



## STC Test Report

**Date: 2016-05-18**

**Page 1 of 25**

**No.: DM123356**

**Applicant:**

HK YYT Trading Co., Limited  
Office 3A-3, 12/F, Kaiser Centre, No.18 Centre Street, Sai  
Ying Pun, Hong Kong

**Manufacturer:**

HK YYT Trading Co., Limited  
Office 3A-3, 12/F, Kaiser Centre, No.18 Centre Street, Sai  
Ying Pun, Hong Kong

**Description of Sample(s):**

Submitted sample(s) said to be  
Product: Remote Control Drone  
Brand Name: CRAIG  
Model Number: CRT706  
FCC ID: 2AH3TYYT706

**Date Sample(s) Received:** 2016-04-26

**Date Tested:** 2016-05-04 to 2016-05-18

**Investigation Requested:**

Perform ElectroMagnetic Interference measurement in  
accordance with FCC 47CFR [Codes of Federal Regulations]  
Part 15: 2015 and ANSI C63.10: 2013 for FCC Certification.

**Conclusion(s):**

The submitted product COMPLIED with the requirements of  
Federal Communications Commission [FCC] Rules and  
Regulations Part 15. The tests were performed in accordance  
with the standards described above and on Section 2.2 in this  
Test Report.

**Remark(s):**

For additional model(s) details, please page 3.



ElectroMagnetic Compatibility Department  
For and on behalf of  
STC (Dongguan) Company Limited

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 2 of 25**

**No.: DM123356**

### **CONTENT:**

Cover	Page 1 of 25
Content	Page 2 of 25

#### **1.0 General Details**

1.1 Equipment Under Test [EUT]	Page 3 of 25
1.2 Description of EUT Operation	Page 3 of 25
1.3 Date of Order	Page 3 of 25
1.4 Submitted Sample	Page 3 of 25
1.5 Test Duration	Page 3 of 25
1.6 Country of Origin	Page 3 of 25

#### **2.0 Technical Details**

2.1 Investigations Requested	Page 4 of 25
2.2 Test Standards and Results Summary	Page 4 of 25

#### **3.0 Test Results**

3.1 Emission	Page 5-15 of 25
3.2 Bandwidth Measurement	Page 16-20 of 25

#### **Appendix A**

List of Measurement Equipment	Page 21 of 25
-------------------------------	---------------

#### **Appendix B**

Photographs	Page 22-25 of 25
-------------	------------------

#### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : [www.dgstc.org](http://www.dgstc.org)

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 3 of 25**

**No.: DM123356**

### **1.0 General Details**

#### **1.1 Equipment Under Test [EUT] Description of Sample(s)**

Product:	Remote Control Drone
Manufacturer:	HK YYT Trading Co., Limited
	Office 3A-3, 12/F, Kaiser Centre, No.18 Centre Street, Sai
	Ying Pun, Hong Kong
Brand Name:	CRAIG
Model Number:	CRT706
Additional Brand Name:	SURGE
Additional Model Number:	AGRT706, CRT705, AGRT705
Rating:	9Vd.c. (AA*6 battery)

#### **1.2 Description of EUT Operation**

The Equipment Under Test (EUT) is a Remote Control Drone. It is a transceiver operating at 2410MHz~2473MHz and the RF signal was modulated by IC.

#### **1.3 Date of Order**

2016-04-26

#### **1.4 Submitted Sample(s):**

1 Sample

#### **1.5 Test Duration**

2016-05-04 to 2016-05-18

#### **1.6 Country of Origin**

China

### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 4 of 25**

**No.: DM123356**

### **2.0 Technical Details**

#### **2.1 Investigations Requested**

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2015 Regulations and ANSI C63.10: 2013 for FCC Certification.

#### **2.2 Test Standards and Results Summary Tables**

EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Class / Severity		Test Result
			Pass	Fail	
Field Strength of Fundamental & Harmonics Emissions	FCC 47CFR 15.249	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emissions	FCC 47CFR 15.209	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: N/A - Not Applicable

### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## **STC Test Report**

**Date: 2016-05-18**

**Page 5 of 25**

**No.: DM123356**

### **3.0 Test Results**

#### **3.1 Emission**

##### **3.1.1 Radiated Emissions**

Test Requirement:	FCC 47CFR 15.249 & FCC 47CFR 15.209
Test Method:	ANSI C63.10: 2013
Test Date:	2016-05-18
Mode of Operation:	TX mode

#### **Test Method:**

For emission measurements at or below 1 GHz, the sample was placed 0.8m above the ground plane of semi-anechoic Chamber\*. For emission measurements above 1 GHz, the sample was placed 1.5m above the ground plane of semi-anechoic Chamber\*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

\*: Semi-anechoic chamber located on the STC (Dongguan) Company Ltd. 68 Fumin Nan Road, Dalang, Dongguan, Guangdong, PRC with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 629686.

#### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : [www.dgstc.org](http://www.dgstc.org)

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 6 of 25**

**No.: DM123356**

### **Spectrum Analyzer Setting:**

9KHz – 30MHz (Pk & Av)

RBW: 10kHz  
VBW: 30kHz  
Sweep: Auto  
Span: Fully capture the emissions being measured  
Trace: Max. hold

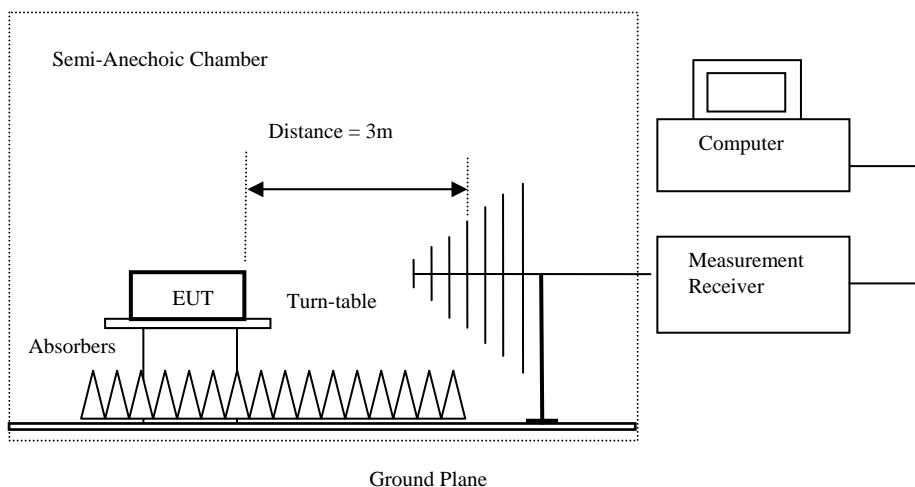
30MHz – 1GHz (QP)

RBW: 120kHz  
VBW: 120kHz  
Sweep: Auto  
Span: Fully capture the emissions being measured  
Trace: Max. hold

Above 1GHz (Pk & Av)

RBW: 1MHz  
VBW: 1MHz  
Sweep: Auto  
Span: Fully capture the emissions being measured  
Trace: Max. hold

### **Test Setup:**



- Absorbers placed on top of the ground plane are for measurements above 1000MHz only.
- Measurements between 30MHz to 1000MHz made with Bi-log antennas, above 1000MHz horn antennas are used, 9kHz to 30MHz loop antennas are used.

### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

Date: 2016-05-18

Page 7 of 25

No.: DM123356

### Limits for Field Strength of Fundamental & Harmonics Emissions [FCC 47CFR 15.249]:

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [microvolts/meter]	Field Strength of Harmonics Emission [microvolts/meter]
902-928	50,000 [Quasi-Peak]	500 [Average]
2400-2483.5	50,000 [Average]	500 [Average]

Results of Tx mode (Lowest Frequency Channel-2410 MHz): Pass

Field Strength of Fundamental Emissions Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
2410.00	60.9	36.8	97.7	76,736.1	500,000	Vertical
2410.00	59.9	36.4	96.3	65,313.1	500,000	Horizontal

Field Strength of Fundamental Emissions Average Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
2410.00	38.5	36.8	75.3	5,821.0	50,000	Vertical
2410.00	38.7	36.4	75.1	5,688.5	50,000	Horizontal

Field Strength of Harmonics Emission Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
4820.0	31.1	41.5	72.6	4,265.8	5,000	Vertical
4820.0	31.1	42.4	73.5	4,731.5	5,000	Horizontal
7230.0	7.8	45.1	52.9	441.6	5,000	Vertical
7230.0	7.1	46.2	53.3	462.4	5,000	Horizontal
9640.0	7.6	48.0	55.6	602.6	5,000	Vertical
9640.0	5.7	48.8	54.5	530.9	5,000	Horizontal

### STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

Date: 2016-05-18

Page 8 of 25

No.: DM123356

Field Strength of Harmonics Emission						
Average Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
4820.0	7.9	41.5	49.4	295.1	500	Vertical
4820.0	7.7	42.4	50.1	319.9	500	Horizontal
7230.0	-8.1	45.1	37.0	70.8	500	Vertical
7230.0	-8.1	46.2	38.1	80.4	500	Horizontal
9640.0	-9.7	48.0	38.3	82.2	500	Vertical
9640.0	-11.4	48.8	37.4	74.1	500	Horizontal

Results of Tx mode (Middle Frequency Channel- 2442MHz): Pass

Field Strength of Fundamental Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
2442.00	60.0	36.8	96.8	69,183.1	500,000	Vertical
2442.00	59.3	36.4	95.7	60,953.7	500,000	Horizontal

Field Strength of Fundamental Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
2442.00	38.1	36.8	74.9	5,559.0	50,000	Vertical
2442.00	37.9	36.4	74.3	5,188.0	50,000	Horizontal

Field Strength of Harmonics Emission						
Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
4884.0	32.0	41.6	73.6	4,786.3	5,000	Vertical
4884.0	30.9	42.5	73.4	4,677.4	5,000	Horizontal
7326.0	7.6	45.2	52.8	436.5	5,000	Vertical
7326.0	7.6	46.3	53.9	495.5	5,000	Horizontal
9768.0	6.4	48.1	54.5	530.9	5,000	Vertical
9768.0	5.7	48.9	54.6	537.0	5,000	Horizontal

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

Date: 2016-05-18

Page 9 of 25

No.: DM123356

Field Strength of Harmonics Emission Avarage Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
4884.0	9.6	41.6	51.2	363.1	500	Vertical
4884.0	3.6	42.5	46.1	201.8	500	Horizontal
7326.0	-7.6	45.2	37.6	75.9	500	Vertical
7326.0	-8.6	46.3	37.7	76.7	500	Horizontal
9768.0	-9.9	48.1	38.2	81.3	500	Vertical
9768.0	-11.2	48.9	37.7	76.7	500	Horizontal

