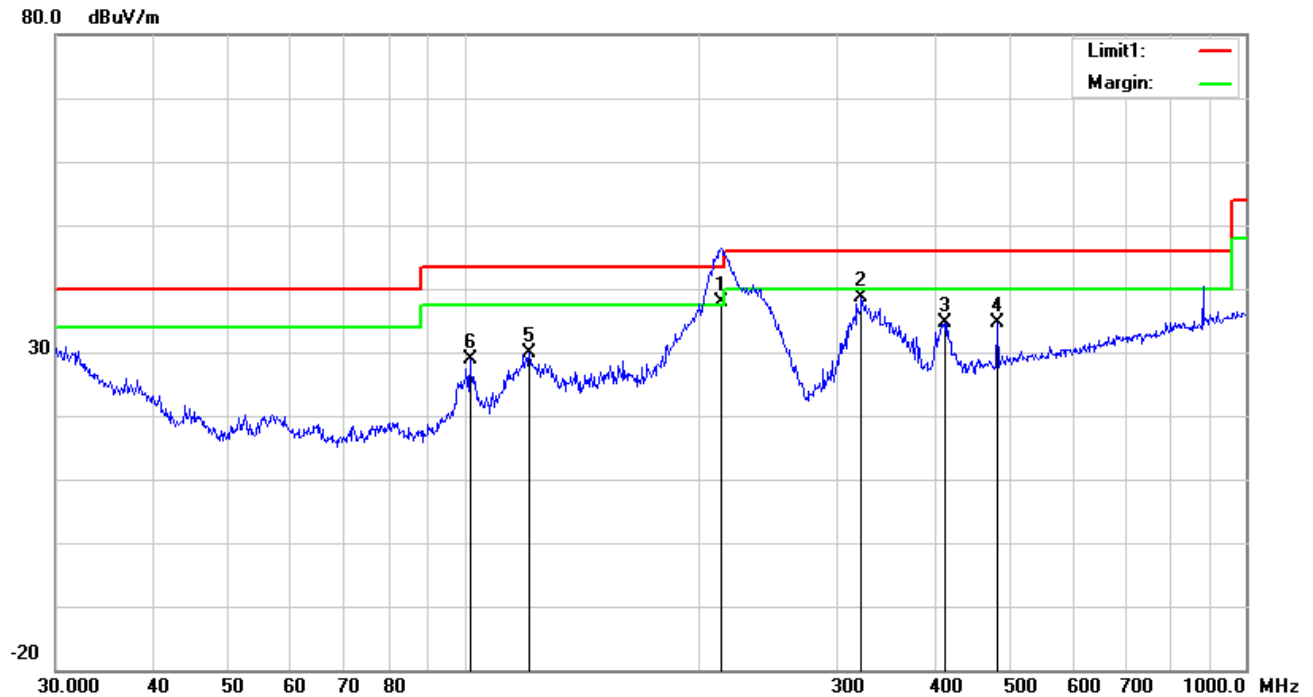


**Test Mode:** Bluetooth Mode

**30MHz -1GHz**



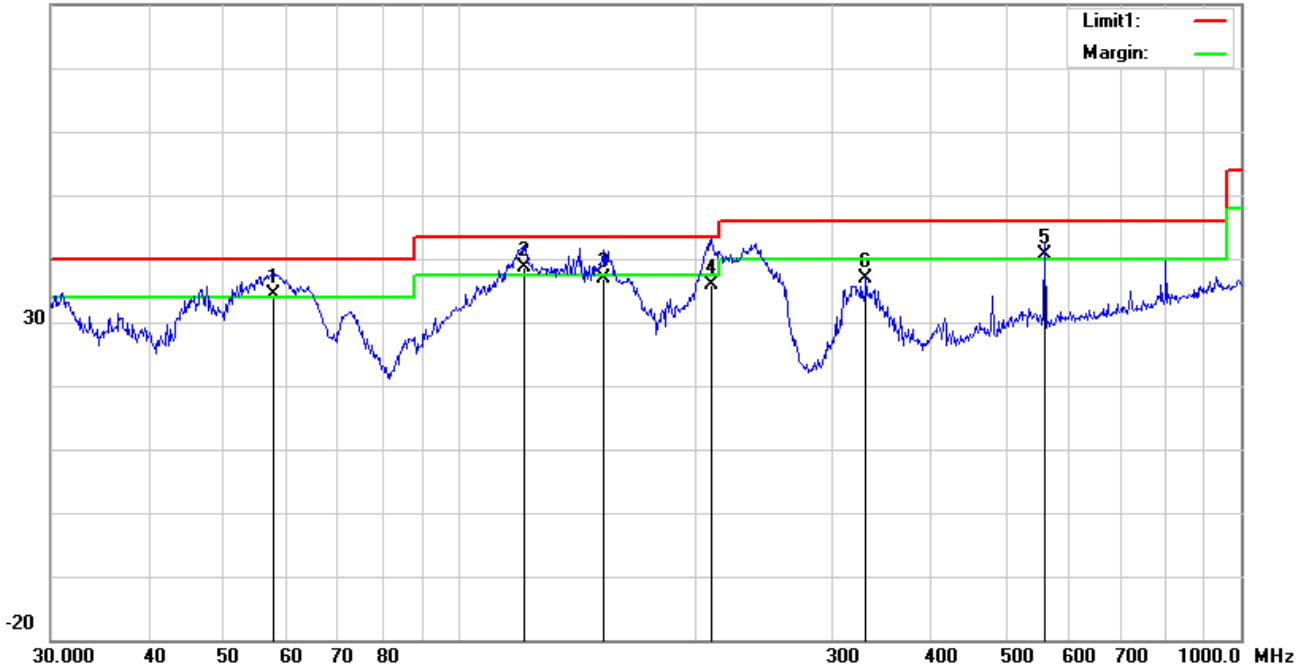
**Test Data**

**Horizontal Polarity Plot @3m**

No.	P/L	Frequency (MHz)	Reading (dBuV/m)	Detect or	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degr ee (°)
1	H	213.0151	46.86	QP	11.92	22.36	1.58	38.00	43.50	-5.50	100	306
2	H	322.1886	44.93	peak	14.07	22.23	1.90	38.67	46.00	-7.33	100	83
3	H	411.8240	38.71	peak	15.94	21.99	2.04	34.70	46.00	-11.30	100	351
4	H	480.5276	36.92	peak	17.31	21.85	2.31	34.69	46.00	-11.31	100	86
5	H	121.1231	37.15	peak	13.83	22.36	1.16	29.78	43.50	-13.72	200	320
6	H	101.6443	39.47	peak	10.69	22.32	1.13	28.97	43.50	-14.53	100	305

