

APPLICATION FOR CERTIFICATION
On Behalf of

E-core Audio Limited

WIRELESS DOCKING SPEAKER SYSTEM

Model Number: EAP-850, EAP-851, EAP-851A

Prepared for : E-core Audio Limited

3rd Building, Weidonglong Industry, Heping East Road,
Longhua, Shenzhen, China

Prepared By : EST Technology Co., Ltd.

San Tun Management Zone, Houjie Town, DongGuan
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Report Number : ESTE-R1108004

Date of Test : Aug.1-22, 2011

Date of Report : Aug.22, 2011

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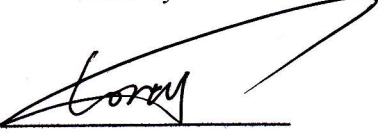
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TEST REPORT CERTIFICATION

Applicant:	E-core Audio Limited		
Address:	3 rd Building, Weidonglong Industry, Heping East Road, Longhua, Shenzhen, China		
Manufacturer:	E-core Audio Limited		
Address:	3 rd Building, Weidonglong Industry, Heping East Road, Longhua, Shenzhen, China		
E.U.T:	WIRELESS DOCKING SPEAKER SYSTEM		
Model Number:	EAP-850, EAP-851, EAP-851A Note: The "EUT" are different is model number and appearance;		
Power Supply:	Come From Adapter Input AC 120V/60Hz		
Test Voltage:	Come From Adapter Input AC 120V/60Hz		
Trade Name:	-----	Serial No.:	-----
Date of Receipt:	June.13.2011	Date of Test:	Aug.1~22,2011
Test Specification:	FCC Rules and Regulations Part 15 Subpart C 2007		
Test Result:	The device described above is tested by EST Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both radiated and conducted emissions. The test results are contained in this test report and EST Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.		
Date: Aug.22.2011			
Prepared by:	Tested by:	Approved by:	
 _____ Ada / Assistant	 _____ Tony.Tang/ Engineer	 _____ Iceman Hu / Manager	
			
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 EST Technology Co., Ltd.			

1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003	PASS
Radiated Emission Test	FCC Part 15: 15.209 ANSI C63.4: 2003	PASS
Carrier Frequency Separation Test	FCC Part 15: 15.247	PASS
20dB Bandwidth Test	FCC Part 15: 15.247	PASS
Number Of Hopping Frequency Test	FCC Part 15: 15.247	PASS
Dwell Time Test	FCC Part 15: 15.247	PASS
Maximum Peak Out Power Test	FCC Part 15: 15.247	PASS
Band Edge Compliance Test	FCC Part 15: 247	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT		WIRELESS DOCKING SPEAKER SYSTEM
Model Number	:	EAP-850
Operation frequency		2403-2478 MHz
Antenna and Gain	:	Integrated PCB loop antenna, 2 dBi Gain.
Modulation		FHSS
Test Voltage	:	Come From Adapter Input AC 120V/60Hz
Applicant	:	E-core Audio Limited 3 rd Building, Weidonglong Industry, Heping East Road, Longhua, Shenzhen, China
Manufacturer	:	E-core Audio Limited 3 rd Building, Weidonglong Industry, Heping East Road, Longhua, Shenzhen, China
Sample Type	:	Prototype production

2.2. Tested Supporting System Details

2.2.1. iPod

iPod classic	:	
M/N	:	A1238
S/N	:	8K044D2Z9ZU

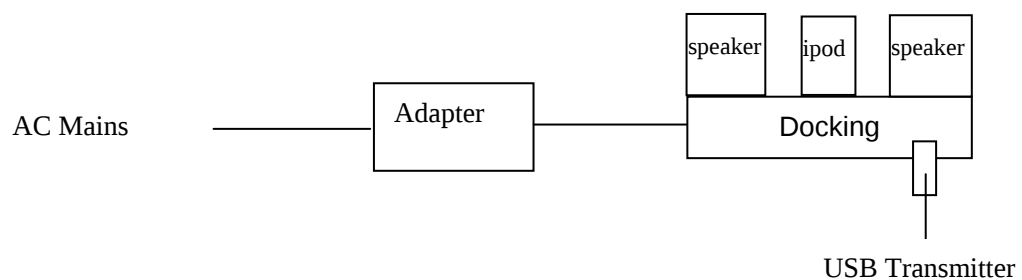
2.2.2. Adapter

Adapter	:	
M/N	:	GP303U-075-240
Input	:	AC 100-240V~50/60Hz 0.8A
Output	:	DC 7.5V/2.4A

2.2.3. Adapter

Adapter	:	
M/N	:	PSEC075240U W
Input	:	AC 100-240V~50/60Hz 0.5A
Output	:	DC 7.5V/2.4A

2.3. Block Diagram of Test Setup



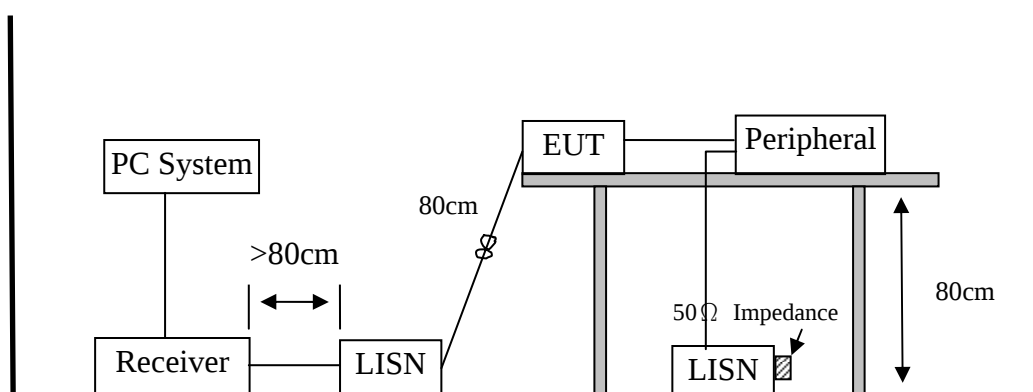
(EUT: WIRELESS DOCKING SPEAKER SYSTEM)

3. CONDUCTED EMISSION TEST

3.1. Test Equipments

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESHS30	832354	Mar,19,11	1 Year
Artificial Mains Network	Rohde & Schwarz	ENV216	101260	Mar,19,11	1 Year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	101100	Sep,20,10	1 Year

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Operating Condition of EUT

3.4.1. Setup the EUT and simulator as shown as Section 2.3.

3.4.2. Let EUT work in TX mode

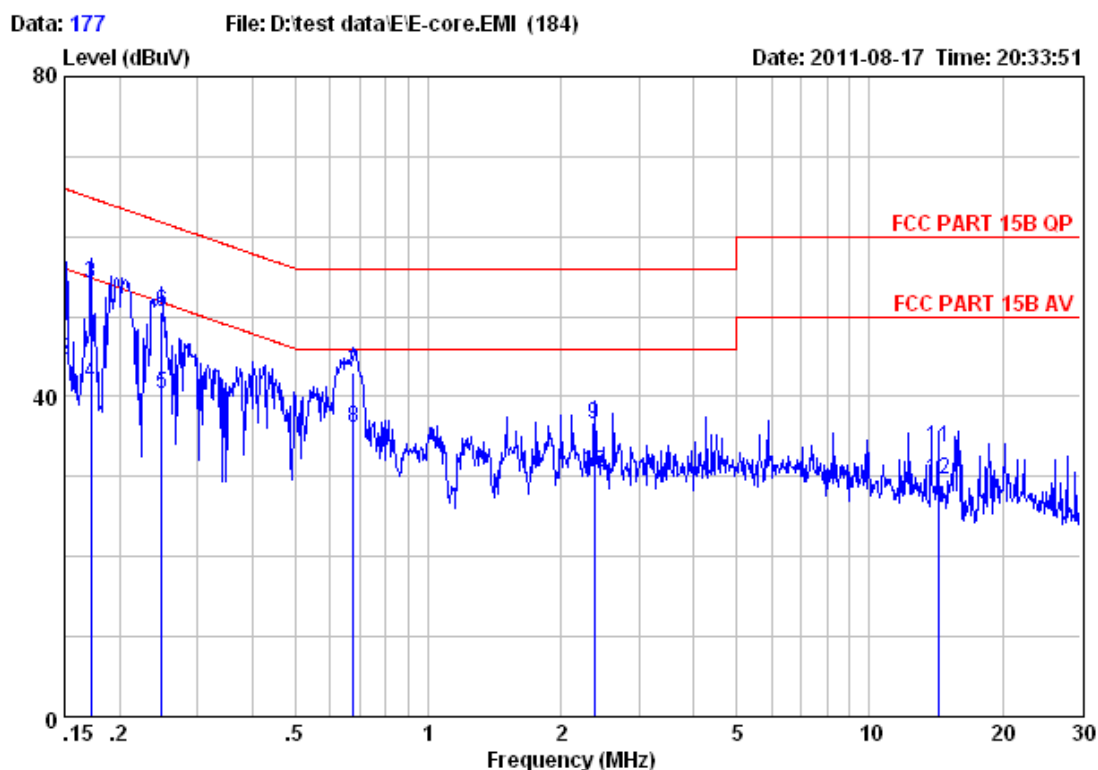
3.5. Test Procedure

The EUT is connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#3). Power on the PC and let it work normally, we use a keyboard test soft ware, let EUT working in test mode, then test it. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Test.

3.6. Conducted Emission Test Results

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Site no. : 844 Shielded Room Data no. : 177
Limit : FCC PART 15B QP LINE Phase : LINE
Env. / Ins. : Temp:24.3'C Humi:58% Press:101.50kPa
Engineer : Tony
EUT : wireless docking speaker system
Power : Come from adapter input AC 120V/60Hz
M/N : EAP-850
Test Mode : TX
Adapter:PSEC075240U W

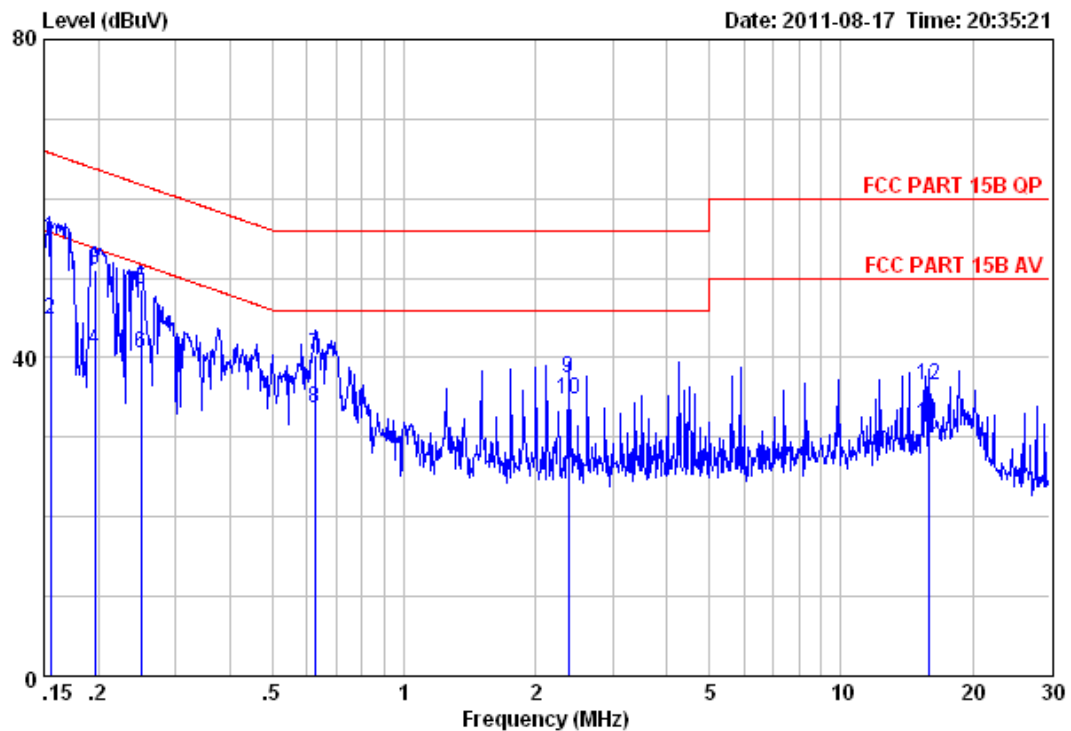
	Freq. (MHz)	LISN Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	0.15	9.61	9.81	34.61	54.03	66.00	11.97	QP
2	0.15	9.61	9.81	25.22	44.64	56.00	11.36	Average
3	0.17	9.61	9.81	34.82	54.24	64.86	10.62	QP
4	0.17	9.61	9.81	22.15	41.57	54.86	13.29	Average
5	0.25	9.61	9.82	20.88	40.31	51.78	11.47	Average
6	0.25	9.61	9.82	31.20	50.63	61.78	11.15	QP
7	0.68	9.59	9.81	23.66	43.06	56.00	12.94	QP
8	0.68	9.59	9.81	16.61	36.01	46.00	9.99	Average
9	2.38	9.62	9.83	17.01	36.46	56.00	19.54	QP
10	2.38	9.62	9.83	11.00	30.45	46.00	15.55	Average
11	14.29	9.67	9.90	14.14	33.71	60.00	26.29	QP
12	14.29	9.67	9.90	10.07	29.64	50.00	20.36	Average

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Data: 179 File: D:\test data\EE-core.EMI (184)

Date: 2011-08-17 Time: 20:35:21



Site no. : 844 Shielded Room Data no. : 179
Limit : FCC PART 15B QP LINE Phase : NEUTRAL
Env. / Ins. : Temp:24.3°C Humi:58% Press:101.50kPa
Engineer : Tony
EUT : wireless docking speaker system
Power : Come from adapter input AC 120V/60Hz
M/N : EAP-850
Test Mode : TX
Adapter:PSEC075240U W

