Certificate of Compliance

for the FCC Declaration of Conformity Procedure from the

Conformity Assessment Body

Hong Kong Standards and Testing Centre

Designation Number: HK0001

on the basis of Asia-Pacific Economic Cooperation (APEC) economies' Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment (APEC Tel MRA) scheme sanctioned by the Federal Communications Commission of the United States Government.

Certificate Number:	FCC002587
Test Laboratory:	The Hong Kong Standards and Testing Centre Ltd.
Test Report / Issued date:	MH191694 / 06 July 2015
Applicant:	SAHAB TECHNOLOGY
Manufacturer:	SAHAB TECHNOLOGY
Type of Equipment:	Enterprise IP Phone
Brand Name:	XonTel
Model Number:	S22P
Additional Model Number(s):	S23P

Rules and Regulations

United States CFR 47 FCC Part 15 Subpart B (Unintentional Radiators).

Standards

ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.

Remark

This certificate shall be used in conjunction with the above mentioned test report.

Signed by Dr. LEE Kam Chuen,

ElectroMagnetic Compatibility Department

For and on behalf of

The Hong Kong Standards and Testing Centre Ltd.

(Conformity Assessment Body CAB under the APEC Tel MRA)

Date: 2015-07-22

10 Dai Wang St., Tai Po Industrial Estate, N.T., Hong Kong Tel.: (852)26661888 Fax: (852)26644353 http://www.hkstc.org

STC Test Report

Date: 2015-07-06

No.: MH191694

Applicant:	SAHAB TECHNOLOGY Office 20 – Qibla Tower – Fahad AI Salem St. Qibla – State of KUWAIT
Manufacturer:	SAHAB TECHNOLOGY Office 20 – Qibla Tower – Fahad AI Salem St. Qibla – State of KUWAIT
Description of Sample(s):	Submitted sample(s) said to be Product: Enterprise IP Phone Brand Name: XonTel Model Number: S22P
Date Sample(s) Received:	2015-04-14
Date Tested:	2015-04-15
Investigation Requested:	FCC Part 15 Subpart B
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):	The EUT highest operating frequency provided by manufacturer is 125MHz. For additional model(s) details, see page 3

Dr. LEE Kam Chuen
Authorized Signatory
ElectroMagnetic Compatibility Department
For and on behalf of
The Hong Kong Standards and Testing Centre Ltd.

STC Test Report

CONTENT:

1.0 General Details

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

Submitted sample(s) said to be

Product:	Enterprise IP Phone
Manufacturer:	SAHAB TECHNOLOGY
Brand Name:	XonTel
Model Number:	S22P
Additional Model Number(s):	S23P
Rating:	5.0Vd.c. with Jack

The AC/DC adaptor was provided by the applicant with following details:
Brand name: Mass power; Model no.: WCF0500120A1BA; Input: 100-240Va.c. 50/60Hz 0.15A; Output: 5.0Vd.c. 1.2A.

1.2 Description of EUT Operation

The Equipment Under Test (EUT) is an Enterprise IP Phone of SAHAB TECHNOLOGY. Tests were conducted under Communication mode to simulate the normal operating condition. During the test, the internet port was connected to internet, the PC port was connected to PC, the handset port was connected to handset, the headphone port connected to Headphone and the Ext port was connected to telephone network.

1.3 Date of Order

2015-04-14

1.4 Submitted Sample(s):

2 Sample

1.5 Test Duration

2015-04-15

1.6 Country of Origin

China

2.0 Technical Details

2.1 Investigations Requested

Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2014 and ANSI C63.4: 2009 for FCC DoC.