### 30MHz -1GHz

80.0 dBuV/m



### Test Data

#### Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detect or	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	57.7962	48.60	QP	7.54	22.40	0.76	34.50	40.00	-5.50	100	145
2	V	121.1231	45.97	QP	13.83	22.36	1.16	38.60	43.50	-4.90	100	87
3	V	153.2004	45.16	QP	12.60	22.32	1.36	36.80	43.50	-6.70	100	116
4	V	210.0482	44.73	QP	11.96	22.36	1.57	35.90	43.50	-7.60	200	102
5	V	560.6928	41.29	QP	18.55	21.67	2.48	40.65	46.00	-5.35	100	218
6	V	331.3547	42.99	peak	14.26	22.20	1.95	37.00	46.00	-9.00	100	317

**Above 1GHz**

<b>Test Mode:</b>	<b>Transmitting Mode</b>
-------------------	--------------------------

Frequency	Meter Reading	Antenna Factor	Cable loss	Preamp factor	Emission Level	Limits	Margin	Detector	Polarity
(MHz)	(dB $\mu$ V)	(dB)	(dB)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	(PK/AV)	(H/V)
Low Channel:GFSK Mode(Worst Case)-2402MHz									
2390	36.97	28.72	3.36	26.32	42.73	74	-31.27	peak	Vertical
4804	26.88	32.94	3.98	27.49	36.31	54	-17.69	Average	Vertical
4804	37.29	32.94	3.98	27.49	46.72	74	-27.28	peak	Vertical
7206	30.19	25.28	5.51	27.94	33.04	54	-20.96	Average	Vertical
7206	39.44	25.28	5.51	27.94	42.29	74	-31.71	peak	Vertical
2390	38.09	28.72	3.36	26.32	43.85	74	-30.15	peak	Horizontal
4804	29.23	32.94	3.98	27.49	38.66	54	-15.34	Average	Horizontal
4804	40.31	32.94	3.98	27.49	49.74	74	-24.26	peak	Horizontal
7206	30.24	25.28	5.51	27.94	33.09	54	-20.91	Average	Horizontal
7206	41.31	25.28	5.51	27.94	44.16	74	-29.84	peak	Horizontal
Middle Channel:GFSK Mode(Worst Case)-2441MHz									
4882	29.10	32.11	4.04	27.53	37.72	54	-16.28	Average	Vertical
4882	38.43	32.11	4.04	27.53	47.05	74	-26.95	peak	Vertical
7323	29.62	24.33	5.58	27.96	31.57	54	-22.43	Average	Vertical
7323	40.37	24.33	5.58	27.96	42.32	74	-31.68	peak	Vertical
4882	30.34	32.11	4.04	27.53	38.96	54	-15.04	Average	Horizontal
4882	40.71	32.11	4.04	27.53	49.33	74	-24.67	peak	Horizontal
7323	34.52	24.33	5.58	27.96	36.47	54	-17.53	Average	Horizontal
7323	40.56	24.33	5.58	27.96	42.51	74	-31.49	peak	Horizontal
High Channel:GFSK Mode(Worst Case)-2480MHz									
2483.5	37.24	28.79	3.48	26.34	43.17	74	-30.83	peak	Vertical
4960	29.37	31.32	4.12	27.58	37.23	54	-16.77	Average	Vertical
4960	38.26	31.32	4.12	27.58	46.12	74	-27.88	peak	Vertical
7440	29.07	24.38	5.68	27.99	31.14	54	-22.86	Average	Vertical
7440	40.13	24.38	5.68	27.99	42.20	74	-31.80	peak	Vertical
2483.5	39.43	28.79	3.48	26.34	45.36	74	-28.64	peak	Horizontal
4960	29.32	31.32	4.12	27.58	37.18	54	-16.82	Average	Horizontal
4960	40.41	31.32	4.12	27.58	48.27	74	-25.73	peak	Horizontal
7440	33.25	24.38	5.68	27.99	35.32	54	-18.68	Average	Horizontal

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**Note:**

*1, The testing has been conformed to  $10 \times 2480\text{MHz} = 24,800\text{MHz}$*

*2, All other emissions more than 30 dB below the limit*

*3, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.*

*4, The radiated spurious test above 18GHz is subcontracted to SIEMIC (Nanjing-China) Laboratories. and found 30dB below the limit at least.*

## Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
<b>AC Line Conducted</b>					
EMI test receiver	ESCS30	8471241027	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
Line Impedance	LI-125A	191106	09/23/2017	09/22/2018	<input checked="" type="checkbox"/>
Line Impedance	LI-125A	191107	09/23/2017	09/22/2018	<input checked="" type="checkbox"/>
ISN	ISN T800	34373	09/23/2017	09/22/2018	<input type="checkbox"/>
Transient Limiter	LIT-153	531118	08/30/2017	08/29/2018	<input type="checkbox"/>
<b>RF conducted test</b>					
Agilent ESA-E SERIES	E4407B	MY45108319	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
Power Splitter	1#	1#	08/30/2017	08/29/2018	<input checked="" type="checkbox"/>
DC Power Supply	E3640A	MY40004013	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
<b>Radiated Emissions</b>					
EMI test receiver	ESL6	100262	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
Positioning Controller	UC3000	MF780208282	11/17/2017	11/16/2018	<input checked="" type="checkbox"/>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/30/2017	08/29/2018	<input checked="" type="checkbox"/>
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	<input checked="" type="checkbox"/>
Horn Antenna	BBHA9170	3145226D1	09/27/2017	09/26/2018	<input checked="" type="checkbox"/>
Active Antenna (9kHz-30MHz)	AL-130	121031	10/12/2017	10/11/2018	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/19/2017	09/18/2018	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/22/2017	09/21/2018	<input checked="" type="checkbox"/>
Universal Radio Communication Tester	CMU200	121393	09/23/2017	09/22/2018	<input checked="" type="checkbox"/>

