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Report No.: GZEM170100032503  
Page: 1 of 27

## **TEST REPORT**

**Application No.:** GZEM1904011807CR  
**Applicant:** Zhongshan Transtek Electronics Co., Ltd  
**Address of Applicant:** NO. 23, Jin'an Road, Minzhong, Zhongshan, Guangdong, China  
**Manufacturer:** The same as applicant  
**Address of Manufacturer:** The same as applicant  
**Factory:** The same as applicant  
**Address of Factory:** The same as applicant  
**Equipment Under Test (EUT):**  
**EUT Name:** Body scale  
**Model No.:** LS102-H  
**Standard(s) :** 47 CFR Part 15, Subpart C 15.247  
**Date of Receipt:** 2019-04-04  
**Date of Test:** 2019-04-12  
**Date of Issue:** 2017-02-17 (For original report: GZEM170100032501)  
2019-05-08 (For copy report: GZEM170100032503)

<b>Test Result:</b>	<b>Pass</b>
---------------------	-------------

\* In the configuration tested, the EUT complied with the standards specified above.



Kobe Jian

Lab Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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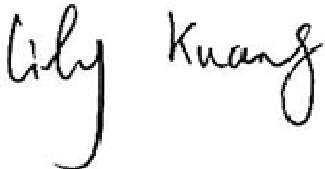
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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2017-02-17		Original
02		2019-05-08		Copy report: Changed applicant, manufacturer, factory information and added buzzer in EUT.

Authorized for issue by:			
Tested By		 Lily Kuang	2019-04-12
		Lily_Kuang /Project Engineer	Date
Checked By		 Ricky Liu	2019-05-08
		Ricky_Liu /Reviewer	Date

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## 2 Test Summary

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass

### Remark for report GZEM170100032503:

This is a copy report base on GZEM170100032501.

The GZEM170100032503 report was an additional report based on and only valid with the original report GZEM170100032501.

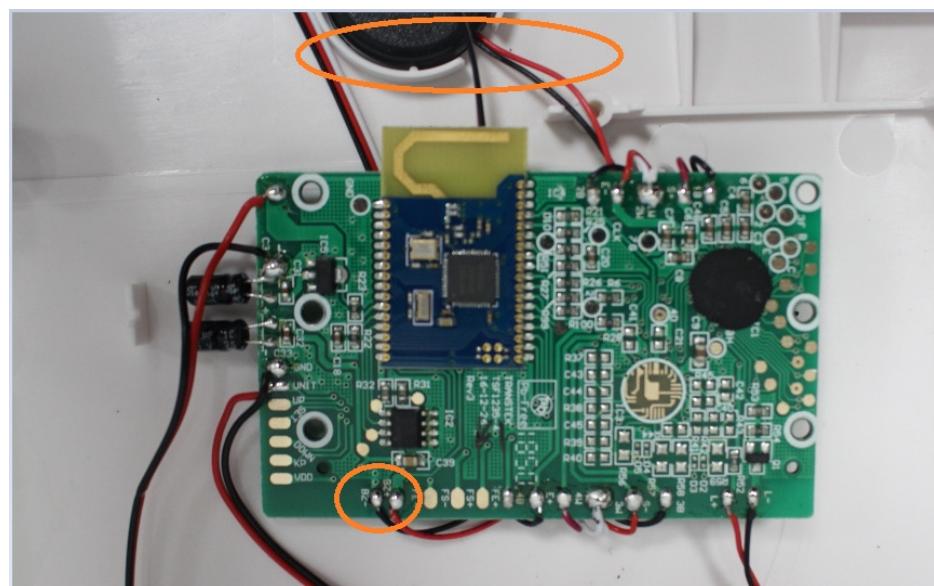
1. Changed applicant, manufacturer, factory information;
2. Added buzzer in EUT(The pictures between after and before as below);

Considering the added buzzer in product, Radiated Emissions which fall in the restricted bands and Radiated Spurious Emissions tests were performed to the new EUT in this report.

Therefore new data were performed in this report GZEM170100032503.

Tests for original data please refer to report GZEM170100032501 for details.

After:



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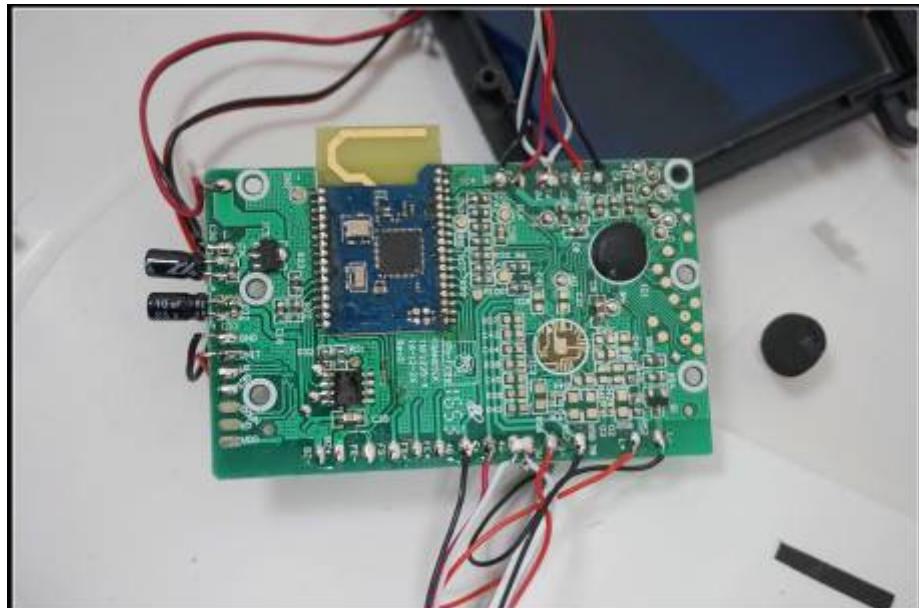