2.2 Test Standards and Results Summary Tables

EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Class / Severity	Test Result	
				Pass	Failed
Radiated Emissions	FCC 47CFR 15.109	ANSI C63.4:2009	Class B	☒	☐
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC 47CFR 15.107	ANSI C63.4:2009	Class B	☒	☐

3.0 Test Results

3.1 Emission

3.1.1 Radiated Emissions

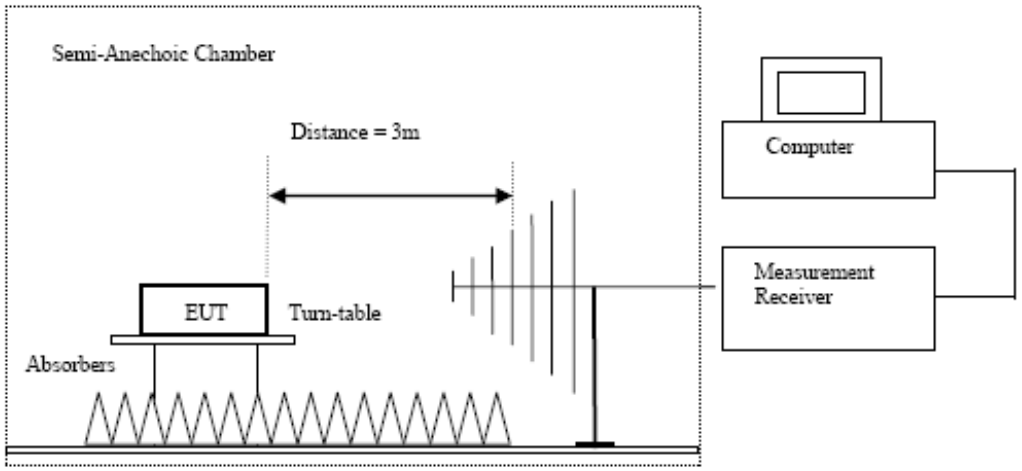
Test Requirement:	FCC 47CFR 15.109
Test Method:	ANSI C63.4:2009
Test Date:	2015-04-15
Mode of Operation:	Communication mode (Refer to 1.2 description of EUT operation for details)

Test Method:

The sample was placed 0.8m 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 G/F of The Hong Kong Standards and Testing Centre Ltd. with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 607756.

Test Setup:



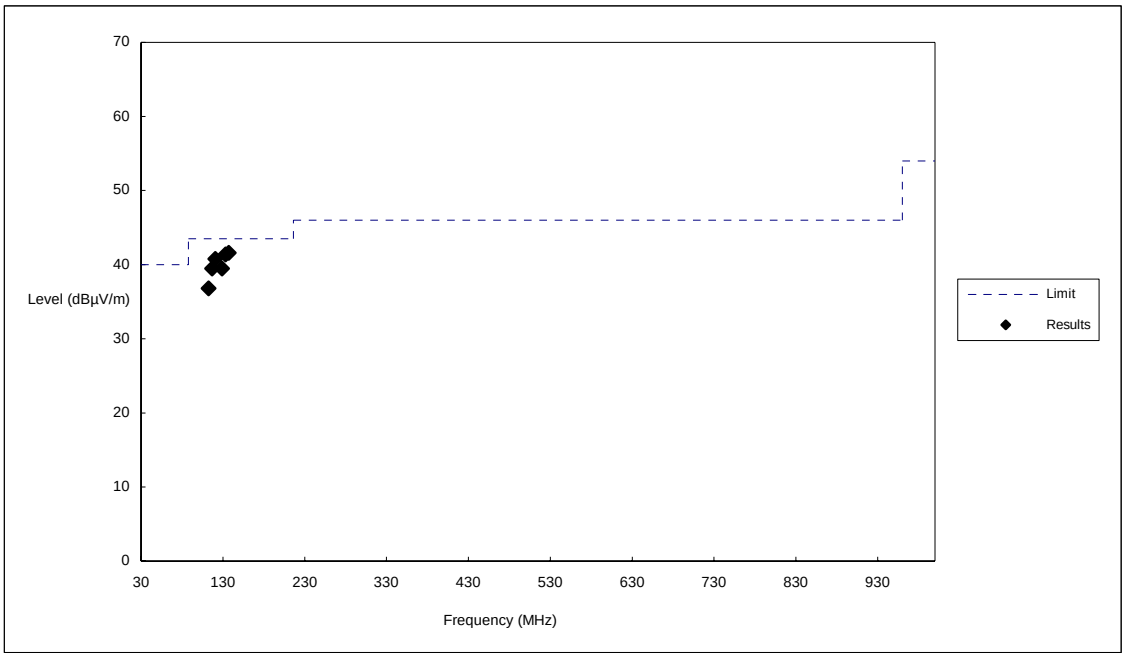
- Absorbers placed on top of the ground plane are for measurements above 1000MHz only.
- Measurements between 30MHz to 1000MHz made with Bi-log antennas, above 1000MHz horn antennas are used.

