

FCC/IC TEST REPORT

for

myAudeo Co., Ltd

Listening System

Model Number: 8081

FCC ID: 2AJ4S8081

IC: 22060-8081

Prepared for : myAudeo Co., Ltd
Address : Room2302,Global GatewayTower,63WingHongStreet,
CheungShaWan,Kowloon,HongKong

Prepared by : Keyway Testing Technology Co., Ltd.
Address : Building 1, Baishun Industrial Zone, Zhangmutou Town,
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Report No. : 16KWE114581F
Date of Test : Oct.18~Nov.01, 2016
Date of Report : Nov. 02, 2016

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Keyway Testing Technology Co., Ltd.

Applicant:	myAudeo Co., Ltd		
Address:	Room2302,Global GatewayTower,63WingHongStreet, CheungShaWan,Kowloon,HongKong		
Manufacturer:	myAudeo Co., Ltd		
Address:	Room2302,Global GatewayTower,63WingHongStreet, CheungShaWan,Kowloon,HongKong		
E.U.T:	Listening System		
Model Number:	8081		
Trade Name:	myAudeo	Serial No.:	-----
Date of Receipt:	Oct.17, 2016	Date of Test:	Oct.18~Nov.01, 2016
Test Specification:	FCC Part 15, Subpart C Section 15.249: 2015 ANSI C63.10-2013 RSS-Gen Issue 4 November 2014 RSS-210 Issue 9 August 2016		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		
Issue Date:Nov.02, 2016			
Tested by:	Reviewed by:	Approved by:	
 <hr style="width: 100%;"/>	 <hr style="width: 100%;"/>	 <hr style="width: 100%;"/>	
Keven Wu / Engineer	Mike Xu / Supervisor	Andy Gao / Supervisor	
Other Aspects:			
None.			
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Keyway Testing Technology Co., Ltd.			

1. TEST SUMMARY

Test Items	Test Requirement	Result
Conducted Emissions	15.207/ RSS-Gen § 8.8	PASS
Radiated Emissions	15.205(a)/15.209/15.249(d) / RSS-Gen § 6.13	PASS
20dB&99% Bandwidth	15.249/ &RSS-Gen§6.6	PASS
Emissions from out of band	15.249/ RSS-Gen § 6.13	PASS
Antenna Requirement	15.203/ RSS-Gen § 8.3	PASS

2. GENERAL PRODUCT INFORMATION

2.1. Product Function

Refer to Technical Construction Form and User Manual.

2.2. Description of Device (EUT)

Product Name:	Listening System
Model No.:	8081
Serial Model :	N/A
Model Difference	N/A
Operation Frequency:	2406MHz-2475MHz
Channel numbers:	24
Modulation technology:	GFSK
Antenna Type:	PCB
Antenna gain:	2.08dBi
Power supply:	DC 5V from adapter
Adapter:	MODEL:S005AYU0500100 I/P:AC 100~240V 50/60Hz 200mA O/P:DC 5V ,1000mA

2.3. Independent Operation Modes

The basic operation modes are:

Test Mode	Frequency
Mode1	2406MHz
Mode2	2442MHz
Mode3	2475MHz
Mode4	Link Mode

2.4. Product Version

Product SW version	AT0062-8810GAMETX-V1.0
Product HW version	AT0062-8810GAMETX-V1.0
Radio SW version	MO-AT01CA-8810PAMINCORETX-V3.0
Radio HW version	MO-AT01CA-8810PAMINCORETX-V3.0
Test SW Version	V1.0
RF power setting in TEST SW	3dBm

2.5. Channel List

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency		
1	2406MHz	10	2433MHz	19	2460MHz		
2	2409MHz	11	2436MHz	20	2463MHz		
3	2412MHz	12	2439MHz	21	2466MHz		
4	2415MHz	13	2442MHz	22	2469MHz		
5	2418MHz	14	2445MHz	23	2472MHz		
6	2421MHz	15	2448MHz	24	2475MHz		
7	2424MHz	16	2451MHz				
8	2427MHz	17	2454MHz				
9	2430MHz	18	2457MHz				

2.6. TEST SITES

Lab Qualifications : 944 Shielded Room built by ETS-Lindgren, USA
Date of completion: March 28, 2011

966 Chamber built by ETS-Lindgren, USA
Date of completion: March 28, 2011

Certificated by TUV Rheinland, Germany.
Registration No.: UA 50207153
Date of registration: July 13, 2011

Certificated by UL, USA
Registration No.: 100567-237
Date of registration: December 1, 2011

Certificated by Intertek
Registration No.: 2011-RTL-L1-31
Date of registration: October 11, 2011

Certificated by Industry Canada
Registration No.: 9868A
Date of registration: December 8, 2011

Certificated by FCC, USA
Registration No.: 370994
Date of registration: February 21, 2012

Certificated by CNAS China
Registration No.: CNAS L5783
Date of registration: August 8, 2012

Name of Firm : Keyway Testing Technology Co., Ltd.

Site Location : Baishun Industrial Zone, Zhangmutou Town,
Dongguan, Guangdong, China

2.7. List of Test and Measurement Instruments

2.7.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 09,16	Apr. 08,17
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	Apr. 09,16	Apr. 08,17
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	Apr. 09,16	Apr. 08,17
RF Cable	FUJIKURA	3D-2W	944 Cable	Apr. 09,16	Apr. 08,17

2.7.2. For radiated emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 09,16	Apr. 08,17
System Simulator	Agilent	E5515C	GB43130245	Apr. 09,16	Apr. 08,17
Power Splitter	Weinschel	1506A	NW425	Apr. 09,16	Apr. 08,17
Bilog Antenna	ETS-LINDGREEN	3142D	135452	Apr. 09,16	Apr. 08,17
Spectrum Analyzer	Agilent	E4411B	MY4511304	Apr. 09,16	Apr. 08,17
Spectrum Analyzer	R&S	FSV40	132.1.3008K39 -100967	Apr. 09,16	Apr. 08,17
3m Semi-anechoic Chamber	ETS-LINDGREEN	966	KW01	Apr. 09,16	Apr. 08,17
Signal Amplifier	SONOMA	310	187016	Apr. 09,16	Apr. 08,17
Signal Amplifier	Agilent	8449B	3008A00251	Apr. 09,16	Apr. 08,17
RF Cable	IMRO	IMRO-400	966 Cable 1#	N/A	N/A
MULTI-DEVICE Controller	ETS-LINDGREEN	2090	126913	N/A	N/A
Horn Antenna	DAZE	ZN30701	11003	Apr. 09,16	Apr. 08,17
Horn Antenna	SCHWARZBECK	BBHA9170	9170-068	Apr. 09,16	Apr. 08,17
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 09,16	Apr. 08,17
Spectrum Analyzer	Agilent	E4408B	MY44211125	Apr. 09,16	Apr. 08,17
Signal Amplifier	DAZE	ZN3380C	11001	Apr. 09,16	Apr. 08,17
High Pass filter	Micro	HPM50111	324216	Apr. 09,16	Apr. 08,17
Filter	COM-MW	ZBSF-C836.5-25-X	KW032	Apr. 09,16	Apr. 08,17
Filter	COM-MW	ZBSF-C1747.5-75-X2	KW035	Apr. 09,16	Apr. 08,17
Filter	COM-MW	ZBSF-C1880-60-X2	KW037	Apr. 09,16	Apr. 08,17
DC Power Supply	LongWei	PS-305D	010964729	Apr. 09,16	Apr. 08,17
Constant temperature and humidity box	GF	GTH-800-40-1P	MAA9906-005	Apr. 09,16	Apr. 08,17
Splitter	Agilent	11636B	0025164	Apr. 27,15	Apr. 27,16
Loop Antenna	ARA	PLA-1030/B	1029	Apr. 22,16	Apr. 21,17

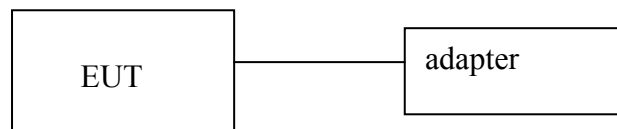
3. TEST SET-UP AND OPERATION MODES

3.1. Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

3.2. Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators



(EUT: Listening System)

3.3. Test Operation Mode and Test Software

None.

3.4. Special Accessories and Auxiliary Equipment

Adapter:	MODEL:S005AYU0500100 I/P:AC 100~240V 50/60Hz 200mA O/P:DC 5V,1000mA
USB cable	Unshielded,length 1.5m

3.5. Countermeasures to Achieve EMC Compliance

None.