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Guangzhou Branch Inspection & Testing Services Laboratory

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**Before:**

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## 4 General Information

### 4.1 Details of E.U.T.

Power Supply:	DC 6.0V
Antenna Gain	Integral PCB antenna
Antenna Type	0 dBi
Channel Spacing	2MHz
Modulation Type	GFSK
Number of Channels	40
Operation Frequency	2402MHz to 2480MHz

### 4.2 Description of Support Units

The EUT has been tested as an independent unit.

### 4.3 Measurement Uncertainty

RF

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 5.5 \times 10^{-8}$
2	Duty cycle	$\pm 0.57\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF Conducted power	$\pm 0.68\text{dB}$
5	RF Power Density	$\pm 1.50\text{dB}$
6	Conducted Spurious Emissions	$\pm 1.04\text{dB}$
7	RF Radiated Power	$\pm 4.5\text{dB}$ (below 1GHz)
		$\pm 4.8\text{dB}$ (above 1GHz)
8	Radiated Spurious Emission Test	$\pm 4.5\text{dB}$ (30MHz-1GHz)
		$\pm 4.8\text{dB}$ (1GHz-18GHz)
9	Temperature	$\pm 0.4^\circ\text{C}$
10	Humidity	$\pm 1.3\%$
11	Supply Voltages	$\pm 1.5\%$
12	Time	$\pm 3\%$

### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,  
198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District,  
Guangzhou, China 510663

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No tests were sub-contracted.



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## 4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

● **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

● **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

● **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2006 accreditation criteria for testing laboratories (identical to

ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

● **FCC Recognized 2.948 Listed Test Firm(Registration No.: 282399)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002.

● **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818, Jul 13, 2017.

● **Industry Canada (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

● **VCCI (Registration No.: R-12460, C-12584, G-10449 and T-11179)**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-10449 and T-11179 respectively.

● **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2005, the Basic Rules, IEC60068-2-27 and Rules of procedure IEC60068-2-27, and the relevant IEC60068-2-27 CB-Scheme Operational documents.



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#### **4.6 Deviation from Standards**

None

#### **4.7 Abnormalities from Standard Conditions**

None



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## 5 Equipment List

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test Receiver	Rohde & Schwarz	ESIB26	EMC0522	2019-01-20	2020-01-19
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC0056	2019-01-20	2020-01-19
Chamber cable	HangTianXing	N/A	EMC0542	2017-06-30	2019-06-30
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9160	EMC2025	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6112B	EMC0524	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6143	EMC0519	2017-05-04	2020-05-03
Horn Antenna 1GHz-18GHz	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2016-09-09	2019-09-08
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2019-01-07	2020-01-08
Amplifier	HP	8447F	EMC2065	2018-06-01	2019-05-31
Pre-Amplifier MH648A	ANRITSU CORP	MH648A	EMC2086	2018-11-19	2019-11-18
Active Loop Antenna	EMCO	6502	EMC0523	2018-03-05	2020-03-04
High Pass Filter(915MHz)	FSY MICROWAVE	HM1465-9SS	EMC2079	2019-01-11	2020-01-10
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2019-01-11	2020-01-10
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2017-06-18	2019-06-18
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2017-12-19	2019-12-18
MXE EMI Receiver	Keysight	N9038A	EMC2139	2018-11-19	2019-11-18
EXA Signal Analyzer	Keysight	N9010A	EMC2138	2018-11-19	2019-11-18
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	SEM003-18	2016-06-29	2019-06-28
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

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<b>Radiated Spurious Emissions</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMI Test Receiver	Rohde & Schwarz	ESIB26	EMC0522	2019-01-20	2020-01-19
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC0056	2019-01-20	2020-01-19
Chamber cable	HangTianXing	N/A	EMC0542	2017-06-30	2019-06-30
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9160	EMC2025	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6112B	EMC0524	2016-09-08	2019-09-07
Bi-log Type Antenna	Schaffner -Chase	CBL6143	EMC0519	2017-05-04	2020-05-03
Horn Antenna 1GHz-18GHz	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2016-09-09	2019-09-08
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2019-01-07	2020-01-08
Amplifier	HP	8447F	EMC2065	2018-06-01	2019-05-31
Pre-Amplifier MH648A	ANRITSU CORP	MH648A	EMC2086	2018-11-19	2019-11-18
Active Loop Antenna	EMCO	6502	EMC0523	2018-03-05	2020-03-04
High Pass Filter(915MHz)	FSY MICROWAVE	HM1465-9SS	EMC2079	2019-01-11	2020-01-10
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2019-01-11	2020-01-10
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2017-06-18	2019-06-18
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2017-12-19	2019-12-18
MXE EMI Receiver	Keysight	N9038A	EMC2139	2018-11-19	2019-11-18
EXA Signal Analyzer	Keysight	N9010A	EMC2138	2018-11-19	2019-11-18
Trilog Broadband Antenna 30MHz-1GHz	SCHWARZBECKME SS-ELEKTRONIK	VULB 9168	SEM003-18	2016-06-29	2019-06-28
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