## Annex B. EUT And Test Setup Photographs

### Annex B.i. Photograph: EUT External Photo

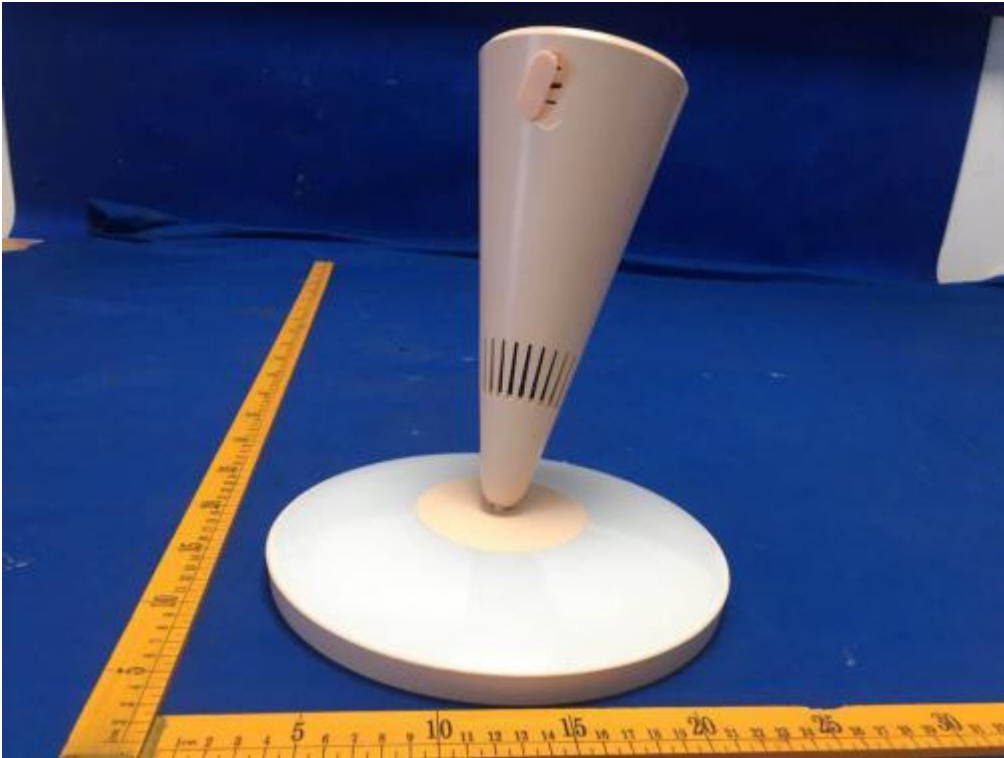
EUT - Front View



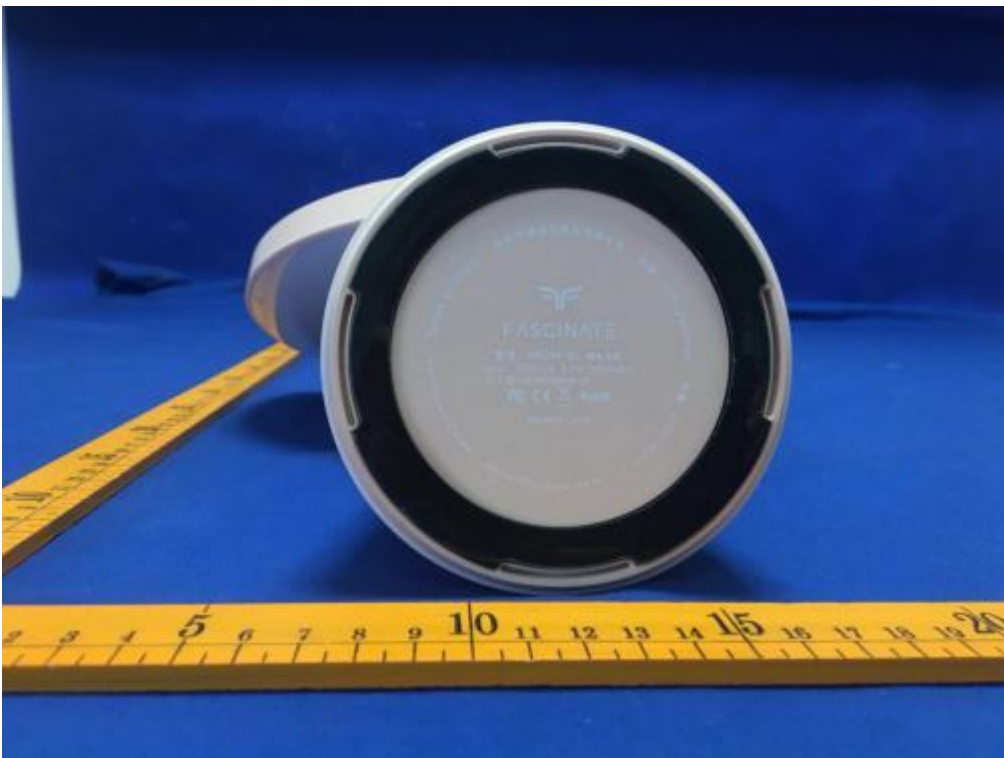
EUT - Rear View



