



Test Report

Date : 2017-04-19
No. : DM17040048

Page 1 of 24

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

Supplier / 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 No.: SL-640300-BK-V3
FCC ID: 2AEDNA42

Date Samples Received : 2017-04-13

Date Tested : 2017-04-18 to 2017-04-19

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.

Conclusions : 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.

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


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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 2 of 24

CONTENT:

Cover	Page 1 of 24
Content	Page 2 of 24
<u>1.0</u>	<u>General Details</u>
1.1	Equipment Under Test [EUT] Page 3 of 24
1.2	Description of EUT operation Page 3 of 24
1.3	Date of Order Page 3 of 24
1.4	Submitted Sample(s) Page 3 of 24
1.5	Test Duration Page 3 of 24
1.6	Country of Origin Page 3 of 24
<u>2.0</u>	<u>Technical Details</u>
2.1	Investigations Requested Page 4 of 24
2.2	Test Standards and Results Summary Page 4 of 24
<u>3.0</u>	<u>Test Results</u>
3.1	Emission Page 5-20 of 24
<u>Appendix A</u>	
List of Measurement Equipment	Page 21 of 24
<u>Appendix B</u>	
Photograph(s) of Product	Page 22-24 of 24

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 3 of 24

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-V3
Additional Model Number: SL-640300-BK-V3-XX(XX denotes different product colors &
countries)
Rating: 3.0Vd.c. (AA battery*2)

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

2017-04-13

1.4 Submitted Sample(s):

1 Sample

1.5 Test Duration

2017-04-18 to 2017-04-19

1.6 Country of Origin

China

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 4 of 24

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. The device was realized by test software.

2.2 Test Standards and Results Summary Tables

EMISSION Results Summary						
Test Condition	Test Requirement	Test Method	Class / Severity	Test Result		
				Pass	Failed	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"/>
Antenna requirement	FCC 47CFR 15.203	N/A	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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 5 of 24

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:	2017-04-19
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, rotated about all 3 axis (X, Y & Z) and 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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.

Test Report

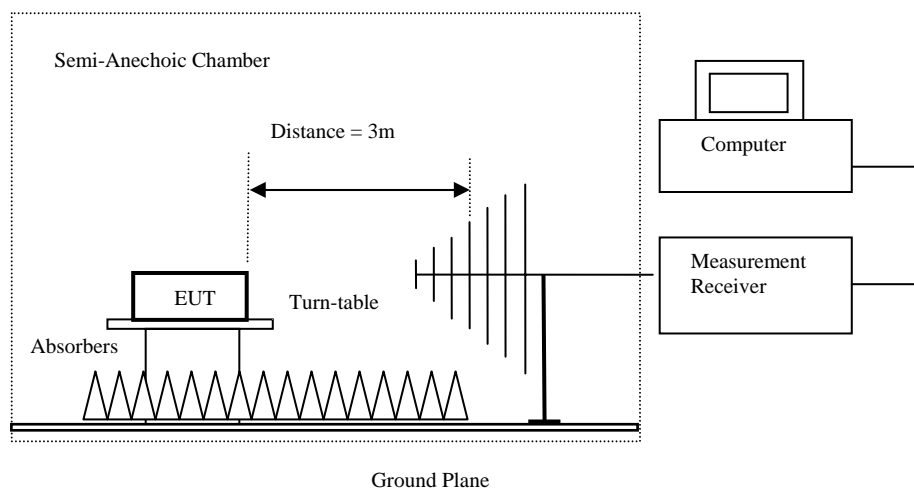
Date : 2017-04-19
No. : DM17040048

Page 6 of 24

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)	RBW: 1MHz VBW: 1MHz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold
Above 1GHz (Av)	RBW: 1MHz VBW: 10Hz 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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
 No. : DM17040048

Page 7 of 24

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

Field Strength of Fundamental Emissions Peak Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
2407.00	44.9	36.8	81.7	12,161.9	500,000	Vertical
2407.00	46.8	36.4	83.2	14,454.4	500,000	Horizontal

Field Strength of Fundamental Emissions Average Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
2407.00	37.7	36.8	74.5	5,308.8	50,000	Vertical
2407.00	40.9	36.4	77.3	7,328.2	50,000	Horizontal