<b>General used equipment</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
DMM	Fluke	73	EMC0006	2018-07-20	2019-07-19
DMM	Fluke	73	EMC0007	2018-07-19	2019-07-18



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## 6 Radio Spectrum Matter Test Results

### 6.1 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

Measurement Distance: 3m

Limit:

Frequency(MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

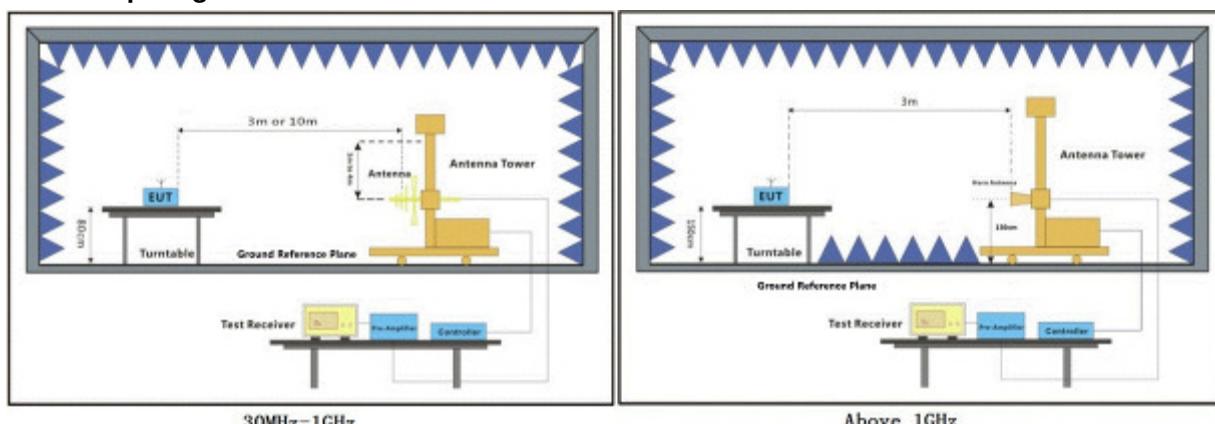
#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 24.9 °C Humidity: 55.4 % RH Atmospheric Pressure: 1020 mbar

Test mode a:TX mode\_Keep the EUT in continuously transmitting mode with GFSK modulation

#### 6.1.2 Test Setup Diagram



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### 6.1.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor



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Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit	Over	Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	31.97	26.25	5.03	37.44	25.81	54.00	-28.19 HORIZONTAL Average
2	2310.000	47.12	26.25	5.03	37.44	40.96	74.00	-33.04 HORIZONTAL Peak
3	2390.000	34.35	26.43	4.88	37.42	28.24	54.00	-25.76 HORIZONTAL Average
4	2390.000	48.97	26.43	4.88	37.42	42.86	74.00	-31.14 HORIZONTAL Peak
5	2483.500	33.71	26.58	5.23	37.40	28.12	54.00	-25.88 HORIZONTAL Average
6	2483.500	46.80	26.58	5.23	37.40	41.21	74.00	-32.79 HORIZONTAL Peak
7	2500.000	32.29	26.60	4.95	37.39	26.45	54.00	-27.55 HORIZONTAL Average
8	2500.000	47.50	26.60	4.95	37.39	41.66	74.00	-32.34 HORIZONTAL Peak

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit	Over	Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	34.40	26.25	5.03	37.44	28.24	54.00	-25.76 VERTICAL Average
2	2310.000	47.14	26.25	5.03	37.44	40.98	74.00	-33.02 VERTICAL Peak
3	2390.000	35.20	26.43	4.88	37.42	29.09	54.00	-24.91 VERTICAL Average
4	2390.000	47.19	26.43	4.88	37.42	41.08	74.00	-32.92 VERTICAL Peak
5	2483.500	34.91	26.58	5.23	37.40	29.32	54.00	-24.68 VERTICAL Average
6	2483.500	46.94	26.58	5.23	37.40	41.35	74.00	-32.65 VERTICAL Peak
7	2500.000	32.27	26.60	4.95	37.39	26.43	54.00	-27.57 VERTICAL Average
8	2500.000	47.56	26.60	4.95	37.39	41.72	74.00	-32.28 VERTICAL Peak

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Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit	Over	Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	32.76	26.25	5.03	37.44	26.60	54.00	-27.40 HORIZONTAL Average
2	2310.000	46.46	26.25	5.03	37.44	40.30	74.00	-33.70 HORIZONTAL Peak
3	2390.000	35.69	26.43	4.88	37.42	29.58	54.00	-24.42 HORIZONTAL Average
4	2390.000	47.52	26.43	4.88	37.42	41.41	74.00	-32.59 HORIZONTAL Peak
5	2483.500	52.58	26.58	5.23	37.40	46.99	54.00	-7.01 HORIZONTAL Average
6	2483.500	67.29	26.58	5.23	37.40	61.70	74.00	-12.30 HORIZONTAL Peak
7	2500.000	34.79	26.60	4.95	37.39	28.95	54.00	-25.05 HORIZONTAL Average
8	2500.000	47.50	26.60	4.95	37.39	41.66	74.00	-32.34 HORIZONTAL Peak