Limits for Radiated Emissions [FCC 47 CFR 15.109 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
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: Pass



Results of Communication mode: Pass

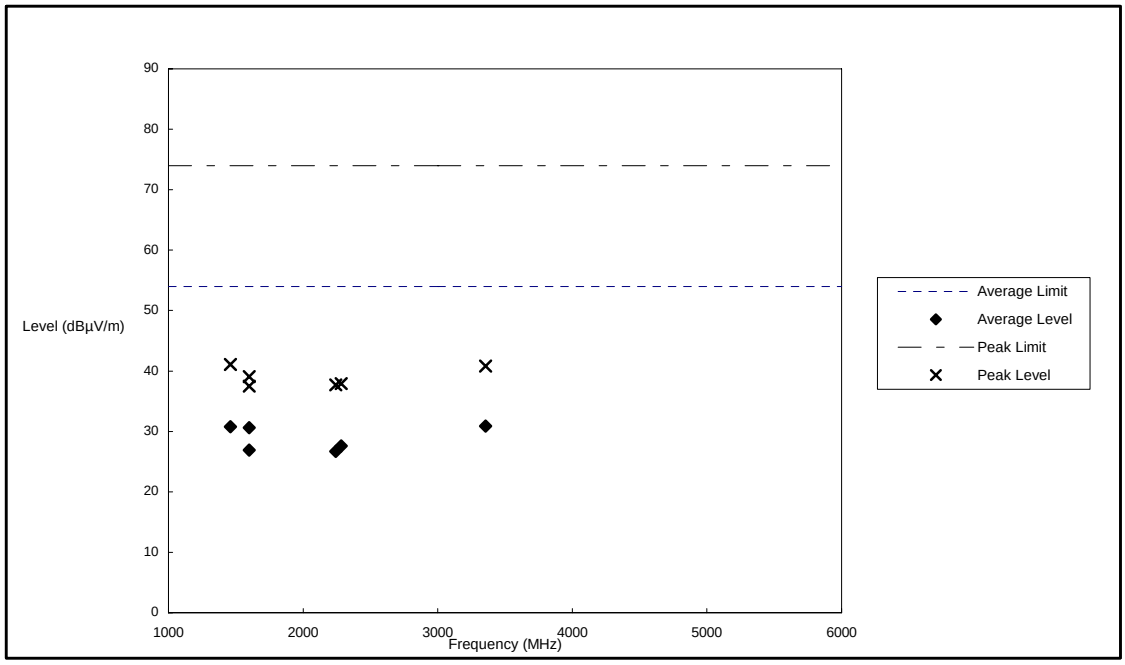
Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dBμV/m	Limit @3m dBμV/m	Level @3m μV/m	Limit @3m μV/m
112.63	Horizontal	36.8	43.5	69.2	150
116.74	Horizontal	39.5	43.5	94.4	150
120.85	Horizontal	40.8	43.5	109.6	150
129.04	Vertical	39.5	43.5	94.4	150
133.21	Vertical	41.4	43.5	117.5	150
137.21	Vertical	41.6	43.5	120.2	150

Limits for Radiated Emissions [FCC 47 CFR 15.109 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
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: Pass
Please refer to the following table for individual results.



Results of Communication mode: Pass

The average & peak measurements were recorded as follows:

Frequency MHz	Peak Level @3m dBμV/m	Peak Limit @3m dBμV/m	Peak Margin dB	E-Field Polarity
1460.9	41.1	74.0	32.9	Horizontal
1601.2	39.1	74.0	34.9	Horizontal
3354.7	40.8	74.0	33.2	Horizontal
1601.2	37.5	74.0	36.5	Vertical
2242.5	37.7	74.0	36.3	Vertical
2282.6	37.9	74.0	36.1	Vertical

Frequency MHz	Average Level @3m dBμV/m	Average Limit @3m dBμV/m	Average Margin dB	E-Field Polarity
1460.9	30.8	54.0	23.2	Horizontal
1601.2	30.6	54.0	23.4	Horizontal
3354.7	30.9	54.0	23.1	Horizontal
1601.2	26.9	54.0	27.1	Vertical
2242.5	26.7	54.0	27.3	Vertical
2282.6	27.6	54.0	26.4	Vertical

Remarks:
Calculated measurement uncertainty (30MHz – 1GHz): 4.9dB
(1GHz – 6GHz): 6.02dB
Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.