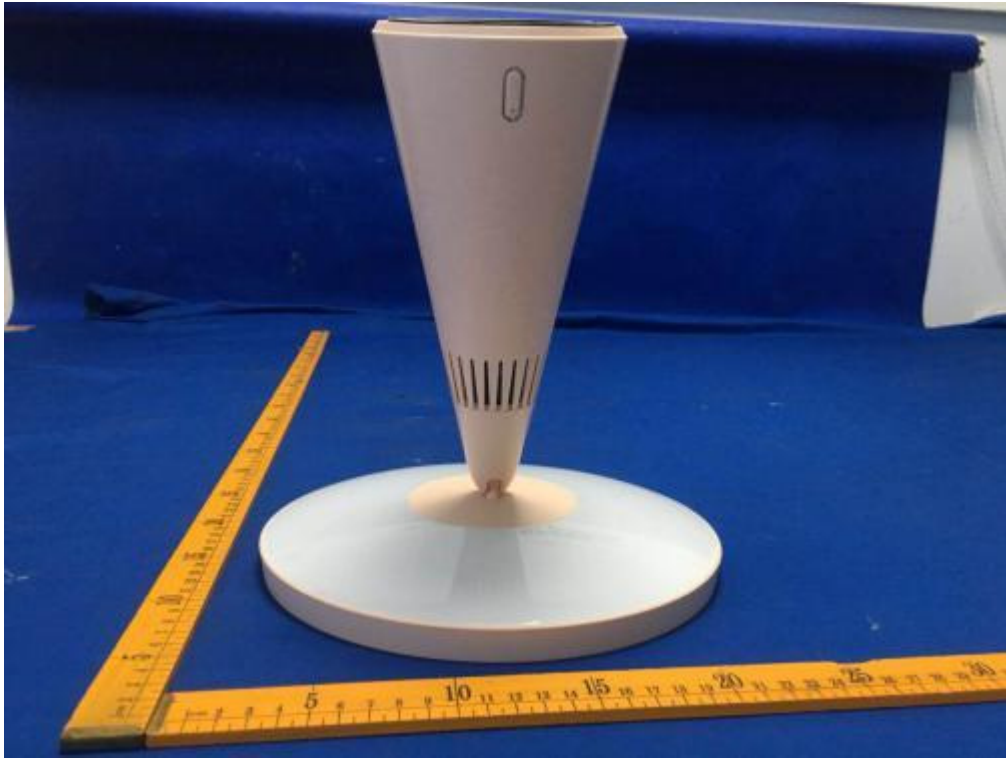
EUT - Top View



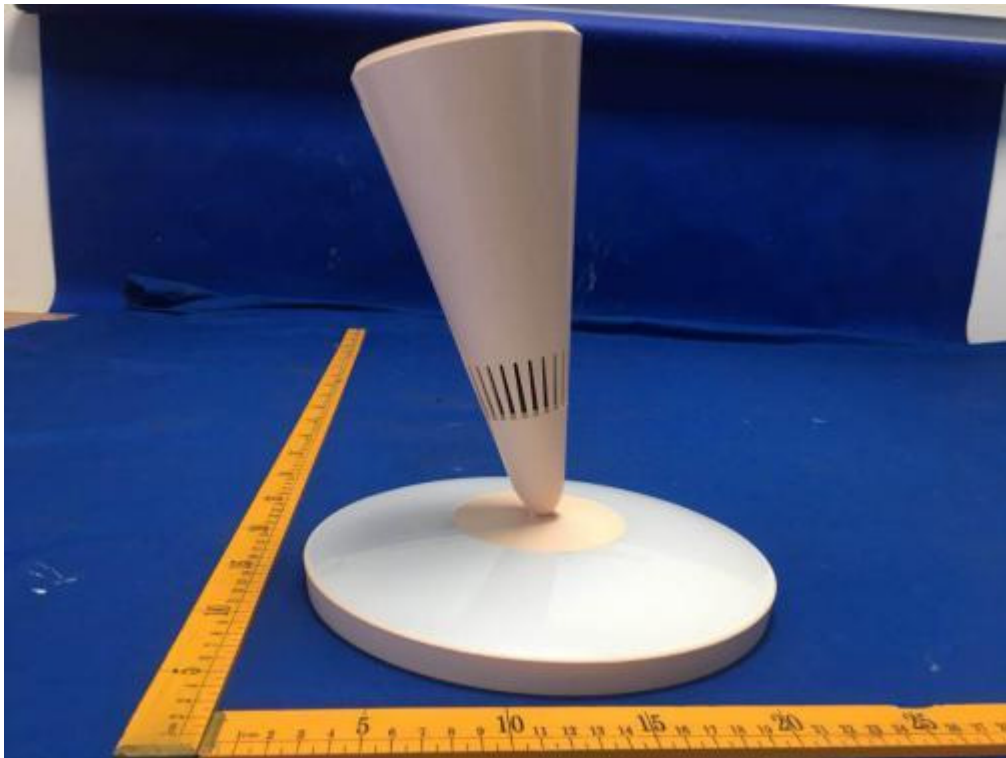
EUT - Bottom View



EUT - Left View



EUT - Right View

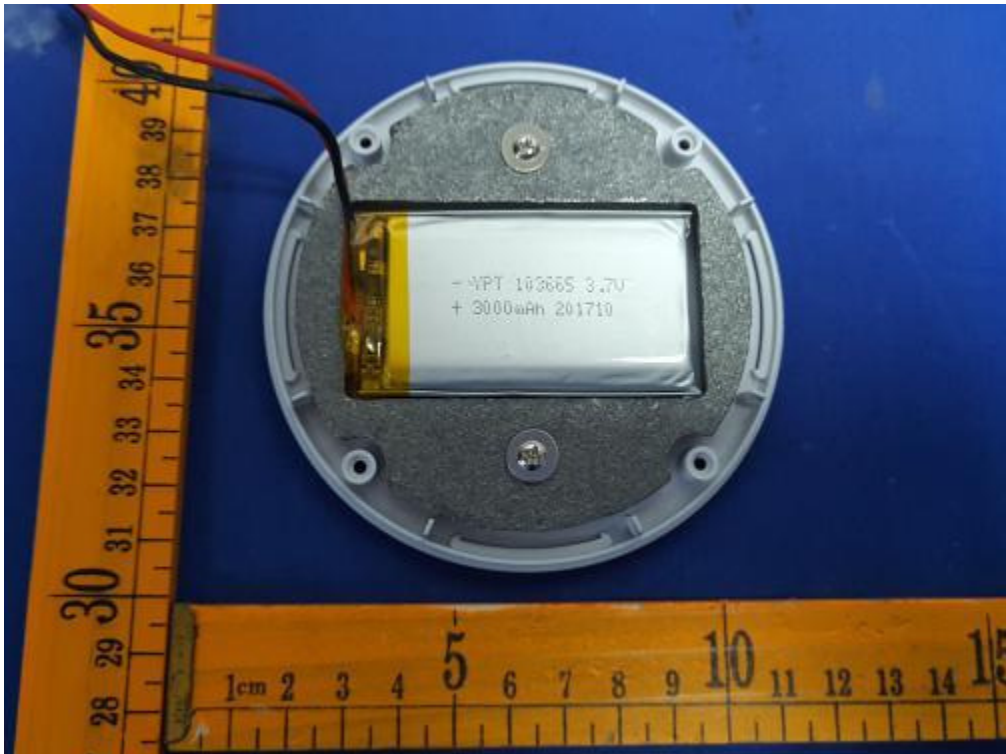


**Annex B.ii. Photograph: EUT Internal