Results of Tx mode (Highest Frequency Channel – 2473MHz): Pass

Field Strength of Fundamental Emissions Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
2473.00	59.2	36.8	96.0	63,095.7	500,000	Vertical
2473.00	58.9	36.4	95.3	58,210.3	500,000	Horizontal

Field Strength of Fundamental Emissions Average Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
2473.00	37.7	36.8	74.5	5,308.8	50,000	Vertical
2473.00	37.7	36.4	74.1	5,069.9	50,000	Horizontal

Field Strength of Harmonics Emission Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
4960.0	31.9	41.4	73.3	4,623.8	5,000	Vertical
4960.0	28.8	42.7	71.5	3,758.4	5,000	Horizontal
7419.0	6.4	45.6	52.0	398.1	5,000	Vertical
7419.0	6.1	46.5	52.6	426.6	5,000	Horizontal
9892.0	4.6	48.6	53.2	457.1	5,000	Vertical
9892.0	4.0	49.7	53.7	484.2	5,000	Horizontal

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 10 of 25**

**No.: DM123356**

<b>Field Strength of Harmonics Emission</b>						
<b>Average Value</b>						
Frequency MHz	Measured Level @3m dB $\mu$ V/m	Correction Factor dB $\mu$ V/m	Field Strength dB $\mu$ V/m	Field Strength $\mu$ V/m	Limit @3m $\mu$ V/m	E-Field Polarity
4946.0	8.6	41.4	50.0	316.2	500	Vertical
4946.0	4.5	42.7	47.2	229.1	500	Horizontal
7419.0	-8.7	45.6	36.9	70.0	500	Vertical
7419.0	-9.8	46.5	36.7	68.4	500	Horizontal
9892.0	-10.8	48.6	37.8	77.6	500	Vertical
9892.0	-11.5	49.7	38.2	81.3	500	Horizontal

Remarks:

No additional spurious emissions found between lowest internal used/generated frequency and 30 MHz

Calculated measurement uncertainty (9kHz - 30MHz): 3.3dB

(30MHz – 1GHz): 4.6dB

(1GHz - 26GHz): 4.4dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)

Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.

For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

Date: 2016-05-18

Page 11 of 25

No.: DM123356

### Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu$ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

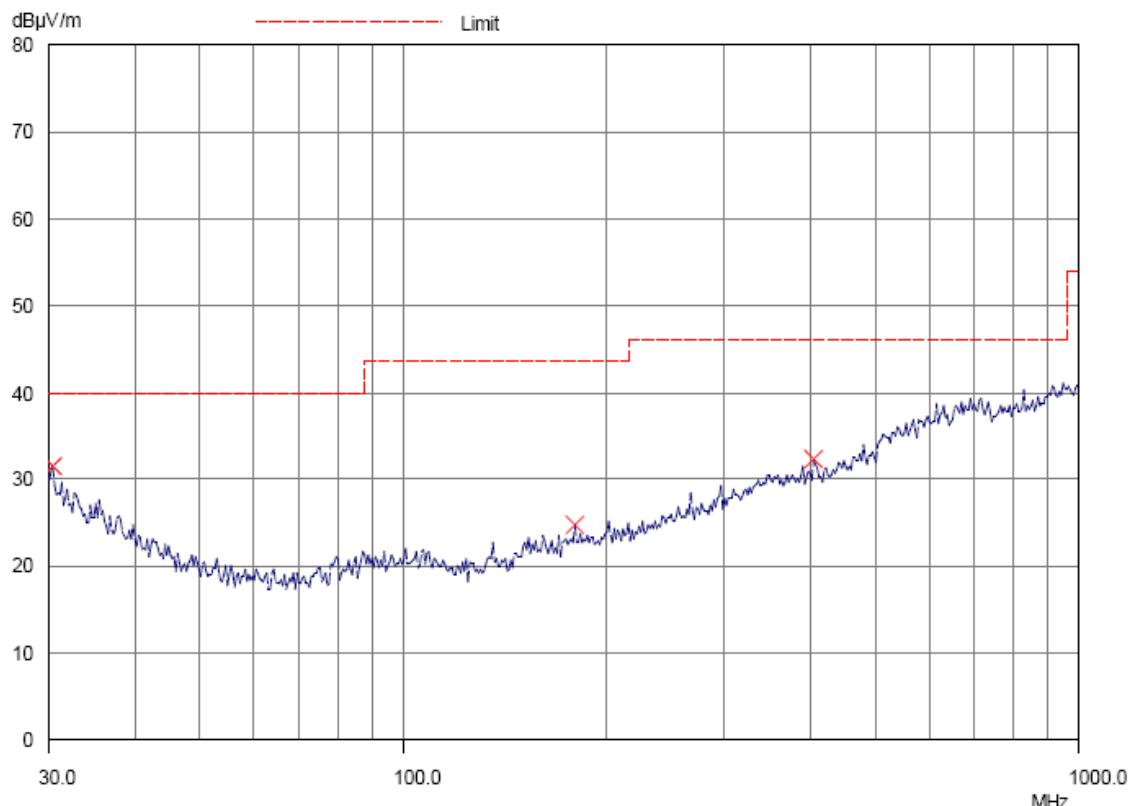
The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