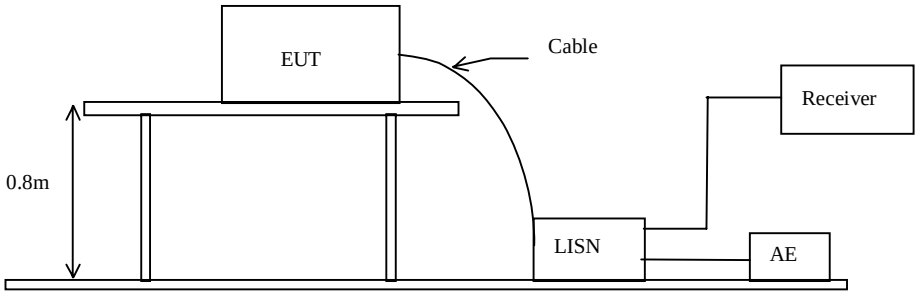
3.1.2 Conducted Emissions (0.15MHz to 30MHz)

Test Requirement:	FCC 47CFR 15.107
Test Method:	ANSI C63.4:2009
Test Date:	2015-04-15
Mode of Operation:	Communication mode (Refer to 1.2 description of EUT operation for details)

Test Method:

The test was performed in accordance with ANSI C63.4: 2009, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Test Setup:



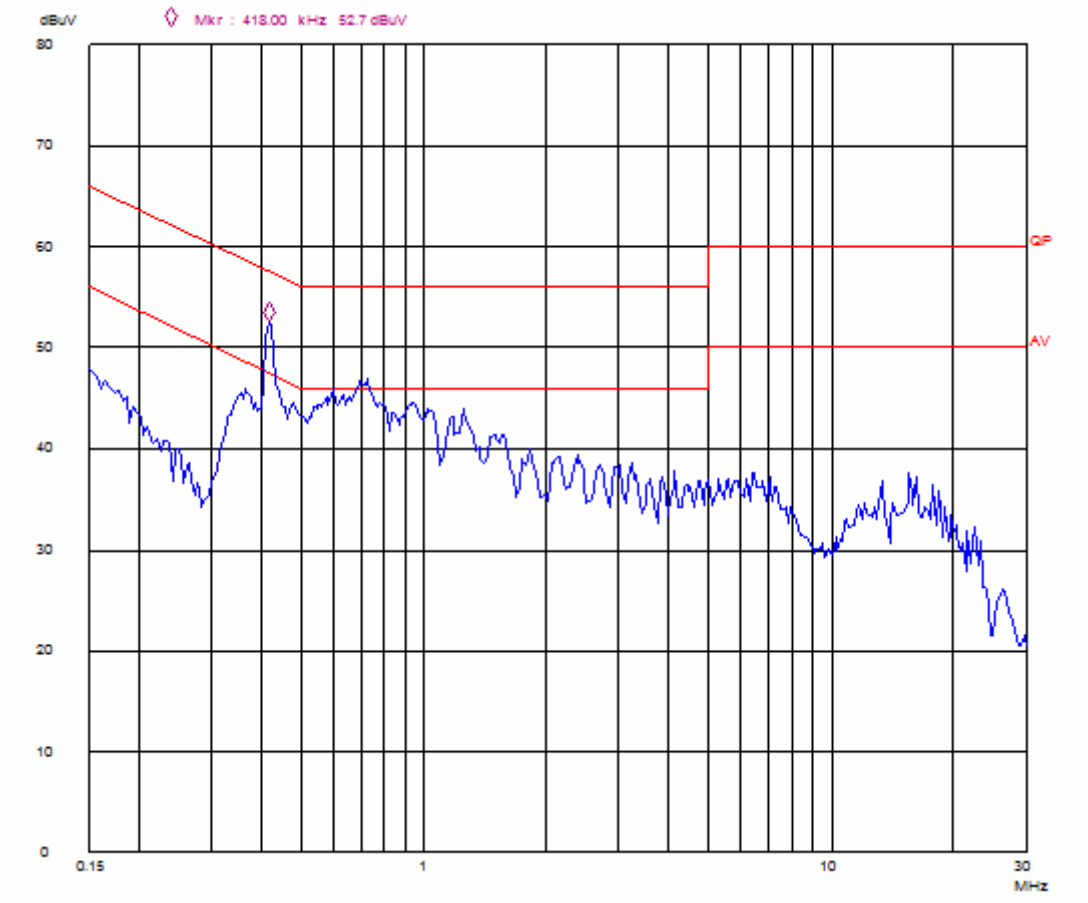
Limit for Conducted Emissions (FCC 47 CFR 15.107):