Photo**

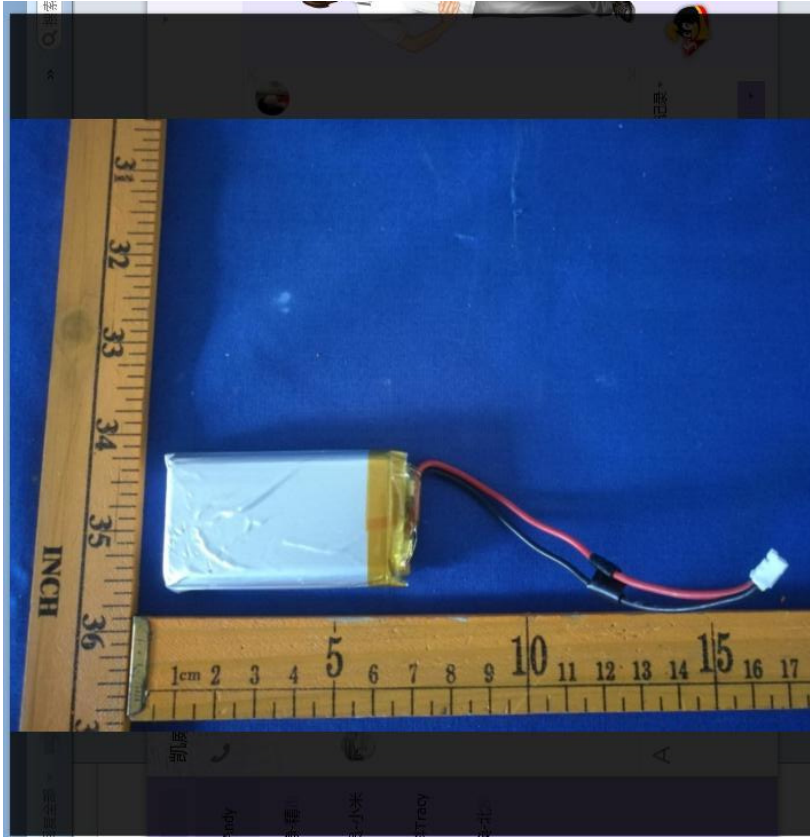
Cover Off - Top View



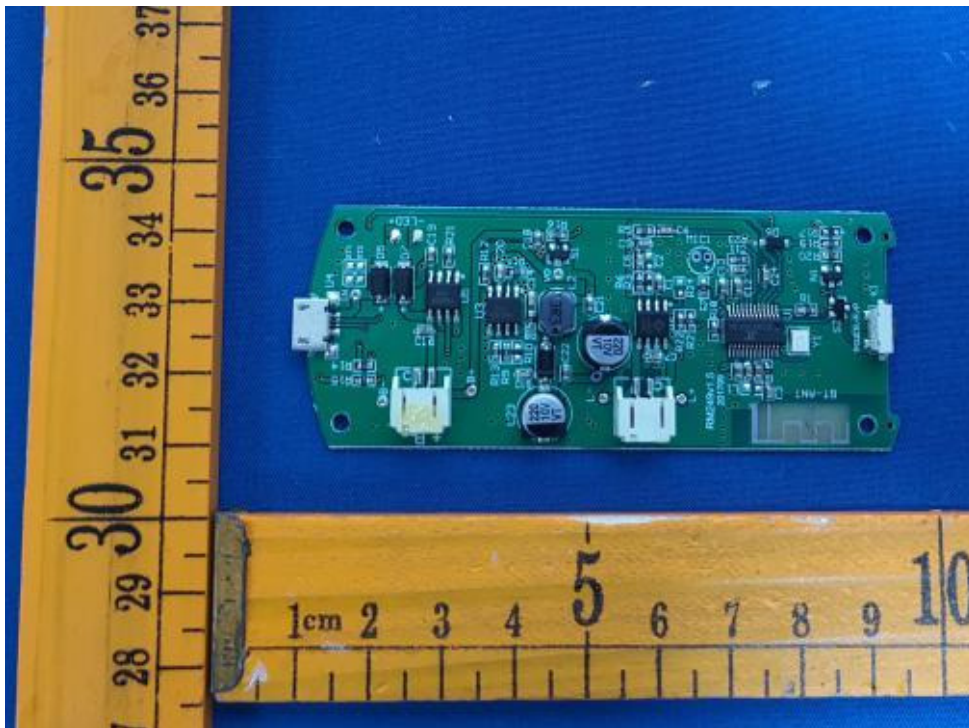
Battery - Front View



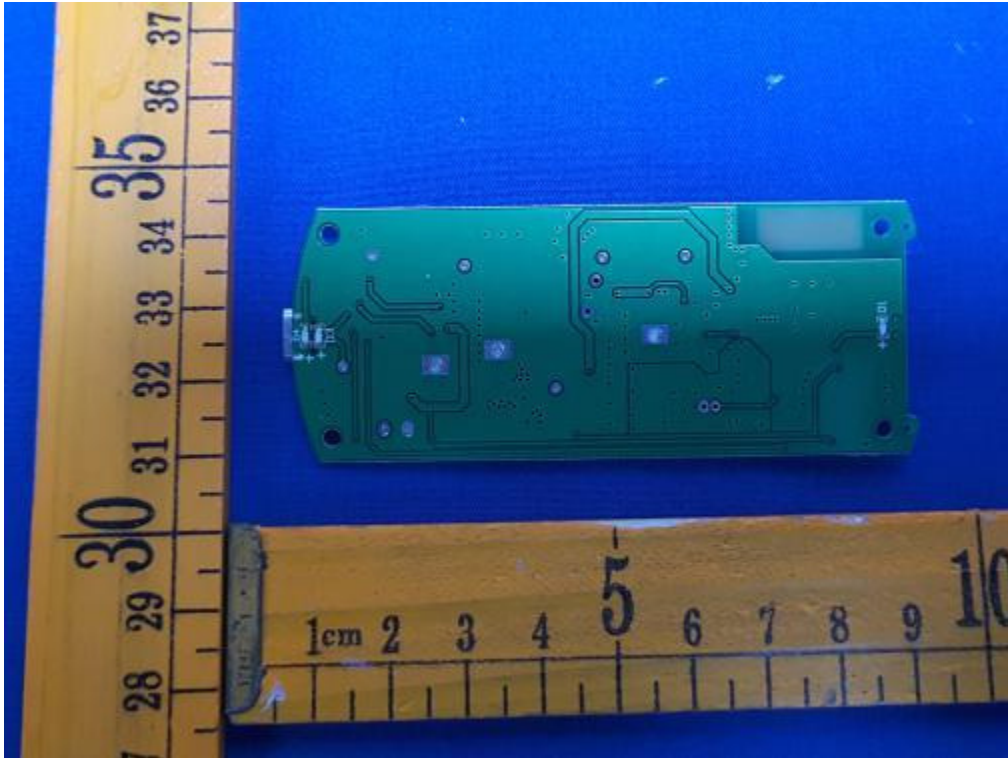
Battery - Rear View



Mainboard - Front View



