



## STC Test Report

Date: 2015-08-04

Page 1 of 25

No.: DM120402

**Applicant:** Winspeed Co., LTD  
14 F-1, No. 2, Jian-Ba Rd., Chung-Ho District, New Taipei  
City, Taiwan

**Manufacturer:** Winspeed Co., LTD  
14 F-1, No. 2, Jian-Ba Rd., Chung-Ho District, New Taipei  
City, Taiwan

**Description of Sample(s):** Submitted sample(s) said to be  
Product: SPEEDLINK LUCIDIS Wireless Deskset  
Brand Name: Speedlink  
Model Number: SL-640300-BK-US  
FCC ID: 2AEDNA16

**Date Sample(s) Received:** 2015-07-24

**Date Tested:** 2015-07-25 to 2015-08-01

**Investigation Requested:** Perform ElectroMagnetic Interference measurement in  
accordance with FCC 47CFR [Codes of Federal Regulations]  
Part 15: 2014 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):** ---  
(Mouse)

  
LONG Yun Jian, Along  
Authorized Signatory  
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: 2015-08-04

Page 2 of 25

No.: DM120402

## CONTENT:

Cover	Page 1 of 25
Content	Page 2 of 25
<b><u>1.0</u></b>	<b><u>General Details</u></b>
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
<b><u>2.0</u></b>	<b><u>Technical Details</u></b>
2.1	Investigations Requested Page 4 of 25
2.2	Test Standards and Results Summary Page 4 of 25
<b><u>3.0</u></b>	<b><u>Test Results</u></b>
3.1	Emission Page 5-8 of 25
3.2	Bandwidth Measurement Page 9-19 of 25
<b><u>Appendix A</u></b>	
List of Measurement Equipment	Page 20 of 25
<b><u>Appendix B</u></b>	
Ancillary Equipment	Page 21 of 25
<b><u>Appendix C</u></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

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: 2015-08-04**

**Page 3 of 25**

**No.: DM120402**

### **1.0 General Details**

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

Product:	SPEEDLINK LUCIDIS Wireless Deskset
Manufacturer:	Winspeed Co., LTD 14 F-1, No. 2, Jian-Ba Rd., Chung-Ho District, New Taipei City, Taiwan
Brand Name:	Speedlink
Model Number:	SL-640300-BK-US
Rating:	3.0Vd.c. (Powered by "AAA" battery x2)

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

The Equipment Under Test (EUT) is a SPEEDLINK LUCIDIS Wireless Deskset. It is a transceiver operating at 2407MHz~2477MHz and the RF signal was modulated by IC.

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

2015-07-24

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

1 Sample

#### **1.5 Test Duration**

2015-07-25 to 2015-08-01

#### **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: 2015-08-04

Page 4 of 25

No.: DM120402

### 2.0 Technical Details

#### **2.1 Investigations Requested**

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2014 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	N/A
Field Strength of Fundamental & Harmonics Emissions	FCC 47CFR 15.249	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiated Emissions	FCC 47CFR 15.209	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input 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: 2015-08-04**

**Page 5 of 25**

**No.: DM120402**

### **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:	2015-07-25 to 2015-08-01
Mode of Operation:	Communication 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

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: 2015-08-04

Page 6 of 25

No.: DM120402

### Spectrum Analyzer Setting:

9KHz – 30MHz (Pk & Av)