Frequency Range [MHz]	Quasi-Peak Limits [dBµV]	Average [dBµV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

Results of Communication mode (L): PASS



Results of Communication mode (L): PASS

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dBμV	Limit dBμV	Level dBμV	Limit dBμV
Live	0.150	43.2	66.0	29.6	56.0
Live	0.418	47.7	57.5	38.8	47.5
Live	0.726	43.2	56.0	35.5	46.0
Live	0.934	40.9	56.0	32.2	46.0
Live	1.246	39.7	56.0	30.5	46.0
Live	1.502	37.8	56.0	28.8	46.0

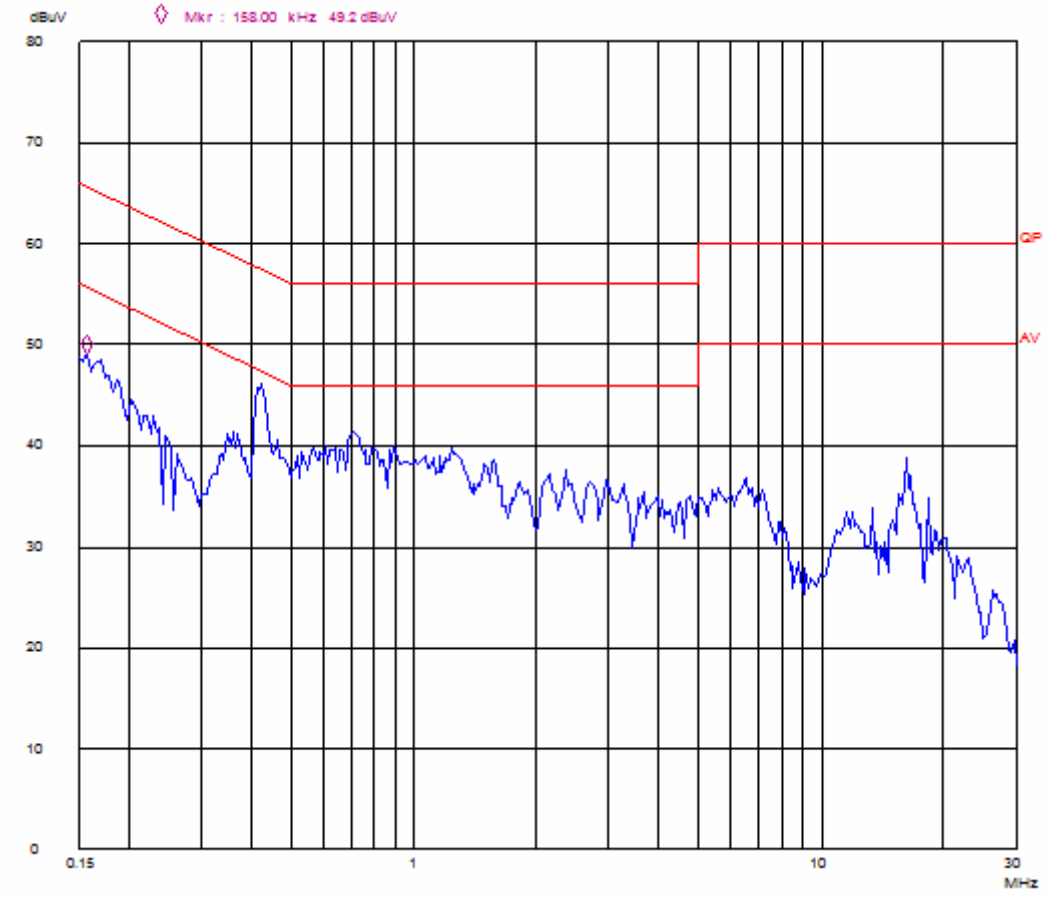
Limit for Conducted Emissions (FCC 47 CFR 15.107):