Mainboard – Rear View



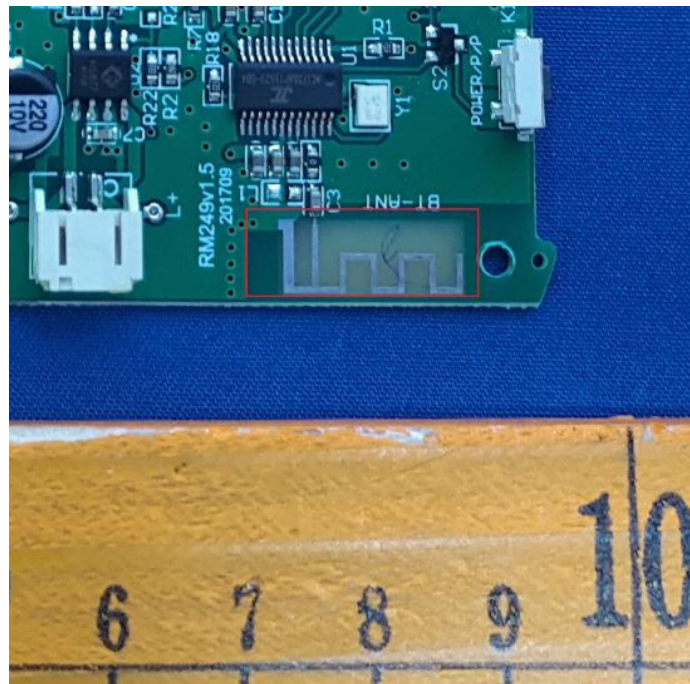
Support - Front View



Support – Rear View



BT - Antenna View



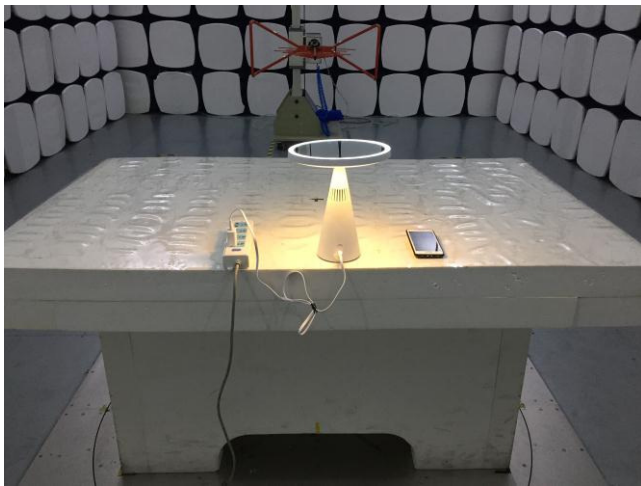
**Annex B.iii. Photograph: Test Setup Photo**