Field Strength of Harmonics Emission Peak Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
4814.0	6.9	41.5	48.4	263.0	5,000	Vertical
4814.0	4.1	42.4	46.5	211.3	5,000	Horizontal
7221.0	4.4	45.1	49.5	298.5	5,000	Vertical
7221.0	2.6	46.2	48.8	275.4	5,000	Horizontal
9628.0	3.6	48.0	51.6	380.2	5,000	Vertical
9628.0	3.2	48.8	52.0	398.1	5,000	Horizontal

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
 No. : DM17040048

Page 8 of 24

Field Strength of Harmonics Emission						
Average Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
4814.0	-4.4	41.5	37.1	71.6	500	Vertical
4814.0	-7.6	42.4	34.8	55.0	500	Horizontal
7221.0	-9.0	45.1	36.1	63.8	500	Vertical
7221.0	-9.8	46.2	36.4	66.1	500	Horizontal
9628.0	-9.2	48.0	38.8	87.1	500	Vertical
9628.0	-10.4	48.8	38.4	83.2	500	Horizontal

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

Field Strength of Fundamental Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
2442.00	44.3	36.8	81.1	11,350.1	500,000	Vertical
2442.00	47.4	36.4	83.8	15,488.2	500,000	Horizontal

Field Strength of Fundamental Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
2442.00	37.4	36.8	74.2	5,128.6	50,000	Vertical
2442.00	41.1	36.4	77.5	7,498.9	50,000	Horizontal

Field Strength of Harmonics Emission						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
4884.0	7.5	41.6	49.1	285.1	5,000	Vertical
4884.0	5.7	42.5	48.2	257.0	5,000	Horizontal
7326.0	3.2	45.2	48.4	263.0	5,000	Vertical
7326.0	3.4	46.3	49.7	305.5	5,000	Horizontal
9768.0	3.4	48.1	51.5	375.8	5,000	Vertical
9768.0	1.0	48.9	49.9	312.6	5,000	Horizontal

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
 No. : DM17040048

Page 9 of 24

Field Strength of Harmonics Emission						
Average Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
4884.0	-4.2	41.6	37.4	74.1	500	Vertical
4884.0	-5.6	42.5	36.9	70.0	500	Horizontal
7326.0	-8.7	45.2	36.5	66.8	500	Vertical
7326.0	-9.1	46.3	37.2	72.4	500	Horizontal
9768.0	-9.3	48.1	38.8	87.1	500	Vertical
9768.0	-11.6	48.9	37.3	73.3	500	Horizontal

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

Field Strength of Fundamental Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
2477.00	44.2	36.8	81.0	11,220.2	500,000	Vertical
2477.00	47.5	36.4	83.9	15,667.5	500,000	Horizontal

Field Strength of Fundamental Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
2477.00	37.4	36.8	74.2	5,128.6	50,000	Vertical
2477.00	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 μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
4954.0	7.5	41.4	48.9	278.6	5,000	Vertical
4954.0	6.3	42.7	49.0	281.8	5,000	Horizontal
7431.0	2.5	45.6	48.1	254.1	5,000	Vertical
7431.0	3.0	46.5	49.5	298.5	5,000	Horizontal
9908.0	2.0	48.6	50.6	338.8	5,000	Vertical
9908.0	1.5	49.7	51.2	363.1	5,000	Horizontal

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 10 of 24

Field Strength of Harmonics Emission						
Average Value						
Frequency MHz	Measured Level @3m dB μ V/m	Correction Factor dB μ V/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
4954.0	-4.5	41.4	36.9	70.0	500	Vertical
4954.0	-5.6	42.7	37.1	71.6	500	Horizontal
7431.0	-8.9	45.6	36.7	68.4	500	Vertical
7431.0	-9.0	46.5	37.5	75.0	500	Horizontal
9908.0	-10.2	48.6	38.4	83.2	500	Vertical
9908.0	-10.9	49.7	38.8	87.1	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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
 No. : DM17040048

Page 11 of 24

Radiated Emissions Measurement:

Limit :

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 5.205(c)).