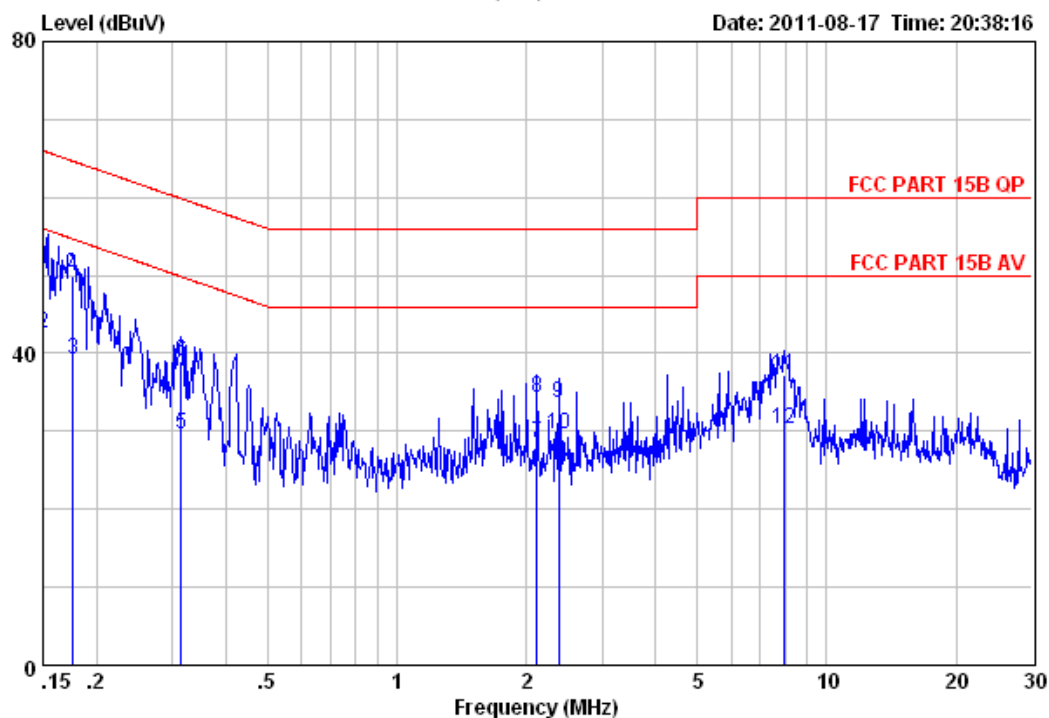
	Freq.	LISN	Cable	Emission				
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.16	9.48	9.81	35.83	55.12	65.69	10.57	QP
2	0.16	9.48	9.81	25.58	44.87	55.69	10.82	Average
3	0.20	9.59	9.80	31.55	50.94	63.76	12.82	QP
4	0.20	9.59	9.80	21.71	41.10	53.76	12.66	Average
5	0.25	9.60	9.82	29.11	48.53	61.73	13.20	QP
6	0.25	9.60	9.82	21.18	40.60	51.73	11.13	Average
7	0.62	9.62	9.81	20.97	40.40	56.00	15.60	QP
8	0.62	9.62	9.81	14.17	33.60	46.00	12.40	Average
9	2.38	9.63	9.83	17.95	37.41	56.00	18.59	QP
10	2.38	9.63	9.83	15.24	34.70	46.00	11.30	Average
11	15.89	9.74	9.94	11.92	31.60	50.00	18.40	Average
12	15.89	9.74	9.94	16.93	36.61	60.00	23.39	QP

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Data: 181 File: D:\test data\EE-core.EMI (184)

Date: 2011-08-17 Time: 20:38:16

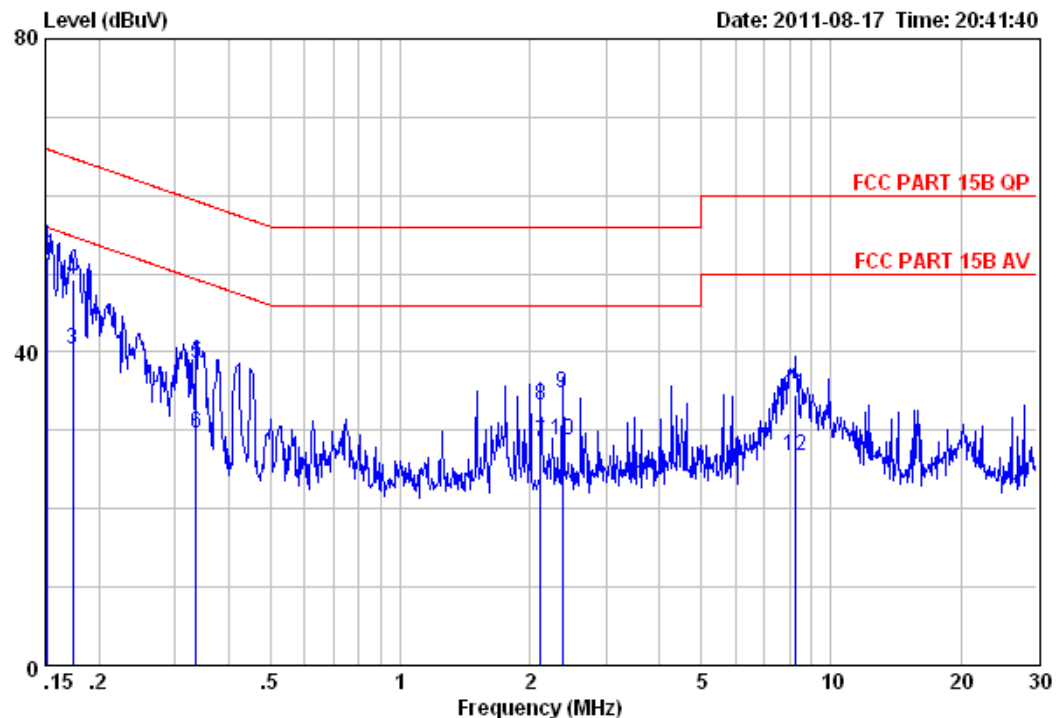


Site no. : 844 Shielded Room Data no. : 181
Limit : FCC PART 15B QP LINE Phase : NEUTRAL
Env. / Ins. : Temp:24.3'C Humi:58% Press:101.50kPa
Engineer : Tony
EUT : wireless docking speaker system
Power : Come from adapter input AC 120V/60Hz
M/N : EAP-850
Test Mode : TX
Adapter:GP303U-075-240

		LISN	Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dBUV)	(dBUV/m)	(dBUV/m)	(dB)	
1	0.15	9.46	9.81	33.94	53.21	66.00	12.79	QP
2	0.15	9.46	9.81	23.33	42.60	56.00	13.40	Average
3	0.18	9.54	9.80	19.86	39.20	54.68	15.48	Average
4	0.18	9.54	9.80	30.54	49.88	64.68	14.80	QP
5	0.31	9.60	9.83	10.27	29.70	49.84	20.14	Average
6	0.31	9.60	9.83	19.68	39.11	59.84	20.73	QP
7	2.12	9.62	9.84	9.14	28.60	46.00	17.40	Average
8	2.12	9.62	9.84	14.84	34.30	56.00	21.70	QP
9	2.38	9.63	9.83	14.22	33.68	56.00	22.32	QP
10	2.38	9.63	9.83	10.14	29.60	46.00	16.40	Average
11	7.94	9.67	9.85	17.78	37.30	60.00	22.70	QP
12	7.94	9.67	9.85	10.78	30.30	50.00	19.70	Average

Data: 183 File: D:\test data\E\E-core.EMI (184)

Date: 2011-08-17 Time: 20:41:40



Site no. : 844 Shielded Room Data no. : 183
 Limit : FCC PART 15B QP LINE Phase : LINE
 Env. / Ins. : Temp:24.3'C Humi:58% Press:101.50kPa
 Engineer : Tony
 EUT : wireless docking speaker system
 Power : Come from adapter input AC 120V/60Hz
 M/N : EAP-850
 Test Mode : TX
 Adapter:GP303U-075-240

		LISN	Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.15	9.61	9.81	22.78	42.20	55.91	13.71	Average
2	0.15	9.61	9.81	32.83	52.25	65.91	13.66	QP
3	0.17	9.61	9.80	20.89	40.30	54.77	14.47	Average
4	0.17	9.61	9.80	29.73	49.14	64.77	15.63	QP
5	0.34	9.61	9.83	19.02	38.46	59.31	20.85	QP
6	0.34	9.61	9.83	10.26	29.70	49.31	19.61	Average
7	2.12	9.61	9.84	9.05	28.50	46.00	17.50	Average
8	2.12	9.61	9.84	13.67	33.12	56.00	22.88	QP
9	2.38	9.62	9.83	15.31	34.76	56.00	21.24	QP
10	2.38	9.62	9.83	9.35	28.80	46.00	17.20	Average
11	8.28	9.66	9.87	14.91	34.44	60.00	25.56	QP
12	8.28	9.66	9.87	7.17	26.70	50.00	23.30	Average

4. RADIATED EMISSION TEST

4.1. Test Equipment

4.1.1. For frequency range 30MHz~1GHz (At Anechoic Chamber)

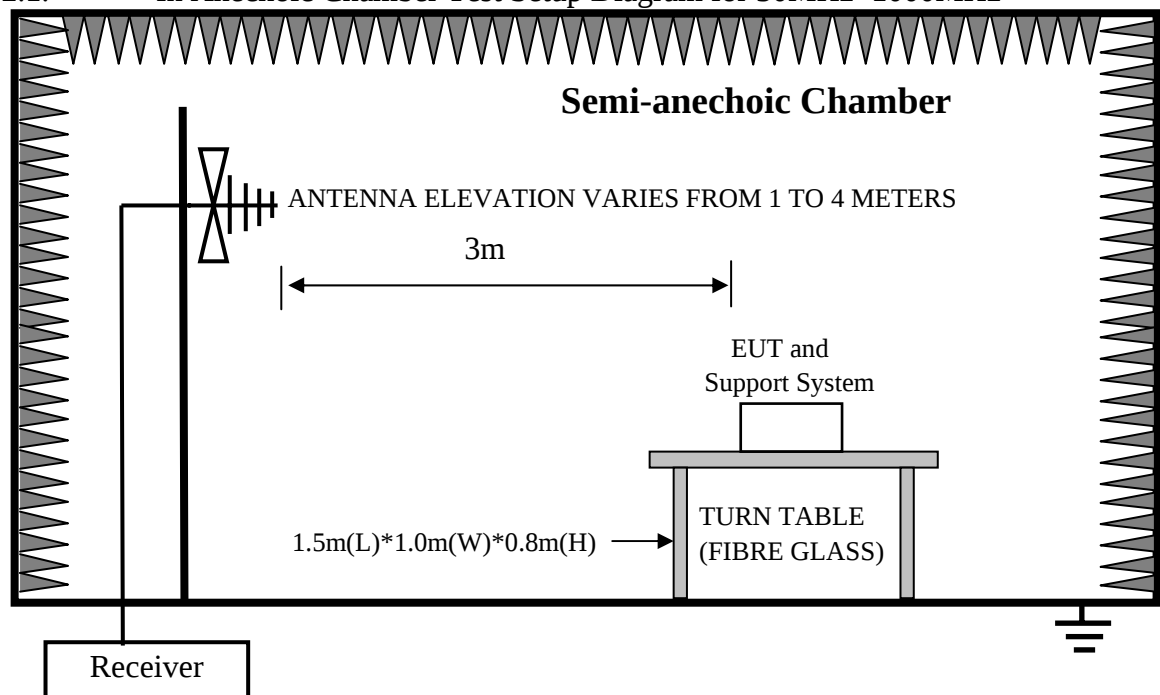
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESVS10	100004	Mar,19,11	1 Year
Spectrum Analyzer	Agilent	E4411B	MY50140697	Mar,19,11	1 Year
Bilog Antenna	Teseq	CBL 6111D	25872	Jun.08,10	1.5 Year
Signal Amplifier	Agilent	310N	187037	Sep,20,10	1 Year

4.1.2. For frequency range above 1GHz (At Anechoic Chamber)

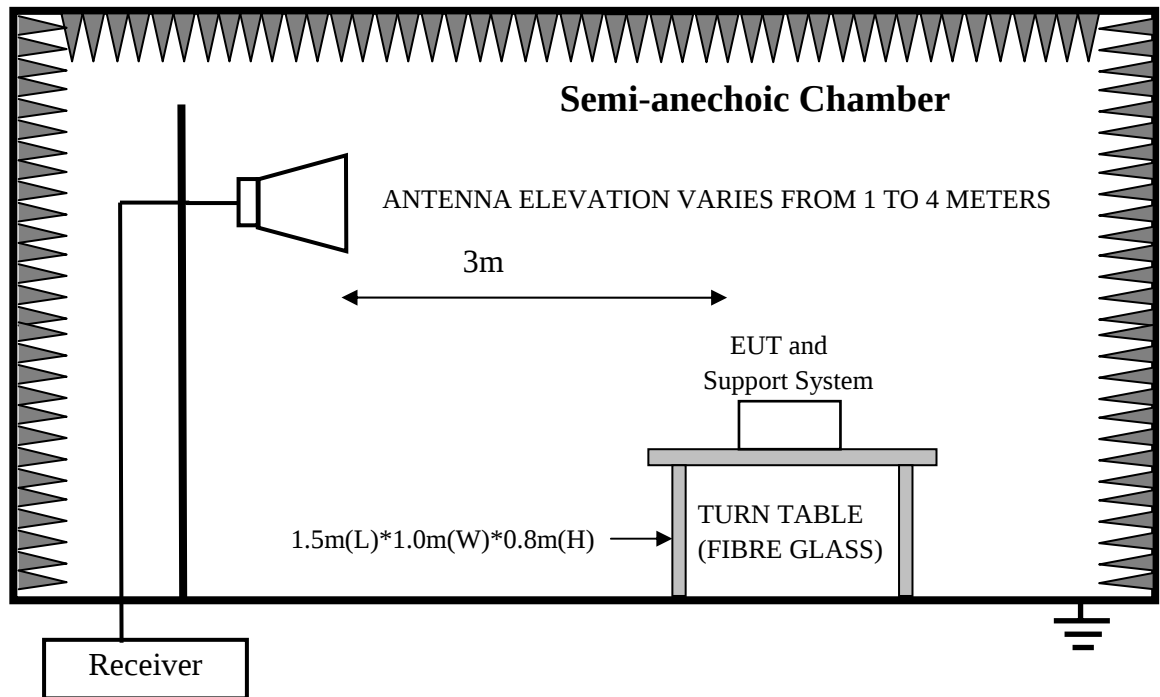
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.10, 11	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May, 27, 11	1.5 Year
3	Amplifier	Agilent	8449B	3008A02495	Nov 6.10	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.28, 11	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	271471/4	May.28, 11	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29086/2	May.28, 11	1 Year

4.2. Block Diagram of Test Setup

4.2.1. In Anechoic Chamber Test Setup Diagram for 30MHz~1000MHz



4.2.2. In Anechoic Chamber Test Setup Diagram for Above 1 GHz



4.3. Radiated Emission Limit

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)	

- Remark :
- (1) Emission level $\text{dB}\mu\text{V} = 20 \log$ Emission level $\mu\text{V/m}$
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 2.3.