Conducted Emissions Test Setup Front View



Conducted Emissions Test Setup Side View



Radiated Spurious Emissions Test Setup Below 1GHz

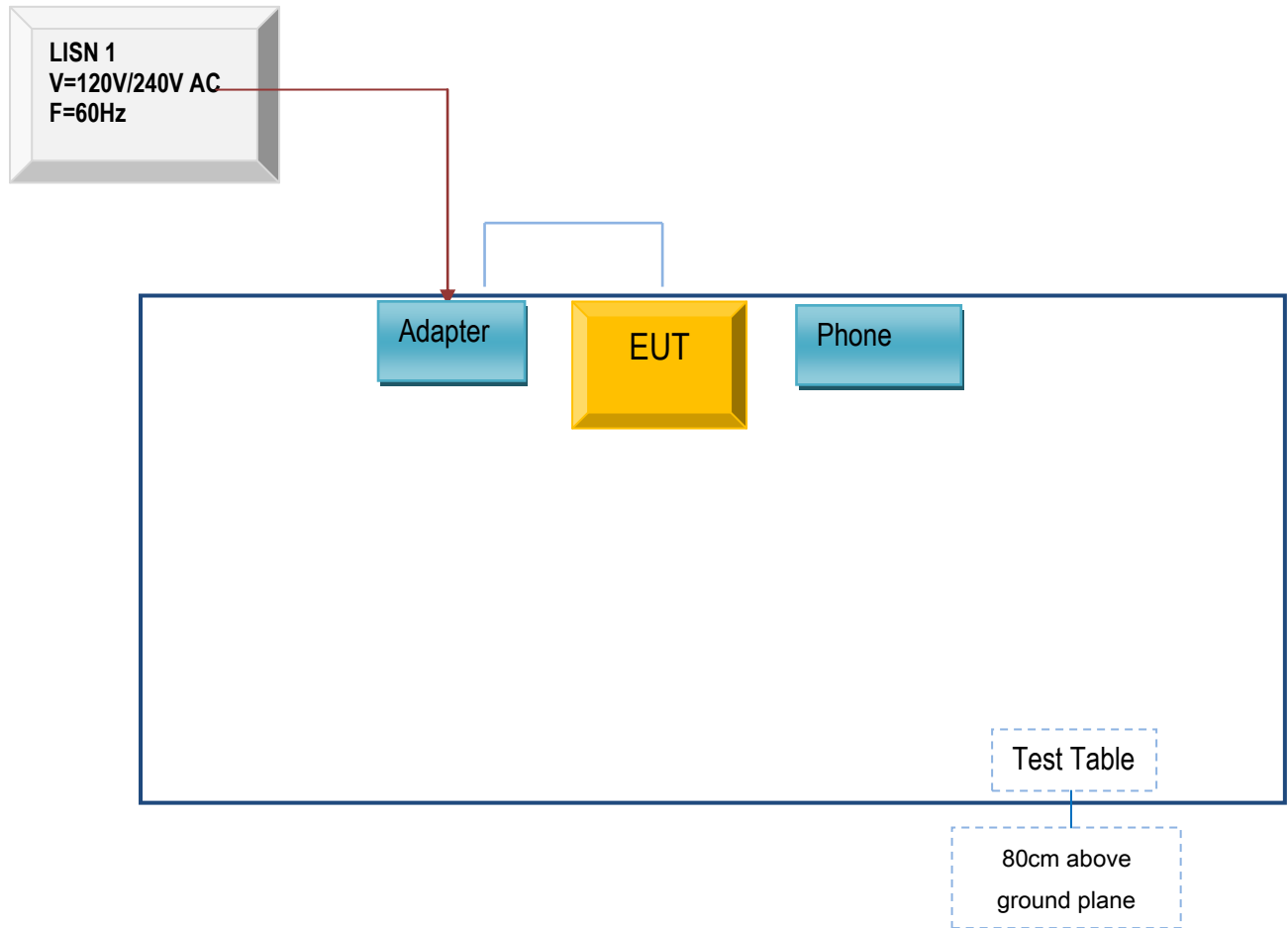


Radiated Spurious Emissions Test Setup Above 1GHz

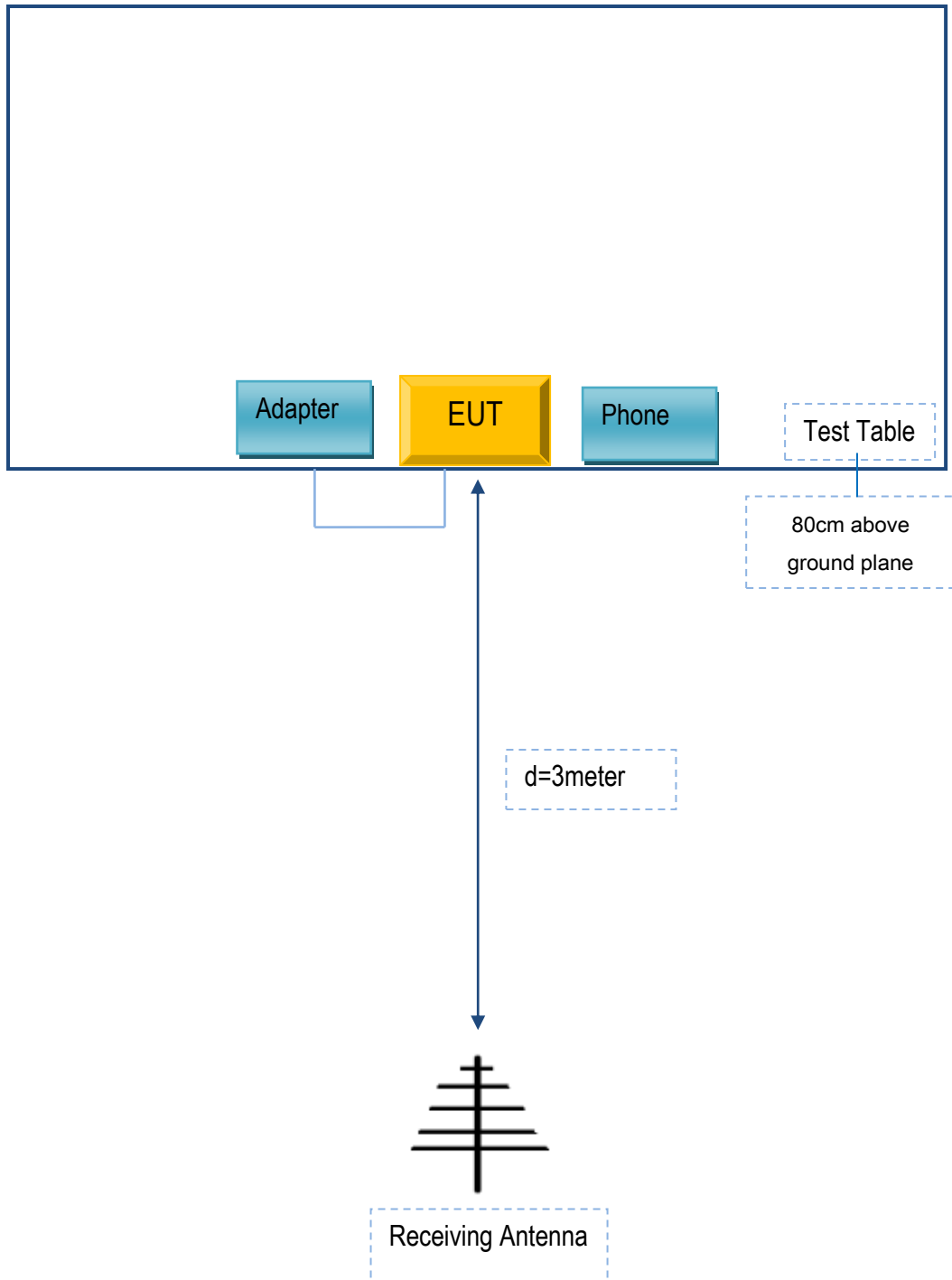
## Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