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit	Over	Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2310.000	32.45	26.25	5.03	37.44	26.29	54.00	-27.71 VERTICAL Average
2	2310.000	47.16	26.25	5.03	37.44	41.00	74.00	-33.00 VERTICAL Peak
3	2390.000	32.61	26.43	4.88	37.42	26.50	54.00	-27.50 VERTICAL Average
4	2390.000	47.10	26.43	4.88	37.42	40.99	74.00	-33.01 VERTICAL Peak
5	2483.500	54.49	26.58	5.23	37.40	48.90	54.00	-5.10 VERTICAL Average
6	2483.500	64.42	26.58	5.23	37.40	58.83	74.00	-15.17 VERTICAL Peak
7	2500.000	31.11	26.60	4.95	37.39	25.27	54.00	-28.73 VERTICAL Average
8	2500.000	46.84	26.60	4.95	37.39	41.00	74.00	-33.00 VERTICAL Peak

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**6.2 Radiated Spurious Emissions**

Test Requirement 47 CFR Part 15, Subpart C 15.205 &amp; 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5,6.6

Measurement Distance: 3m

Limit:

Frequency(MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.



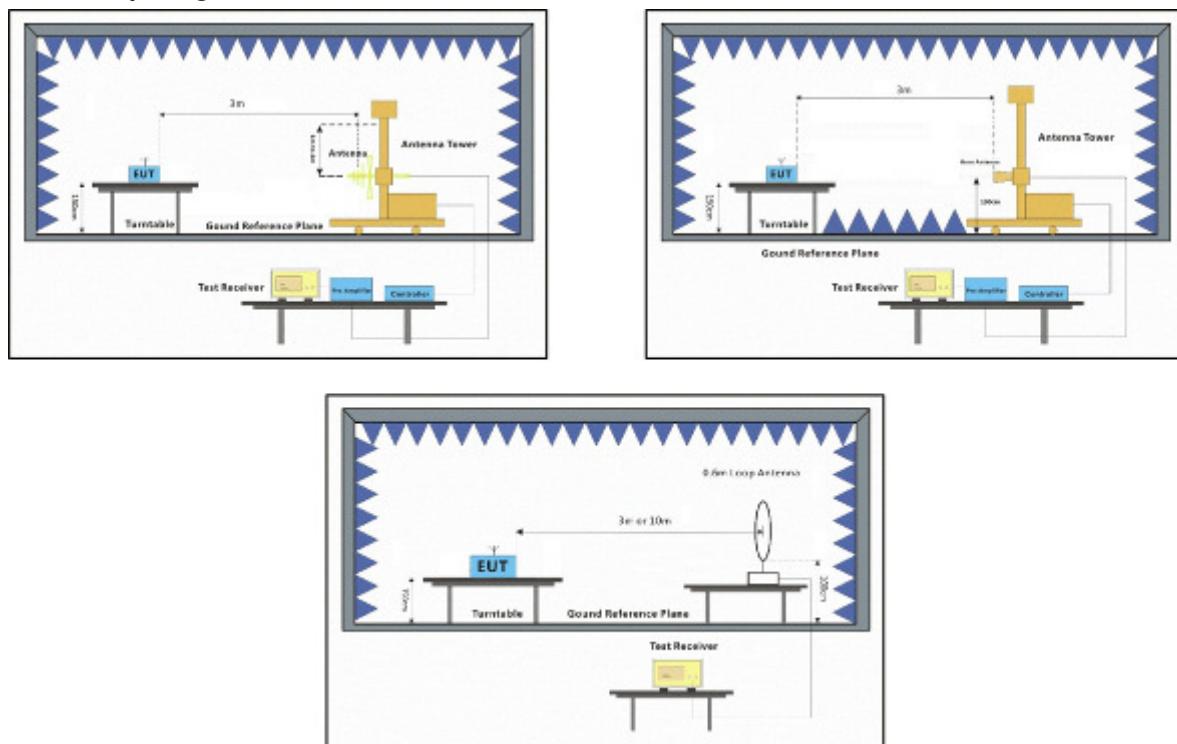
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**6.2.1 E.U.T. Operation**

Operating Environment:

Temperature: 24.9 °C      Humidity: 55.4 % RH      Atmospheric Pressure: 1020 mbar  
Test mode      a:TX mode\_Keep the EUT in continuously transmitting mode with GFSK modulation

**6.2.2 Test Setup Diagram**

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### 6.2.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark:

- 1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

- 3) Scan from 9kHz to 25GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

- 4) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown

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Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	30.962	31.09	12.22	0.07	29.83	13.55	40.00	-26.45 HORIZONTAL QP
2	53.318	28.45	12.78	0.59	29.49	12.33	40.00	-27.67 HORIZONTAL QP
3	121.976	29.64	11.62	0.93	29.40	12.79	43.50	-30.71 HORIZONTAL QP
4	180.649	29.21	12.67	1.34	29.40	13.82	43.50	-29.68 HORIZONTAL QP
5	513.633	39.26	18.44	2.27	29.62	30.35	46.00	-15.65 HORIZONTAL QP
6	893.857	28.69	23.95	2.86	28.70	26.80	46.00	-19.20 HORIZONTAL QP

