RF TEST REPORT

Report No.: 18071069-FCC-R

Supersede Report No.: N/A

Applicant	Southern Telecom Inc.
Product Name	HD WI-FI Security Camera
Model No.	SVC562
Serial No.	SVC563 (All models have same circuits diagram, PCB Layout, construction and rated power,only different was model name and appearance.)
Test Standard	FCC Part 15.247, ANSI C63.10: 2013
Test Date	September 17 to 25, 2018
Issue Date	September 26, 2018
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Aaron Liang	David Huang	
Aaron Liang Test Engineer	David Huang Checked By	

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Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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CONTENTS

1. Report Revision History

Report No.	Report Version	Description	Issue Date
18071069-FCC-R	NONE	Original	September 26, 2018

2. Customer information

Applicant Name	Southern Telecom Inc.
Applicant Add	5601 1st Ave, 2nd Floor Brooklyn New York United States
Manufacturer	Southern Telecom Inc.
Manufacturer Add	5601 1st Ave, 2nd Floor Brooklyn New York United States

3. Test site information

Test Lab :

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	535293
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

4. Equipment under Test (EUT) Information

Description of EUT:	HD WI-FI Security Camera
Main Model:	SVC562
Serial Model:	SVC563 (All models have same circuits diagram, PCB Layout, construction and rated power,only different was model name and appearance.)
Date EUT received:	September 17, 2018
Test Date(s):	September 17 to 25, 2018
Equipment Category：	DTS
Antenna Gain:	WIFI: 2.5dBi
Antenna Type:	PCB Antenna
Type of Modulation:	802.11b/g/n: DSSS, OFDM
RF Operating Frequency (ies):	WIFI: 802.11b/g/n(20M): 2412-2462 MHz
Number of Channels:	WIFI :802.11b/g/n(20M): 11CH
Port:	Please refer to the user manual
Input Power:	Adapter: Model: A18A-050100U-US2 Input: AC100-240V~50/60Hz,Max.0.2A Output: DC 5V，1A
Trade Name :	SHARPER IMAGE
FCC ID:	2ABV4SVC562

Mark:

Revision Number	Adapter Model	Report Number	Description of Revision	Date of Revision
0	D31-05050100	18070685-FCC-R	Original Report	July 18, 2018
1	A18A-050100U-US2	18071069-FCC-R	Amended Report	September 26, 2018

Note: This is the amended report application (18071069-FCC-R) of the device, the original submission (18070685-FCC-R) was granted on July 18, 2018. The difference between the original device and the current one was as following the detail information:

The difference is for different Adapter

And based on the above differences, we will retest the " AC Power Line Conducted Emissions and Radiated Emissions" test data, and others please refer to report 18070685-FCC-R.

5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.207 (a),	AC Power Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Radiated Emissions & Unwanted Emissions into Restricted Frequency Bands	Compliance

Measurement Uncertainty

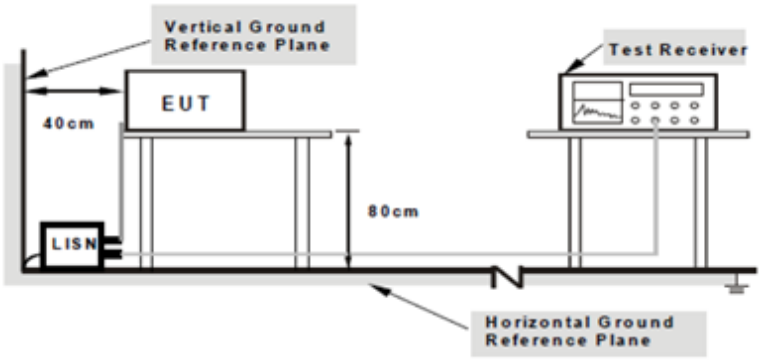
Emissions		
Test Item	**Description**	**Uncertainty**
Band-Edge & Unwanted Emissions into Restricted Frequency Bands and Radiated Emissions & Unwanted Emissions into Restricted Frequency Bands	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	26 °C
Relative Humidity	55%
Atmospheric Pressure	1017mbar
Test date :	September 26, 2018
Tested By :	Aaron Liang

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>47CFR§15.207, RSS210 (A8.1)</td><td>a)</td><td>For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 [mu] H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.
<table>
<tr><th rowspan="2">Frequency ranges (MHz)</th><th colspan="2">Limit (dBμV)</th></tr>
<tr><th>QP</th><th>Average</th></tr>
<tr><td>0.15 ~ 0.5</td><td>66 – 56</td><td>56 – 46</td></tr>
<tr><td>0.5 ~ 5</td><td>56</td><td>46</td></tr>
<tr><td>5 ~ 30</td><td>60</td><td>50</td></tr>
</table></td><td>☑</td></tr>
<tr><td>Test Setup</td><td colspan="3"> 