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

Field Strength of Band-edge Compliance						
Peak Value						
Frequency	Measured Level @3m	Correction Factor	Field Strength	Limit @3m	Margin	E-Field Polarity
MHz	dBμV	dB/m	dBμV/m	dBμV/m	dB	
2400.0	4.9	36.8	41.7	74.0	32.3	Vertical

Field Strength of Band-edge Compliance						
Average Value						
Frequency	Measured Level @3m	Correction Factor	Field Strength	Limit @3m	Margin	E-Field Polarity
MHz	dBμV	dB/m	dBμV/m	dBμV/m	dB	
2400.0	-2.0	36.8	34.8	54.0	19.2	Vertical

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

Field Strength of Band-edge Compliance						
Peak Value						
Frequency	Measured Level @3m	Correction Factor	Field Strength	Limit @3m	Margin	E-Field Polarity
MHz	dBμV	dB/m	dBμV/m	dBμV/m	dB	
2483.5	4.8	36.4	41.2	74.0	32.8	Horizontal

Field Strength of Band-edge Compliance						
Average Value						
Frequency	Measured Level @3m	Correction Factor	Field Strength	Limit @3m	Margin	E-Field Polarity
MHz	dBμV	dB/m	dBμV/m	dBμV/m	dB	
2483.5	-1.9	36.4	34.5	54.0	19.5	Horizontal

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 12 of 24

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

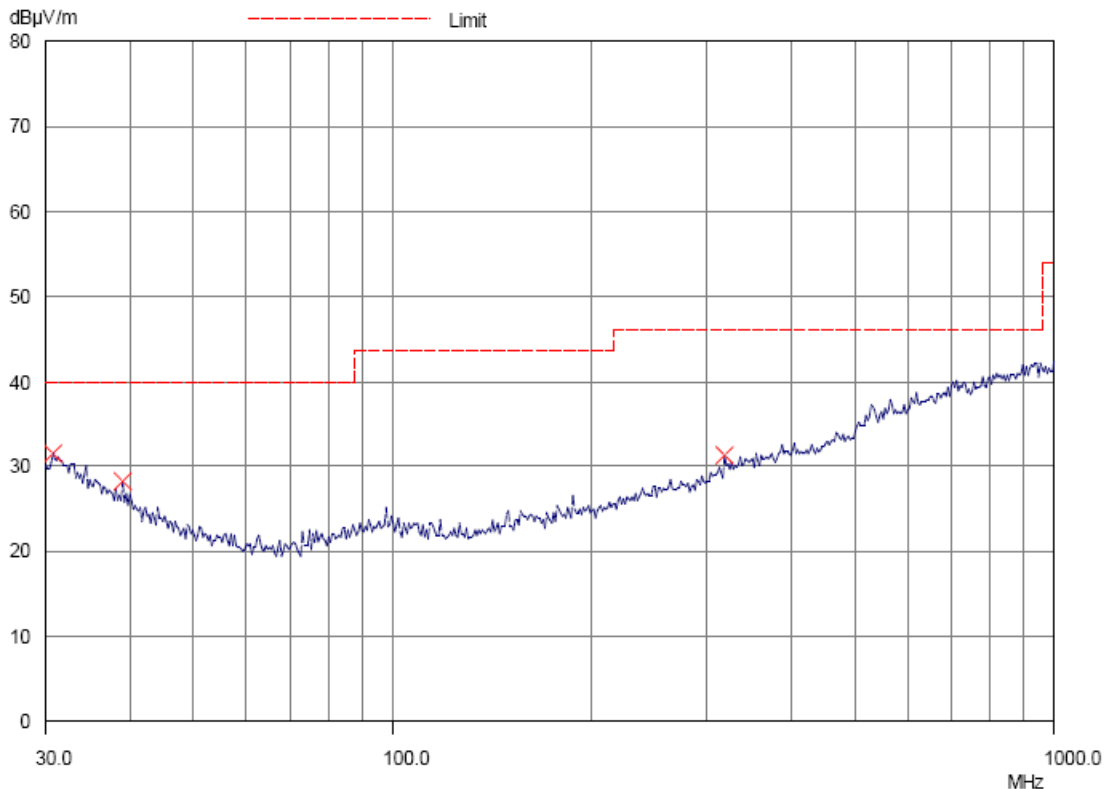
The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