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	4804.517	34.94	30.79	5.87	36.94	34.66	54.00	-19.34 HORIZONTAL Average
2	4804.517	48.35	30.79	5.87	36.94	48.07	74.00	-25.93 HORIZONTAL Peak
3	6340.436	31.89	33.76	6.97	36.99	35.63	54.00	-18.37 HORIZONTAL Average
4	6340.436	44.75	33.76	6.97	36.99	48.49	74.00	-25.51 HORIZONTAL Peak
5	7206.309	35.78	35.45	7.34	36.93	41.64	54.00	-12.36 HORIZONTAL Average
6	7206.309	48.66	35.45	7.34	36.93	54.52	74.00	-19.48 HORIZONTAL Peak
7	8638.399	30.00	36.20	7.96	36.95	37.21	54.00	-16.79 HORIZONTAL Average
8	8638.399	44.57	36.20	7.96	36.95	51.78	74.00	-22.22 HORIZONTAL Peak
9	9608.151	30.95	37.51	8.15	37.08	39.53	54.00	-14.47 HORIZONTAL Average
10	9608.151	45.46	37.51	8.15	37.08	54.04	74.00	-19.96 HORIZONTAL Peak
11	12010.540	24.87	39.50	10.67	37.20	37.84	54.00	-16.16 HORIZONTAL Average
12	12010.540	41.73	39.50	10.67	37.20	54.70	74.00	-19.30 HORIZONTAL Peak

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Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor					
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	30.962	29.92	12.22	0.07	29.83	12.38	40.00	-27.62	VERTICAL QP
2	49.359	28.37	12.99	0.61	29.50	12.47	40.00	-27.53	VERTICAL QP
3	62.871	28.66	11.89	0.61	29.45	11.71	40.00	-28.29	VERTICAL QP
4	120.277	31.05	11.52	0.92	29.40	14.09	43.50	-29.41	VERTICAL QP
5	157.007	27.66	13.37	1.25	29.40	12.88	43.50	-30.62	VERTICAL QP
6	890.728	29.14	23.92	2.87	28.75	27.18	46.00	-18.82	VERTICAL QP

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Limit	Pol/Phase	Remark
	Level	Factor	Loss	Factor					
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	3801.333	30.82	29.01	7.89	36.92	30.80	54.00	-23.20	VERTICAL Average
2	3801.333	45.03	29.01	7.89	36.92	45.01	74.00	-28.99	VERTICAL Peak
3	4804.007	37.41	30.79	5.87	36.94	37.13	54.00	-16.87	VERTICAL Average
4	4804.007	50.12	30.79	5.87	36.94	49.84	74.00	-24.16	VERTICAL Peak
5	7205.989	40.19	35.45	7.34	36.93	46.05	54.00	-7.95	VERTICAL Average
6	7205.989	57.03	35.45	7.34	36.93	62.89	74.00	-11.11	VERTICAL Peak
7	8248.005	29.80	36.30	8.21	36.92	37.39	54.00	-16.61	VERTICAL Average
8	8248.005	44.45	36.30	8.21	36.92	52.04	74.00	-21.96	VERTICAL Peak
9	9608.371	29.98	37.51	8.15	37.08	38.56	54.00	-15.44	VERTICAL Average
10	9608.371	45.50	37.51	8.15	37.08	54.08	74.00	-19.92	VERTICAL Peak
11	12010.270	27.82	39.50	10.67	37.20	40.79	54.00	-13.21	VERTICAL Average
12	12010.270	42.87	39.50	10.67	37.20	55.84	74.00	-18.16	VERTICAL Peak

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Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	4884.151	34.69	30.95	6.86	36.95	35.55	54.00	-18.45 HORIZONTAL Average
2	4884.151	47.40	30.95	6.86	36.95	48.26	74.00	-25.74 HORIZONTAL Peak
3	6194.041	33.86	33.00	6.92	36.99	36.79	54.00	-17.21 HORIZONTAL Average
4	6194.041	48.67	33.00	6.92	36.99	51.60	74.00	-22.40 HORIZONTAL Peak
5	7326.267	37.22	35.74	7.39	36.92	43.43	54.00	-10.57 HORIZONTAL Average
6	7326.267	49.40	35.74	7.39	36.92	55.61	74.00	-18.39 HORIZONTAL Peak
7	8663.404	29.20	36.22	7.95	36.96	36.41	54.00	-17.59 HORIZONTAL Average
8	8663.404	45.54	36.22	7.95	36.96	52.75	74.00	-21.25 HORIZONTAL Peak
9	9768.151	30.45	37.74	8.37	37.09	39.47	54.00	-14.53 HORIZONTAL Average
10	9768.151	45.53	37.74	8.37	37.09	54.55	74.00	-19.45 HORIZONTAL Peak
11	12210.740	27.46	39.21	10.98	37.06	40.59	54.00	-13.41 HORIZONTAL Average
12	12210.740	42.25	39.21	10.98	37.06	55.38	74.00	-18.62 HORIZONTAL Peak