Frequency Range [MHz]	Quasi-Peak Limits [dBμV]	Average [dBμV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

Results of Communication mode (N): PASS



Results of Communication mode (N): PASS

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dBμV	Limit dBμV	Level dBμV	Limit dBμV
Neutral	0.158	44.3	65.6	27.8	55.6
Neutral	0.170	43.2	65.0	26.9	55.0
Neutral	0.422	43.3	57.4	34.5	47.4
Neutral	0.718	37.6	56.0	26.7	46.0
Neutral	0.790	33.5	56.0	24.1	46.0
Neutral	1.242	35.4	56.0	23.8	46.0

Remark:
Calculated measurement uncertainty (0.15MHz – 30Hz): 3.25dB

Appendix A

List of Measurement Equipment

Radiated Emission

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM299	DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA	ETS-LINDGREN	3115	00114120	2014/01/15	2016/01/25
EM215	MULTIDEVICE CONTROLLER	EMCO	2090	00024676	N/A	N/A
EM216	MINI MAST SYSTEM	EMCO	2075	00026842	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088	00029144	N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-LINDGREN	FACT-3	--	2014/09/29	2015/09/29
EM320	BICONILOG ANTENNA	ETS-LINDGREN	3142D	00094856	2014/08/06	2016/08/06
EM229	EMI TEST RECEIVER	R&S	ESIB40	100248	2014/05/26	2015/05/26

Line Conducted

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM119	LISN	R & S	ESH3-Z5	0831.5518.52	2014/05/26	2015/05/26
EM145	EMI TEST RECEIVER	R & S	ESCS 30	830245/021	2014/05/26	2015/05/26
EM179	IMPULSE LIMITER	ROHDE & SCHWARZ	ESH3-Z2	357-8810.52/54	2015/01/14	2016/01/14
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057-99A	2012/02/03	2017/02/03

Remarks:-
N/A Not Applicable or Not Available

Appendix B

Ancillary Equipment

ITEM NO.	DESCRIPTION	MODEL NO.	FCC ID	REMARK
1	DELL COMPUTER	DMC	N/A	CONNECTED TO THE EUT INPUT PORT
2	DELL MONITOR	E177FPB	N/A	RESOLUTION:1024x768(DURING TESTING) 1.0M UNSHIEDED POWER CORD CONNECTED TO THE COMPUTER 1.5M SHIELDED CABLE CONNECTED TO THE COMPUTER
3	DELL MOUSE	N/A	N/A	2.4M UNSHIELDED CABLE CONNECTED TO THE COMPUTER
4	DELL KEYBOARD	SK-8110	N/A	1.8M SHIELDED COILED CABLE CONNECTED TO THE COMPUTER
5	LASER PRINTER	HP LASERJET 1020 PLUS	N/A	1.8M UNSHIELDED POWER CORD 2.8M SHIELDED CABLE (BUNDLED TO 1M) CONNECTED TO THE COMPUTER
6	HEADPHONE	A310IP	N/A	N/A