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

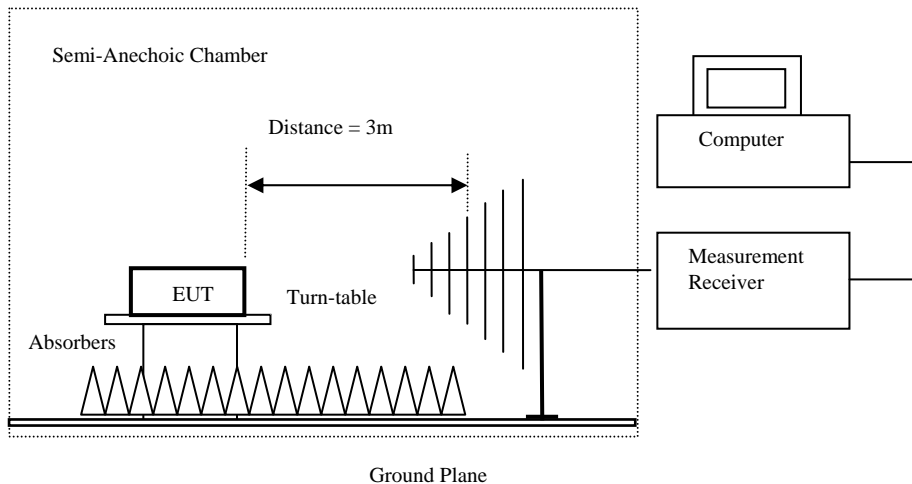
30MHz – 1GHz (QP)

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: 2015-08-04

Page 7 of 25

No.: DM120402

**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-2407 MHz): Pass**

<b>Field Strength of Fundamental Emissions Peak 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
2407.00	43.1	36.8	79.9	9,885.5	500,000	Vertical
2407.00	42.6	36.4	79.0	8,912.5	500,000	Horizontal

<b>Field Strength of Fundamental Emissions 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
2407.00	28.8	36.8	65.6	1,905.5	50,000	Vertical
2407.00	28.9	36.4	65.3	1,840.8	50,000	Horizontal

<b>Field Strength of Harmonics Emission Peak 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
4814.0	3.7	41.5	45.2	182.0	5,000	Vertical
4814.0	3.3	42.4	45.7	192.8	5,000	Horizontal
7221.0	3.3	45.1	48.4	263.0	5,000	Vertical
7221.0	1.8	46.2	48.0	251.2	5,000	Horizontal
9628.0	2.5	48.0	50.5	335.0	5,000	Vertical
9628.0	1.4	48.8	50.2	323.6	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: 2015-08-04

Page 8 of 25

No.: DM120402

<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
4814.0	-7.5	41.5	34.0	50.1	500	Vertical
4814.0	-9.9	42.4	32.5	42.2	500	Horizontal
7221.0	-11.0	45.1	34.1	50.7	500	Vertical
7221.0	-9.9	46.2	36.3	65.3	500	Horizontal
9628.0	-9.4	48.0	38.6	85.1	500	Vertical
9628.0	-11.3	48.8	37.5	75.0	500	Horizontal

**Results of Tx mode (Middle Frequency Channel- 2437MHz): Pass**

<b>Field Strength of Fundamental Emissions</b>						
<b>Peak 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
2437.00	42.3	36.8	79.1	9,015.7	500,000	Vertical
2437.00	42.5	36.4	78.9	8,810.5	500,000	Horizontal

<b>Field Strength of Fundamental Emissions</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
2437.00	28.5	36.8	65.3	1,840.8	50,000	Vertical
2437.00	28.6	36.4	65.0	1,778.3	50,000	Horizontal

<b>Field Strength of Harmonics Emission</b>						
<b>Peak 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
4874.0	3.4	41.6	45.0	177.8	5,000	Vertical
4874.0	2.6	42.5	45.1	179.9	5,000	Horizontal
7311.0	2.3	45.2	47.5	237.1	5,000	Vertical
7311.0	1.5	46.3	47.8	245.5	5,000	Horizontal
9748.0	2.3	48.1	50.4	331.1	5,000	Vertical
9748.0	0.2	48.9	49.1	285.1	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: 2015-08-04

Page 9 of 25

No.: DM120402

<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
4874.0	-8.4	41.6	33.2	45.7	500	Vertical
4874.0	-9.8	42.5	32.7	43.2	500	Horizontal
7311.0	-11.1	45.2	34.1	50.7	500	Vertical
7311.0	-11.7	46.3	34.6	53.7	500	Horizontal
9748.0	-10.5	48.1	37.6	75.9	500	Vertical
9748.0	-12.9	48.9	36.0	63.1	500	Horizontal