4.4.2. Let EUT work in TX mode.

4.5. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it work normally, we use a keyboard test software, let EUT working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

4.6. Radiated Emission Test Results

PASS.

Frequency: 30MHz~1GHz

EUT:	Wireless docjing speaker system		Temperature:	25°C
M/N:	EAP-850		Humidity:	56%
Test Voltage:	Come From Adapter Input AC 120V/60Hz		Date of Test:	2011.8.15
Detector Function:	Quasi-peak		Test Engineer:	Tony
Test Mode:	TX (Adapter: GP303E-075-240)			
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)	Limit (dB μ V/m)	Over limit (dB)
48.16	H	24.31	40	-15.69
208.62	H	33.54	43.5	-9.96
722.50	H	41.14	46	-4.86
749.00	H	42.35	46	-3.65
809.88	H	40.54	46	-5.46
959.47	H	39.61	46	-6.39
31.25	V	33.47	40	-6.53
45.62	V	34.41	40	-5.59
152.16	V	37.86	43.5	-5.64
645.61	V	37.01	46	-8.99
720/38	V	39.78	46	-6.22
959.23	V	40.00	46	-6.00

EUT:	Wireless docjing speaker system		Temperature:	25°C
M/N:	EAP-850		Humidity:	56%
Test Voltage:	Come From Adapter Input AC 120V/60Hz		Date of Test:	2011.8.15
Detector Function:	Quasi-peak		Test Engineer:	Tony
Test Mode:	On (Adapter: PSEC075240V W)			
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)	Limit (dB μ V/m)	Over limit (dB)
45.10	H	27.16	40	-12.84
212.22	H	37.87	43.5	-5.63
243.16	H	41.00	46	-5.00
722.45	H	37.65	46	-8.35
750.11	H	37.60	46	-8.40
959.57	H	38.71	46	-7.29
33.10	V	34.15	40	-5.85
48.16	V	32.89	40	-7.11
480.08	V	40.19	46	-5.81
541.19	V	37.71	46	-8.29
565.44	V	39.41	46	-6.59
959.66	V	38.66	46	-6.34

Frequency: 1GHz~18GHz

EUT:		Wireless docjing speaker system			Temperature:		25℃	
M/N:		EAP-850			Humidity:		56%	
Test Voltage:		Come From Adapter Input AC 120V/60Hz			Date of Test:		2011.8.15	
Detector Function:		Peak + AV			Test Engineer:		Tony	
Test Mode:		TX 2403MHz (Adapter: GP303U-075-240)						
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)		Limit (dB μ V/m)		Over limit (dB)		
		PK	AV	PK	AV	PK	AV	
1188.00	H	50.98	31.44	74	54	-23.02	-22.56	
1658.00	H	48.61	29.73	74	54	-25.39	-24.27	
4807.14	H	65.64	48.33	74	54	-8.36	-5.67	
7211.57	H	63.10	44.15	74	54	-10.09	-9.85	
9615.33	H	54.56	35.61	74	54	-19.44	-18.39	
12023.65	H	56.43	36.17	74	54	-17.57	-17.83	
1658.00	V	50.32	31.74	74	54	-23.68	-22.26	
2598.00	V	55.10	32.05	74	54	-18.90	-21.95	
4807.14	V	67.12	50.33	74	54	-6.88	-3.67	
7211.57	V	66.38	47.11	74	54	-7.62	-6.89	
9615.33	V	53.25	34.50	74	54	-20.75	-18.5	
12023.65	V	55.77	37.51	74	54	-18.23	-16.49	

EUT:		Wireless docjing speaker system		Temperature:		25℃	
M/N:		EAP-850		Humidity:		56%	
Test Voltage:		Come From Adapter Input AC 120V/60Hz		Date of Test:		2011.8.15	
Detector Function:		Peak + AV		Test Engineer:		Tony	
Test Mode:		TX 2403 MHz(Adapter: PSEC075240U W)					
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)		Limit (dB μ V/m)		Over limit (dB)	
		PK	AV	PK	AV	PK	AV
1192.00	H	56.59	35.80	74	54	-17.41	-18.20
1558.00	H	57.68	38.90	74	54	-16.32	-15.107
4807.14	H	66.93	48.24	74	54	-7.07	-5.76
7211.57	H	60.84	45.32	74	54	-13.16	-8.68
9615.33	H	55.45	37.23	74	54	-18.55	-16.77
12023.65	H	57.14	37.11	74	54	-16.86	-16.89
1558.00	V	60.59	41.09	74	54	-13.41	-12.91
2598.00	V	62.67	42.32	74	54	-11.33	-11.68
4807.14	V	65.32	46.31	74	54	-8.68	-7.69
7211.57	V	63.17	43.67	74	54	-10.83	-10.33
9615.33	V	54.01	34.97	74	54	-19.99	-19.03
12023.65	V	56.12	37.00	74	54	-17.88	-17.00

EUT:		Wireless docjing speaker system			Temperature:		25℃	
M/N:		EAP-850			Humidity:		56%	
Test Voltage:		Come From Adapter Input AC 120V/60Hz			Date of Test:		2011.8.15	
Detector Function:		Peak + AV			Test Engineer:		Tony	
Test Mode:		TX 2442MHz (Adapter: GP303U-075-240)						
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)		Limit (dB μ V/m)		Over limit (dB)		
		PK	AV	PK	AV	PK	AV	
1399.00	H	51.98	32.86	74	54	-22.02	-21.14	
2363.00	H	57.00	36.51	74	54	-17.00	-17.49	
4887.15	H	66.54	44.98	74	54	-7.46	-9.02	
7331.04	H	63.21	41.15	74	54	-10.79	-12.85	
9779.43	H	54.90	35.11	74	54	-19.10	-18.89	
12222.10	H	56.56	37.00	74	54	-17.44	-17.00	
1752.00	V	47.71	29.80	74	54	-26.29	-24.20	
2363.00	V	53.06	33.14	74	54	-20.94	-20.86	
4887.15	V	62.97	43.00	74	54	-11.03	-11.00	
7331.04	V	60.40	39.83	74	54	-13.60	-14.17	
9779.43	V	53.08	34.94	74	54	-20.92	-19.06	
12222.10	V	56.15	37.94	74	54	-17.85	-16.06	

EUT:		Wireless docjing speaker system		Temperature:		25℃	
M/N:		EAP-850		Humidity:		56%	
Test Voltage:		Come From Adapter Input AC 120V/60Hz		Date of Test:		2011.8.15	
Detector Function:		Peak + AV		Test Engineer:		Tony	
Test Mode:		TX 2442 MHz(Adapter: PSEC075240U W)					
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)		Limit (dB μ V/m)		Over limit (dB)	
		PK	AV	PK	AV	PK	AV
1403.00	H	49.75	30.03	74	54	-24.25	-23.97
2363.00	H	59.39	38.65	74	54	-14.61	-15.35
4887.15	H	64.66	45.19	74	54	-9.34	-8.81
7331.04	H	60.75	40.32	74	54	-13.25	-13.68
9779.43	H	55.72	35.27	74	54	-18.28	-18.73
12222.10	H	57.12	37.97	74	54	-16.88	-16.03
1642.00	V	52.11	33.74	74	54	-21.89	-20.26
2502.00	V	56.88	34.86	74	54	-17.12	-19.14
4887.15	V	64.17	44.41	74	54	-9.83	-9.59
7331.04	V	59.24	39.15	74	54	-14.76	-14.85
9779.43	V	54.10	34.25	74	54	-19.90	-19.75
12222.10	V	57.32	38.80	74	54	-16.68	-15.20

EUT:		Wireless docjing speaker system			Temperature:		25℃	
M/N:		EAP-850			Humidity:		56%	
Test Voltage:		Come From Adapter Input AC 120V/60Hz			Date of Test:		2011.8.15	
Detector Function:		Peak + AV			Test Engineer:		Tony	
Test Mode:		TX 2478MHz (Adapter: GP303U-075-240)						
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)		Limit (dB μ V/m)		Over limit (dB)		
		PK	AV	PK	AV	PK	AV	
1305.50	H	46.79	29.50	74	54	-27.21	-24.50	
2504.00	H	56.77	37.54	74	54	-17.23	-16.46	
4958.13	H	64.16	41.51	74	54	-9.84	-12.49	
7439.10	H	68.34	46.78	74	54	-5.66	-7.22	
9919.90	H	57.70	35.41	74	54	-16.30	-18.59	
12312.12	H	59.03	34.67	74	54	-14.97	-19.33	
1423.00	V	48.53	30.08	74	54	-25.47	-23.92	
2645.00	V	51.84	32.45	74	54	-22.16	-21.55	
4958.13	V	64.20	43.76	74	54	-9.80	-10.28	
7439.10	V	61.20	44.89	74	54	-12.80	-9.11	
9919.90	V	54.01	33.21	74	54	-19.99	-20.79	
12312.12	V	56.77	37.93	74	54	-17.23	-16.07	

EUT:		Wireless docjing speaker system			Temperature:		25℃	
M/N:		EAP-850			Humidity:		56%	
Test Voltage:		Come From Adapter Input AC 120V/60Hz			Date of Test:		2011.8.15	
Detector Function:		Peak + AV			Test Engineer:		Tony	
Test Mode:		TX 2478 MHz(Adapter: PSEC075240U W)						
Frequency [MHz]	Antenna Polarization	Measured level (dB μ V/m)		Limit (dB μ V/m)		Over limit (dB)		
		PK	AV	PK	AV	PK	AV	
1354.00	H	52.88	31.31	74	54	-21.12	-22.69	
2382.00	H	46.77	29.30	74	54	-27.23	-24.70	
4958.13	H	62.67	42.09	74	54	-11.33	-11.91	
7439.10	H	65.31	45.00	74	54	-8.69	-9.00	
9919.90	H	56.31	36.07	74	54	-17.69	-17.93	
12312.12	H	57.97	35.12	74	54	-16.03	-18.88	
1450.00	V	55.82	32.90	74	54	-18.18	-21.10	
2545.00	V	50.98	30.96	74	54	-23.02	-23.04	
4958.13	V	63.21	43.44	74	54	-10.79	-10.56	
7439.10	V	60.94	41.23	74	54	-13.06	-12.77	
9919.90	V	53.08	33.87	74	54	-20.92	-20.13	
12312.12	V	57.71	36.89	74	54	-16.29	-17.11	

5. CARRIER FREQUENCY SEPARATION TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Rohde & Schwarz	FSP	101130	Jun 17.11	1 Year

5.2. Test Information

EUT:	WIRELESS DOCKING SPEAKER SYSTEM
M/N:	EAP-850
Test Date:	Aug.22, 2011
Ambient Temperature:	25°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX Mode(Hopping on)
Test Frequency:	CH1: 2403MHz CH14: 2442MHz CH26: 2478MHz
Tested By:	Tony

5.3. Test Results

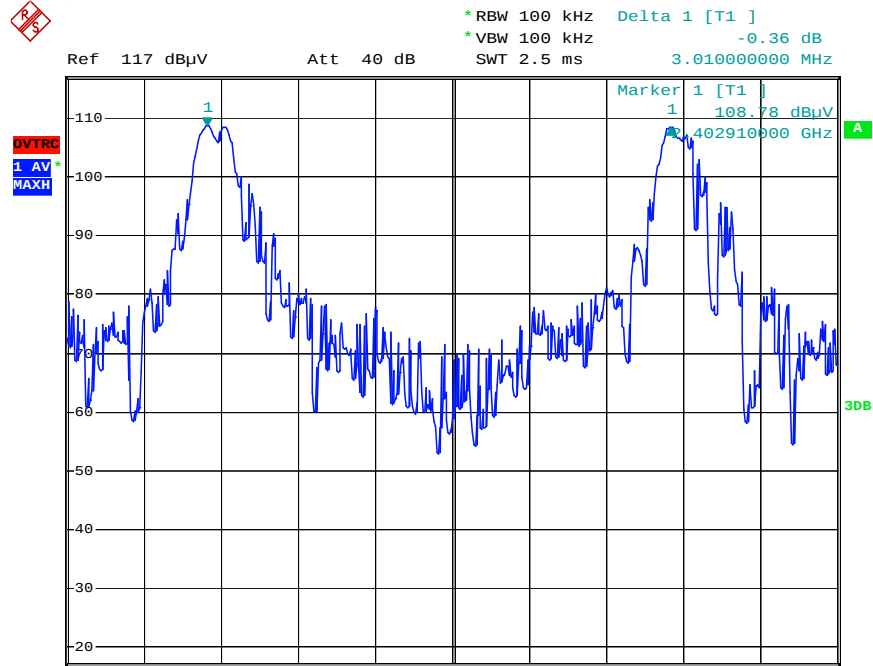
Adapter: GP303U-075-240

CH	Channel separation (MHz)	Limit	Conclusion
1	3.01	>the 20 dB Bandwidth or 25kHz (whichever is greater)	PASS
14	3.01	>the 20 dB Bandwidth or 25kHz (whichever is greater)	PASS
26	3.00	>the 20 dB Bandwidth or 25kHz (whichever is greater)	PASS

