle Clip Invisible
Prepared For:	Shenzhen Qi Jie Electronics Co., Ltd.
Address:	2F, 1, Buiding 21th, Chuangye RD, Shilongzai Industrial Park saiyan, Baoan District, Shenzhen, GD, China
Prepared By:	Aerospace Testing Technology (Shenzhen) Co., Ltd.
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Report No.:	AST2009302007

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Aerospace Testing Technology (Shenzhen) Co., Ltd.

Applicant : Shenzhen Qi Jie Electronics Co., Ltd.
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Baoan District, Shenzhen, GD, China
Manufacturer : Shenzhen Qi Jie Electronics Co., Ltd.
Address : 2F, 1, Buiding 21th, Chuangye RD, Shilongzai Industrial Park saiyan,
Baoan District, Shenzhen, GD, China
EUT : Beetle Clip Invisible
Model Number : Beetle Clip Invisible
Trademark : /
Test Date : Sep. 29, 2020 to Oct. 15, 2020
Date Of Report : Oct. 15, 2020
Test Result : The equipment under test was found to be compliance with the
requirements of the standards applied.

Test Procedure Used:

FCC Part 15 B

ANSI C63.4: 2014

Tested Engineer : Mason
Reviewed Supervisor : Lucas
Authorized Signatory : Thomas

Mason

Lucas

Thomas



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Aerospace Testing Technology (Shenzhen) Co., Ltd.

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Beetle Clip Invisible

Trademark : /

Model Number : Beetle Clip Invisible

Power Supply : DC36V 5.5A

Test Supply : DC36V

1.2. Tested System Details

None.

1.3. Test Uncertainty

Conducted Emission Uncertainty : $\pm 2.66\text{dB}$

Radiated Emission Uncertainty : $\pm 4.26\text{dB}$

1.4. Test Facility

Site Description

Name of Firm : Aerospace Testing Technology (Shenzhen) Co., Ltd.

Site Location : 3/F, Block A1, No. 5, 8th Road, Shapu Yangyong
Industrial Park, Songgang Street, Bao'an District,
Shenzhen, Guangdong, China

Test Location : Building A and D, No.1 Hedong Three Road, Jinxia
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Guangdong , China

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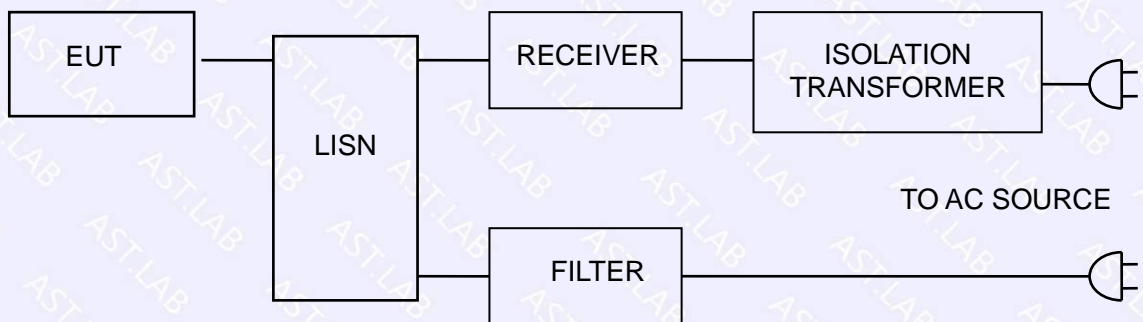
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2. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

2.1. Block Diagram Of Test Setup



2.2. Test Standard

FCC PART 15 B

2.3. Power Line Conducted Emission Limit

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

2.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

2.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

2.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **FCC PART 15 B** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