**Results of Tx mode (Highest Frequency Channel – 2477MHz): Pass**

<b>Field Strength of Fundamental Emissions</b>						
<b>Peak 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
2477.00	42.5	36.8	79.3	9,225.7	500,000	Vertical
2477.00	42.3	36.4	78.7	8,609.9	500,000	Horizontal

<b>Field Strength of Fundamental Emissions</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
2477.00	28.7	36.8	65.5	1,883.6	50,000	Vertical
2477.00	28.4	36.4	64.8	1,737.8	50,000	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: 2015-08-04

Page 10 of 25

No.: DM120402

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
4954.0	3.8	41.4	45.2	182.0	5,000	Vertical
4954.0	1.4	42.7	44.1	160.3	5,000	Horizontal
7431.0	1.4	45.6	47.0	223.9	5,000	Vertical
7431.0	0.7	46.5	47.2	229.1	5,000	Horizontal
9908.0	0.9	48.6	49.5	298.5	5,000	Vertical
9908.0	0.9	49.7	50.6	338.8	5,000	Horizontal

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
4954.0	-8.9	41.4	32.5	42.2	500	Vertical
4954.0	-10.4	42.7	32.3	41.2	500	Horizontal
7431.0	-11.0	45.6	34.6	53.7	500	Vertical
7431.0	-11.1	46.5	35.4	58.9	500	Horizontal
9908.0	-11.5	48.6	37.1	71.6	500	Vertical
9908.0	-13.0	49.7	36.7	68.4	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: 2015-08-04

Page 11 of 25

No.: DM120402

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

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu\text{V/m}$ ]
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

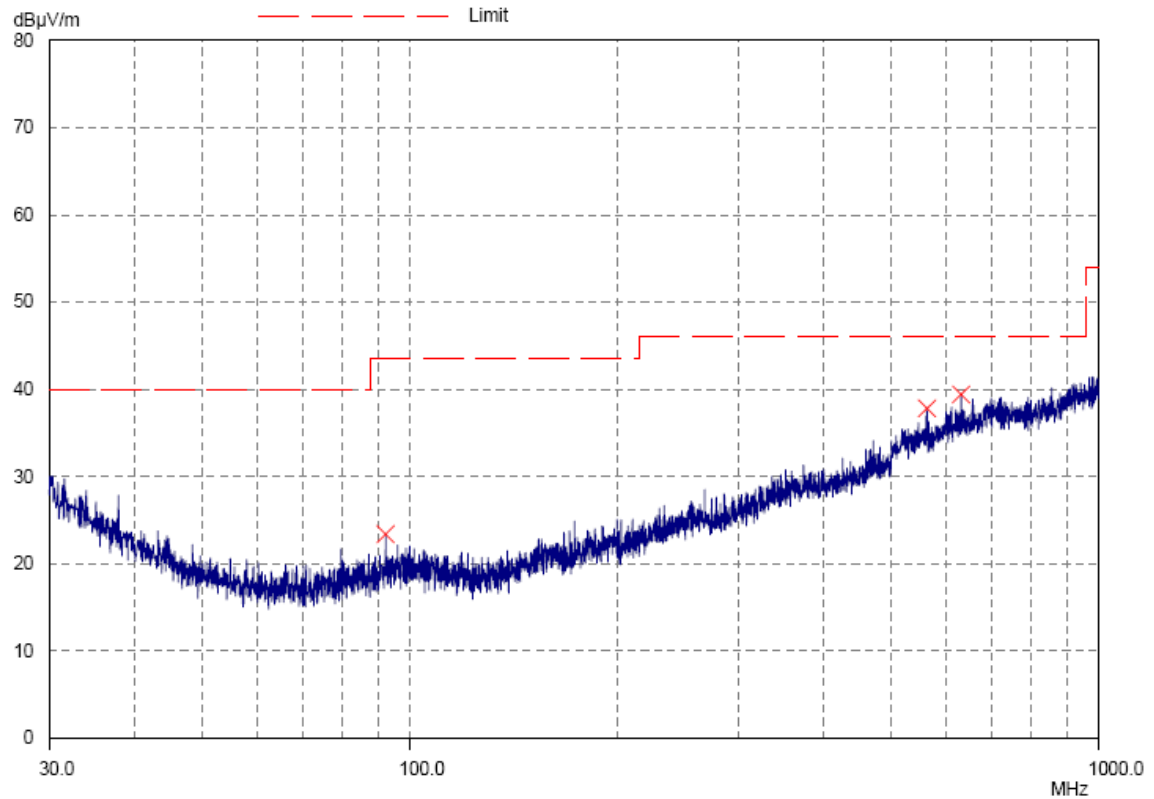
The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