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:middle

Freq	ReadAntenna		Cable Preamp		Limit Level	Line Limit	Over Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	3867.831	32.89	29.22	7.69	36.91	32.89	54.00	-21.11 VERTICAL Average
2	3867.831	45.55	29.22	7.69	36.91	45.55	74.00	-28.45 VERTICAL Peak
3	4884.151	33.17	30.95	6.86	36.95	34.03	54.00	-19.97 VERTICAL Average
4	4884.151	48.29	30.95	6.86	36.95	49.15	74.00	-24.85 VERTICAL Peak
5	7325.749	42.85	35.74	7.39	36.92	49.06	54.00	-4.94 VERTICAL Average
6	7325.749	53.67	35.74	7.39	36.92	59.88	74.00	-14.12 VERTICAL Peak
7	8416.584	31.34	36.15	8.07	36.93	38.63	54.00	-15.37 VERTICAL Average
8	8416.584	45.62	36.15	8.07	36.93	52.91	74.00	-21.09 VERTICAL Peak
9	9608.018	30.32	37.51	8.15	37.08	38.90	54.00	-15.10 VERTICAL Average
10	9608.018	45.69	37.51	8.15	37.08	54.27	74.00	-19.73 VERTICAL Peak
11	12010.850	28.12	39.50	10.67	37.20	41.09	54.00	-12.91 VERTICAL Average
12	12010.850	42.32	39.50	10.67	37.20	55.29	74.00	-18.71 VERTICAL Peak

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Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit	Over	Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	4959.993	36.73	31.05	7.84	36.96	38.66	54.00	-15.34 HORIZONTAL Average
2	4959.993	47.53	31.05	7.84	36.96	49.46	74.00	-24.54 HORIZONTAL Peak
3	6322.136	31.14	33.68	6.97	36.99	34.80	54.00	-19.20 HORIZONTAL Average
4	6322.136	45.38	33.68	6.97	36.99	49.04	74.00	-24.96 HORIZONTAL Peak
5	7440.914	42.63	35.92	7.43	36.92	49.06	54.00	-4.94 HORIZONTAL Average
6	7440.914	53.39	35.92	7.43	36.92	59.82	74.00	-14.18 HORIZONTAL Peak
7	8738.852	32.76	36.30	7.98	36.96	40.08	54.00	-13.92 HORIZONTAL Average
8	8738.852	45.63	36.30	7.98	36.96	52.95	74.00	-21.05 HORIZONTAL Peak
9	9920.390	32.53	37.92	8.63	37.10	41.98	54.00	-12.02 HORIZONTAL Average
10	9920.390	45.98	37.92	8.63	37.10	55.43	74.00	-18.57 HORIZONTAL Peak
11	12400.950	29.25	38.93	11.17	36.90	42.45	54.00	-11.55 HORIZONTAL Average
12	12400.950	44.72	38.93	11.17	36.90	57.92	74.00	-16.08 HORIZONTAL Peak

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High

Freq	ReadAntenna		Cable Preamp		Limit	Over	Pol/Phase	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	4960.993	36.27	31.05	7.84	36.96	38.20	54.00	-15.80 VERTICAL Average
2	4960.993	49.90	31.05	7.84	36.96	51.83	74.00	-22.17 VERTICAL Peak
3	6322.136	30.78	33.68	6.97	36.99	34.44	54.00	-19.56 VERTICAL Average
4	6322.136	44.68	33.68	6.97	36.99	48.34	74.00	-25.66 VERTICAL Peak
5	7439.749	40.92	35.92	7.43	36.92	47.35	54.00	-6.65 VERTICAL Average
6	7439.749	53.98	35.92	7.43	36.92	60.41	74.00	-13.59 VERTICAL Peak
7	8789.516	30.11	36.35	8.02	36.97	37.51	54.00	-16.49 VERTICAL Average
8	8789.516	44.88	36.35	8.02	36.97	52.28	74.00	-21.72 VERTICAL Peak
9	9920.151	29.98	37.92	8.63	37.10	39.43	54.00	-14.57 VERTICAL Average
10	9920.151	45.01	37.92	8.63	37.10	54.46	74.00	-19.54 VERTICAL Peak
11	12400.610	26.61	38.93	11.17	36.90	39.81	54.00	-14.19 VERTICAL Average
12	12400.610	41.71	38.93	11.17	36.90	54.91	74.00	-19.09 VERTICAL Peak