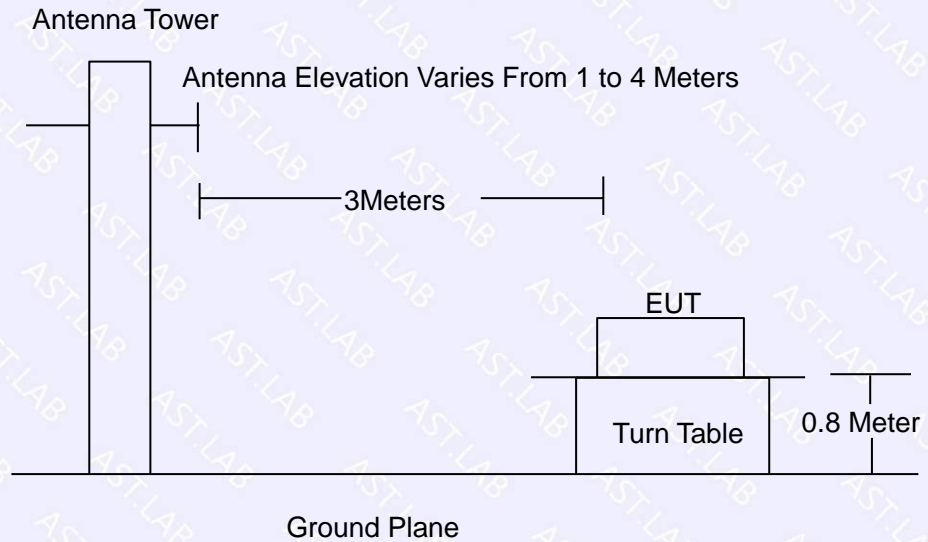
The frequency range from 150 KHz to 30 MHz is investigated.

2.7. Test Result

Not applicable. The EUT is supplied by DC Power.

3. RADIATION EMISSION TEST

3.1. Block Diagram of Test Setup



3.2. Test Standard

FCC PART 15 B

3.3. Radiation Limit

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

3.4. EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

3.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

3.6. Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to FCC PART 15 B on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz

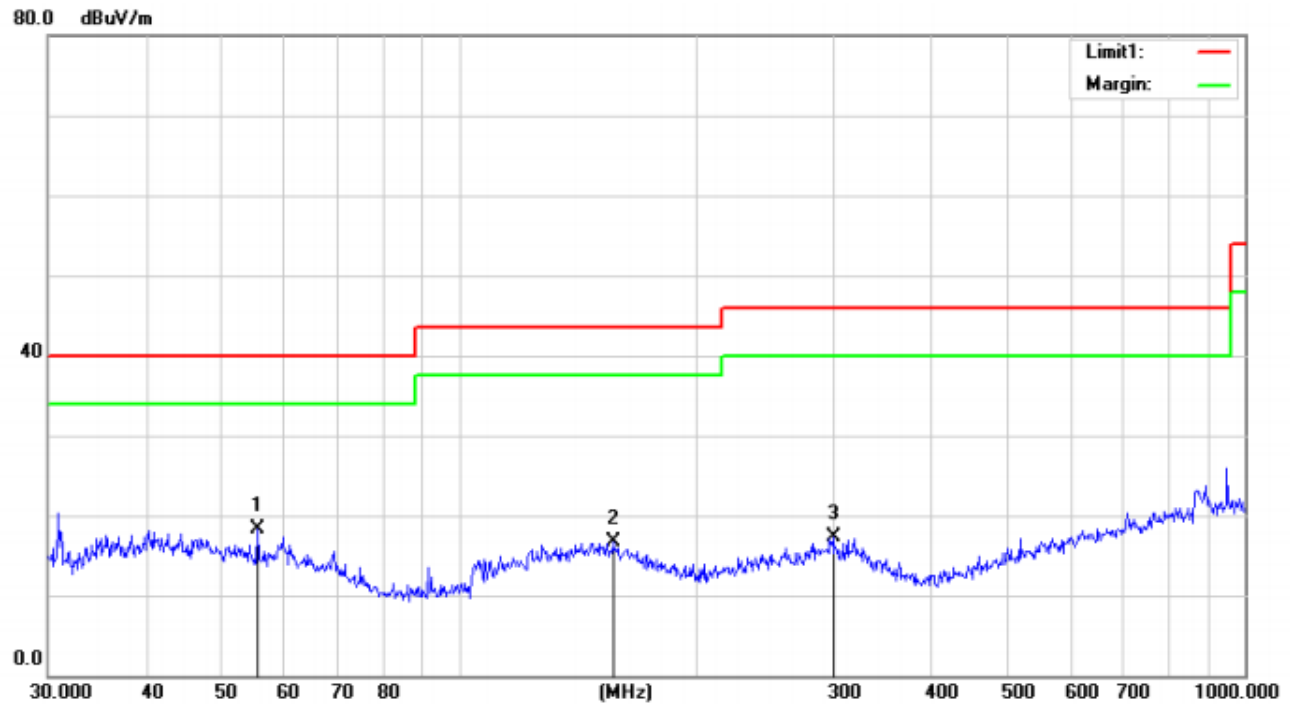
The frequency range from 30MHz to 1000MHz is checked.