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

Emissions detected are more than 20 dB below the FCC Limits

### Results of Communication 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: 2015-08-04

Page 12 of 25

No.: DM120402

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

<b>Radiated Emissions</b>					
<b>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
92.3	Horizontal	23.4	43.5	14.8	150
563.9	Horizontal	37.8	46.0	77.6	200
631.9	Horizontal	39.4	46.0	93.3	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: 2015-08-04

Page 13 of 25

No.: DM120402

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

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu\text{V/m}$ ]
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

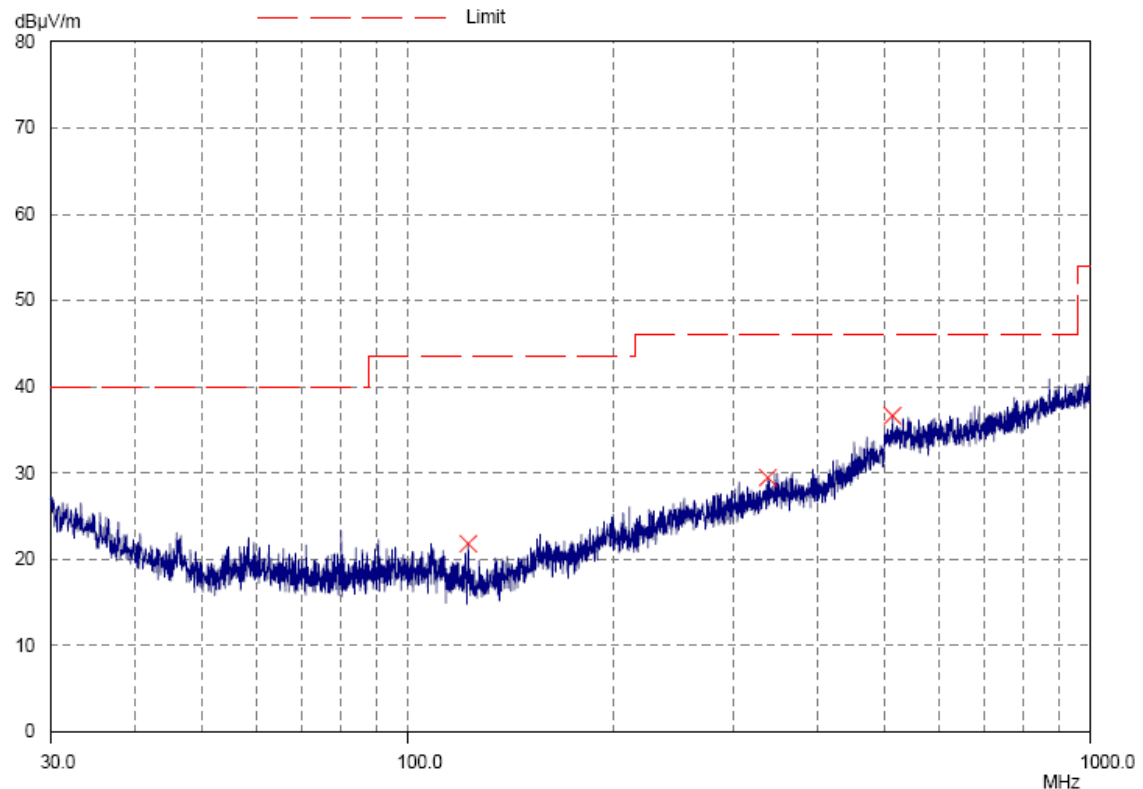
The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