Appendix C

Photographs of EUT

Front View of the Product

Rear View of the Product

Left View of the Product

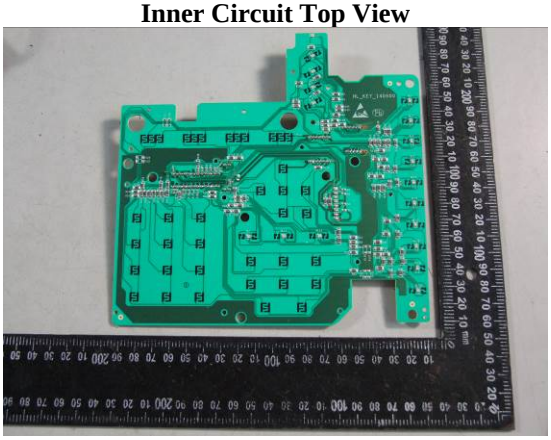
Right View of the Product

Top View of the Product

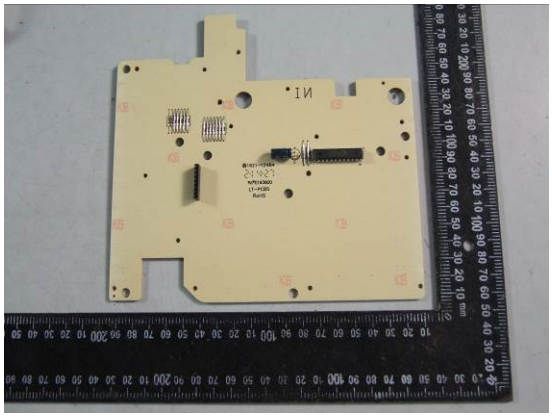
Bottom View of the Product

Photographs of EUT

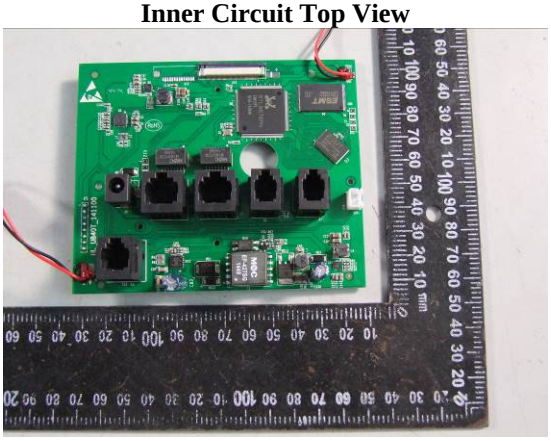
Inner Circuit Top View



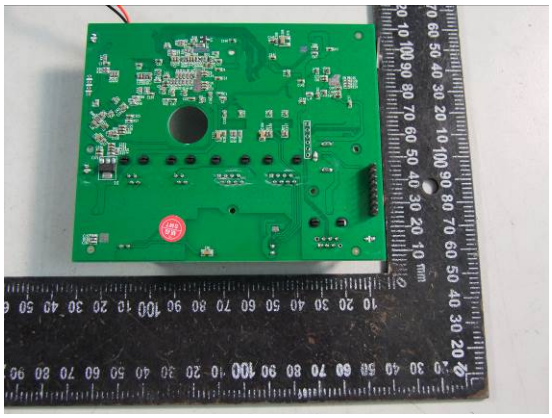
Inner Circuit Bottom View



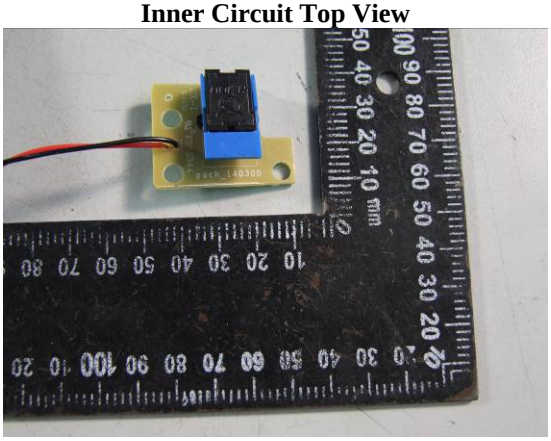
Inner Circuit Top View