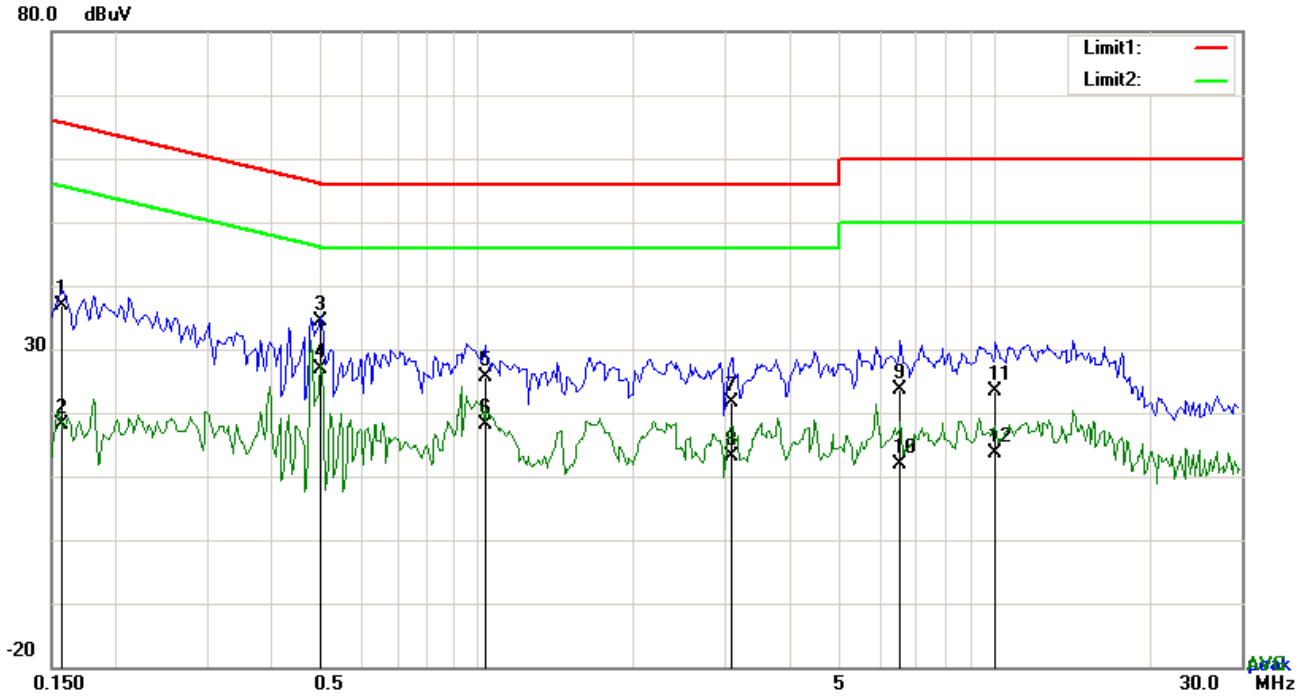
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</td></tr>
<tr><td>Procedure</td><td colspan="3">1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.
2. The power supply for the EUT was fed through a 50W/50mH EUT LISN, connected to filtered mains.</td></tr>
</table>

	3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. 4. All other supporting equipment were powered separately from another main supply. 5. The EUT was switched on and allowed to warm up to its normal operating condition. 6. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver. 7. High peaks, relative to the limit line, The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 kHz. 8. Step 7 was then repeated for the LIVE line (for AC mains) or DC line (for DC power).
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