The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.

3.7. Test Result

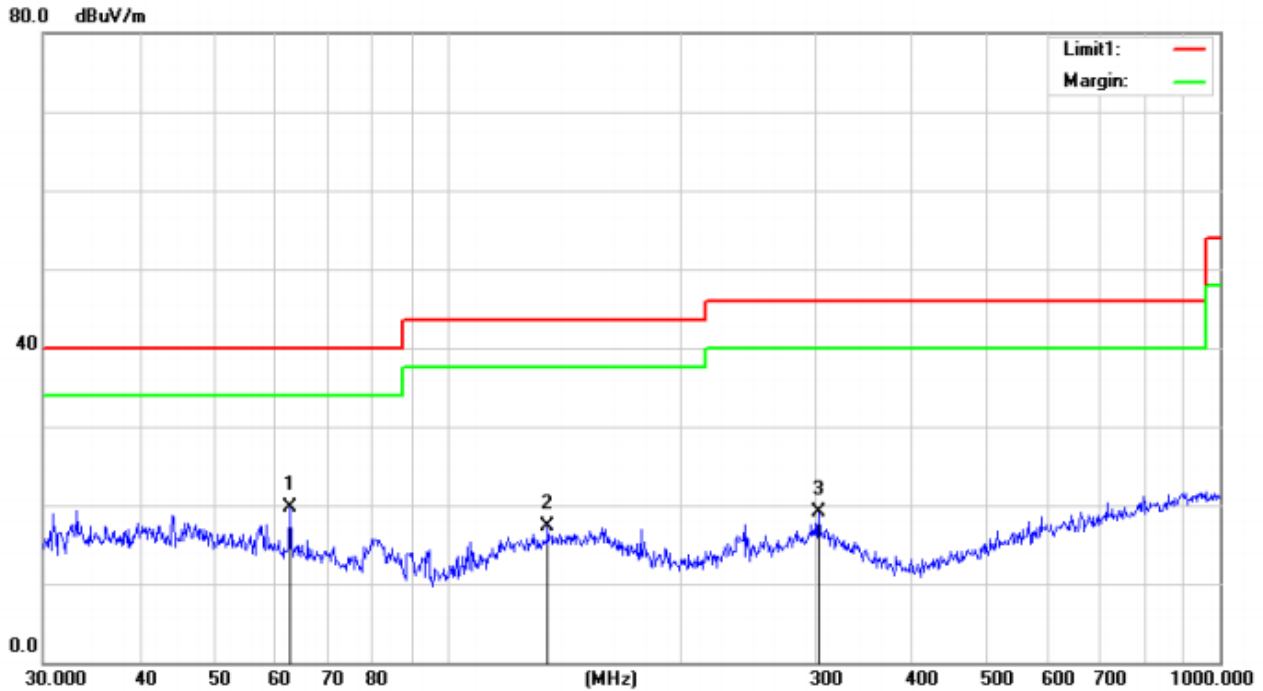
PASS

Radiation Emission Test Data			
Temperature:	25.6°C	Relative Humidity:	54.3%
Pressure:	1009hPa	Phase :	Horizontal
Test Voltage :	DC 36V	Test Mode:	Working