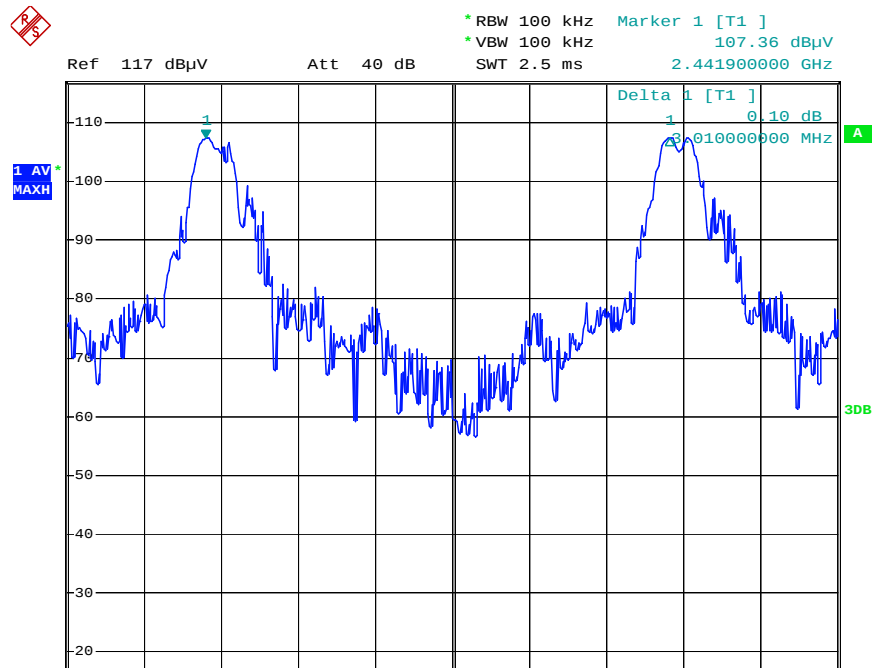
Adapter: PSEC075240U W

CH	Channel separation (MHz)	Limit	Conclusion
1	3.01	>the 20 dB Bandwidth or 25kHz (whichever is greater)	PASS
14	3.01	>the 20 dB Bandwidth or 25kHz (whichever is greater)	PASS
26	3.00	>the 20 dB Bandwidth or 25kHz (whichever is greater)	PASS

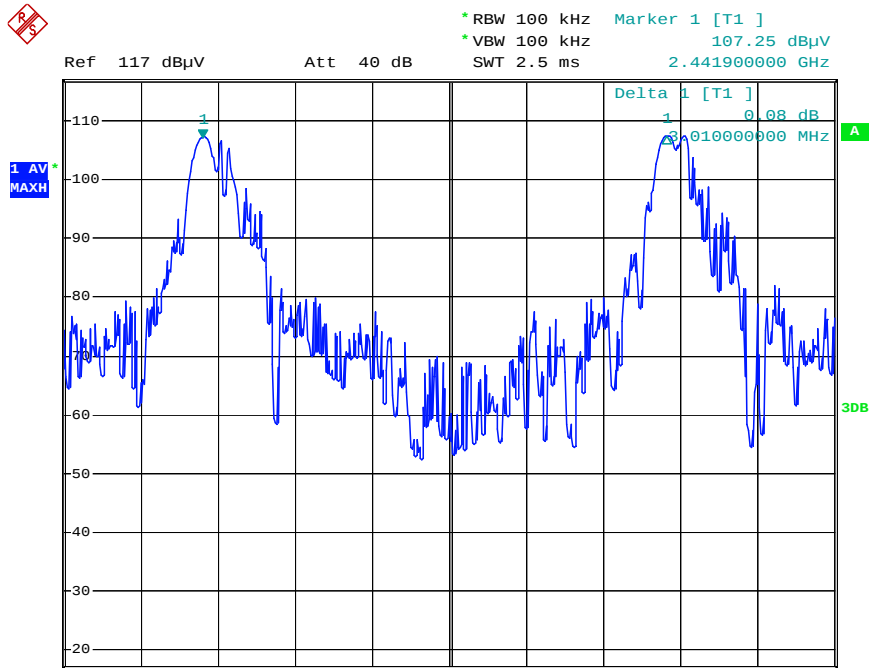
Adapter: GP303U-075-240



Date: 22.AUG.2011 05:07:21

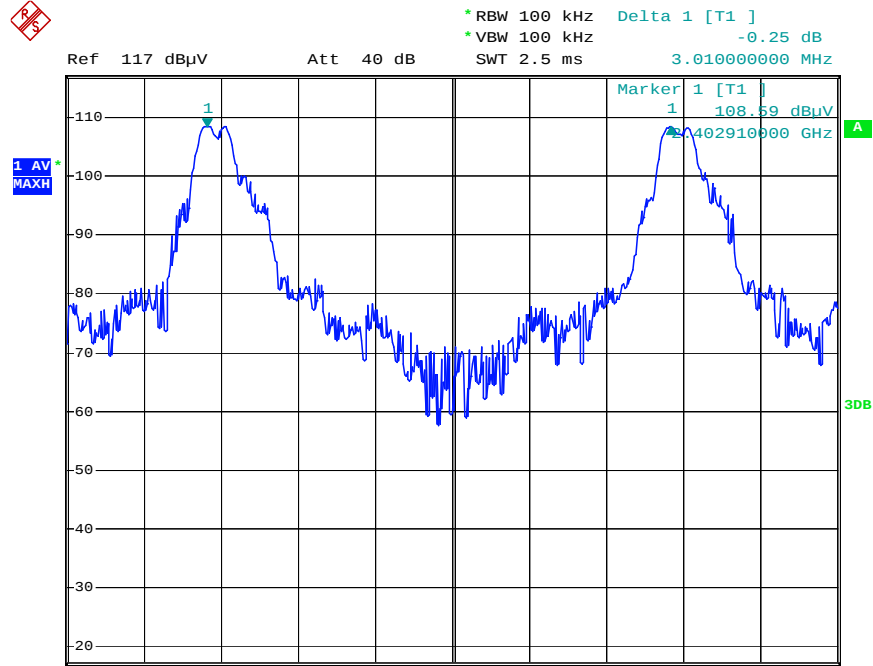


Date: 22.AUG.2011 05:20:14

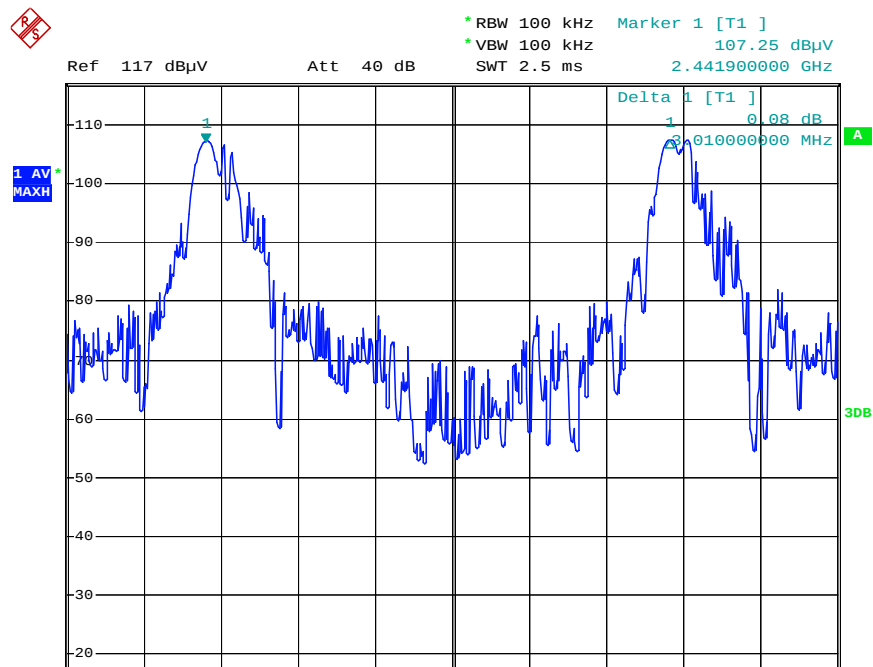


Date: 22.AUG.2011 05:23:10

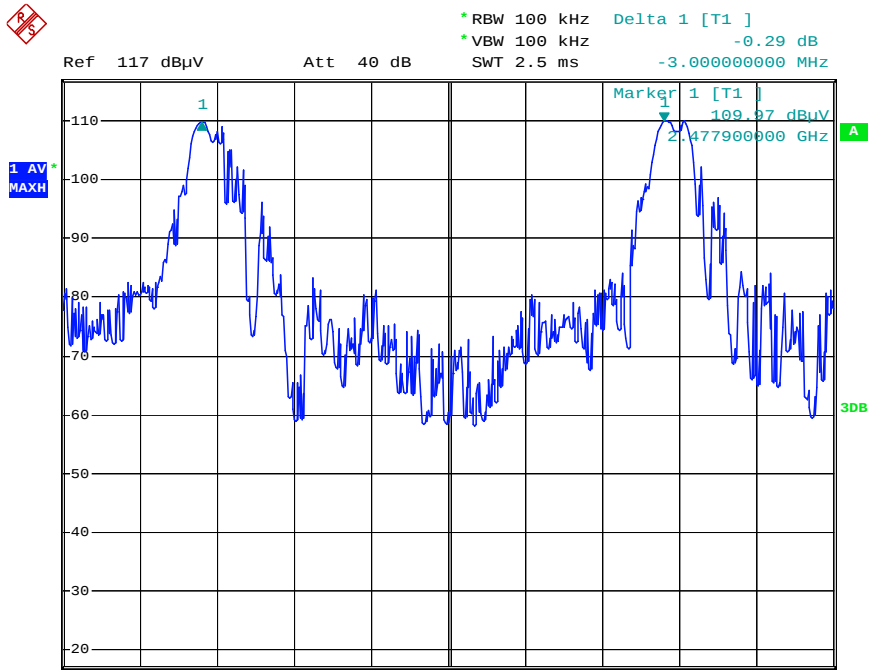
Adapter: PSEC075240U W



Date: 22.AUG.2011 05:16:34



Date: 22.AUG.2011 05:23:10



Date: 22.AUG.2011 05:28:36

6. 20dB Bandwidth Test

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Rohde & Schwarz	FSP	101130	Jun 17.11	1 Year

6.2. Test Information

EUT:	WIRELESS DOCKING SPEAKER SYSTEM
M/N:	EAP-850
Test Date:	Aug.22, 2011
Ambient Temperature:	25°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX Mode(Hopping off)
Test Frequency:	CH1: 2403MHz CH14: 2442MHz CH26: 2478MHz
Tested By:	Tony

6.3. Test Results

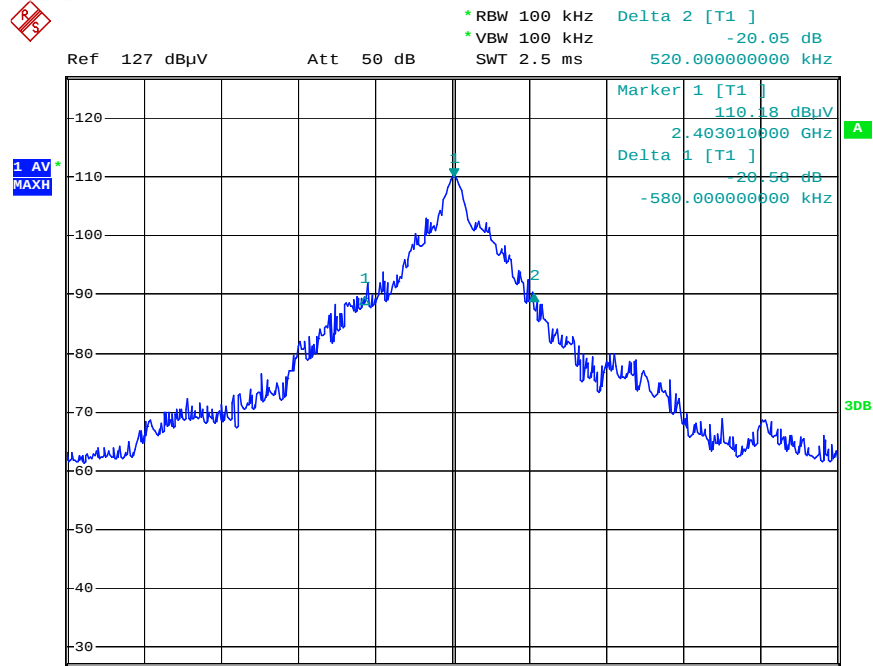
Adapter: GP303U-075-240

CH	20dB Bandwidth (MHz)	Limit	Conclusion
1	1.10	-----	PASS
14	1.12	-----	PASS
26	1.23	-----	PASS

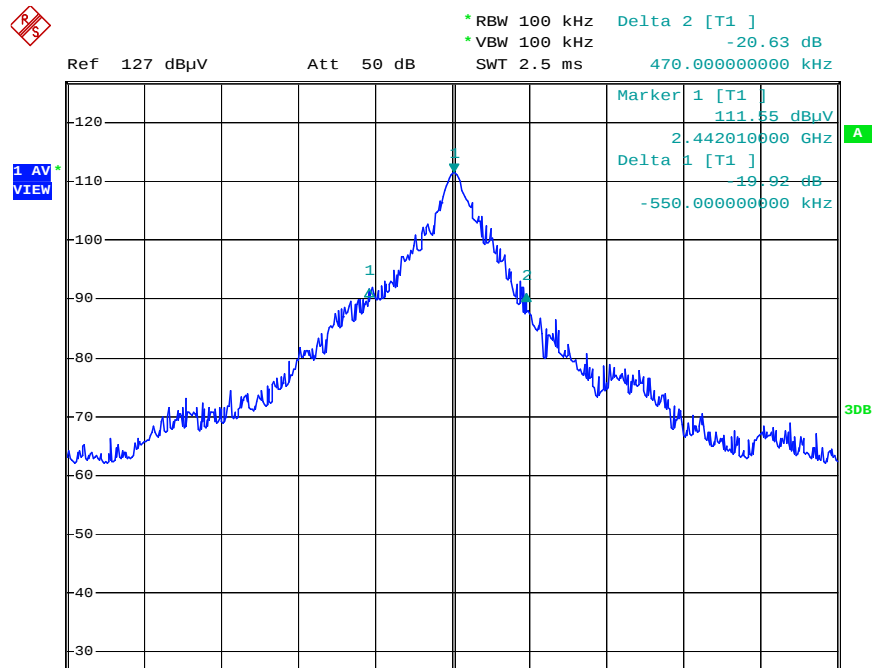
Adapter: PSEC075240U W

CH	6dB Bandwidth (MHz)	Limit	Conclusion
1	1.10	-----	PASS
14	1.07	-----	PASS
26	1.22	-----	PASS