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

Emissions detected are more than 20 dB below the FCC Limits

### Results of Communication 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: 2015-08-04

Page 14 of 25

No.: DM120402

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

Radiated Emissions Quasi-Peak					
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
122.8	Vertical	21.8	43.5	12.3	150
337.3	Vertical	29.5	46.0	29.9	200
513.6	Vertical	36.6	46.0	67.6	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: 2015-08-04**

**Page 15 of 25**

**No.: DM120402**

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

Test Requirement:	FCC 47 CFR 15.249
Test Method:	ANSI C63.10: 2013
Test Date:	2015-08-01
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

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: 2015-08-04

Page 16 of 25

No.: DM120402

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

Frequency Range [MHz]	20dB Bandwidth [MHz]
2407	2.12

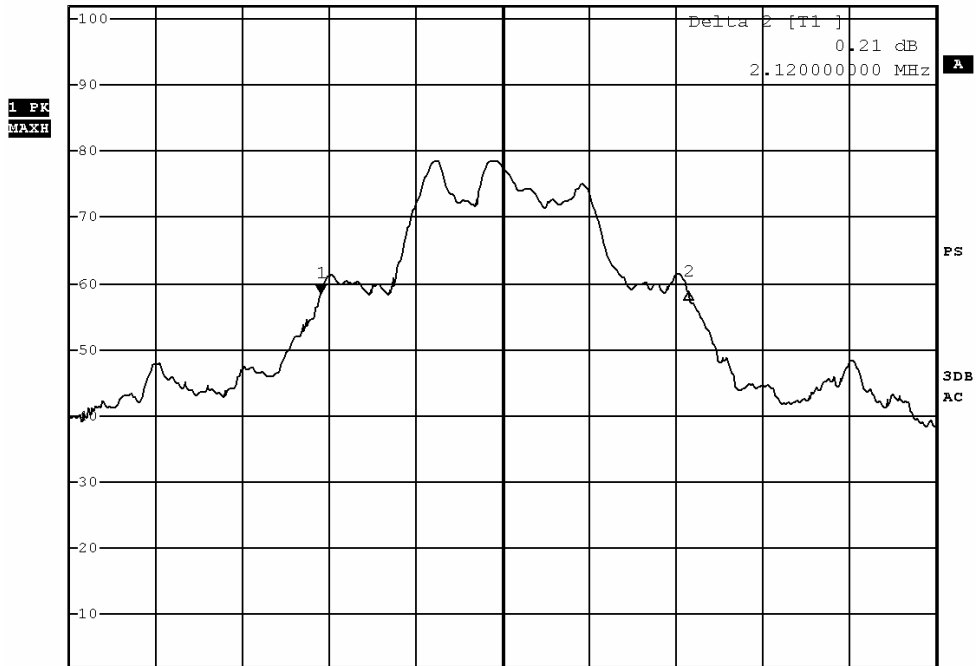
## 20dB Bandwidth of Fundamental Emission



\*RBW 100 kHz Marker 1 [T1 ]  
 \*VBW 300 kHz 58.54 dBμV  
 SWT 2.5 ms 2.405950000 GHz