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

Emissions detected are more than 20 dB below the FCC Limits

Results of TX mode (30MHz – 1GHz)(2407MHz): PASS

Horizontal



STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 13 of 24

Results of TX mode (30MHz – 1GHz) (2407MHz): PASS

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
30.7	Horizontal	31.5	40.0	37.6	100
39.1	Horizontal	28.1	40.0	25.4	100
316.9	Horizontal	31.3	46.0	36.7	200

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 14 of 24

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

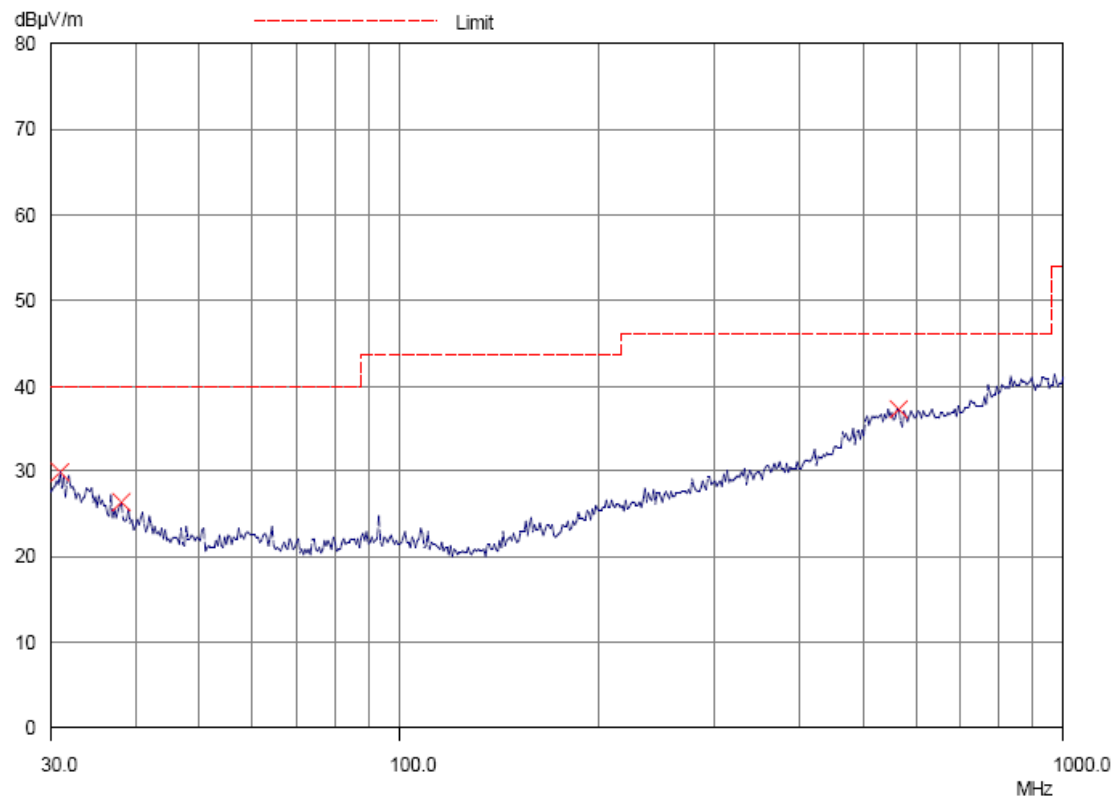
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

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) (2407MHz): PASS

Vertical



STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 15 of 24

Results of TX mode (30MHz – 1GHz) (2407MHz): PASS

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
30.9	Vertical	29.8	40.0	30.9	100
38.3	Vertical	26.4	40.0	20.9	100
564.3	Vertical	37.3	46.0	73.3	200

Remarks:

Calculated measurement uncertainty (30MHz – 1GHz): 4.6dB

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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 16 of 24

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 PCB antenna. There is no external antenna, the antenna gain = -1.6dBi. User is unable to remove or changed the Antenna.