Test Mode:	Transmitting Mode

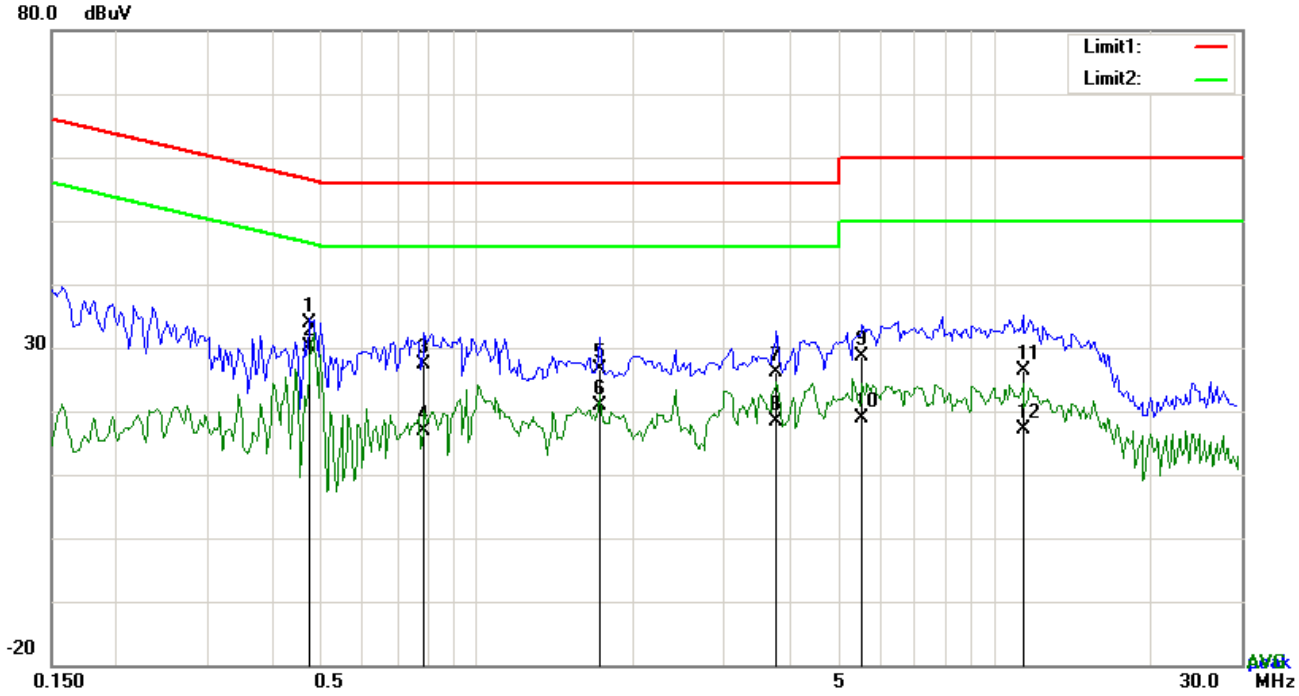


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	L1	0.1578	26.77	QP	10.03	36.80	65.58	-28.78
2	L1	0.1578	8.17	AVG	10.03	18.20	55.58	-37.38
3	L1	0.4971	24.43	QP	10.03	34.46	56.05	-21.59
4	L1	0.4971	16.76	AVG	10.03	26.79	46.05	-19.26
5	L1	1.0353	15.57	QP	10.03	25.60	56.00	-30.40
6	L1	1.0353	7.98	AVG	10.03	18.01	46.00	-27.99
7	L1	3.1053	11.52	QP	10.06	21.58	56.00	-34.42
8	L1	3.1053	3.11	AVG	10.06	13.17	46.00	-32.83
9	L1	6.5607	13.61	QP	10.10	23.71	60.00	-36.29
10	L1	6.5607	1.90	AVG	10.10	12.00	50.00	-38.00
11	L1	10.0200	13.30	QP	10.15	23.45	60.00	-36.55
12	L1	10.0200	3.51	AVG	10.15	13.66	50.00	-36.34

Test Mode:	Transmitting Mode

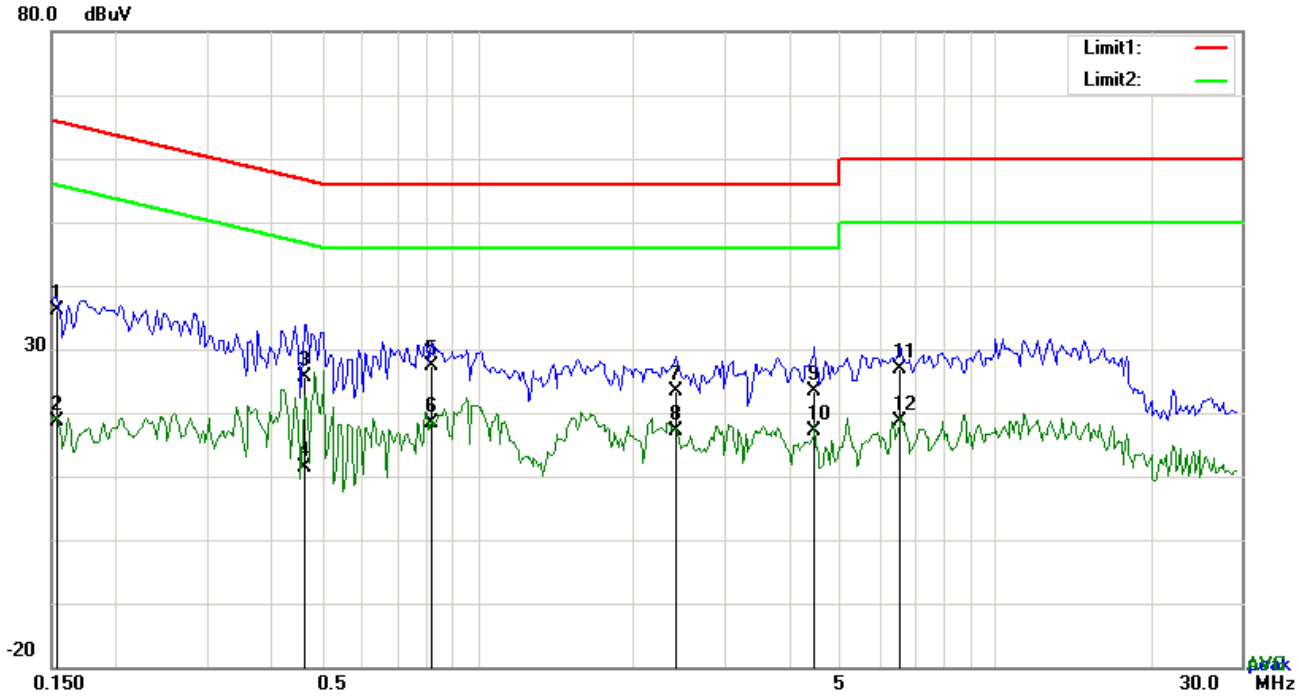


Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	N	0.4737	23.94	QP	10.02	33.96	56.45	-22.49
2	N	0.4737	20.18	AVG	10.02	30.20	46.45	-16.25
3	N	0.7896	17.41	QP	10.03	27.44	56.00	-28.56
4	N	0.7896	6.89	AVG	10.03	16.92	46.00	-29.08
5	N	1.7217	16.57	QP	10.04	26.61	56.00	-29.39
6	N	1.7217	10.81	AVG	10.04	20.85	46.00	-25.15
7	N	3.7917	16.16	QP	10.06	26.22	56.00	-29.78
8	N	3.7917	8.25	AVG	10.06	18.31	46.00	-27.69
9	N	5.5389	18.66	QP	10.08	28.74	60.00	-31.26
10	N	5.5389	8.80	AVG	10.08	18.88	50.00	-31.12
11	N	11.3733	16.31	QP	10.16	26.47	60.00	-33.53
12	N	11.3733	6.88	AVG	10.16	17.04	50.00	-32.96