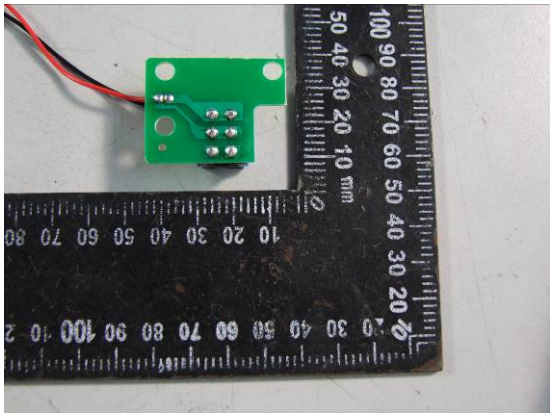
Inner Circuit Bottom View



Inner Circuit Top View



Inner Circuit Bottom View



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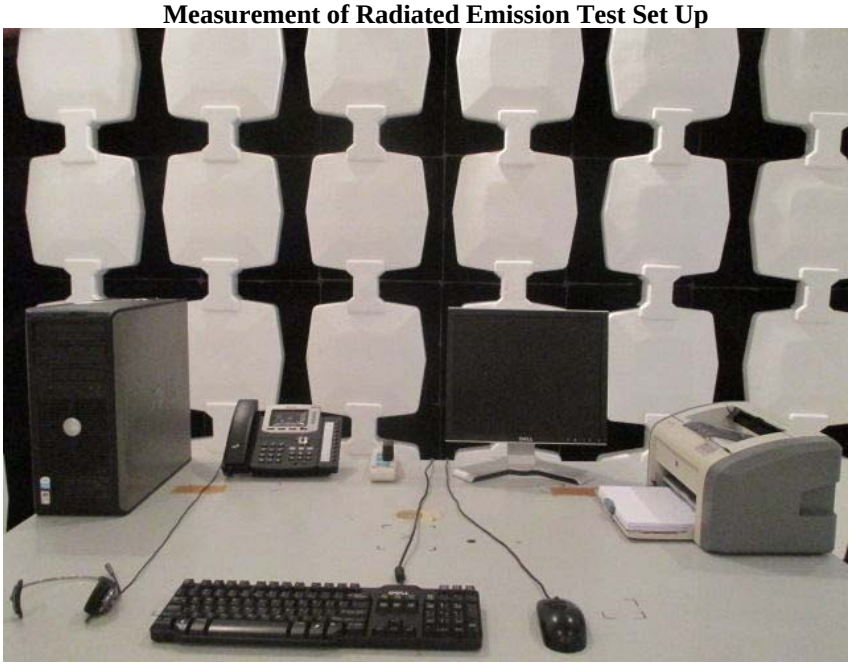
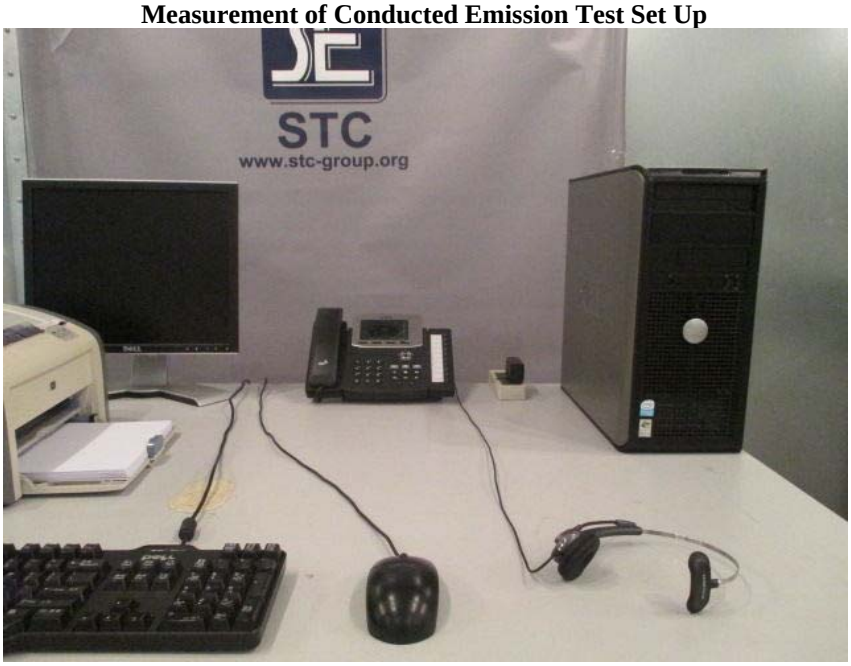
Photographs of EUT

Measurement of Radiated Emission Test Set Up



Measurement of Conducted Emission Test Set Up



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

The Hong Kong Standards and Testing Centre Ltd.

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