4. EMISSION TEST RESULTS

4.1. Conducted Emission at the Mains Terminals Test

4.1.1. Limit 15.207 & RSS-Gen §8.8

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

4.1.2. Test Setup

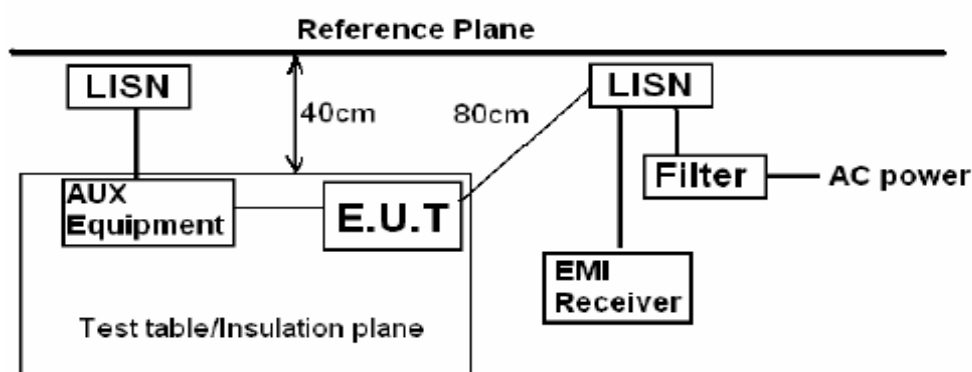
The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 0.8 m, the excess was folded back and forth parallel to the cable at the centre so as to form a bundle no longer than 0.4 m.

The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.

The frequency range from 150 kHz to 30 MHz was investigated.

The bandwidth of the test receiver was set at 9 kHz.

Pretest for all mode, The test data of the worst case condition(s) was reported on the following page.



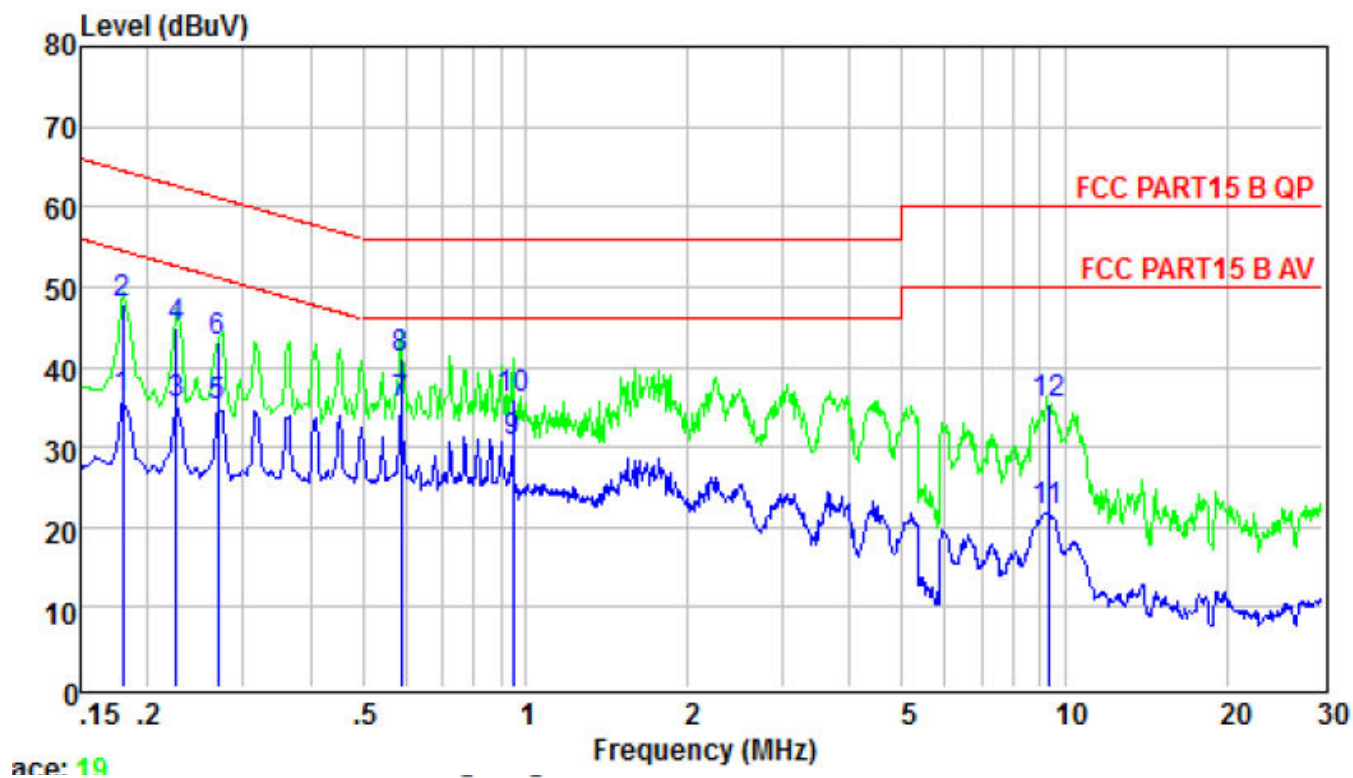
Remark:

E.U.T: Equipment Under Test

LISN: Line Impedance Stabilization Network

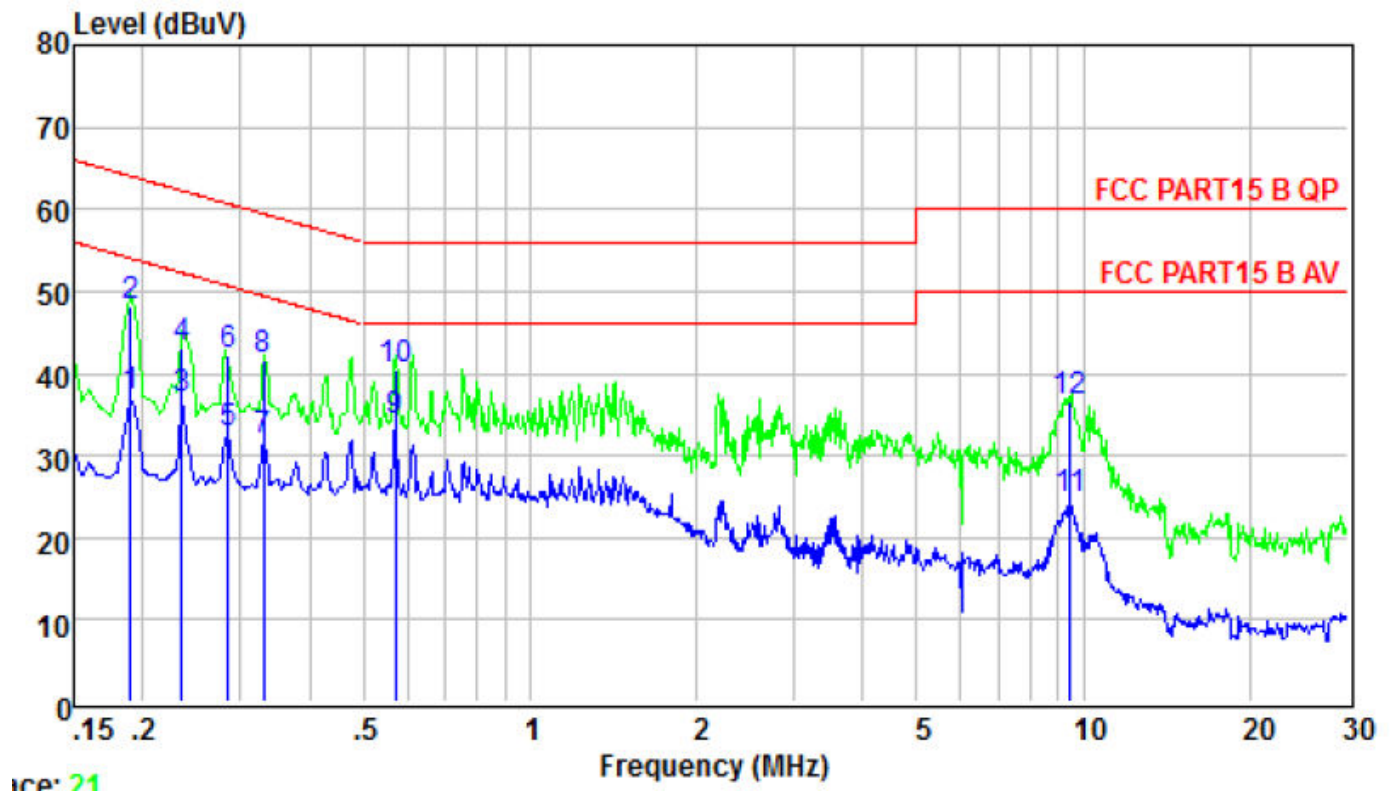
Test table height=0.8m

EUT :	Listening System	Model Name :	8081
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from adapter AC120V/60Hz	Test Mode :	Mode 4