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 17 of 24

3.1.3 20dB Bandwidth of Fundamental Emission

Test Requirement:	FCC 47 CFR 15.249
Test Method:	ANSI C63.10:2013
Test Date:	2017-04-19
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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

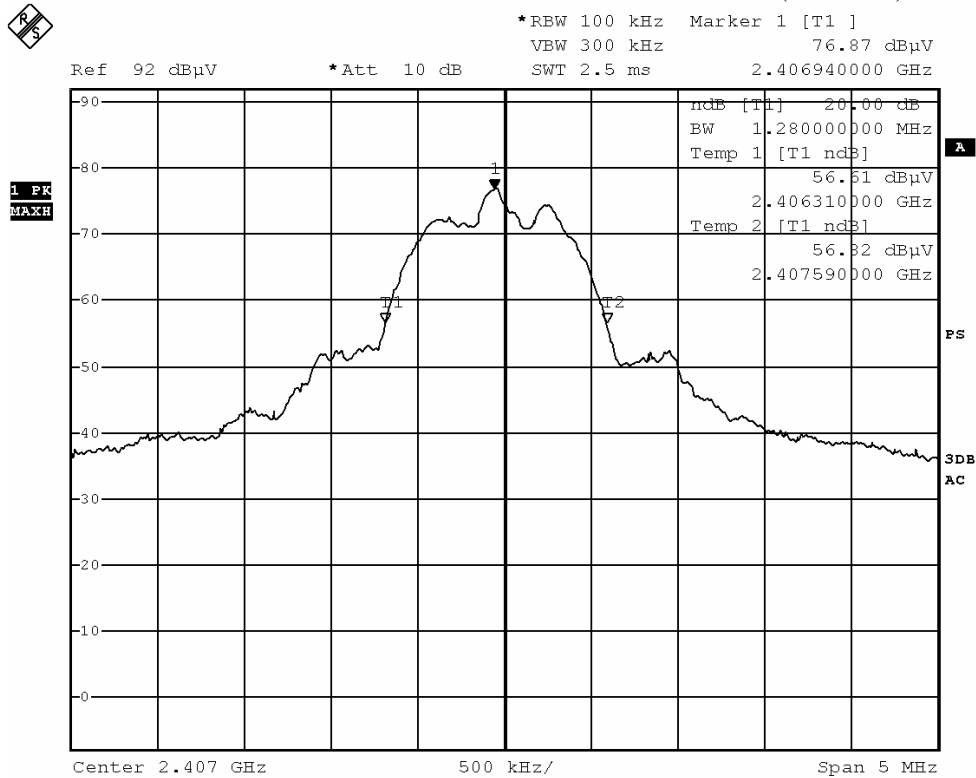
Date : 2017-04-19
No. : DM17040048

Page 18 of 24

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

Frequency Range [MHz]	20dB Bandwidth [MHz]
2407.0	1.28

20dB Bandwidth of Fundamental Emission (2407MHz)



STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
 No. : DM17040048

Page 19 of 24

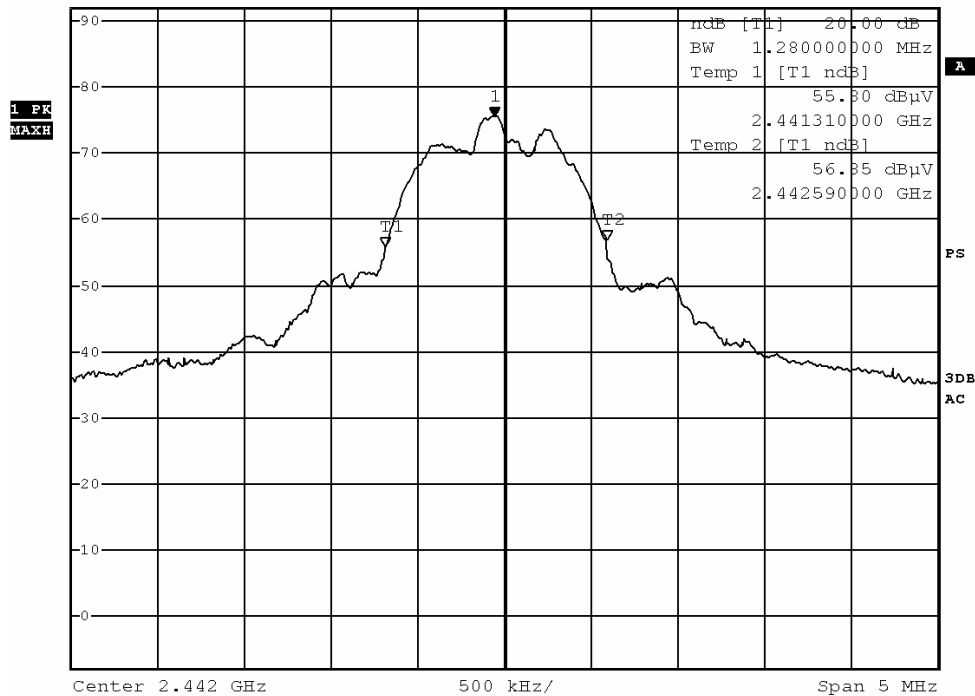
Limits for 20dB Bandwidth of Fundamental Emission (Middle Frequency Channel):