Test Mode:	Transmitting Mode

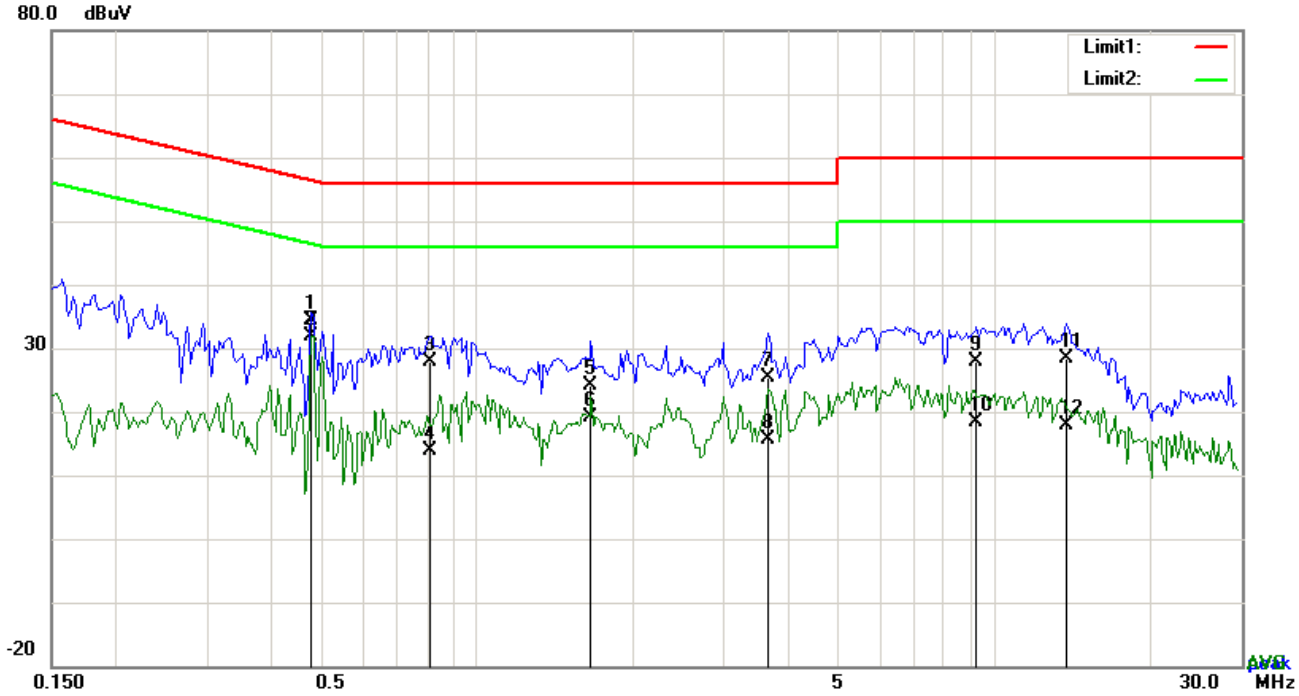


Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	L1	0.1539	26.02	QP	10.03	36.05	65.79	-29.74
2	L1	0.1539	8.66	AVG	10.03	18.69	55.79	-37.10
3	L1	0.4659	15.58	QP	10.03	25.61	56.59	-30.98
4	L1	0.4659	1.32	AVG	10.03	11.35	46.59	-35.24
5	L1	0.8169	17.29	QP	10.03	27.32	56.00	-28.68
6	L1	0.8169	8.40	AVG	10.03	18.43	46.00	-27.57
7	L1	2.4198	13.34	QP	10.05	23.39	56.00	-32.61
8	L1	2.4198	6.97	AVG	10.05	17.02	46.00	-28.98
9	L1	4.4976	13.35	QP	10.07	23.42	56.00	-32.58
10	L1	4.4976	7.13	AVG	10.07	17.20	46.00	-28.80
11	L1	6.5763	16.78	QP	10.10	26.88	60.00	-33.12
12	L1	6.5763	8.53	AVG	10.10	18.63	50.00	-31.37