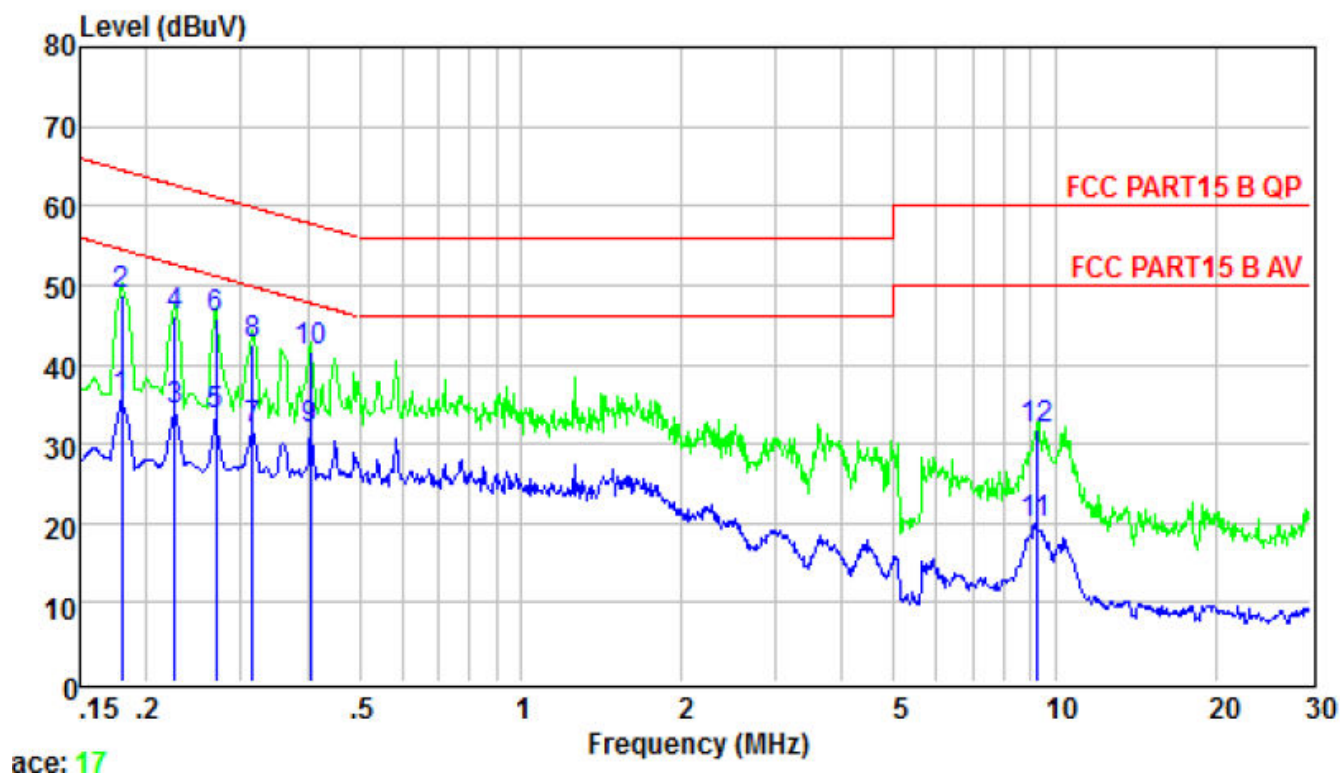
	Freq	Level	Limit	Over	Remark
	MHz	dBuV	Line	Limit	
			dBuV	dB	
1	0.180	36.00	54.50	-18.50	Average
2	0.180	47.91	64.50	-16.59	QP
3	0.226	35.34	52.61	-17.27	Average
4	0.226	45.03	62.61	-17.58	QP
5	0.270	34.99	51.12	-16.13	Average
6	0.270	43.12	61.12	-18.00	QP
7	0.589	35.29	46.00	-10.71	Average
8	0.589	41.16	56.00	-14.84	QP
9	0.948	30.63	46.00	-15.37	Average
10	0.948	36.09	56.00	-19.91	QP
11	9.302	21.92	50.00	-28.08	Average
12	9.302	35.37	60.00	-24.63	QP

EUT :	Listening System	Model Name :	8081
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from adapter AC120V/60Hz	Test Mode :	Mode 4



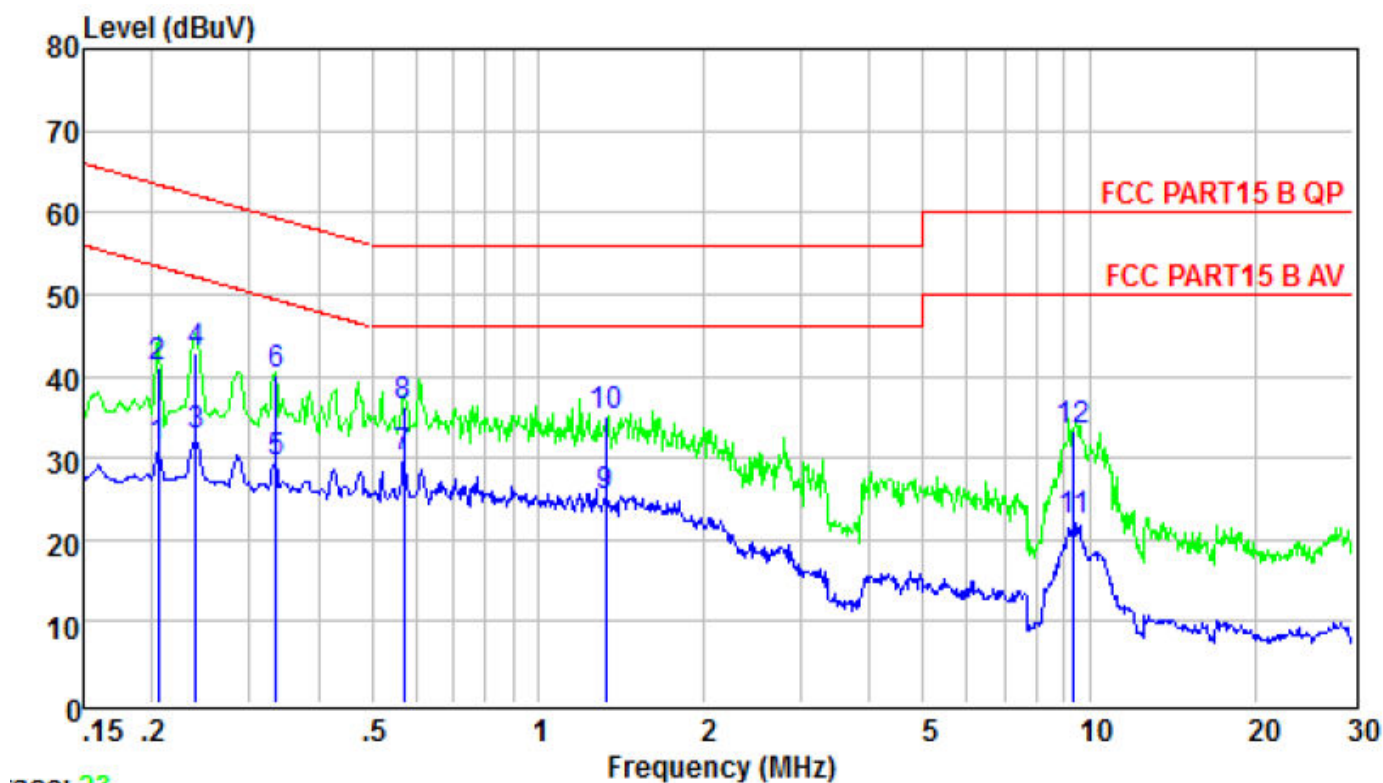
	Freq	Level	Limit	Over	Remark
	MHz	dBuV	Line	Limit	
			dBuV	dB	
1	0.190	37.12	54.02	-16.90	Average
2	0.190	48.07	64.02	-15.95	QP
3	0.235	36.77	52.26	-15.49	Average
4	0.235	43.15	62.26	-19.11	QP
5	0.285	32.77	50.68	-17.91	Average
6	0.285	42.11	60.68	-18.57	QP
7	0.330	31.82	49.44	-17.62	Average
8	0.330	41.55	59.44	-17.89	QP
9	0.570	34.15	46.00	-11.85	Average
10	0.570	40.32	56.00	-15.68	QP
11	9.451	24.67	50.00	-25.33	Average
12	9.451	36.72	60.00	-23.28	QP

EUT :	Listening System	Model Name :	8081
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from adapter AC 240V/60Hz	Test Mode :	Mode 4



	Freq	Level	Limit	Over	Remark
	MHz	dBuV	Line	Limit	
			dBuV	dB	
1	0.180	35.75	54.50	-18.75	Average
2	0.180	48.76	64.50	-15.74	QP
3	0.226	34.25	52.61	-18.36	Average
4	0.226	46.13	62.61	-16.48	QP
5	0.270	33.56	51.12	-17.56	Average
6	0.270	45.87	61.12	-15.25	QP
7	0.315	31.94	49.84	-17.90	Average
8	0.315	42.54	59.84	-17.30	QP
9	0.404	31.82	47.77	-15.95	Average
10	0.404	41.76	57.77	-16.01	QP
11	9.204	19.78	50.00	-30.22	Average
12	9.204	31.79	60.00	-28.21	QP

EUT :	Listening System	Model Name :	8081
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from adapter AC 240V/60Hz	Test Mode :	Mode 4



ace: 23

	Freq	Level	Limit	Over	Remark
	MHz	dBuV	Line	Limit	
	MHz	dBuV	dBuV	dB	
1	0.205	31.14	53.40	-22.26	Average
2	0.205	41.16	63.40	-22.24	QP
3	0.240	32.59	52.08	-19.49	Average
4	0.240	42.69	62.08	-19.39	QP
5	0.336	29.35	49.31	-19.96	Average
6	0.336	40.01	59.31	-19.30	QP
7	0.570	29.97	46.00	-16.03	Average
8	0.570	36.17	56.00	-19.83	QP
9	1.324	25.25	46.00	-20.75	Average
10	1.324	35.11	56.00	-20.89	QP
11	9.352	22.17	50.00	-27.83	Average
12	9.352	33.17	60.00	-26.83	QP

4.2. Radiated Emission Test

4.2.1. Limit 15.209& Limit RSS-Gen §6.13

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

4.2.2. Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

4.2.3. Test setup

The EUT was placed on a turn table which was 0.8 m (above 1GHz, the table was 1.5m) above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

Notes: 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading-Preamplifier Factor.