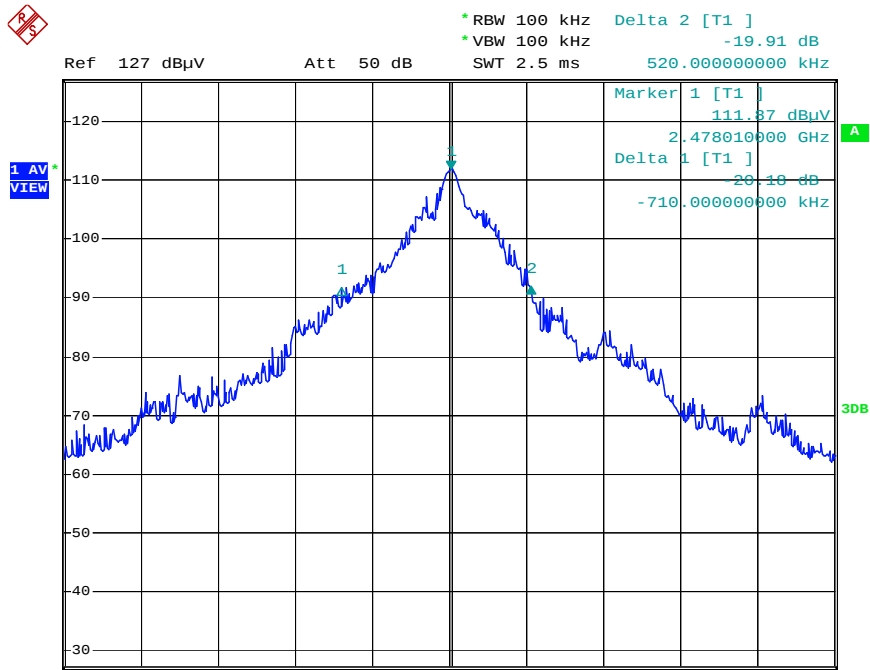
Adapter: GP303U-075-240



Date: 22.AUG.2011 05:43:54

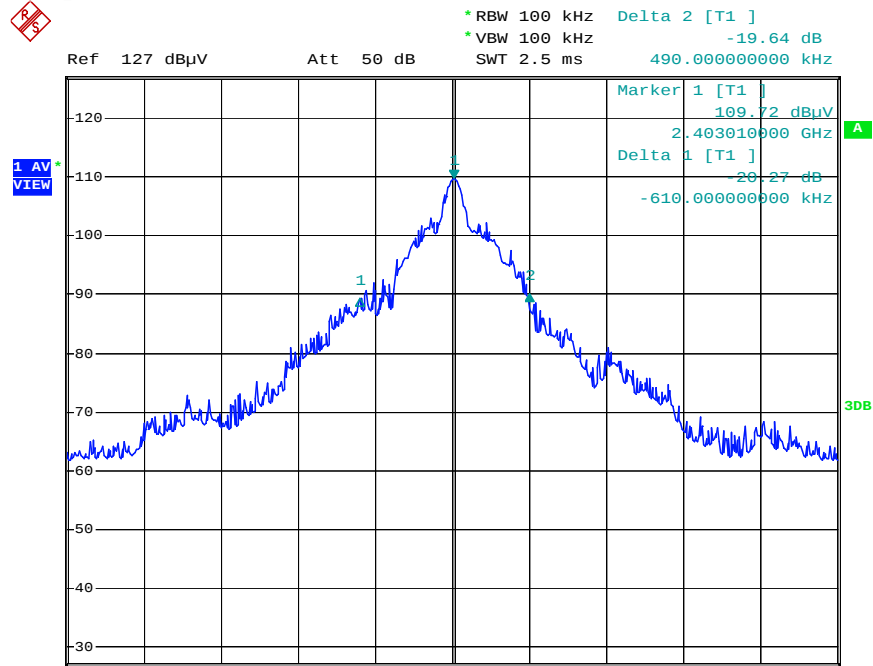


Date: 22.AUG.2011 05:54:47

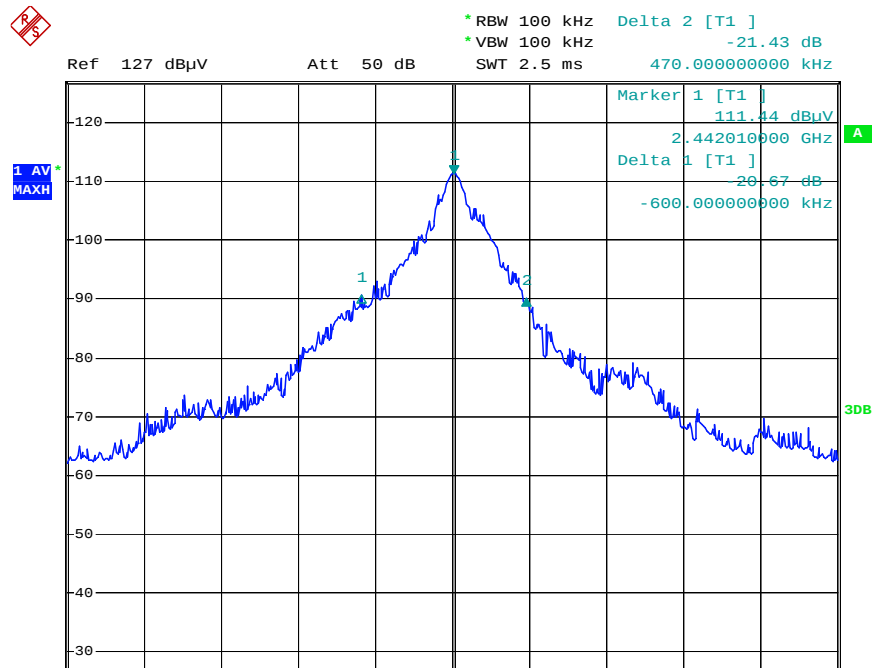


Date: 22.AUG.2011 06:16:35

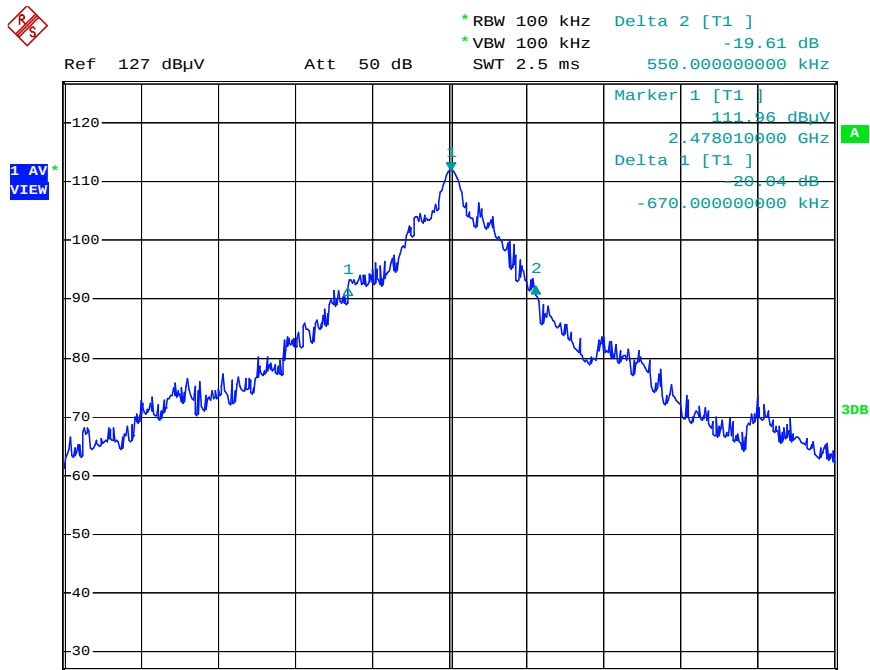
Adapter: PSEC075240U W



Date: 22.AUG.2011 05:48:17



Date: 22.AUG.2011 06:00:49



Date: 22.AUG.2011 06:25:24

7. NUMBER OF HOPPING FREQUENCY TEST

7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Rohde & Schwarz	FSP	101130	Jun 17.11	1 Year

7.2. Test Information

EUT:	WIRELESS DOCKING SPEAKER SYSTEM
M/N:	EAP-850
Test Date:	Aug.22, 2011
Ambient Temperature:	25°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX Mode(Hopping on)
Test Frequency:	From 2403MHz to 2478MHz
Tested By:	Tony

7.3. Test Results

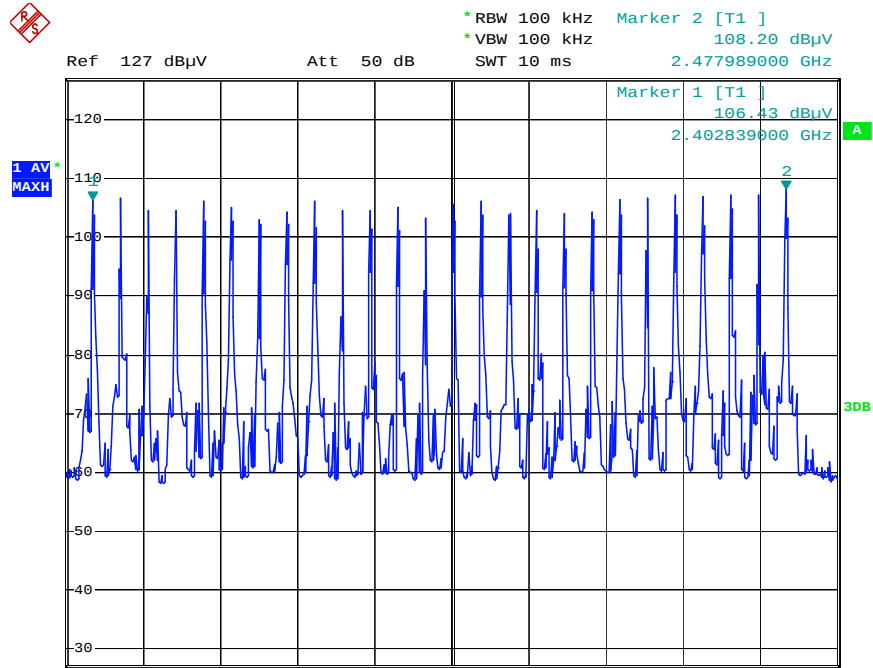
Adapter: GP303U-075-240

Number of channel	Limit	Concolution
26	> = 15	Pass

Adapter: PSEC075240U W

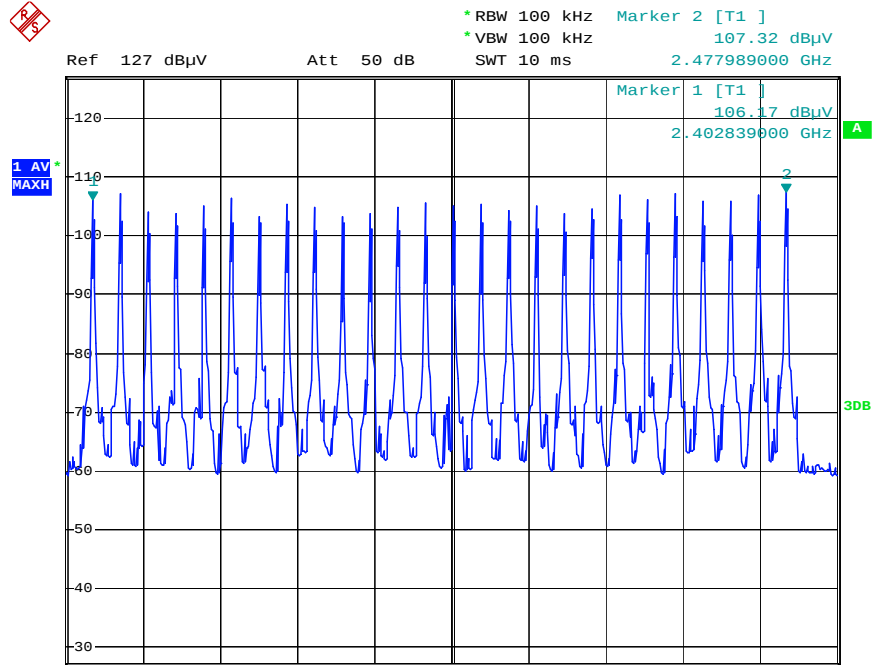
Number of channel	Limit	Concolution
26	> = 15	Pass

Adapter: GP303U-075-240



Date: 22.AUG.2011 06:35:11

Adapter: PSEC075240U W



Date: 22.AUG.2011 06:41:12

8. DWELL TIME TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Rohde & Schwarz	FSP	101130	Jun 17.11	1 Year

8.2. Test Information

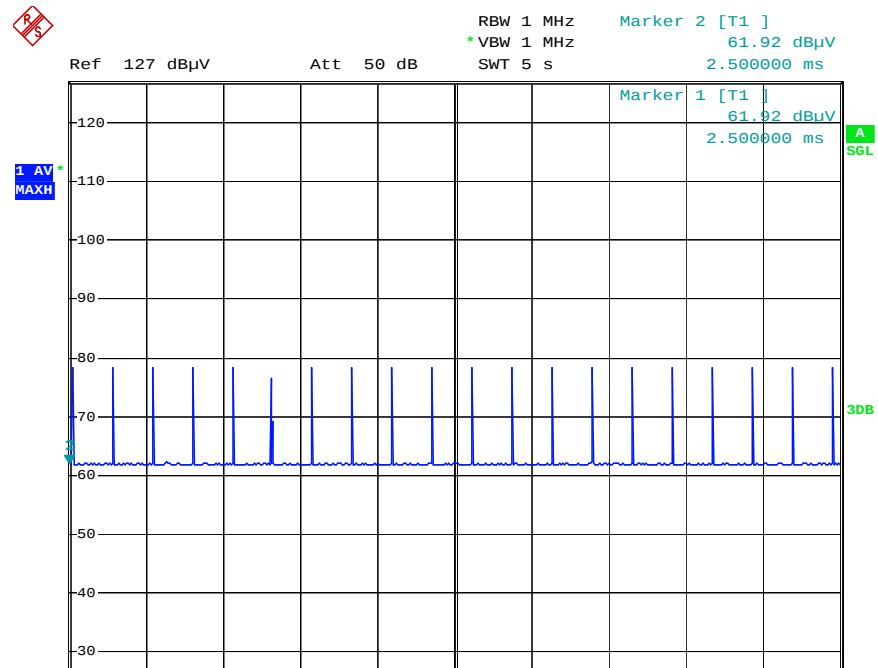
EUT:	WIRELESS DOCKING SPEAKER SYSTEM
M/N:	EAP-850
Test Date:	Aug.22, 2011
Ambient Temperature:	25°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX Mode(Hopping on)
Test Frequency:	CH14: 2442MHz
Tested By:	Tony