Test Mode:	Transmitting Mode



Test Data

Phase Neutral Plot at 240Vac, 60Hz

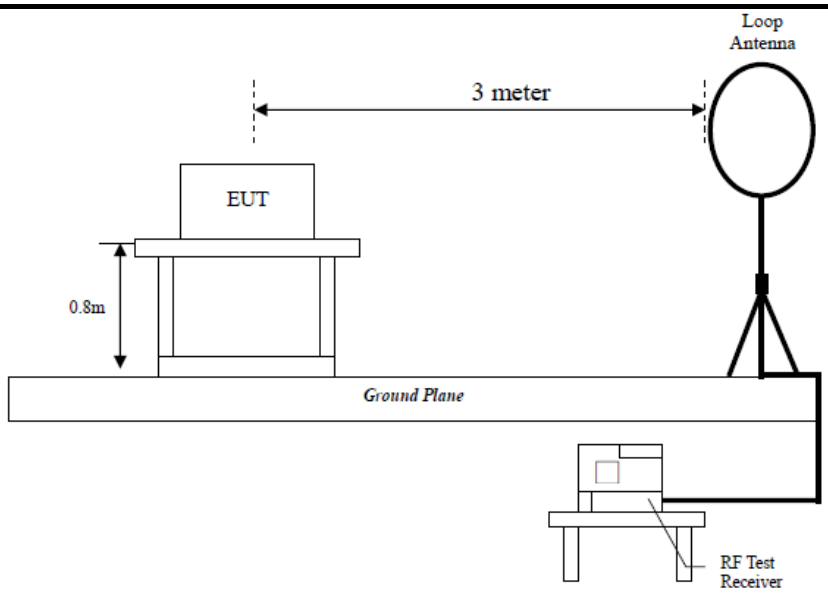
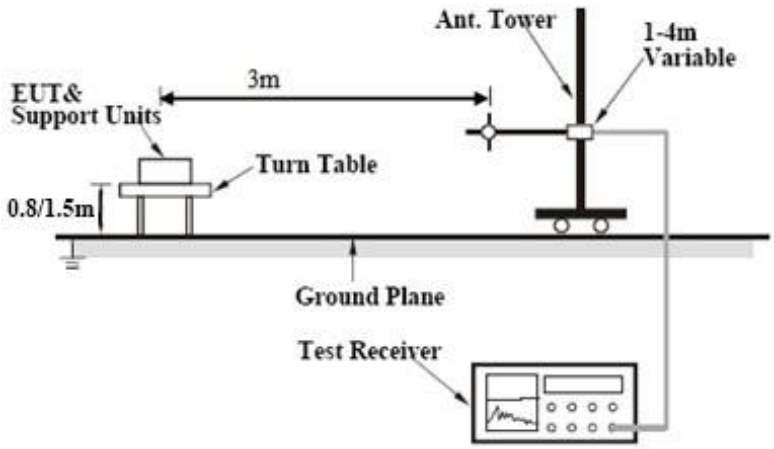
No.	P/L	Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	N	0.4776	24.46	QP	10.02	34.48	56.38	-21.90
2	N	0.4776	21.75	AVG	10.02	31.77	46.38	-14.61
3	N	0.8130	17.94	QP	10.03	27.97	56.00	-28.03
4	N	0.8130	3.84	AVG	10.03	13.87	46.00	-32.13
5	N	1.6554	13.97	QP	10.04	24.01	56.00	-31.99
6	N	1.6554	9.08	AVG	10.04	19.12	46.00	-26.88
7	N	3.6552	15.42	QP	10.06	25.48	56.00	-30.52
8	N	3.6552	5.65	AVG	10.06	15.71	46.00	-30.29
9	N	9.2088	17.82	QP	10.13	27.95	60.00	-32.05
10	N	9.2088	8.31	AVG	10.13	18.44	50.00	-31.56
11	N	13.7679	18.11	QP	10.19	28.30	60.00	-31.70
12	N	13.7679	7.61	AVG	10.19	17.80	50.00	-32.20

6.2 Radiated Spurious Emissions & Restricted Band

Temperature	26 °C
Relative Humidity	55%
Atmospheric Pressure	1017mbar
Test date :	September 26, 2018
Tested By :	Aaron Liang

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td rowspan="3">47CFR§15.247(d), RSS210 (A8.5)</td><td>a)</td><td>Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges
<table>
<tr><th>Frequency range (MHz)</th><th>Field Strength (μV/m)</th></tr>
<tr><td>0.009~0.490</td><td>2400/F(KHz)</td></tr>
<tr><td>0.490~1.705</td><td>24000/F(KHz)</td></tr>
<tr><td>1.705~30.0</td><td>30</td></tr>
<tr><td>30 – 88</td><td>100</td></tr>
<tr><td>88 – 216</td><td>150</td></tr>
<tr><td>216 960</td><td>200</td></tr>
<tr><td>Above 960</td><td>500</td></tr>
</table></td><td>☑</td></tr>
<tr><td>b)</td><td>For non-restricted band, 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 or 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, determined by the measurement method on output power to be used. Attenuation below the general limits specified in § 15.209(a) is not required
☒ 20 dB down ☐ 30 dB down</td><td>☑</td></tr>
<tr><td>c)</td><td>or restricted band, emission must also comply with the radiated emission limits specified in 15.209</td><td>☑</td></tr>
</table>

Test Setup	 
Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarization (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz. 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak measurement at frequency above 1GHz.

	The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz with Peak detection for Average Measurement as below at frequency above 1GHz. 5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

Test Result:

Test Mode:	Transmitting Mode

Frequency range: 9KHz - 30MHz

Freq. (MHz)	Detection value	Factor (dB/m)	Reading (dBuV/m)	Result (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)
--	--	--	--	--	--	>20
--	--	--	--	--	--	>20

Note:

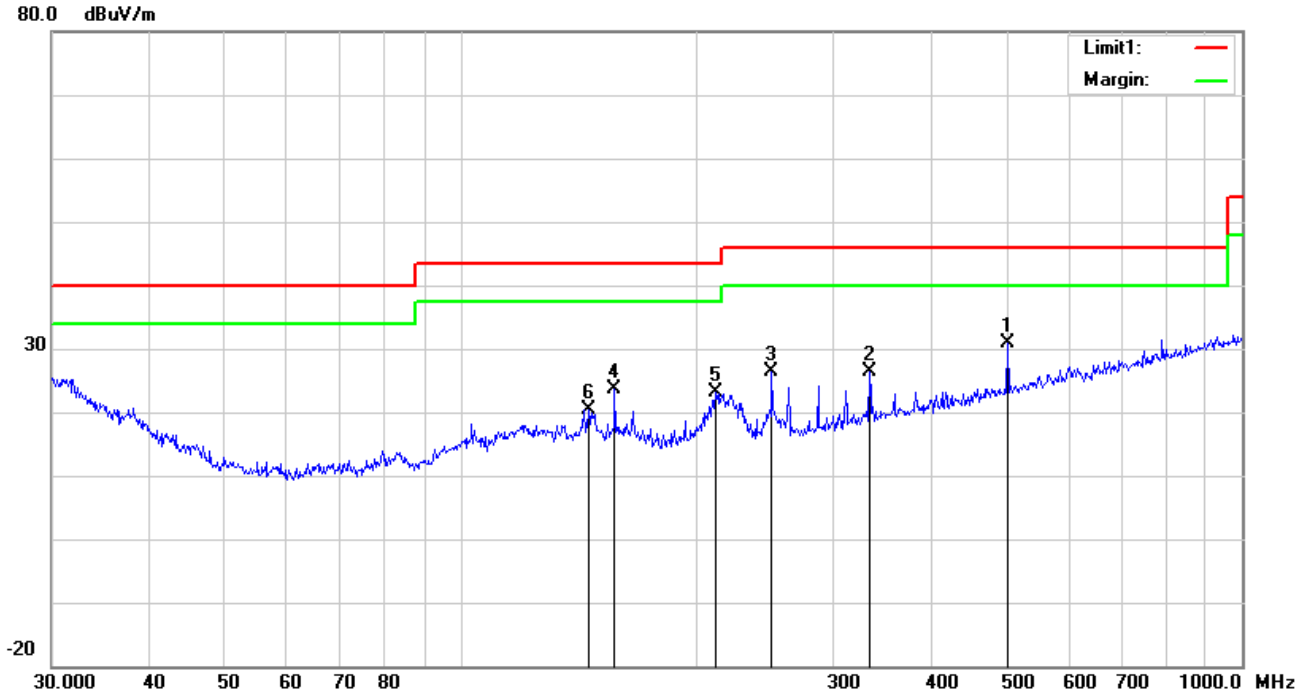
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.

Test Mode:	Transmitting Mode

30MHz -1GHz

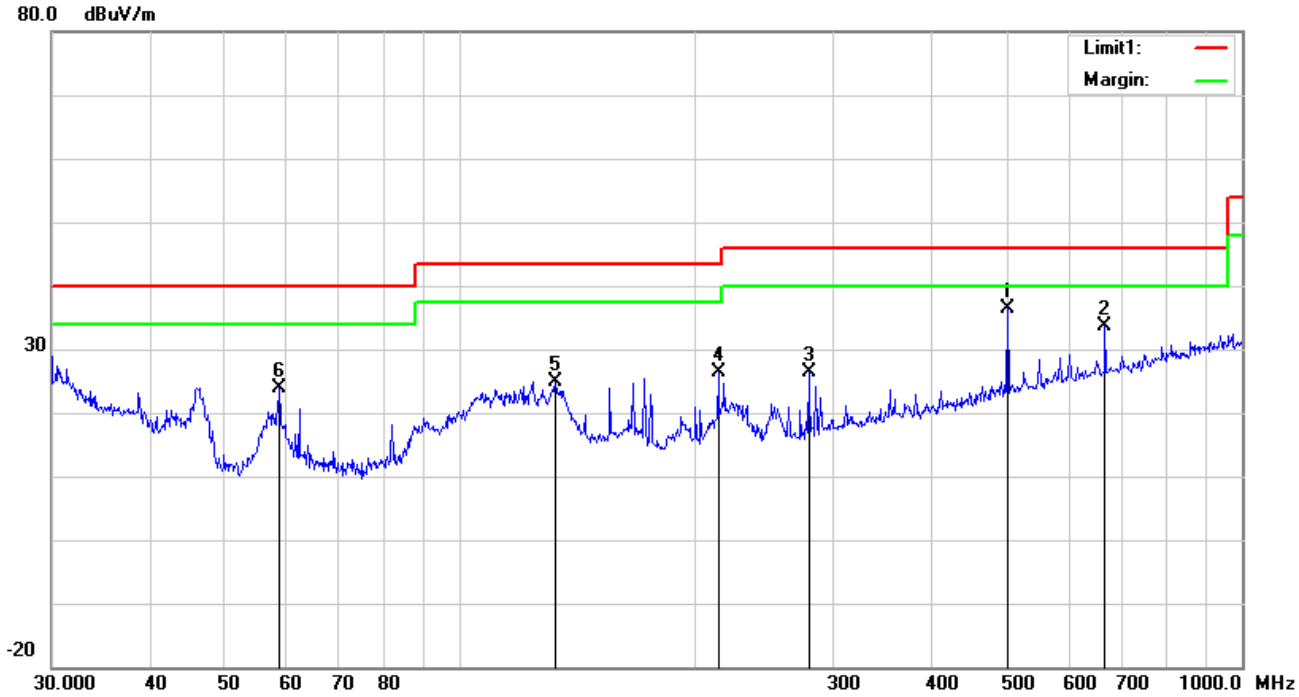


Test Data

Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)	(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	H	501.1790	32.54	17.72	21.81	2.42	30.87	46.00	-15.13	100	142
2	H	333.6867	32.39	14.31	22.20	1.96	26.46	46.00	-19.54	100	144
3	H	250.3012	35.54	11.41	22.29	1.70	26.36	46.00	-19.64	100	178
4	H	157.5589	32.01	12.60	22.29	1.38	23.70	43.50	-19.80	100	318
5	H	212.2695	31.92	11.93	22.36	1.58	23.07	43.50	-20.43	100	192
6	H	145.8611	28.74	12.60	22.37	1.31	20.28	43.50	-23.22	100	310