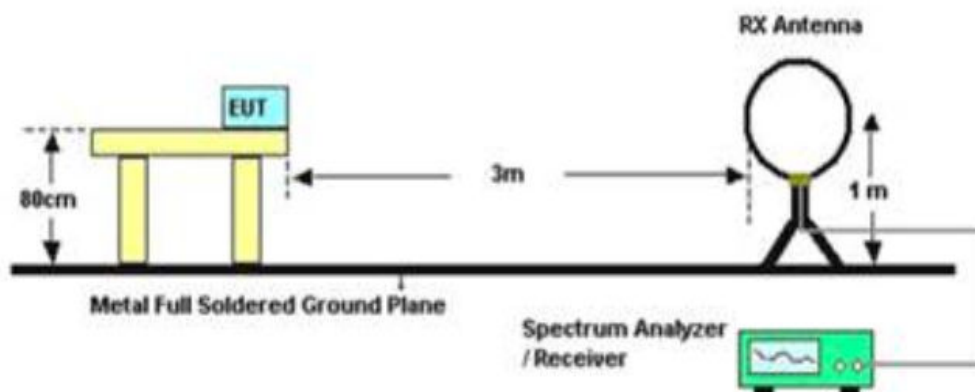
2. Measurement Uncertainty: ± 3.2 dB at a level of confidence of 95%.

3. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

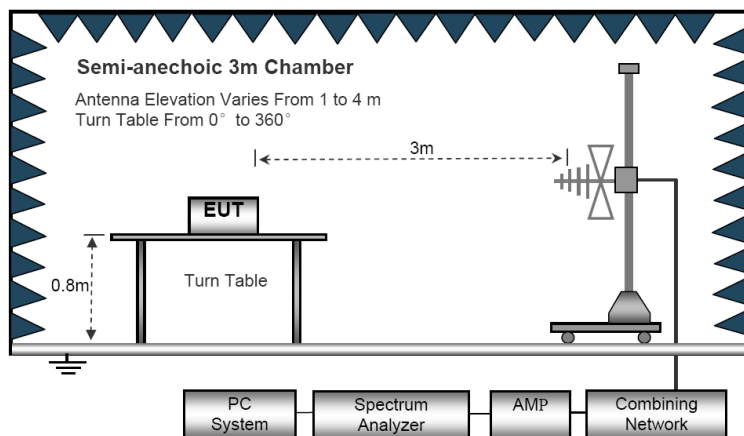
4. For emissions below 1GHz, pretest for all mode, The test data of the worst case condition(s) was reported on the following pages.

5. EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report (Z orientation).

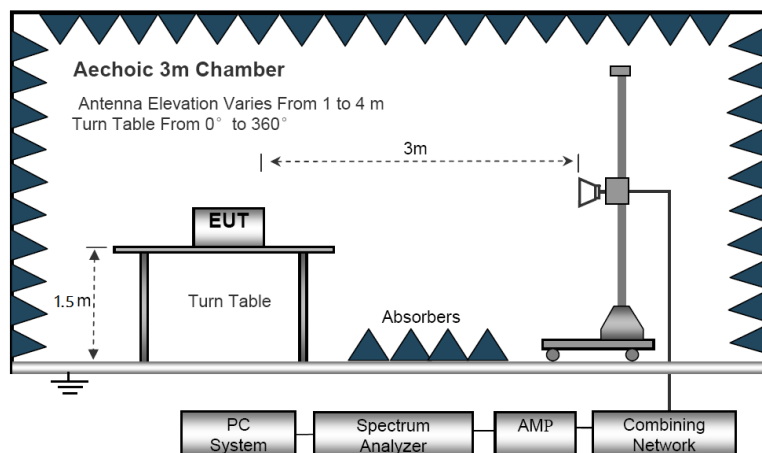
Radiated Emission Test-Up Frequency Below 30MHz



30MHz- 1GHz



Above 1GHz



Below 30MHz

EUT :	Listening System	Model Name :	8081
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010hPa	Test Mode :	TX
Test Voltage :	DC 5V from adapter		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	P
--	--	--	--	P

Note:

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

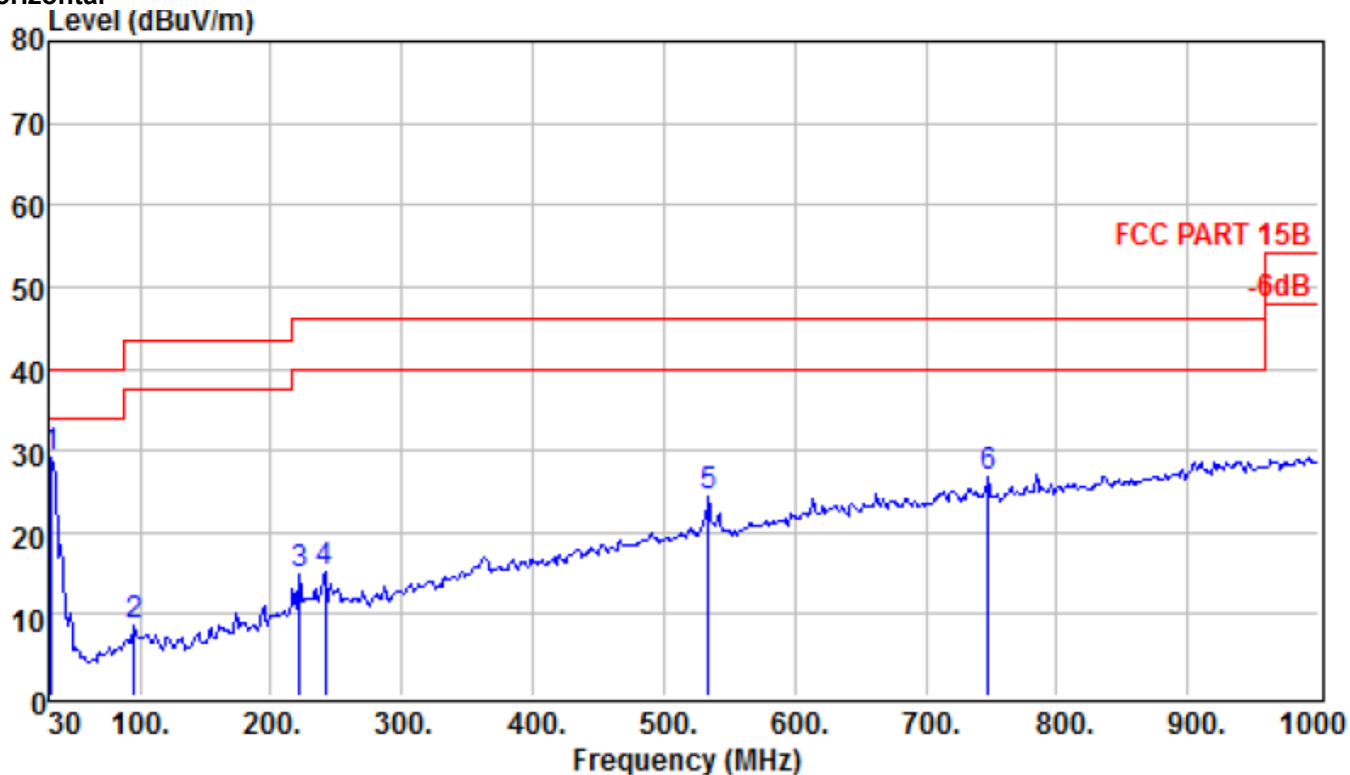
Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})$ (dB);