### Results of TX mode (9kHz – 30MHz): PASS

Emissions detected are more than 20 dB below the FCC Limits

### Results of TX mode (30MHz – 1GHz): PASS

Horizontal



**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 12 of 25**

**No.: DM123356**

**Results of TX mode (30MHz – 1GHz): PASS**

<b>Radiated Emissions Quasi-Peak</b>					
<b>Emission Frequency MHz</b>	<b>E-Field Polarity</b>	<b>Level @3m dB<math>\mu</math>V/m</b>	<b>Limit @3m dB<math>\mu</math>V/m</b>	<b>Level @3m <math>\mu</math>V/m</b>	<b>Limit @3m <math>\mu</math>V/m</b>
30.3	Horizontal	31.6	40.0	38.0	100
178.5	Horizontal	24.7	43.5	17.2	150
403.4	Horizontal	32.3	46.0	41.2	200

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

Date: 2016-05-18

Page 13 of 25

No.: DM123356

### Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu$ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above 960	500

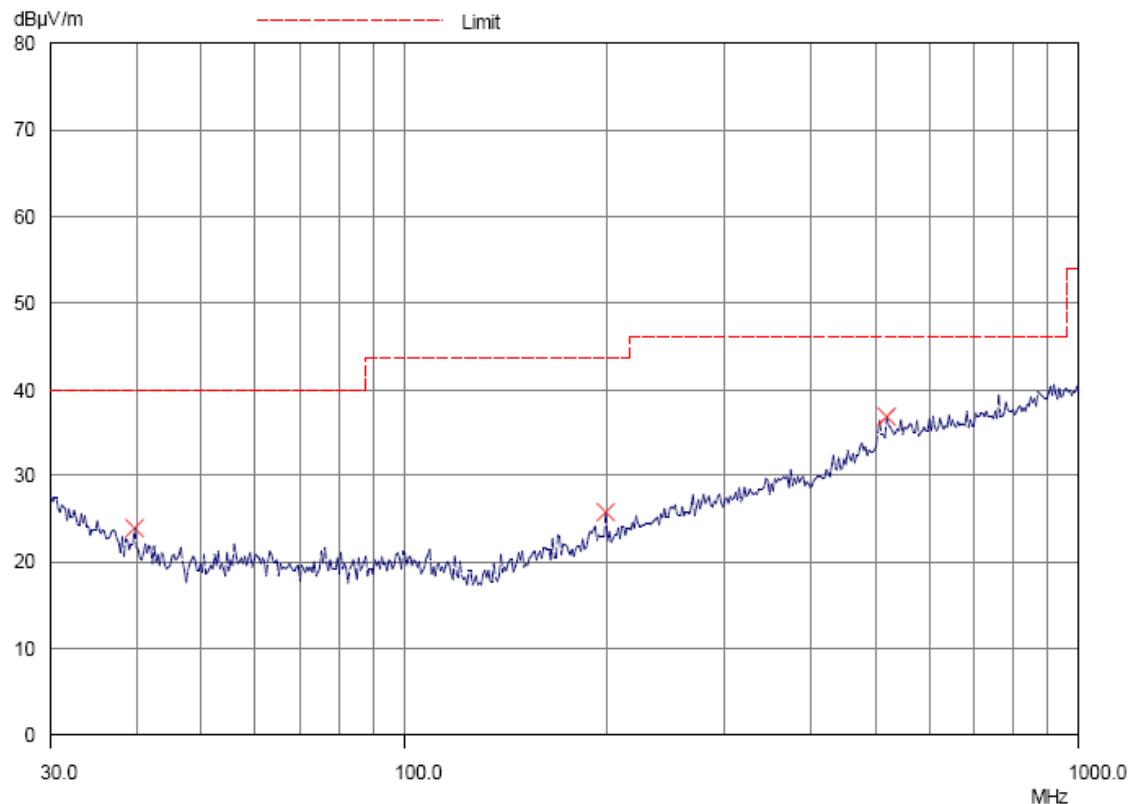
The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

### Results of TX mode (9kHz – 30MHz): PASS

Emissions detected are more than 20 dB below the FCC Limits

### Results of TX mode (30MHz – 1GHz): PASS

Vertical



**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 14 of 25**

**No.: DM123356**

**Results of TX mode (30MHz – 1GHz): PASS**

<b>Radiated Emissions Quasi-Peak</b>					
Emission Frequency MHz	E-Field Polarity	Level @3m dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Level @3m $\mu$ V/m	Limit @3m $\mu$ V/m
39.8	Vertical	23.9	40.0	15.7	100
198.3	Vertical	25.8	43.5	19.5	150
517.0	Vertical	36.9	46.0	70.0	200

Remarks:

Calculated measurement uncertainty (9kHz - 30MHz): 3.3dB  
(30MHz – 1GHz): 4.6dB  
(1GHz - 26GHz): 4.4dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 15 of 25**

**No.: DM123356**

### **3.1.2 Antenna Requirement**

**Test Requirements: § 15.203**

#### **Test Specification:**

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### **Test Results:**

This is Polarization line antenna. There is no external antenna, the antenna gain = 0dBi. User is unable to remove or changed the Antenna.

#### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : [www.dgstc.org](http://www.dgstc.org)

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 16 of 25**

**No.: DM123356**

### **3.2 20dB Bandwidth of Fundamental Emission**

Test Requirement:	FCC 47 CFR 15.249
Test Method:	ANSI C63.10: 2013
Test Date:	2016-05-05
Mode of Operation:	Tx mode

#### **Test Method:**

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

#### **Test Setup:**

As Test Setup of clause 3.1.1 in this test report.

#### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : [www.dgstc.org](http://www.dgstc.org)

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

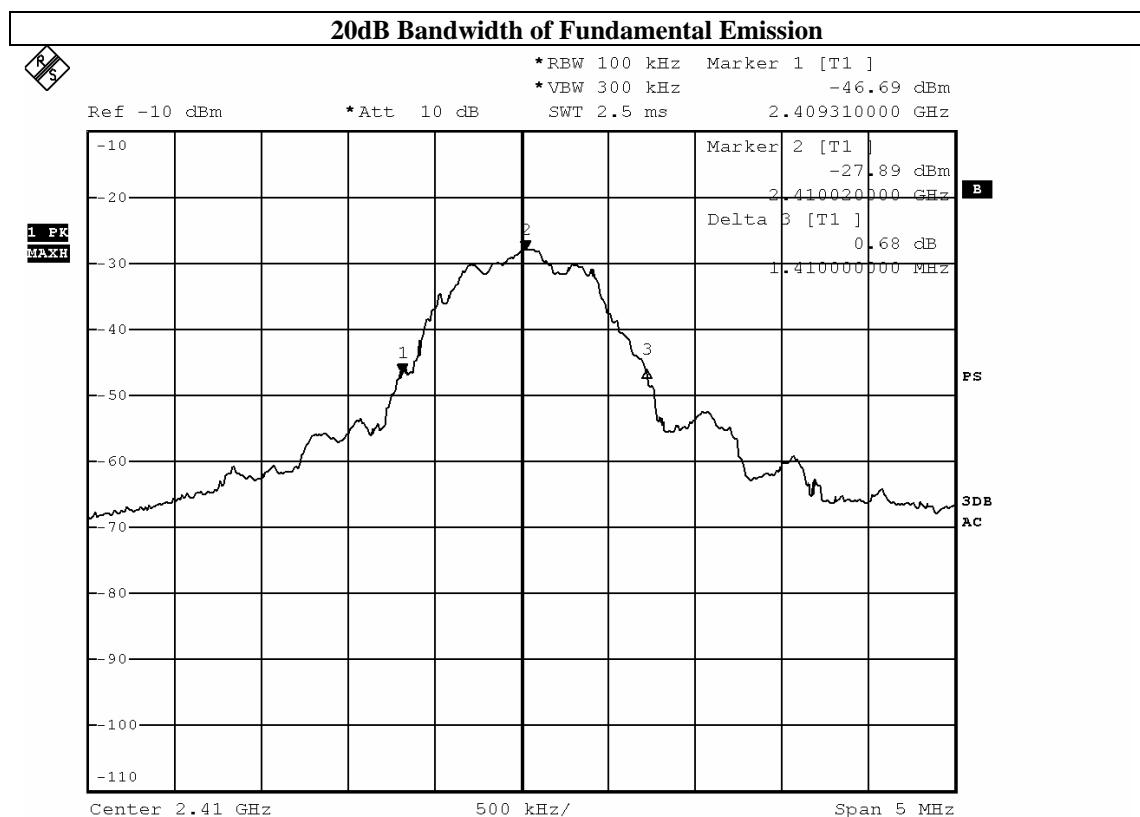
Date: 2016-05-18

Page 17 of 25

No.: DM123356

### Limits for 20dB Bandwidth of Fundamental Emission (Low Frequency Channel):

Frequency Range [MHz]	20dB Bandwidth [MHz]
2410	1.41



BMP

Date: 5.MAY.2016 15:27:26

### STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

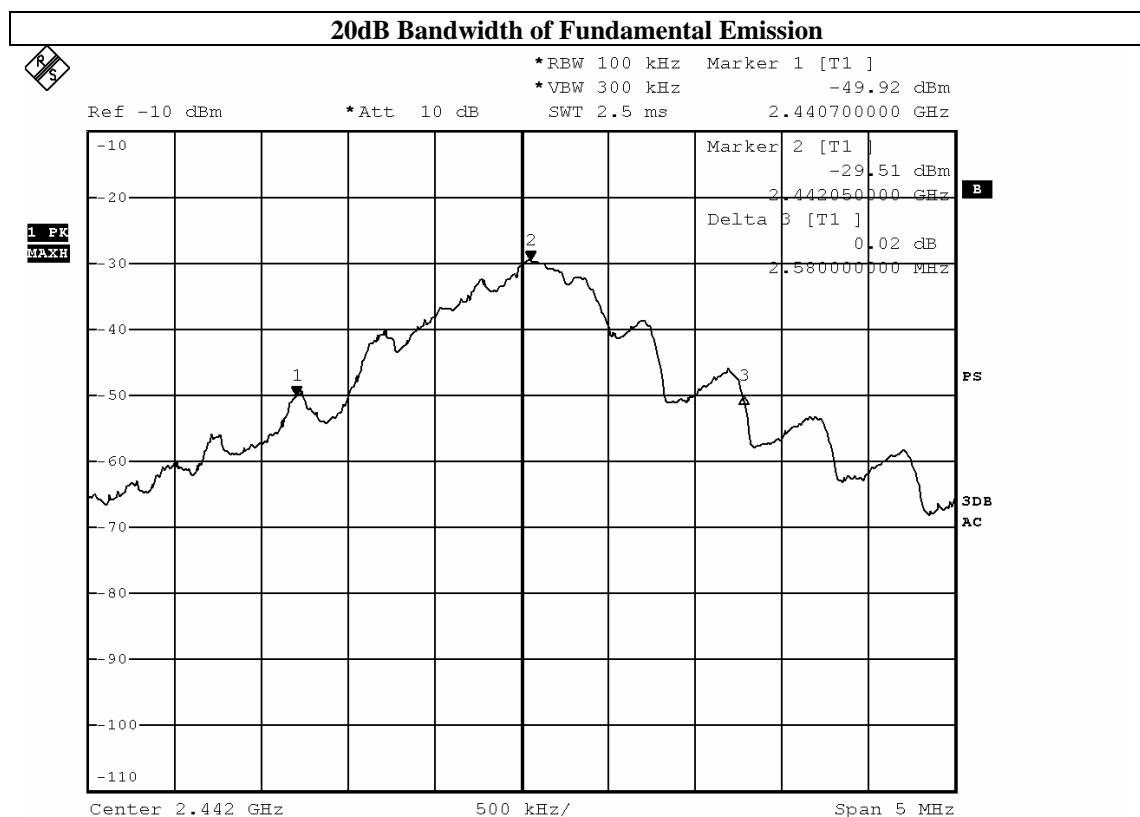
Date: 2016-05-18

Page 18 of 25

No.: DM123356

### Limits for 20dB Bandwidth of Fundamental Emission (Middle Frequency Channel):

Frequency Range [MHz]	20dB Bandwidth [MHz]
2442	2.58



BMP

Date: 5.MAY.2016 15:29:52