8.3. Test Results

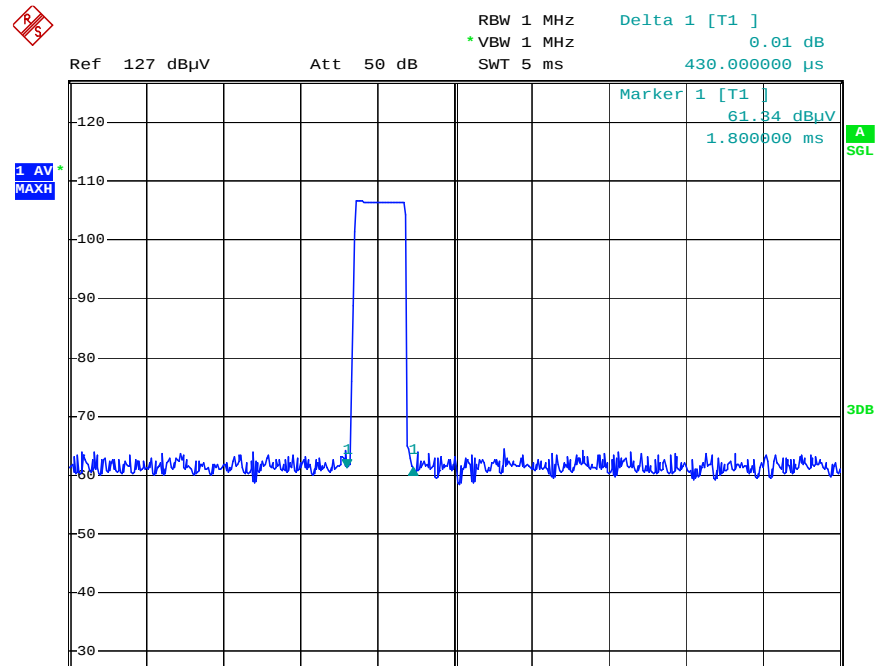
This system hopping 20 hops in any 5s, each hop dwell 430 μ s, so the dwell time is:

Adapter	Dwell time	Limit	Conclusion
GP303U-075-240	17.888	<400 ms	Pass
PSEC075240U W	17.888	<400 ms	Pass

Adapter: GP303U-075-240

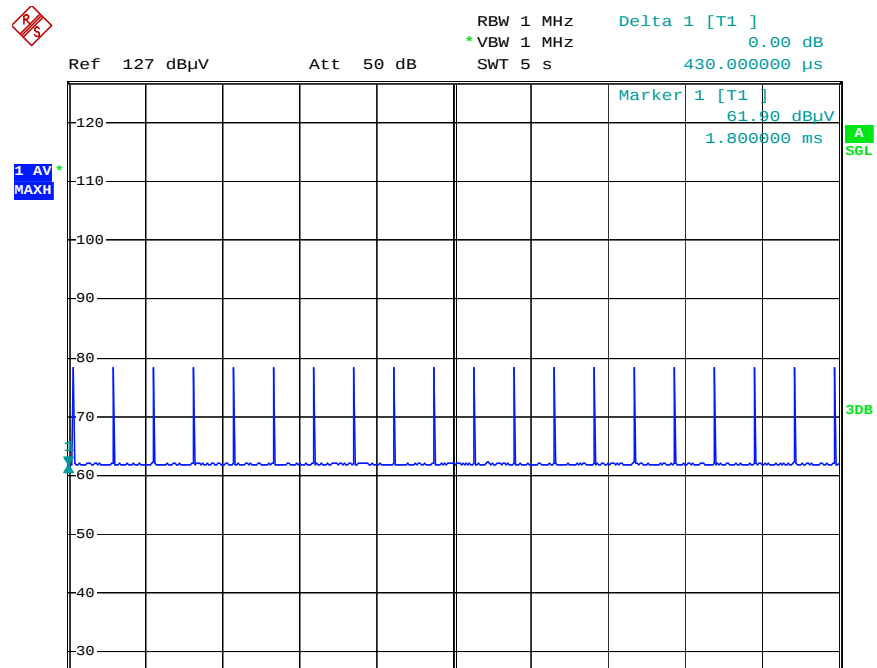
Dwell time = $20 \text{ times} / 5 \text{ s} * 26 * 0.4 * 0.4301 \text{ ms} = 17.888 \text{ ms}$ 

Date: 22.AUG.2011 06:46:58

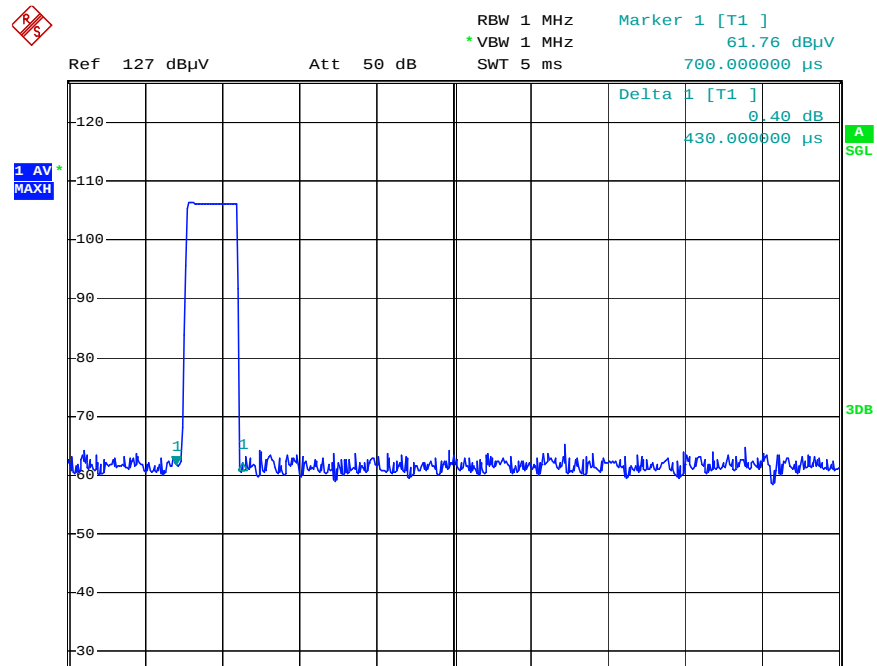


Date: 22.AUG.2011 06:49:08

Adapter: PSEC075240U W

Dwell time = $20 \times 5 \times 26 \times 0.4 \times 0.4301 \text{ ms} = 17.888 \text{ ms}$ 

Date: 22.AUG.2011 06:53:23



Date: 22.AUG.2011 06:54:35

9. MAXIMUMPEAK OUTPUT POWER TEST

9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Rohde &Schwarz	FSL	100959	May 08.11	1 Year

9.2.Test Information

EUT:	WIRELESS DOCKING SPEAKER SYSTEM
M/N:	EAP-850
Test Date:	Aug.15, 2011
Ambient Temperature:	24.1℃
Relative Humidity:	45%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX Mode(Hopping off)
Test Frequency:	CH1: 2403MHz CH14: 2442MHz CH26: 2478MHz
Tested By:	Tony

9.3.Test Results

Adapter: GP303U-075-240

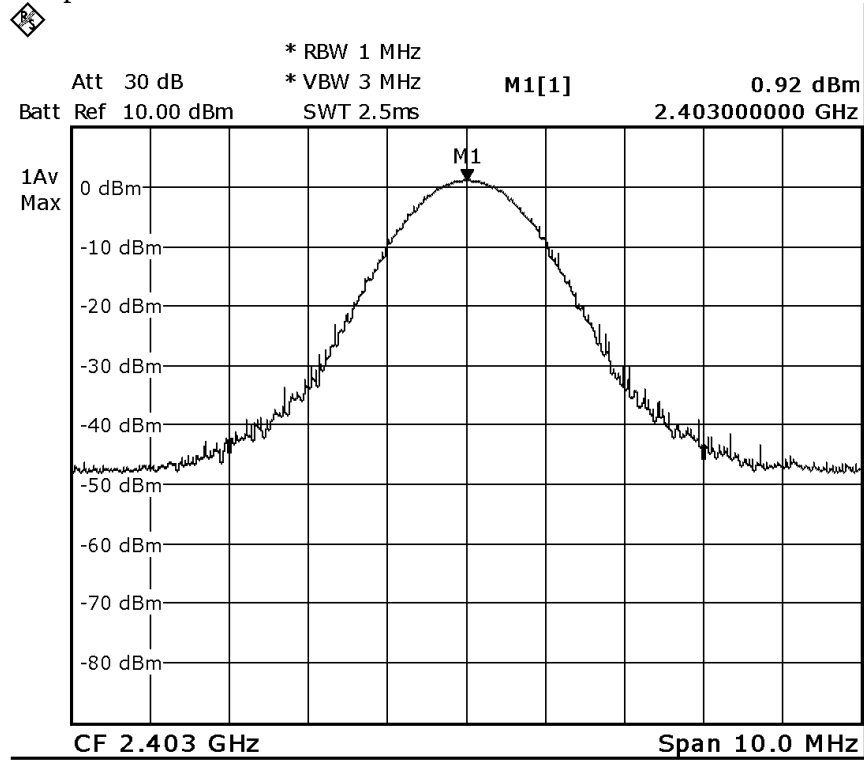
CH	Freq (MHz)	Result (dBm)	Margin	Limit	
				(mW)	(dBm)
CH1	2403	0.92	20.05	125	20.97
CH14	2442	3.92	17.05	125	20.97
CH26	2478	3.58	17.39	125	20.97

Adapter: PSEC075240U W

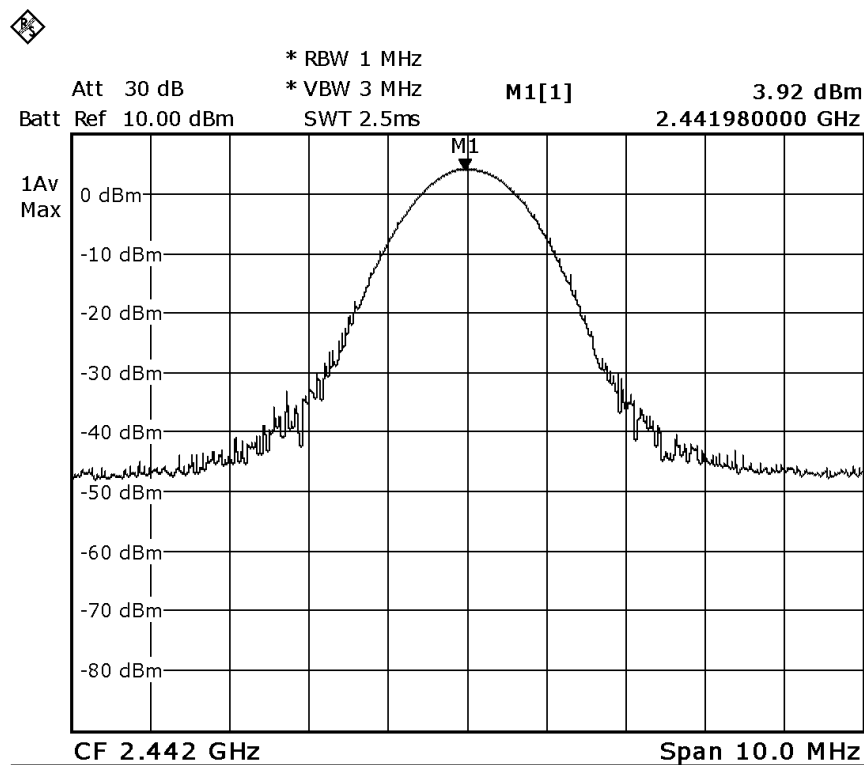
CH	Freq (MHz)	Result (dBm)	Margin	Limit	
				(mW)	(dBm)
CH1	2403	-0.49	21.49	125	20.97
CH14	2442	2.81	18.16	125	20.97
CH26	2478	3.59	17.38	125	20.97

Peak RF output Power ,Please refer to the following page.