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	Comment
1	*	55.4147	28.62	-10.24	18.38	40.00	-21.62	peak	
2		157.0074	25.64	-8.89	16.75	43.50	-26.75	peak	
3		299.3158	25.93	-8.71	17.22	46.00	-28.78	peak	

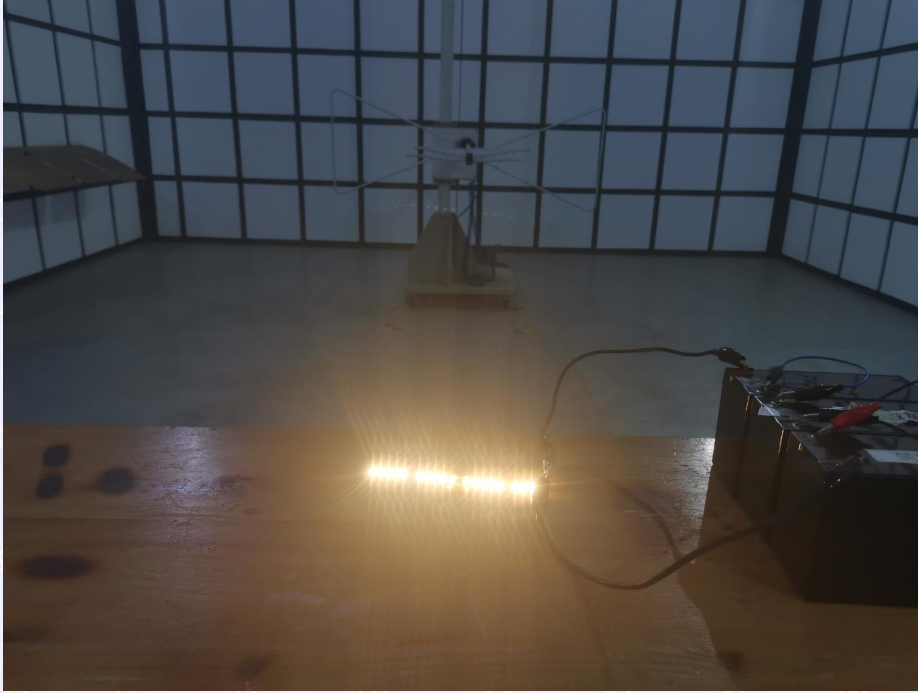
Radiation Emission Test Data			
Temperature:	25.6°C	Relative Humidity:	54.3%
Pressure:	1009hPa	Phase :	Vertical
Test Voltage :	DC 36V	Test Mode:	Working



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector	Comment
1	*	62.6507	30.80	-11.07	19.73	40.00	-20.27	peak	
2		135.0319	26.88	-9.54	17.34	43.50	-26.16	peak	
3		302.4812	34.83	-15.64	19.19	46.00	-26.81	peak	