30MHz -1GHz



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)	(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	V	501.1790	38.01	17.72	21.81	2.42	36.34	46.00	-9.66	100	45
2	V	668.1423	32.49	19.85	21.43	2.60	33.51	46.00	-12.49	100	280
3	V	279.0436	34.35	12.68	22.29	1.75	26.49	46.00	-19.51	100	165
4	V	213.7634	35.13	11.91	22.36	1.58	26.26	43.50	-17.24	100	321
5	V	132.2206	32.96	13.11	22.39	1.22	24.90	43.50	-18.60	100	157
6	V	58.6126	38.09	7.45	22.41	0.76	23.89	40.00	-16.11	100	93

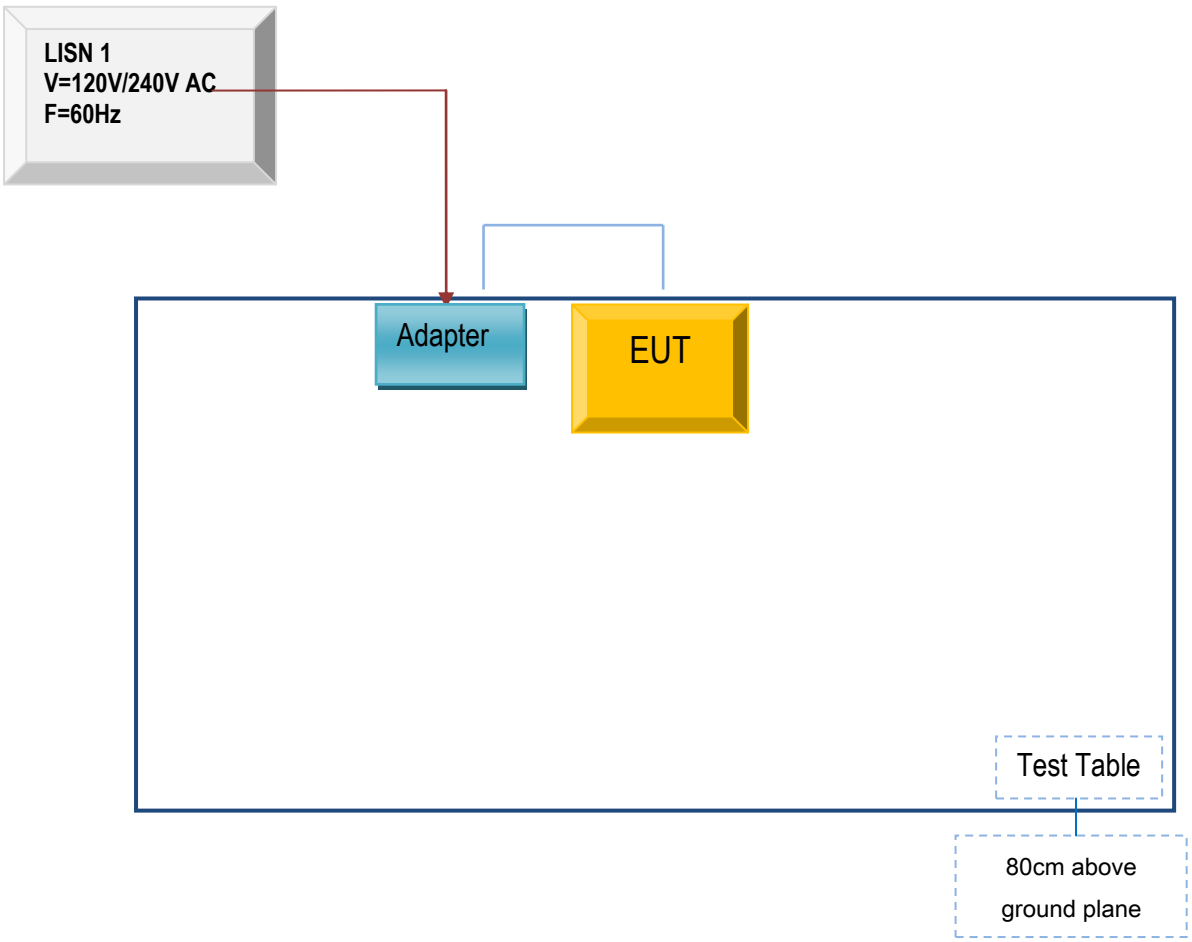
Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted					
EMI test receiver	ESCS30	8471241027	09/15/2017	09/14/2018	☑
Line Impedance	LI-125A	191106	09/23/2017	09/22/2018	☑
Line Impedance	LI-125A	191107	09/23/2017	09/22/2018	☑
ISN	ISN T800	34373	09/23/2017	09/22/2018	☐
Transient Limiter	LIT-153	531118	08/30/2017	08/29/2018	☐
Radiated Emissions					
EMI test receiver	ESL6	100262	09/15/2017	09/14/2018	☑
Positioning Controller	UC3000	MF780208282	11/17/2017	11/16/2018	☑
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/30/2017	08/29/2018	☑
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/22/2018	03/21/2019	☑
Horn Antenna	BBHA9170	3145226D1	09/27/2017	09/26/2018	☑
Active Antenna (9kHz-30MHz)	AL-130	121031	10/12/2017	10/11/2018	☑
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/19/2017	09/18/2018	☑
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/22/2017	09/21/2018	☑
Universal Radio Communication Tester	CMU200	121393	09/23/2017	09/22/2018	☑