Ref 102 dBμV

\*Att 10 dB



Center 2.407 GHz

500 kHz/

Span 5 MHz

BMP

Date: 1.AUG.2015 11:25:13

### 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: 2015-08-04

Page 17 of 25

No.: DM120402

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

Frequency Range [MHz]	20dB Bandwidth [MHz]
2437	2.12

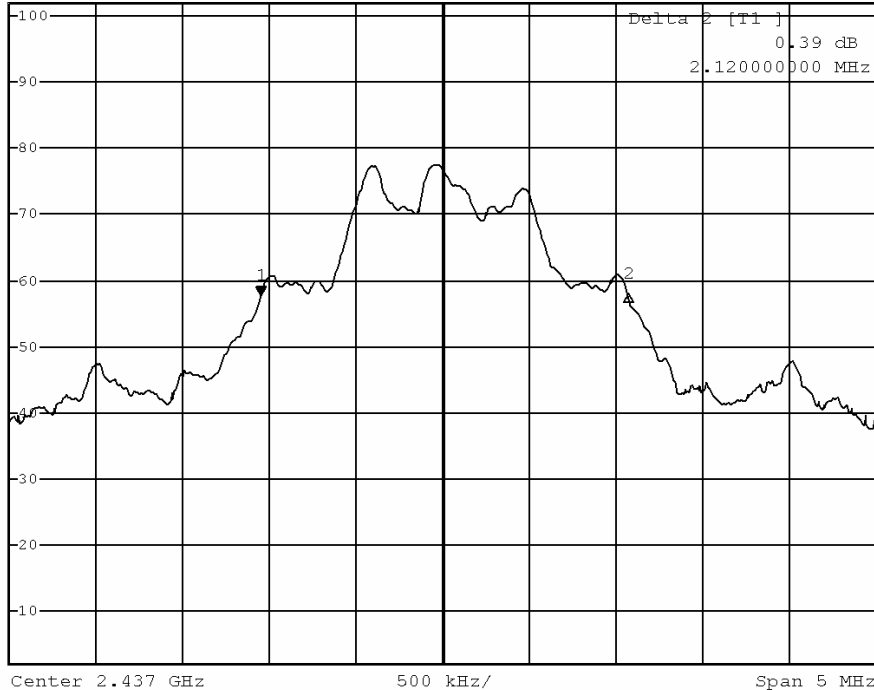
## 20dB Bandwidth of Fundamental Emission



\*RBW 100 kHz Marker 1 [T1 ]  
 \*VBW 300 kHz 57.72 dBμV  
 SWT 2.5 ms 2.435950000 GHz

Ref 102 dBμV

\*Att 10 dB



BMP

Date: 1.AUG.2015 11:27:43

### 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: 2015-08-04

Page 19 of 25

No.: DM120402

### RF Radiated Emissions Measurement:

#### Limit :

Emissions radiated outside of the specified frequency bands, except t for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §115.209, 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
2439.0	4.1	36.8	40.9	74.0	33.1	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
2439.0	-6.6	36.8	30.2	54.0	23.8	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	4.3	36.4	40.7	74.0	33.3	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	-5.6	36.4	30.8	54.0	23.2	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: 2015-08-04

Page 20 of 25

No.: DM120402

### 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	2015.3.24	2016.3.24
EMD022	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100314	2015.3.24	2016.3.24
EMD035	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100441	2015.3.24	2016.3.24
EMD036	EMI Test Receiver	ROHDE & SCHWARZ	ESIB 26	100388	2015.3.24	2016.3.24
EMD041	TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	100261	2015.3.24	2016.3.24
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	2015.11.15
EMD084	MULTI-DVICE CONTROLLER	ETS.LINDGREN	2090	00060107	N/A	N/A
EMD088	Video Contol 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	2015.3.24	2016.3.24
EMD113	Pre-Amplifier	ROHDE & SCHWARZ	N/A	1129588	2015.3.24	2016.3.24
EMD124	Loop Antenna	ETS-Lindgren	6502	00104905	2014.04.28	2016.04.28
EMD131	Standard Gain Horn Antenna (18GHz – 26.5GHz)	Chengdu AINFO Inc.	JTXLB-42-15-C-KF	J2021100721001	2013.04.09	2016.04.09

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: 2015-08-04

Page 21 of 25

No.: DM120402

### Appendix B

#### Ancillary Equipment

ITEM NO.	DESCRIPTION	MODEL NO.	FCC ID	REMARK
1	DELL COMPUTER	DMC	N/A	N/A
2	DELL MONITOR	E177FPB	ARSCM356N	RESOLUTION 1024*768 (DURING TESTING) 1.0M UNSHIEDED POWER VORD CONNECTED TO THE COMPUTER 1.5M SHIEDED CABLE CONNECTED TO THE COMPUTER
3	DELL KEYBOARD	SK-8110	N/A	1.8M SHIEDED COILED CABLE CONNECTED TO THE COMPUTER
4	Dongle	SL-640300-BK	N/A	SPEEDLINK LUCIDIS Wireless Deskset
5	LASER PRINTER	HP LASERJET 1020 PLUS	N/A	1.8M UNSHIEDED POWER CORD 2.8M SHIEDED CABLE (BUNDLED TO 1M) CONNECTED TO THE COMPUTER