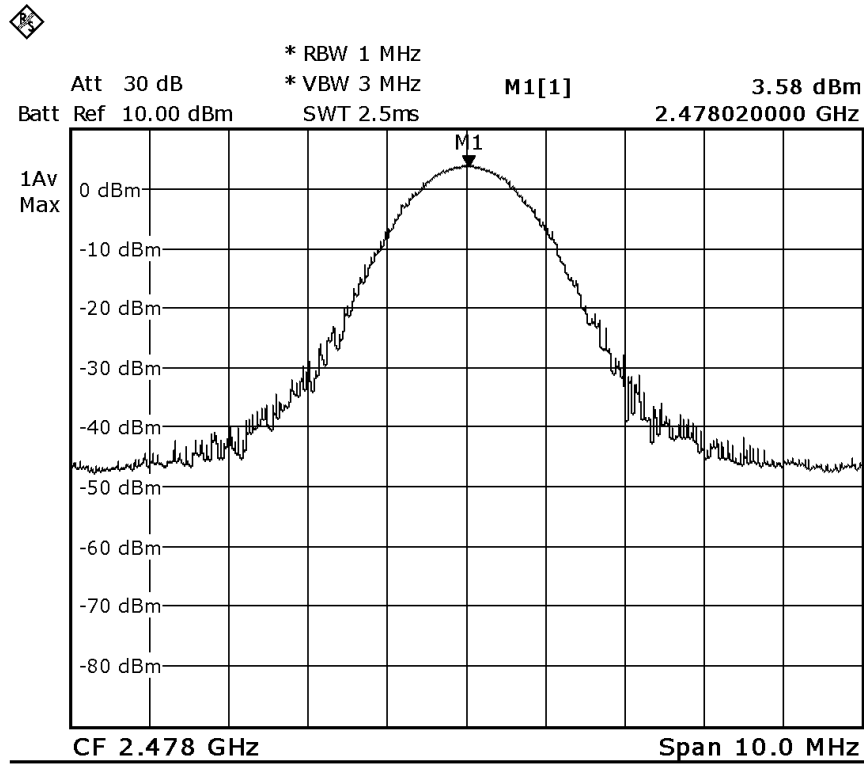
Adapter: GP303U-075-240



Date: 8.SEP.2011 11:45:57

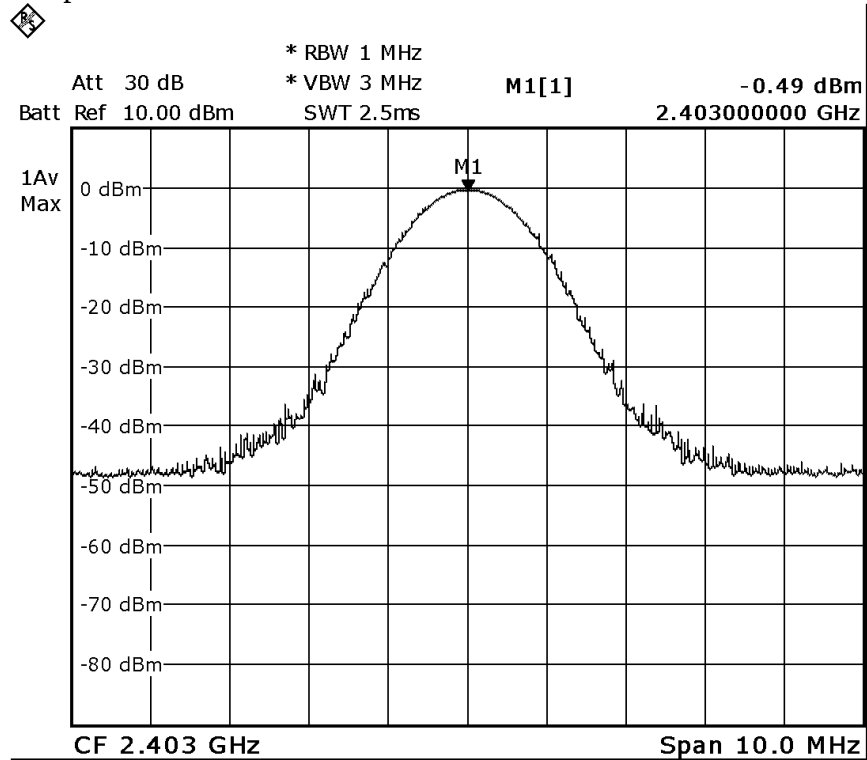


Date: 8.SEP.2011 11:47:07

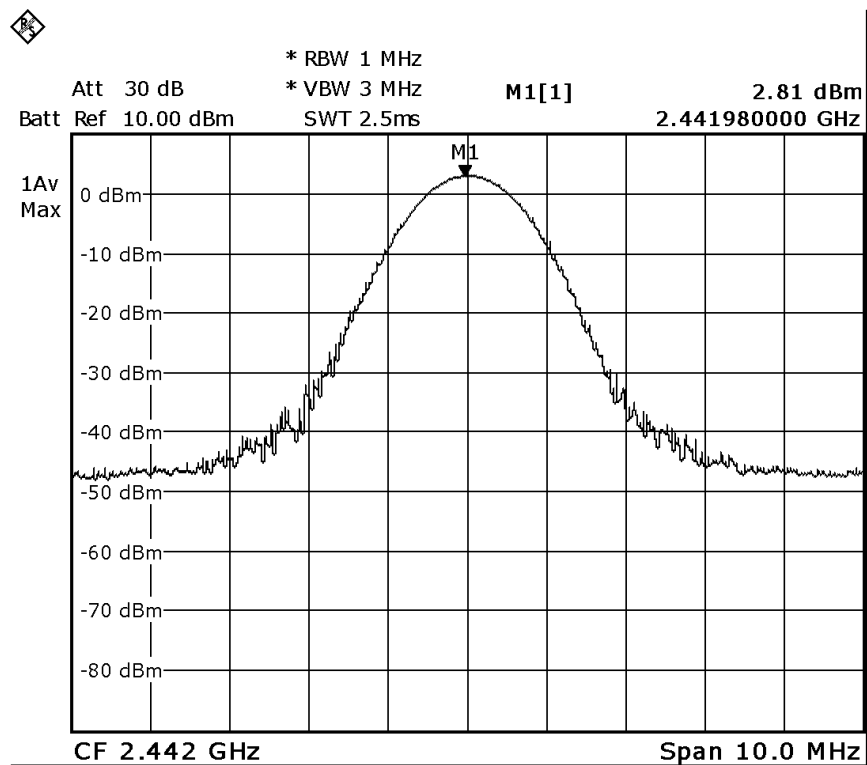


Date: 8.SEP.2011 11:48:19

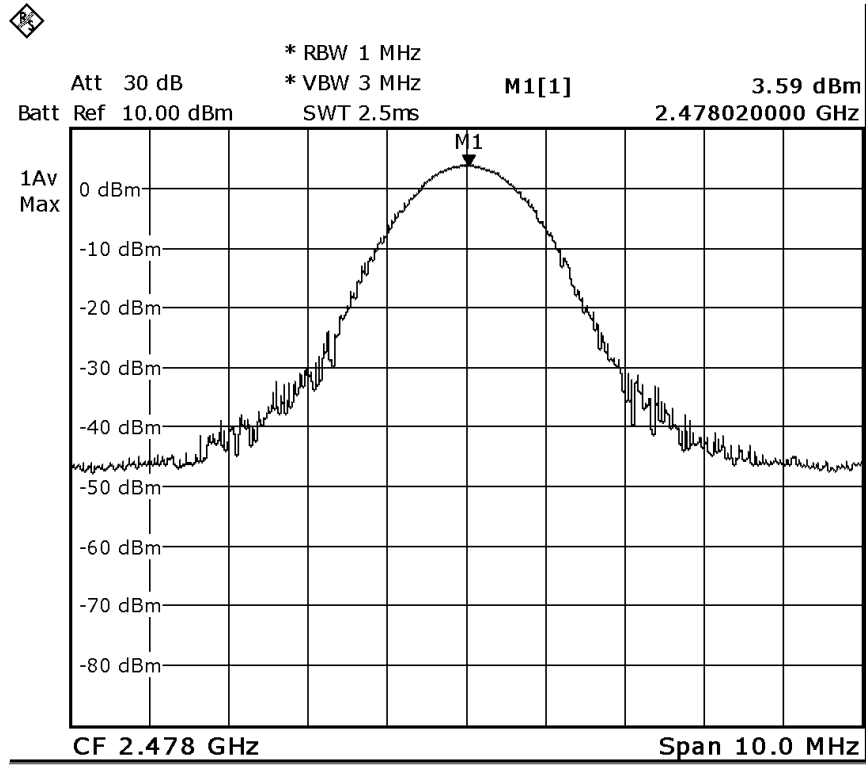
Adapter: PSEC075240U W



Date: 8.SEP.2011 11:46:44



Date: 8.SEP.2011 11:47:33



Date: 8.SEP.2011 11:48:44

10. BAND EDGE COMPLIANCE TEST

10.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Rohde & Schwarz	FSP	101130	Jun 17.11	1 Year

10.2. Test Information

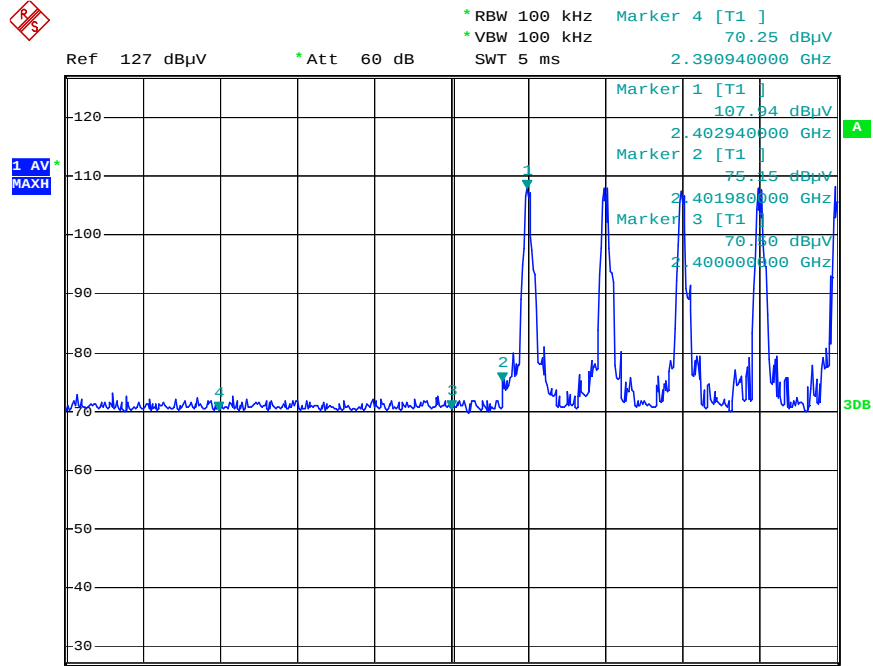
EUT:	WIRELESS DOCKING SPEAKER SYSTEM
M/N:	EAP-850
Test Date:	Aug.16, 2011
Ambient Temperature:	25°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	TX Mode(Hopping On + Hopping off)
Test Frequency:	CH1: 2403MHz CH26: 2478MHz
Tested By:	Tony