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

Below 1GHz

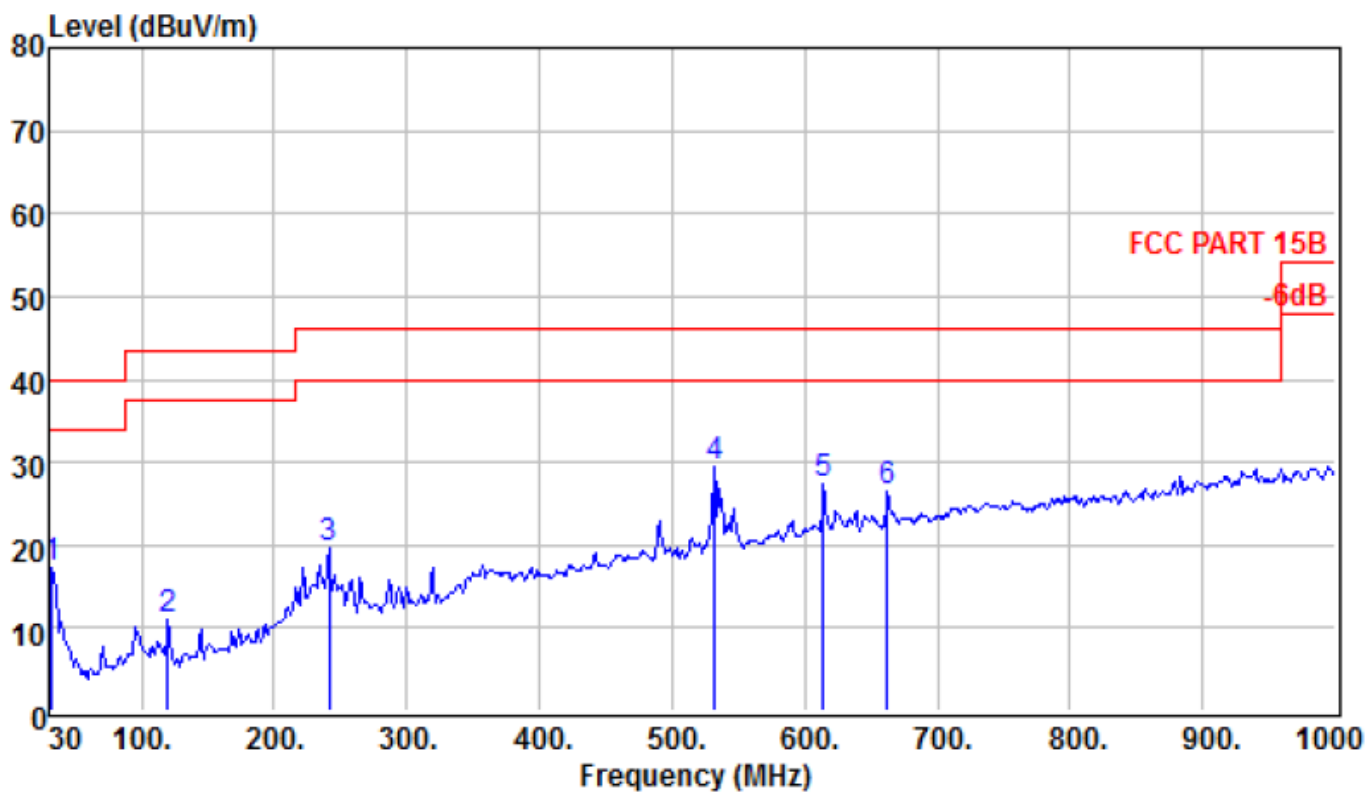
EUT :	Listening System	Model Name :	8081
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010hPa	Test Mode :	TX
Test Voltage :	DC 5V from adapter		

Horizontal



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	31.940	42.47	17.66	0.56	31.40	29.29	40.00	-10.71	QP
2	95.960	29.63	9.40	0.94	31.35	8.62	43.50	-34.88	QP
3	222.060	32.15	12.06	1.53	30.96	14.78	46.00	-31.22	QP
4	241.460	31.99	12.66	1.61	30.95	15.31	46.00	-30.69	QP
5	534.400	32.79	19.31	3.03	30.77	24.36	46.00	-21.64	QP
6	747.800	30.62	22.78	4.04	30.67	26.77	46.00	-19.23	QP

Vertical



	Freq	ReadAntenna	Cable	Preamp	Level	Limit	Over	Remark
	MHz	Level	Factor	Loss	Factor	Line	Limit	
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	31.940	30.46	17.66	0.56	31.40	17.28	40.00	-22.72 QP
2	119.240	32.49	8.56	1.12	31.24	10.93	43.50	-32.57 QP
3	241.460	36.44	12.66	1.61	30.95	19.76	46.00	-26.24 QP
4	532.460	37.94	19.29	3.03	30.76	29.50	46.00	-16.50 QP
5	613.940	33.59	20.99	3.38	30.63	27.33	46.00	-18.67 QP
6	662.440	31.76	21.70	3.69	30.81	26.34	46.00	-19.66 QP

Mode 1 is the worst mode. only worst case is presented in the report

Above 1GHz

Frequency	Meter Reading	antenna Factor	cable loss	preamp factor	Emission Level	Limits	Margin	Detector Type	Comment
(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
low channel(2406MHz)									
2406	78.33	28.73	7.39	26.32	88.13	114.00	-25.87	Pk	Vertical
2406	69.43	28.73	7.39	26.32	79.23	94.00	-14.77	AV	Vertical
4812	46.32	32.94	12.01	27.49	63.78	74.00	-10.22	Pk	Vertical
4812	31.16	32.94	12.01	27.49	48.62	54.00	-5.38	AV	Vertical
7218	42.98	25.29	16.61	27.94	56.94	74.00	-17.06	Pk	Vertical
7218	29.94	25.29	16.61	27.94	43.9	54.00	-10.1	AV	Vertical
2406	72.67	28.73	7.39	26.32	82.47	114.00	-31.53	Pk	Horizontal
2406	63.23	28.73	7.39	26.32	73.03	94.00	-20.97	AV	Horizontal
4812	45.98	32.94	12.01	27.49	63.44	74.00	-10.56	Pk	Horizontal
4812	30.82	32.94	12.01	27.49	48.28	54.00	-5.72	AV	Horizontal
7218	40.06	25.29	16.61	27.94	54.02	74.00	-19.98	Pk	Horizontal
7218	28.44	25.29	16.61	27.94	42.4	54.00	-11.6	AV	Horizontal
Middle channel(2442MHz)									
2442	77.59	28.76	7.48	26.33	87.5	114.00	-26.5	Pk	Vertical
2442	68.54	28.76	7.48	26.33	78.45	94.00	-15.55	AV	Vertical
4884	43.34	32.11	12.19	27.53	60.11	74.00	-13.89	Pk	Vertical
4884	31.09	32.11	12.19	27.53	47.86	54.00	-6.14	AV	Vertical
7326	40.89	24.33	16.62	27.96	53.88	74.00	-20.12	Pk	Vertical
7326	29.08	24.33	16.62	27.96	42.07	54.00	-11.93	AV	Vertical
2442	71.54	28.76	7.48	26.33	81.45	114.00	-32.55	Pk	Horizontal
2442	62.97	28.76	7.48	26.33	72.88	94.00	-21.12	AV	Horizontal
4884	44.65	32.11	12.19	27.53	61.42	74.00	-12.58	Pk	Horizontal
4884	31.12	32.11	12.19	27.53	47.89	54.00	-6.11	AV	Horizontal
7326	39.15	24.33	16.62	27.96	52.14	74.00	-21.86	Pk	Horizontal
7326	28.86	24.33	16.62	27.96	41.85	54.00	-12.15	AV	Horizontal
High channel(2475MHz)									
2475	76.97	28.79	7.57	26.34	86.99	114.00	-27.01	Pk	Vertical
2475	68.23	28.79	7.57	26.34	78.25	94.00	-15.75	AV	Vertical
4950	44.23	32.28	12.32	27.57	61.26	74.00	-12.74	Pk	Vertical
4950	31.11	32.28	12.32	27.57	48.14	54.00	-5.86	AV	Vertical
7425	40.08	24.37	16.62	27.98	53.09	74.00	-20.91	Pk	Vertical
7425	29.75	24.37	16.62	27.98	42.76	54.00	-11.24	AV	Vertical
2475	71.45	28.79	7.57	26.34	81.47	114.00	-32.53	Pk	Horizontal
2475	62.56	28.79	7.57	26.34	72.58	94.00	-21.42	AV	Horizontal
4950	43.08	32.28	12.32	27.57	60.11	74.00	-13.89	Pk	Horizontal
4950	31.25	32.28	12.32	27.57	48.28	54.00	-5.72	AV	Horizontal
7425	39.06	24.37	16.62	27.98	52.07	74.00	-21.93	Pk	Horizontal
7425	28.11	24.37	16.62	27.98	41.12	54.00	-12.88	AV	Horizontal

Note:

Absolute Level= ReadingLevel+antenna Factor+cable loss-preamp factor,

Over Limit= Absolute Level – Limit

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.

5. BANDWIDTH TEST

5.1. TEST PROCEDURE

- a. The EUT was directly connected to the spectru analyzer and antenna output port as show in the block diagram below.
- b.Spectrum Setting:RBW=100KHz, VBW \geq RBW, Sweep=Auto.

5.2. Test setup



Test data:

Channel Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
2406	2.789	2.6464	Pass
2442	2.882	2.5559	Pass
2475	2.408	2.4754	Pass

Test plot as follows:

2406MHz



2442 MHz



2475 MHz



6. BAND EDGE COMPLIANCE TEST

6.1. Limits

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.