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

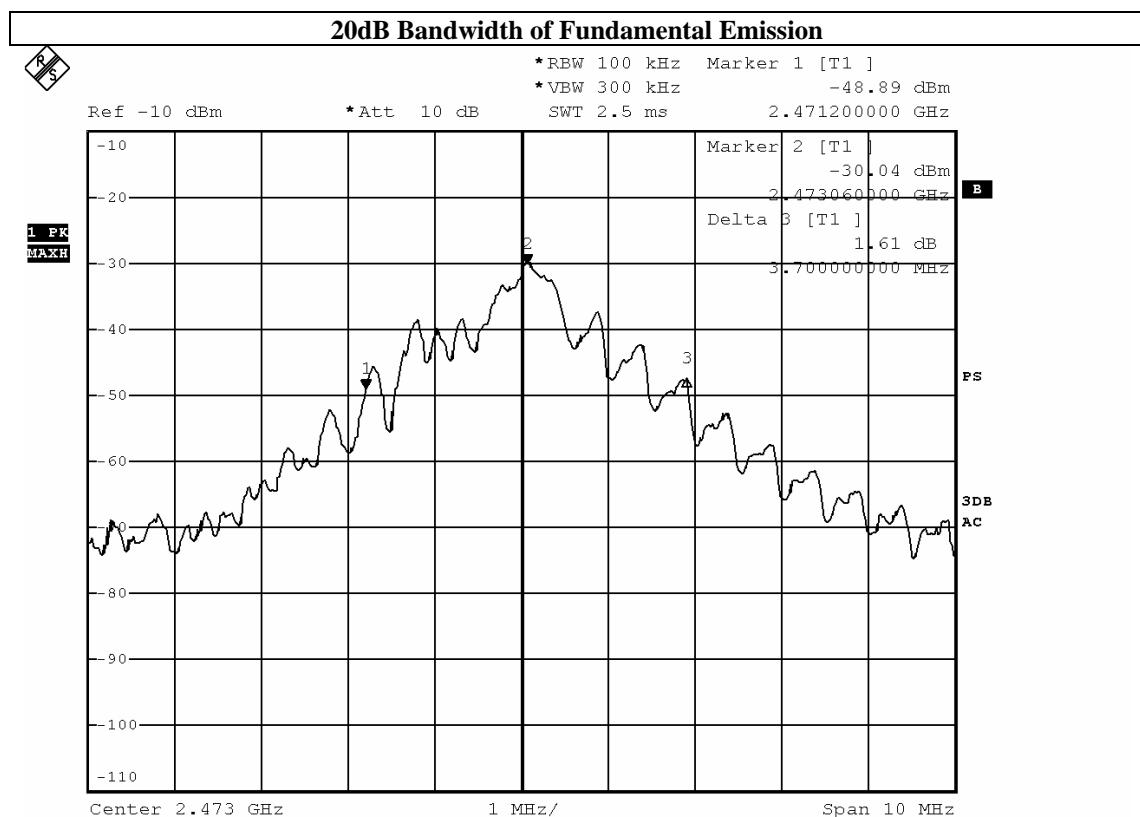
Date: 2016-05-18

Page 19 of 25

No.: DM123356

### Limits for 20dB Bandwidth of Fundamental Emission (High Frequency Channel):

Frequency Range [MHz]	20dB Bandwidth [MHz]
2473	3.70



BMP

Date: 5.MAY.2016 15:37:28

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 20 of 25**

**No.: DM123356**

### **RF Radiated Emissions Measurement:**

#### **Limit :**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

### **Result: RF Radiated Emissions (1GHz-26GHz) (worse data) (Lowest)**

Field Strength of Band-edge Compliance Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB $\mu$ V/m	E-Field Polarity
2400.0	15.9	36.8	52.7	74.0	21.3	Vertical