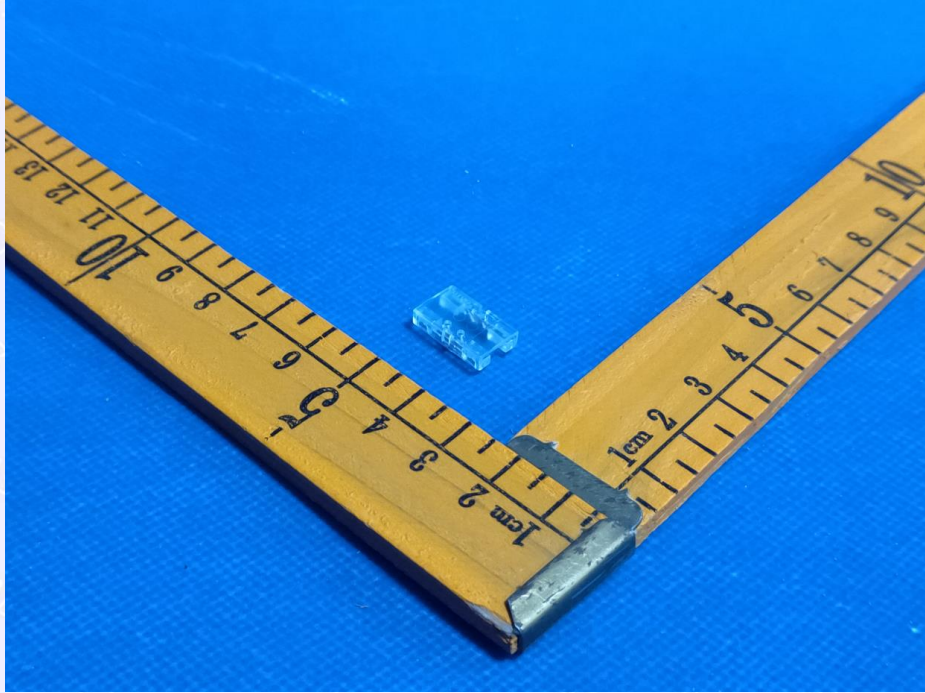
4. TEST SETUP PHOTOGRAPHS

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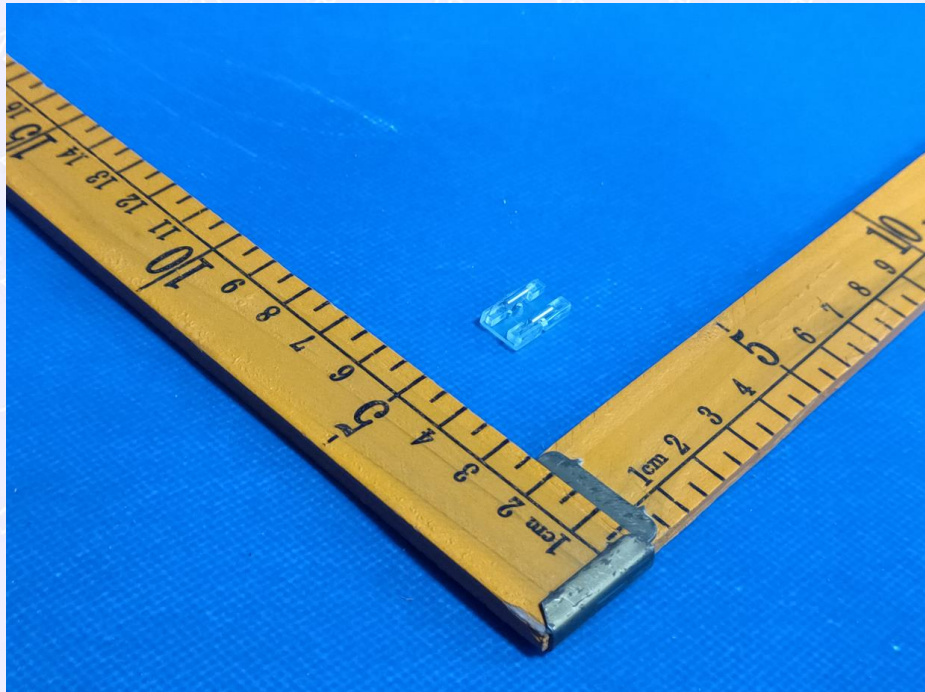


5. EUT PHOTOGRAPHS

EUT Photo 1



EUT Photo 2



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