6.2. Test setup

The EUT was placed on a turn table which was 1.5 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

Set to span from the lowest frequency generated in the device up to and including the tenth harmonic of the highest fundamental frequency

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure. For all test, used peak detector.

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

For radiated test as follows:

Frequency	Meter Reading	antenna Factor	cable loss	preamp factor	Emission Level	Limits	Margin	Detector Type	Comment
(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
Non-hopping									
2390	37.34	30.44	8.94	26.32	50.4	74	-23.6	peak	Vertical
2390	36.56	30.44	8.94	26.32	49.62	74	-24.38	peak	Horizontal
2483.5	38.12	30.05	9.07	26.34	50.90	74	-23.1	peak	Vertical
2483.5	38.77	30.05	9.07	26.34	51.55	74	-22.45	peak	Horizontal
hopping									
2390	37.52	30.44	8.94	26.32	50.58	74	-23.42	peak	Vertical
2390	36.41	30.44	8.94	26.32	49.47	74	-24.53	peak	Horizontal
2483.5	38.34	30.05	9.07	26.34	51.12	74	-22.88	peak	Vertical
2483.5	38.88	30.05	9.07	26.34	51.66	74	-22.34	peak	Horizontal

If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

7. ANTENNA REQUIREMENTS

7.1. Limits

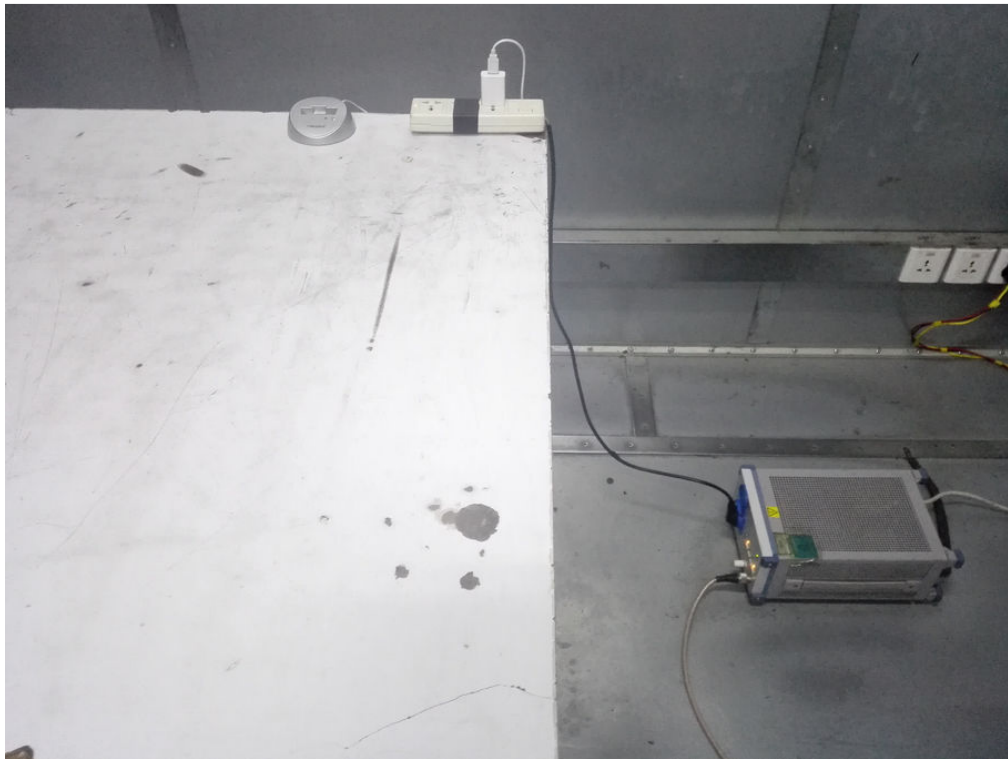
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

7.2. Result

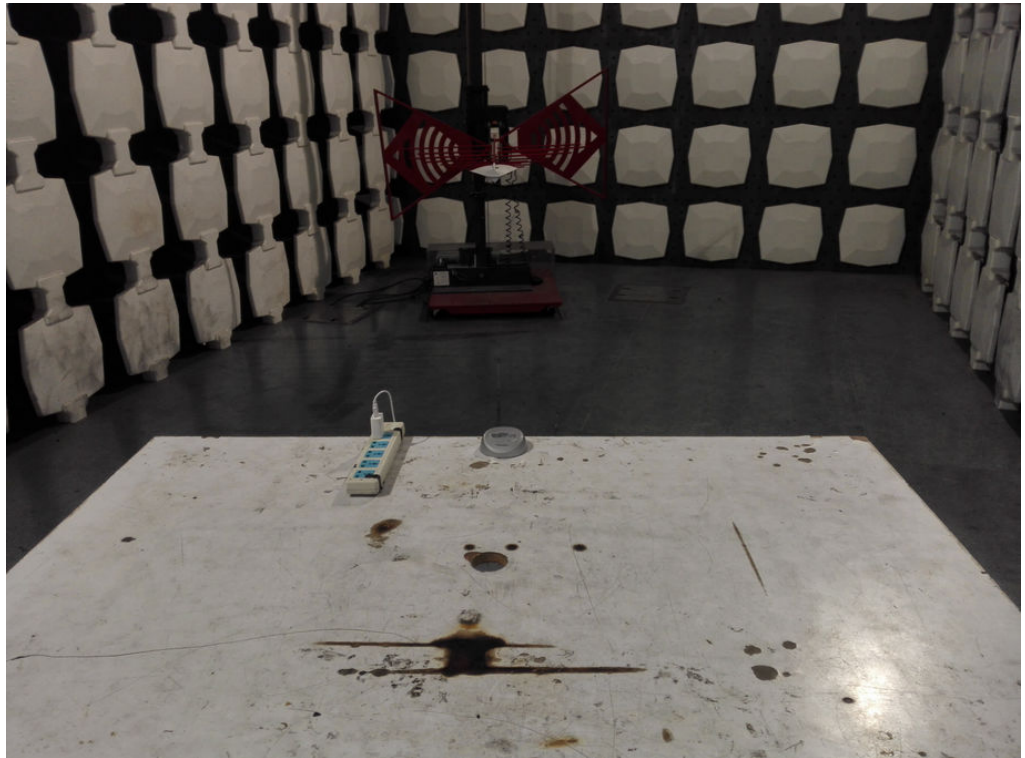
The antennas used for this product is PCB antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 2.08dBi.