Field Strength of Band-edge Compliance Average Value						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB $\mu$ V/m	E-Field Polarity
2400.0	-2.8	36.8	34.0	54.0	20.0	Vertical

### **Result: RF Radiated Emissions (1GHz-26GHz) (worse data) (Highest)**

Field Strength of Band-edge Compliance Peak Value						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB $\mu$ V/m	E-Field Polarity
2483.5	4.4	36.4	40.8	74.0	33.2	Horizontal

Field Strength of Band-edge Compliance Average Value						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB $\mu$ V/m	E-Field Polarity
2483.5	-2.8	36.4	33.6	54.0	20.4	Horizontal

### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 21 of 25**

**No.: DM123356**

### **Appendix A**

#### **List of Measurement Equipment**

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EMD004	LISN	ROHDE & SCHWARZ	ESH3-Z5	100102	2016.03.29	2017.03.29
EMD022	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100314	2016.03.29	2017.03.29
EMD035	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100441	2016.03.29	2017.03.29
EMD036	EMI Test Receiver	ROHDE & SCHWARZ	ESIB 26	100388	2016.03.29	2017.03.29
EMD041	TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	100261	2016.03.29	2017.03.29
EMD061	Biconilog Antenna	ETS.LINDGREN	3142C	00060439	2014.11.29	2016.11.29
EMD062	Double-Ridged Waveguide (1GHz – 18GHz)	ETS.LINDGREN	3117	00075933	2014.11.15	2016.11.15
EMD084	MULTI-DVICE CONTROLLER	ETS.LINDGREN	2090	00060107	N/A	N/A
EMD088	Video Control Unit	ETS.LINDGREN	Y21953A	2601073	N/A	N/A
EMD093	Monitor	ViewSonic	VA9036	Q8X064201876	N/A	N/A
EMD102	Intelligent Frequency	Ainuo Instrument Co., Ltd	AN97005SS	79707454	N/A	N/A
EMD103	Intelligent Frequency	Ainuo Instrument Co., Ltd	AN97005SS	79707455	N/A	N/A
EMD105	FACT-3 EMC Chamber	ETS.LINDGREN	FACT-3	3803	N/A	N/A
EMD106	Shielding Room #1	ETS.LINDGREN	RFD-100	3802	N/A	N/A
	100V Insertion Unit	ROHDE & SCHWARZ	URV5-Z4	100464	2016.03.29	2017.03.29
EMD113	Pre-Amplifier	ROHDE & SCHWARZ	N/A	1129588	2016.03.29	2017.03.29
EMD124	Loop Antenna	ETS-Lindgren	6502	00104905	2016.04.28	2018.04.28
EMD131	Standard Gain Horn Antenna (18GHz – 26.5GHz)	Chengdu AINFO Inc.	JXTXLB-42-15-C-KF	J2021100721001	2015.06.27	2017.06.27