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## 7 Photographs

### 7.1 Radiated Emissions which fall in the restricted bands Test Setup



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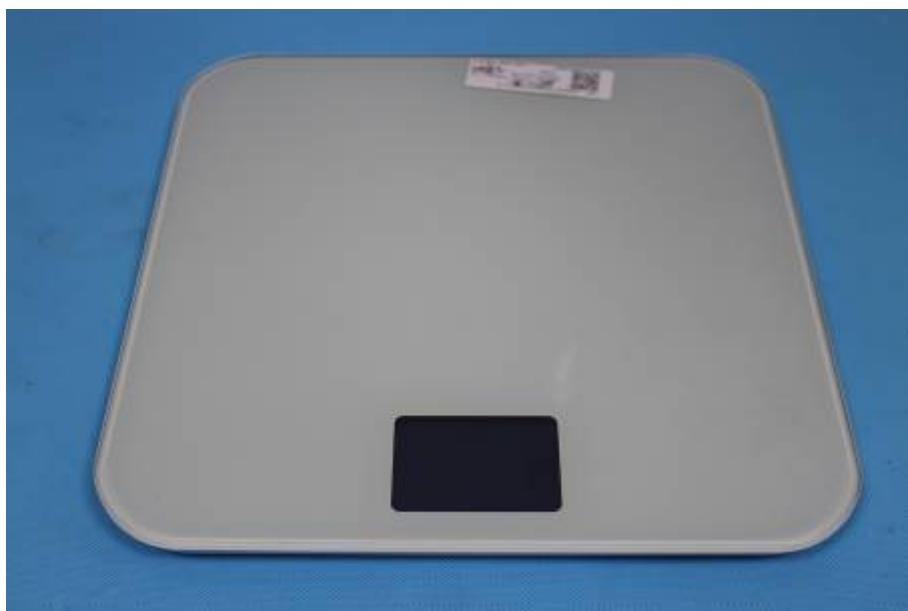
## 7.2 Radiated Spurious Emissions Test Setup



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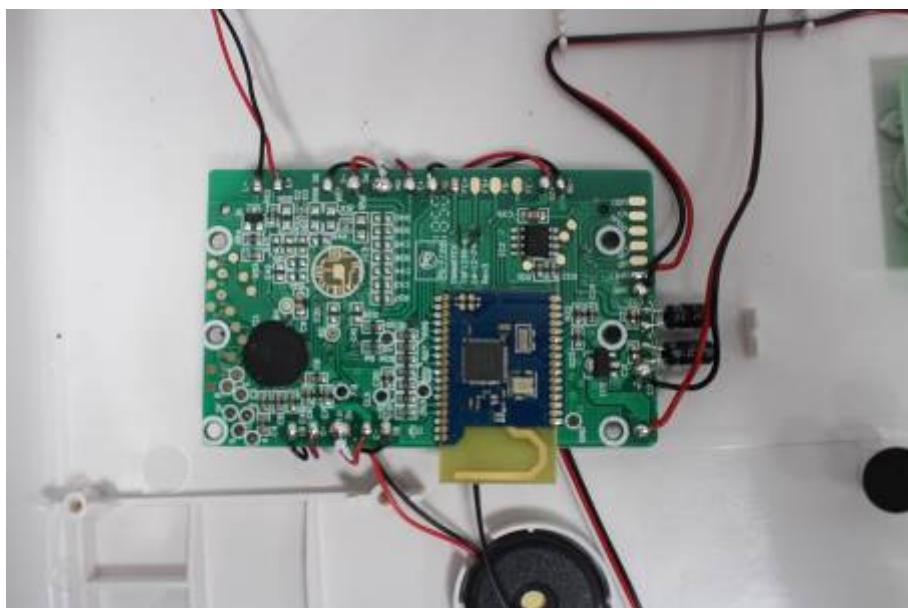
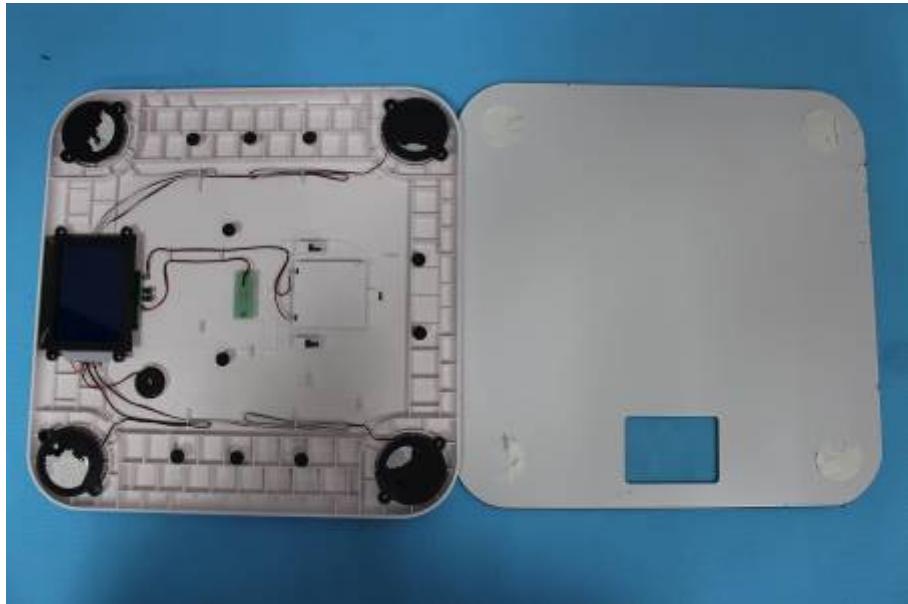
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### 7.3 EUT Constructional Details