8. PHOTOGRAPHS OF TEST SET-UP

Conducted Emission

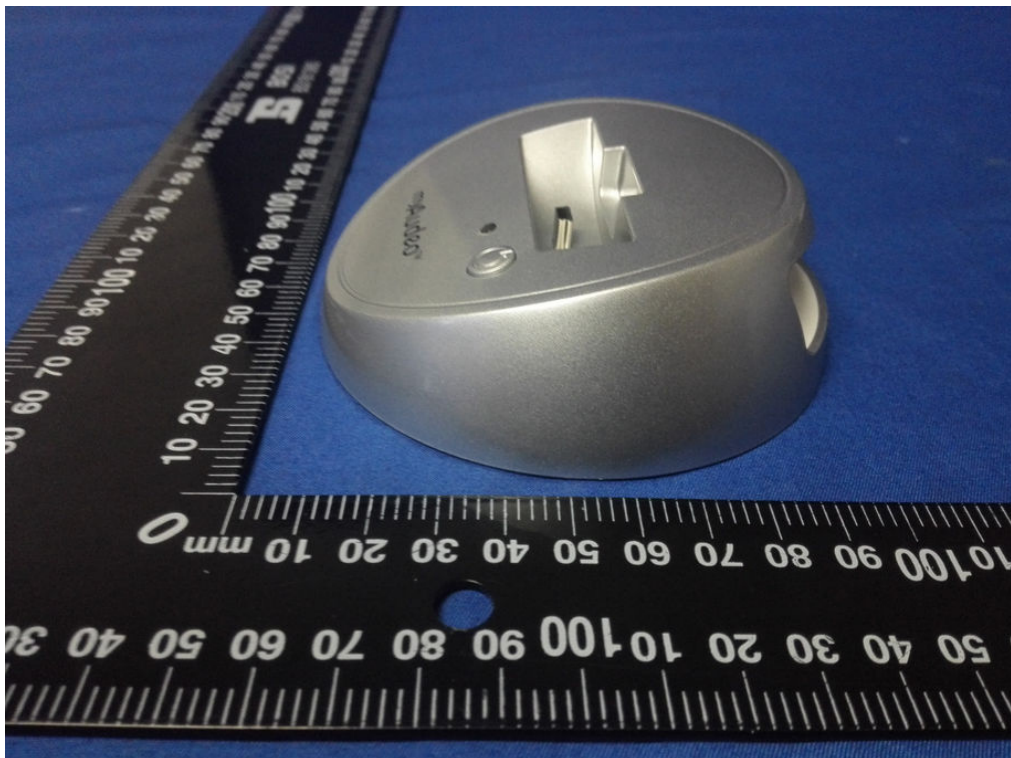
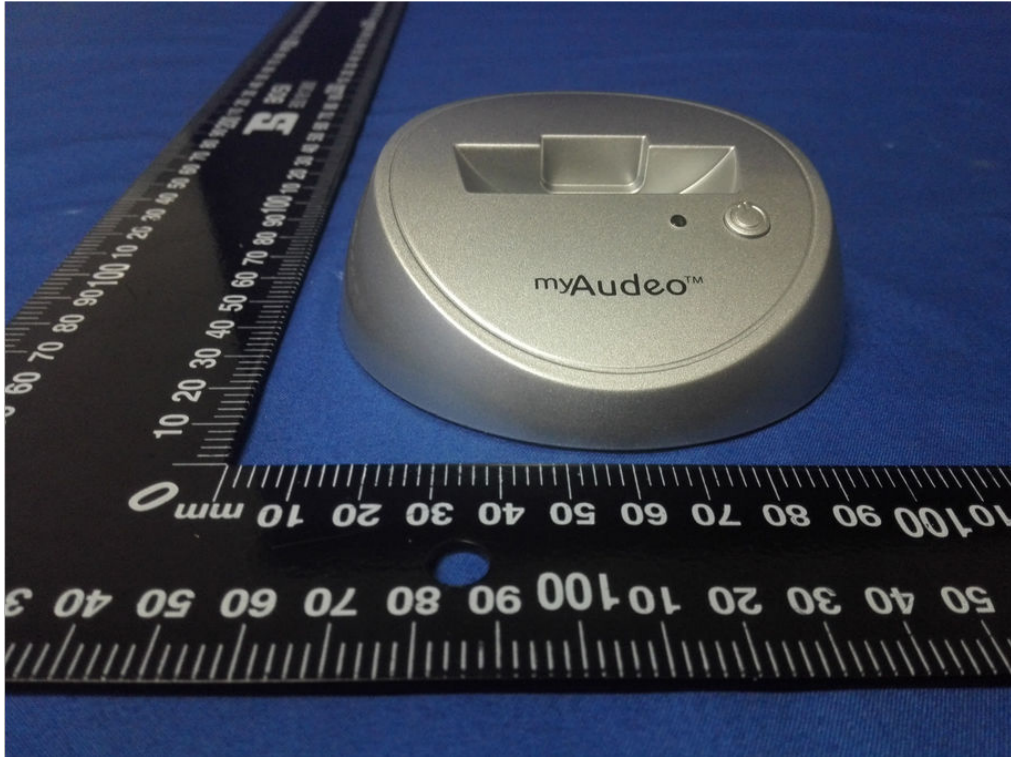


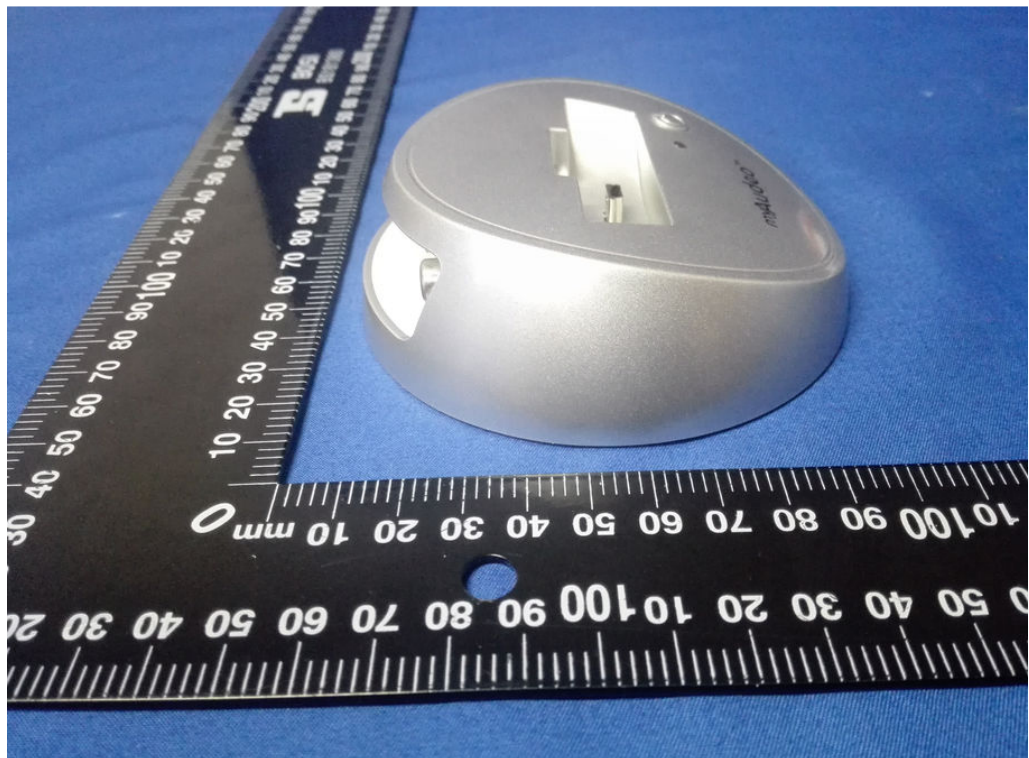
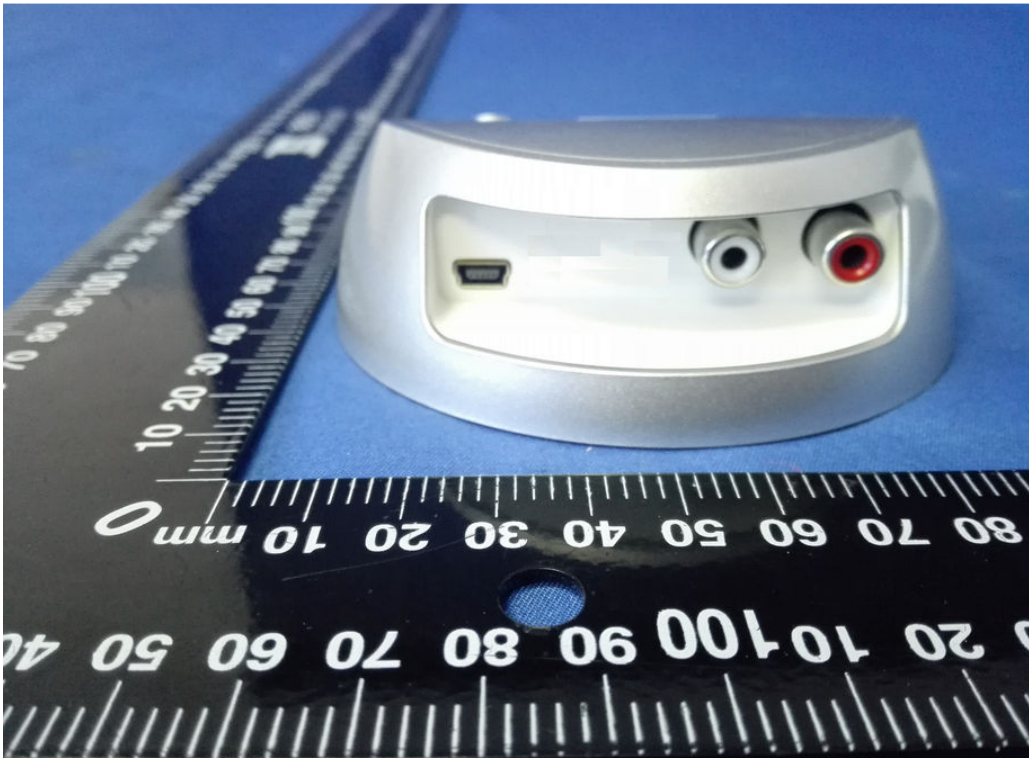
Radiated Emission Test