**Remarks:-**

N/A      Not Applicable or Not Available

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

Date: 2016-05-18

Page 22 of 25

No.: DM123356

### Appendix B

#### Photographs of EUT

Front View of the product



Rear View of the product



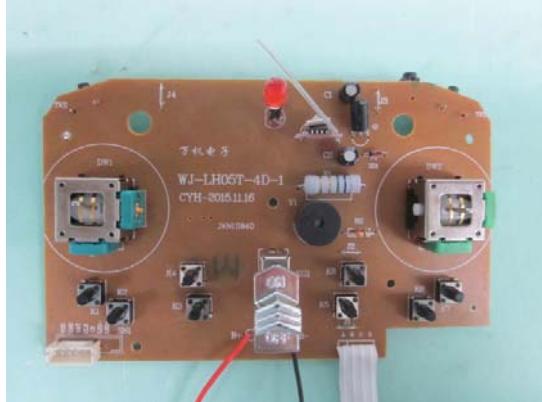
Inside View of the product



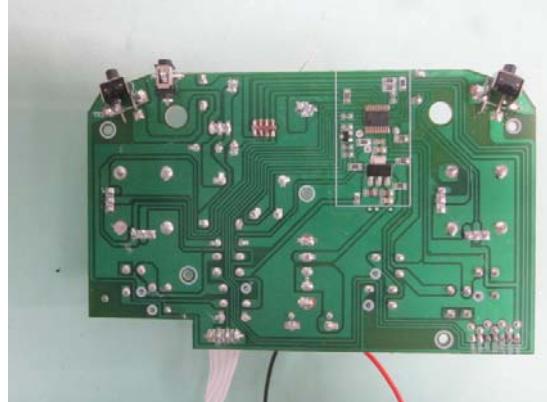
Inside View of the product



Inner Circuit Top View



Inner Circuit Bottom View



**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

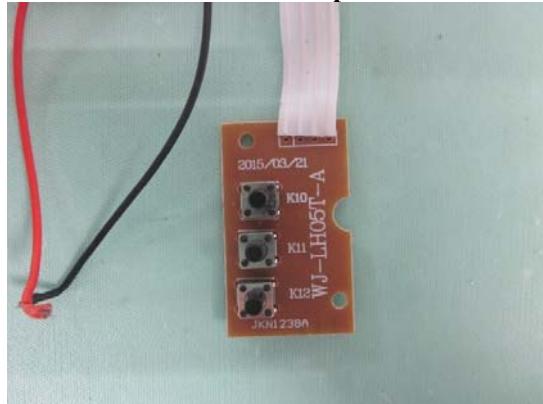
Date: 2016-05-18

Page 23 of 25

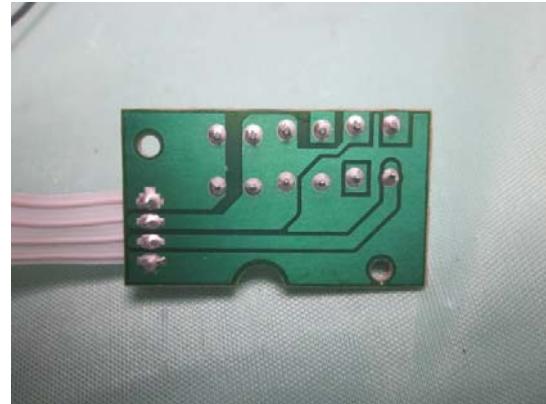
No.: DM123356

### Photographs of EUT

Inner Circuit Top View



Inner Circuit Bottom View



### STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

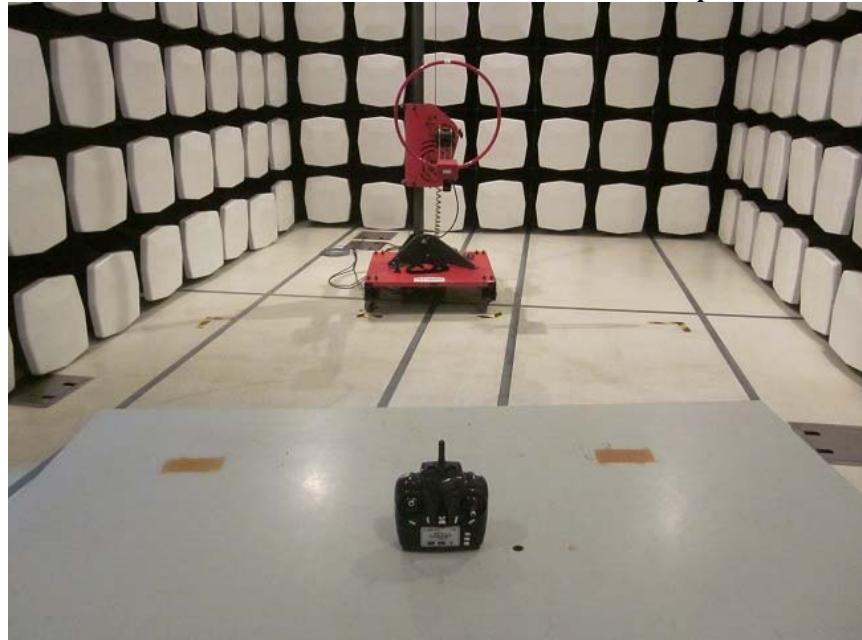
**Date: 2016-05-18**

**Page 24 of 25**

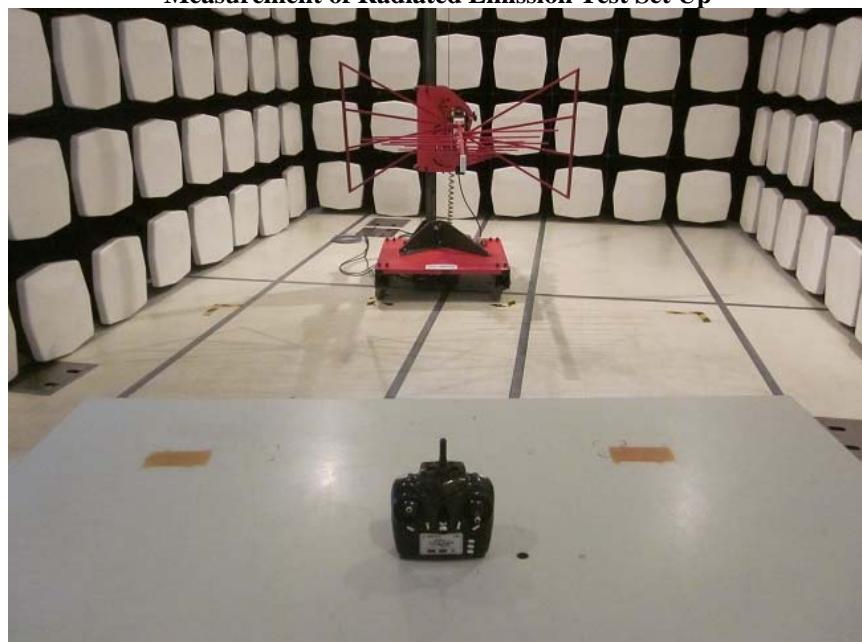
**No.: DM123356**

### **Photographs of EUT**

**Measurement of Radiated Emission Test Set Up**



**Measurement of Radiated Emission Test Set Up**



### **STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.



## STC Test Report

**Date: 2016-05-18**

**Page 25 of 25**

**No.: DM123356**

### **Photographs of EUT**

**Measurement of Radiated Emission Test Set Up**



**\*\*\*\*\* End of Test Report \*\*\*\*\***

**STC (Dongguan) Company Limited**

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)  
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

This report shall not be reproduced unless with prior written approval from STC (Dongguan) Company Limited.  
For Conditions of Issuance of this test report, please refer to the overleaf or Homepage.