#### 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: 2015-08-04

Page 22 of 25

No.: DM120402

### Appendix C

#### Photographs of EUT

**Front View of the product**



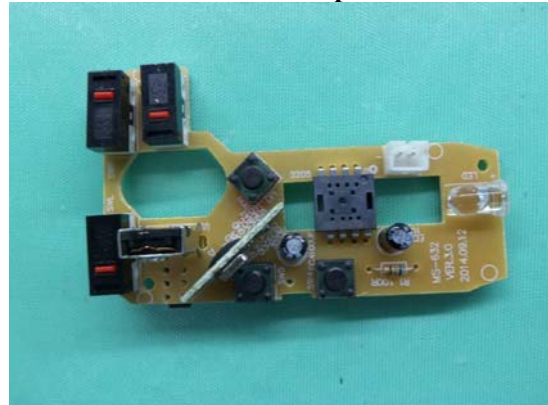
**Rear View of the product**



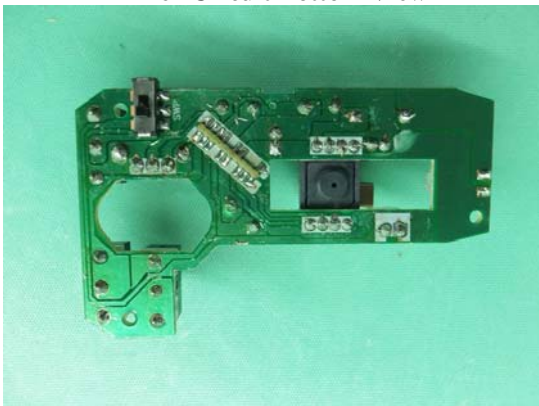
**Inside View of the product**



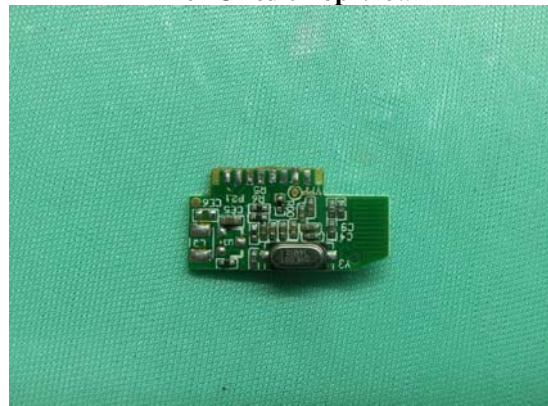
**Inner Circuit Top View**



**Inner Circuit Bottom View**



**Inner Circuit Top 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

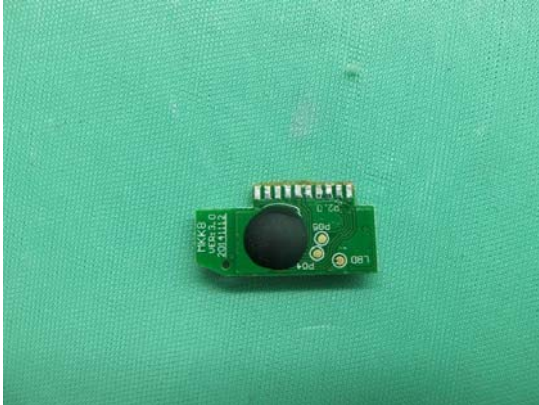
Date: 2015-08-04

Page 23 of 25

No.: DM120402

### Photographs of EUT

**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: 2015-08-04

Page 24 of 25

No.: DM120402

### 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: 2015-08-04

Page 25 of 25

No.: DM120402

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.