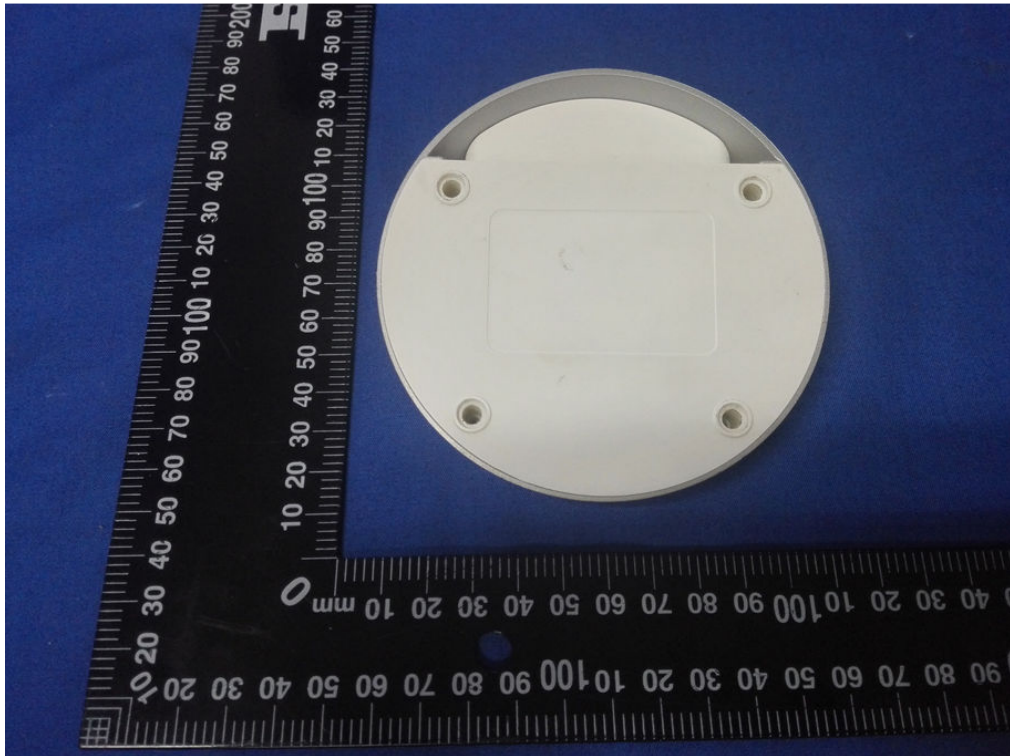


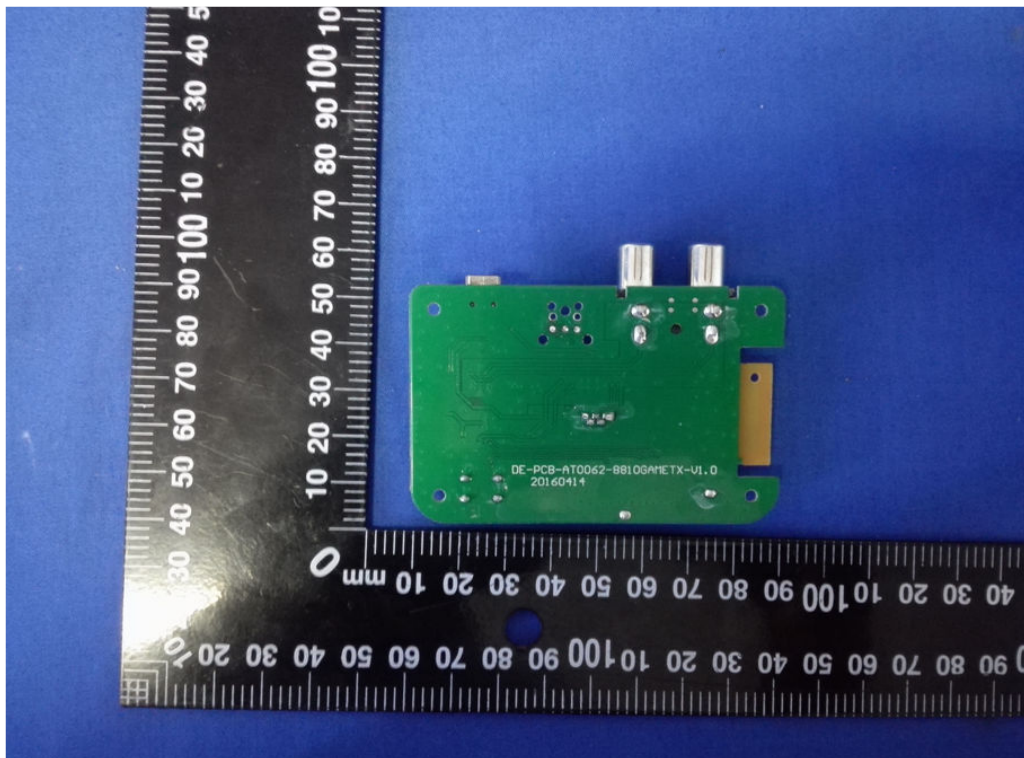
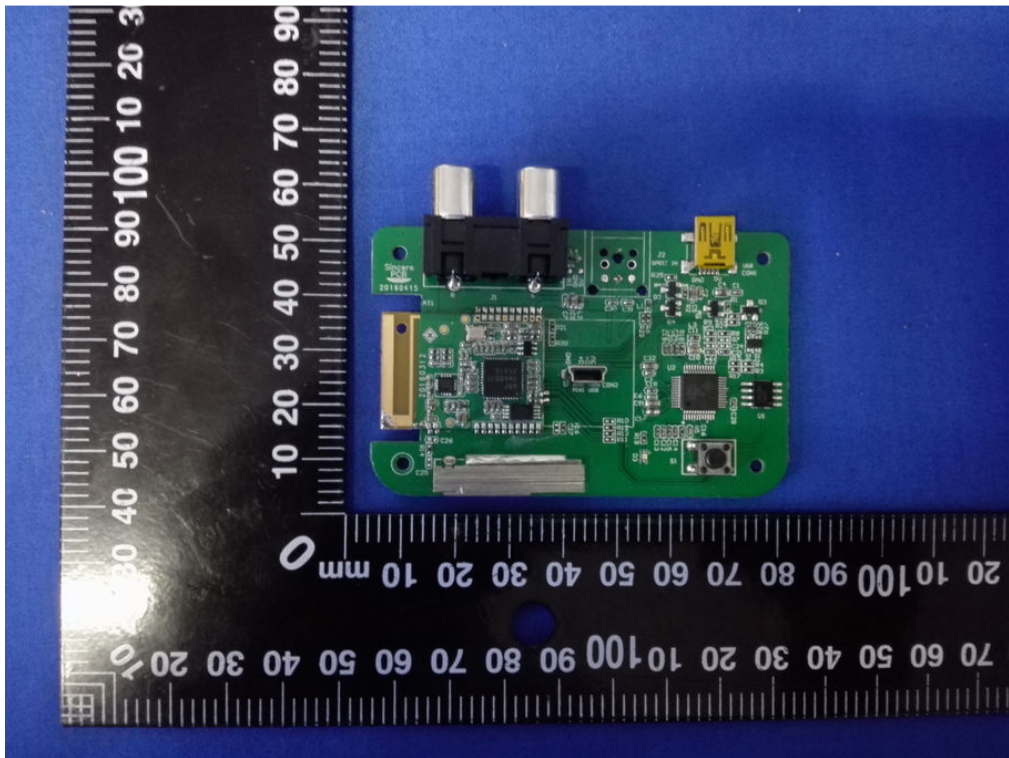
9. PHOTOGRAPHS OF THE EUT

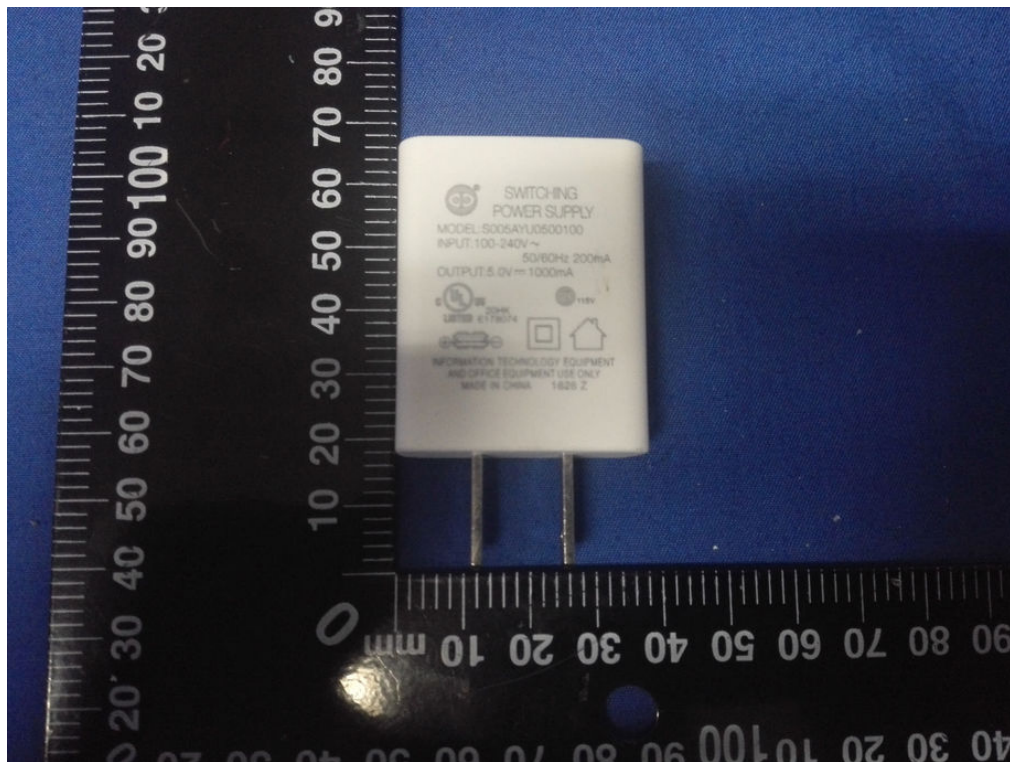












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