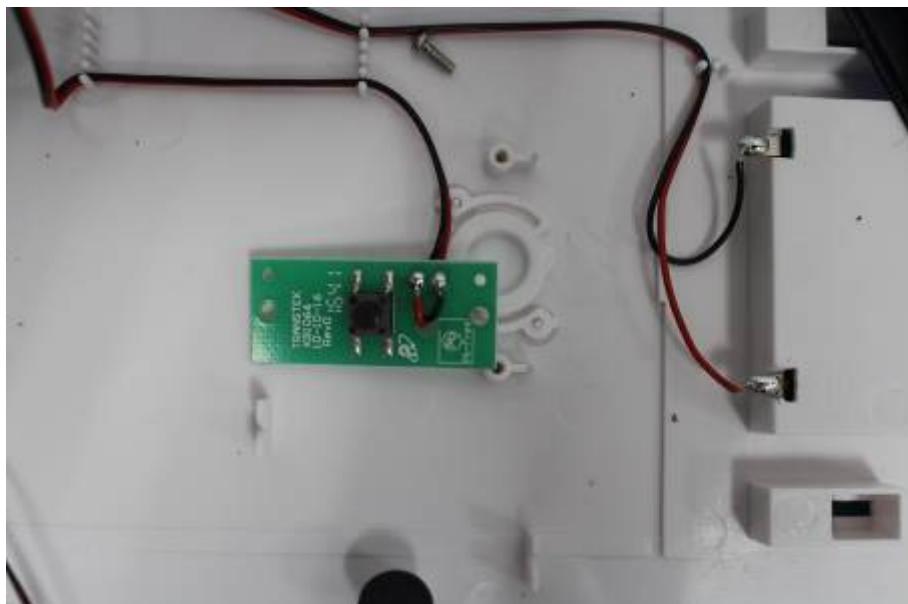
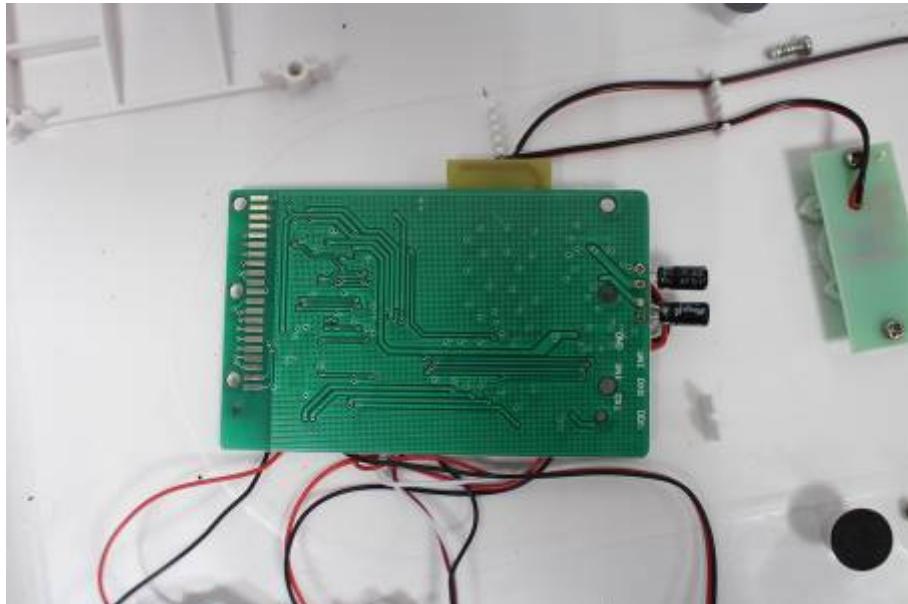
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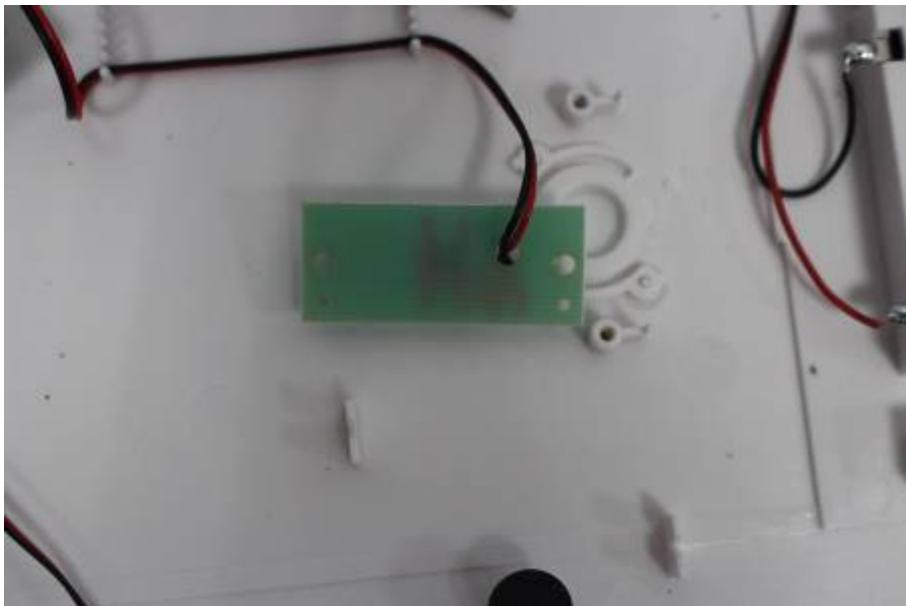


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**--End of Report—**

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