Frequency Range [MHz]	20dB Bandwidth [MHz]
2442.0	1.28

20dB Bandwidth of Fundamental Emission (2442MHz)



*RBW 100 kHz Marker 1 [T1]
 VBW 300 kHz 75.62 dBμV
 Ref 92 dBμV *Att 10 dB SWT 2.5 ms 2.441940000 GHz



STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.



Test Report

Date : 2017-04-19
No. : DM17040048

Page 21 of 24

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	2017-04-14	2018-04-14
EMD022	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100314	2017-04-15	2018-04-15
EMD035	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100441	2017-04-14	2018-04-14
EMD036	EMI Test Receiver	ROHDE & SCHWARZ	ESIB 26	100388	2017-04-15	2018-04-15
EMD041	TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	100261	2017-04-14	2018-04-14
EMD061	Biconilog Antenna	ETS.LINDGREN	3142C	00060439	2016.12.30	2018.12.30
EMD062	Double-Ridged Waveguide (1GHz – 18GHz)	ETS.LINDGREN	3117	00075933	2014.11.15	2017.11.15
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
EMD111	Power meter	ROHDE & SCHWARZ	NRVD	102051	2017-04-14	2018-4-14
	100V Insertion Unit	ROHDE & SCHWARZ	URV5-Z4	100464	2017-04-14	2018-4-14
EMD113	Pre-Amplifier	ROHDE & SCHWARZ	N/A	1129588	2017-04-14	2018-4-14
EMD124	Loop Antenna	ETS-Lindgren	6502	00104905	2016.05.23	2017.05.23
EMD131	Standard Gain Horn Antenna (18GHz – 26.5GHz)	Chengdu AINFO Inc.	JTXSLB-42-15-C-KF	J2021100721001	2015.06.27	2017.06.27
RE01	RF cable	N/A	N/A	N/A	2016-9-28	2018-9-27
RE02	RF cable	N/A	N/A	N/A	2016-9-28	2018-9-27

Remarks:-

N/A Not Applicable or Not Available

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.

Test Report

Date : 2017-04-19
No. : DM17040048

Page 22 of 24

Appendix B

Photographs of EUT

Front View of the product



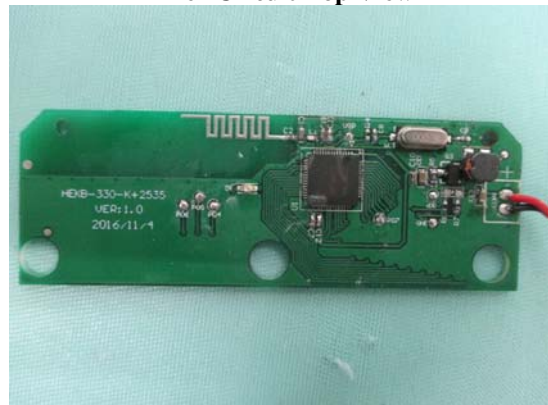
Rear View of the product



Inside View of the product



Inner Circuit Top View



Inner Circuit Bottom View



STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.