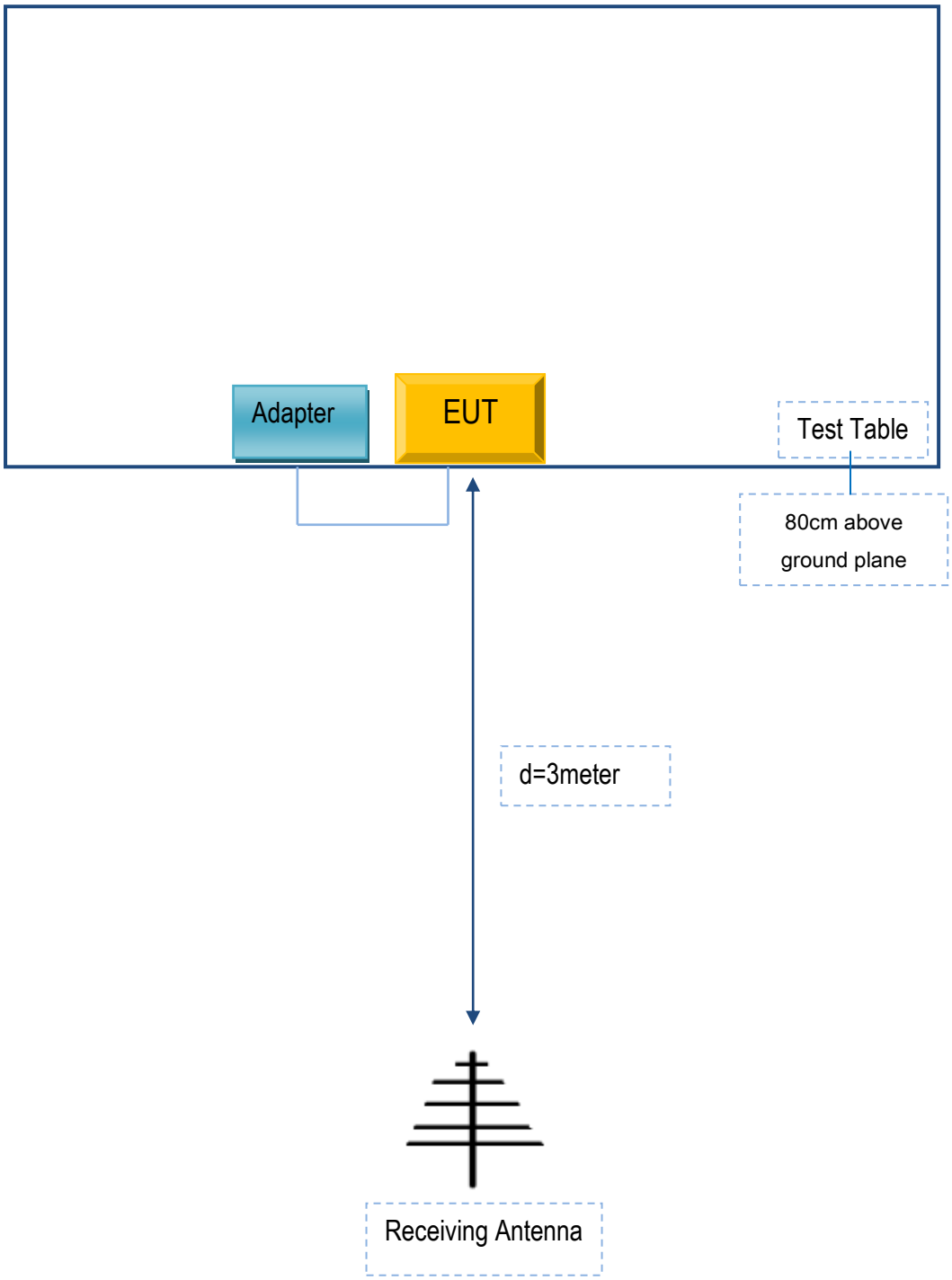
Annex B. TEST SETUP AND SUPPORTING EQUIPMENT

Annex B.i. TEST SET UP BLOCK

Block Configuration Diagram for AC Line Conducted Emissions



Block Configuration Diagram for Radiated Emissions （Below 1GHz）.



Annex B. ii. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
DongGuan AoHai Power Technology Co.,Ltd	Adapter	A18A-050100U-US2	N/A

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	N/A

Annex C. User Manual / Block Diagram / Schematics / Partlist/ DECLARATION OF SIMILARITY

Please see the attachment