### Annex C.ii. TEST SET UP BLOCK

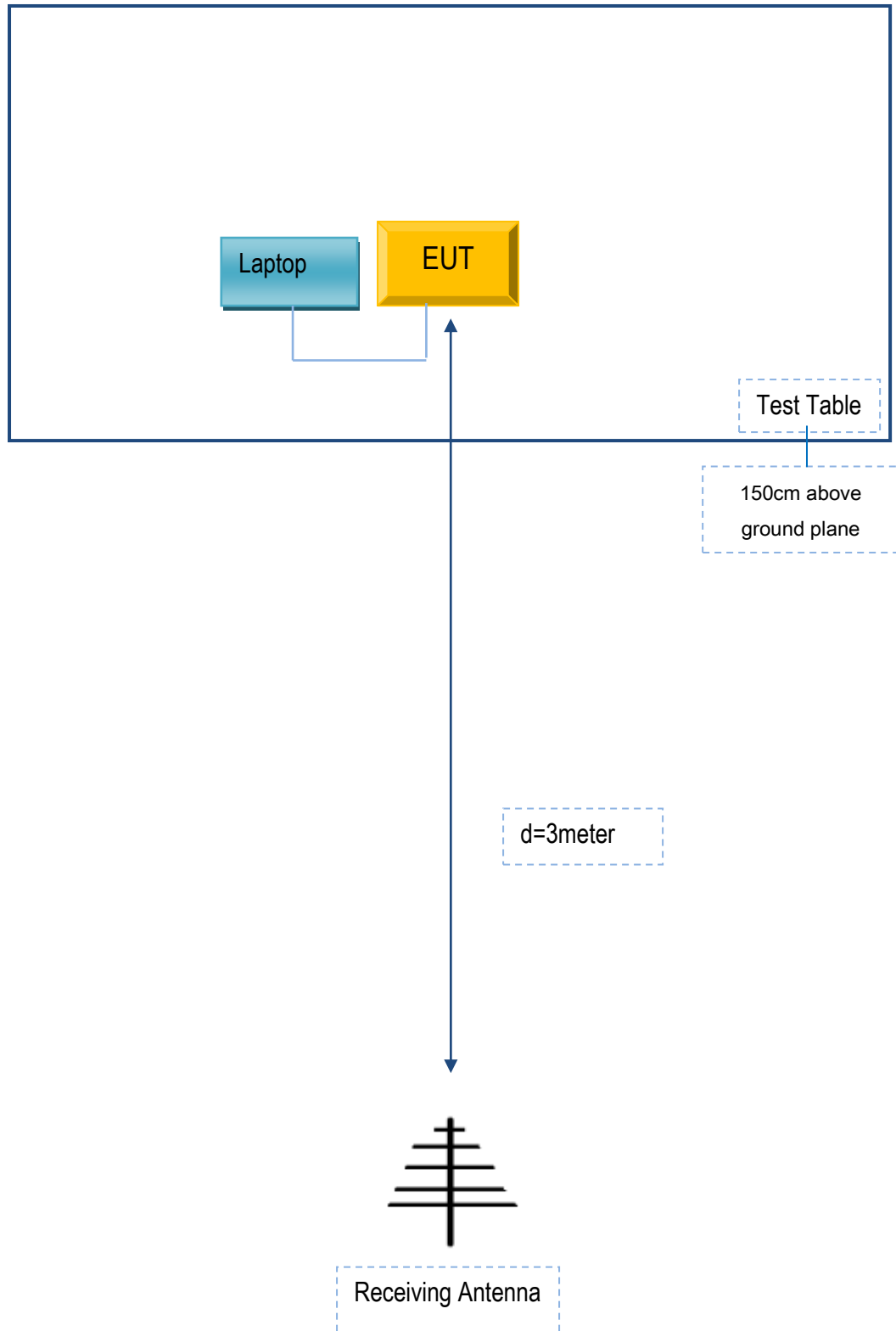
#### Block Configuration Diagram for AC Line Conducted Emissions



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



**Block Configuration Diagram for Radiated Emissions ( Above 1GHz ) .**



## Annex C. 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
Lenovo	Laptop	E40	LR-1EHRX
Apple	Phone	Iphone4s	N/A
DCA	Adapter	E2164A	N/A

### Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
N/A	N/A	N/A	N/A	N/A

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**Annex D. User Manual / Block Diagram / Schematics / Partlist**

Please see the attachment

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## Annex E. DECLARATION OF SIMILARITY