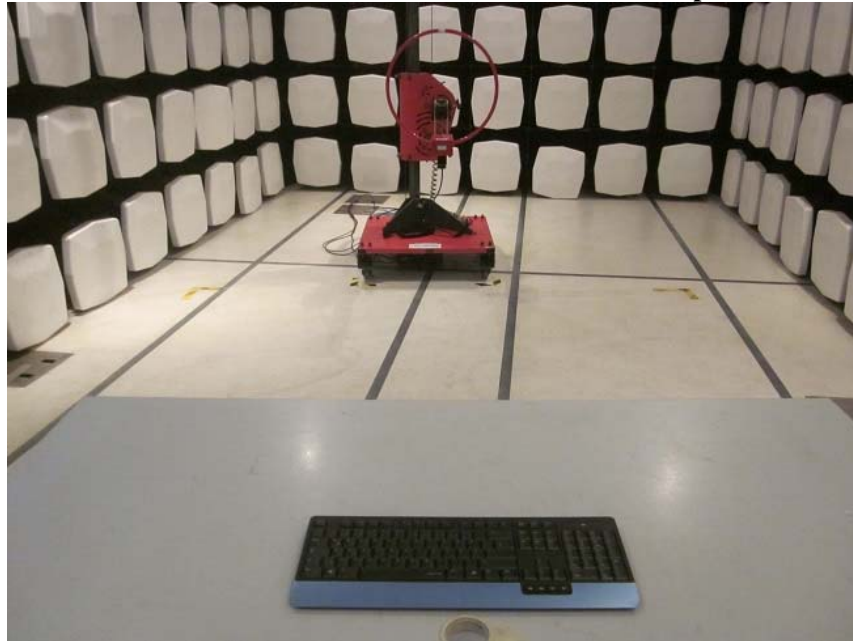
Test Report

Date : 2017-04-19
No. : DM17040048

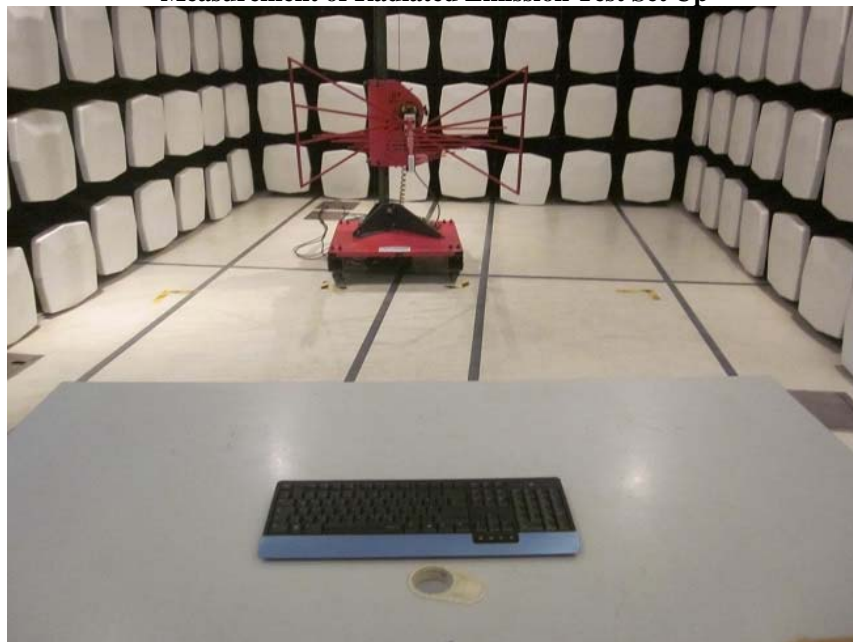
Page 23 of 24

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, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.

Test Report

Date : 2017-04-19
No. : DM17040048

Page 24 of 24

Photographs of EUT

Measurement of Radiated Emission Test Set Up



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

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, Guangdong, China. Zip Code: 523770

Tel : (86 769) 81119888 Fax : (86 769) 81116222 Email : dgstc@dgstc.org Website : 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 "Conditions of Issuance of Test Reports" section or Website.

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by The STC (Dongguan) Company Limited (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The Company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by the Company as a result of this application for testing service (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to his customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. The Report refers only to the sample tested and does not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report.
5. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
6. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
7. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
8. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
9. Subject to the variable length of retention time for test data and report stored hereinto as to otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of this test report for a period of three years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after the retention period. Under no circumstances shall we be liable for damages of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.
10. Issuance records of the Report are available on the internet at dgstc@dgstc.org. Further enquiry of validity or verification of the Reports should be addressed to the Company.