10.3. Test Results

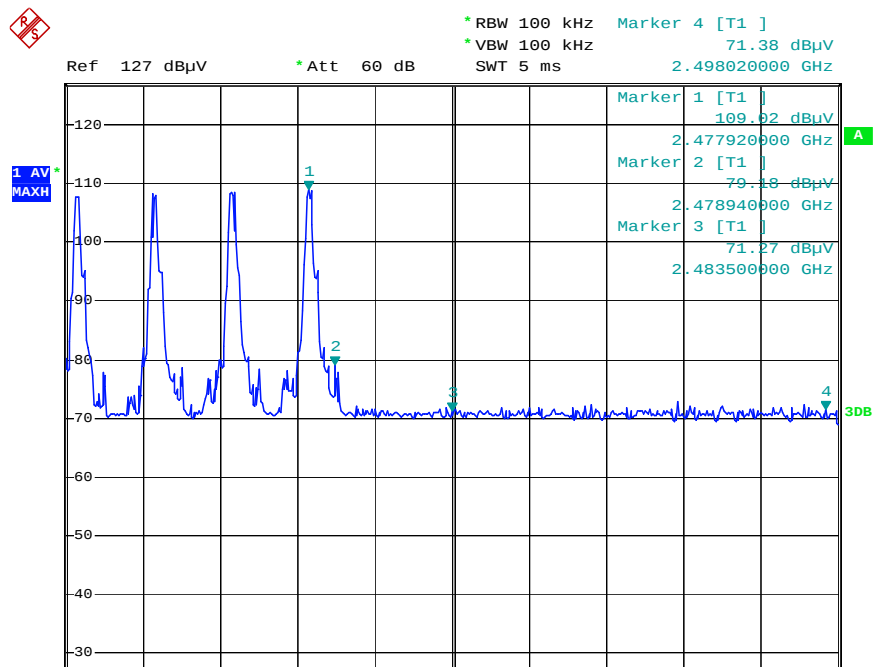
Pass

The testing data was attached in the next pages

Adapter: GP303U-075-240
Hopping on

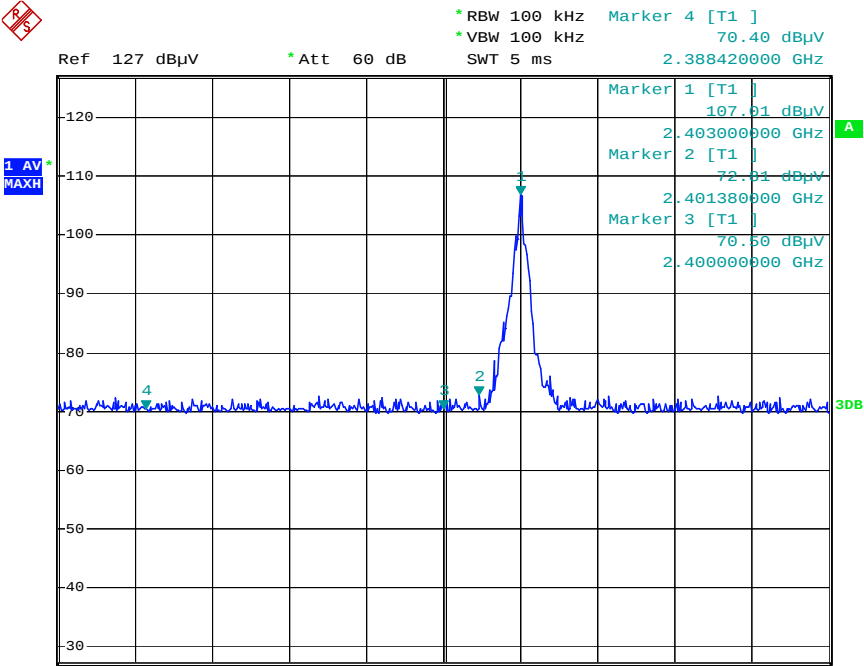


Date: 22.AUG.2011 08:08:30

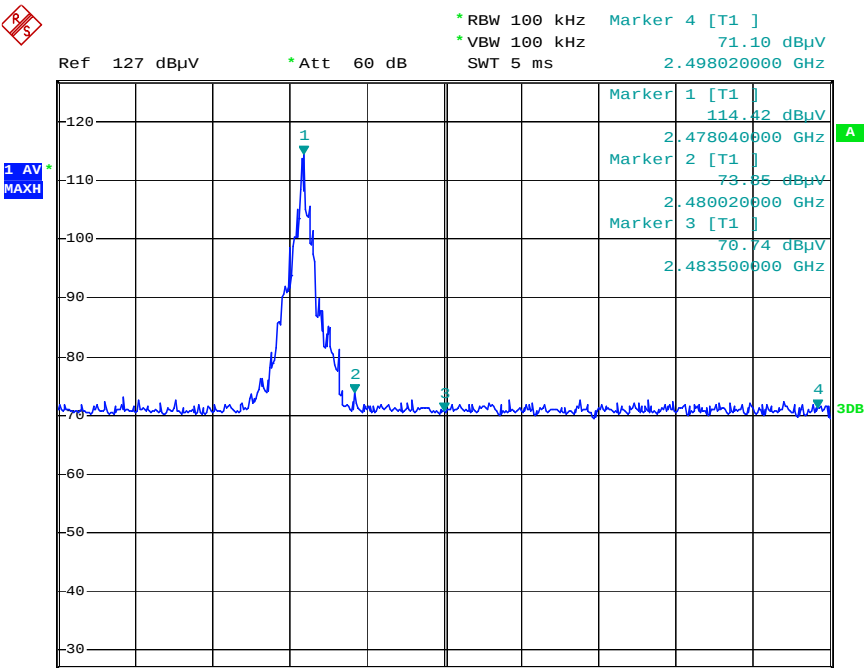


Date: 22.AUG.2011 08:24:30

Hopping off

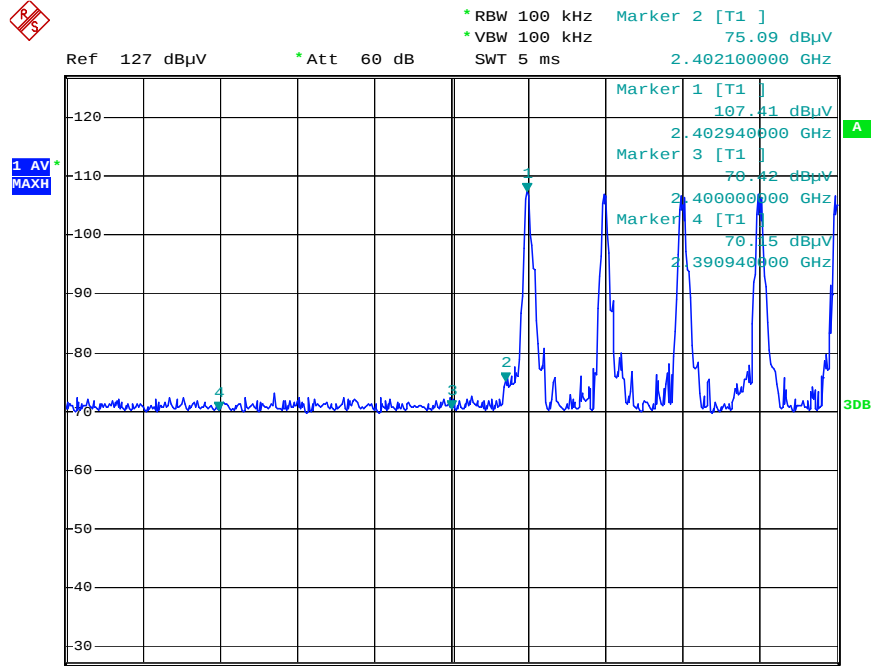


Date: 22.AUG.2011 09:10:22

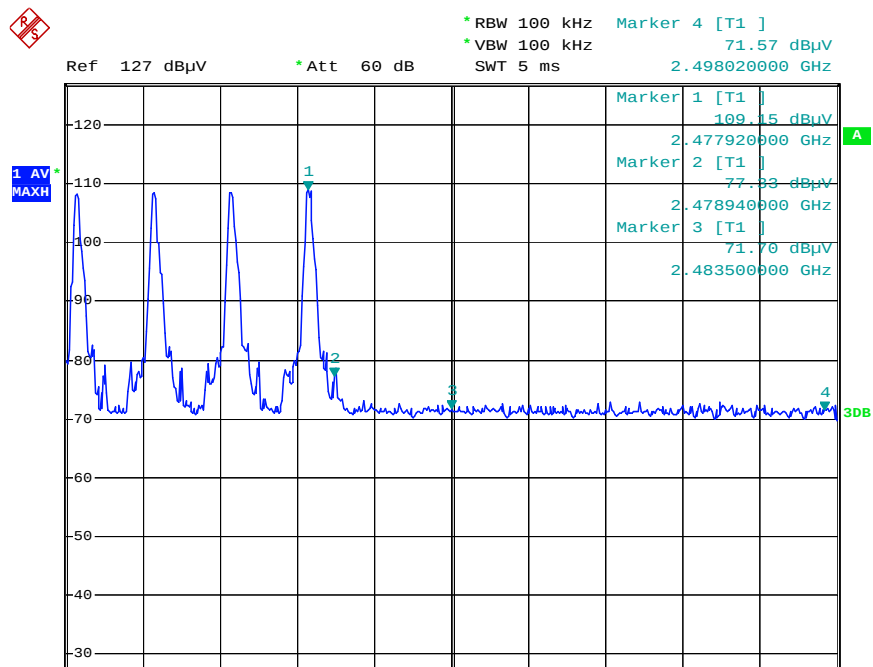


Date: 22.AUG.2011 09:00:29

Adapter: PSEC075240U W
Hopping on

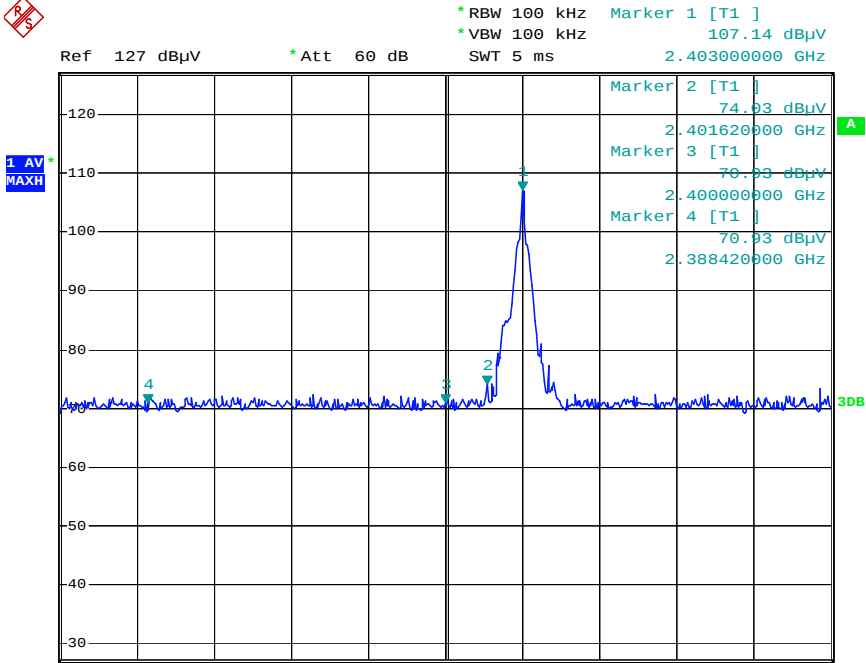


Date: 22.AUG.2011 08:16:53

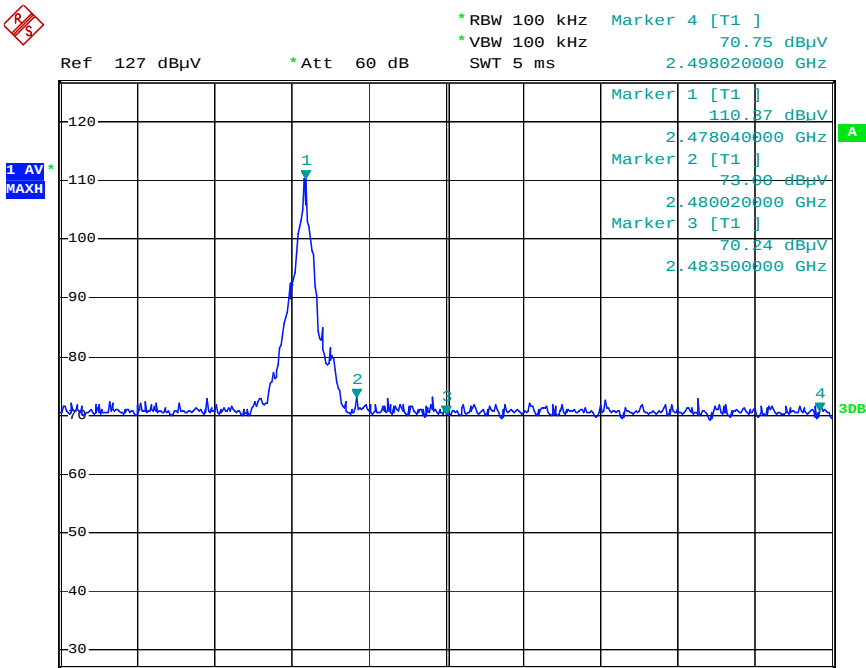


Date: 22.AUG.2011 08:49:01

Hopping off



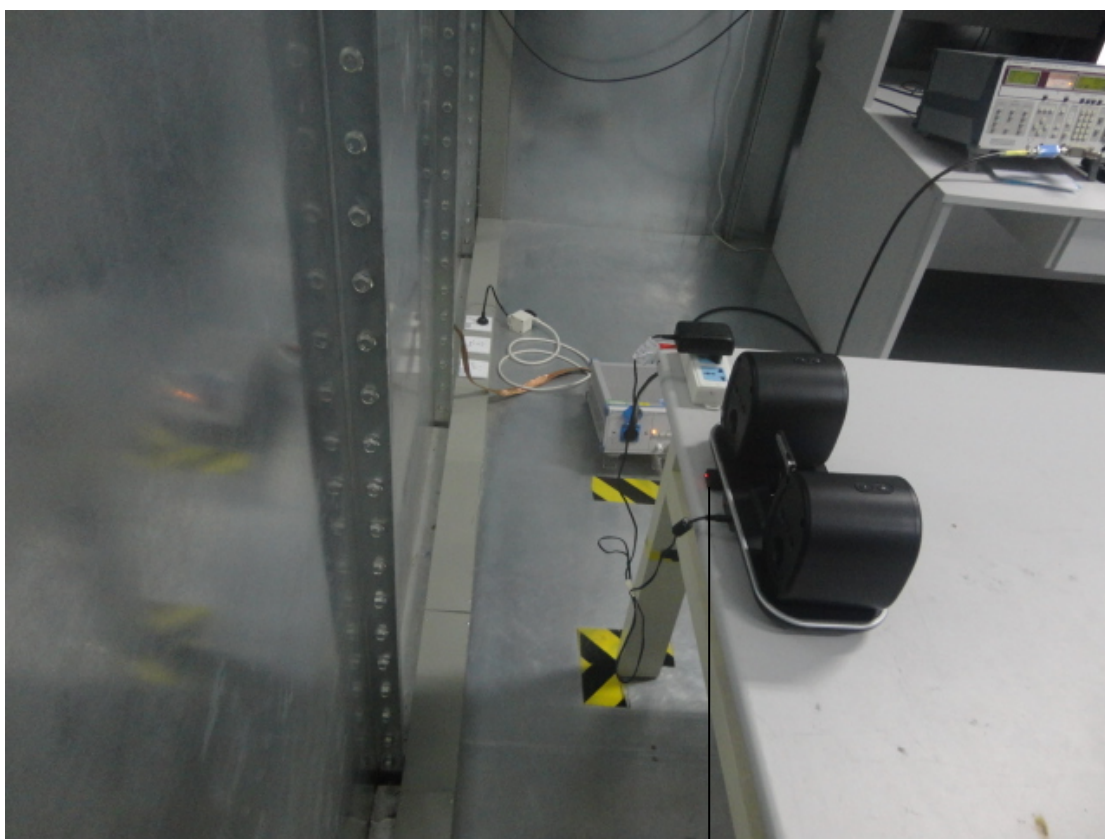
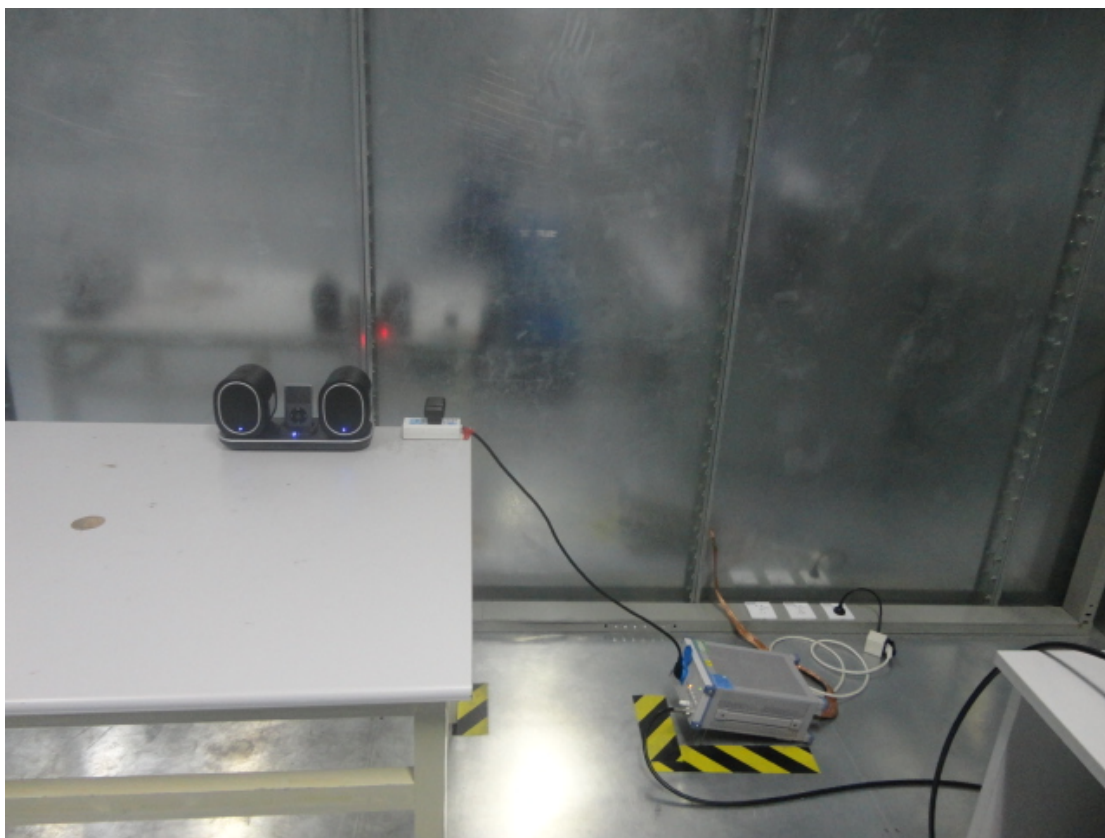
Date: 22.AUG.2011 09:15:22



Date: 22.AUG.2011 09:06:27

11.PHOTOGRAPH

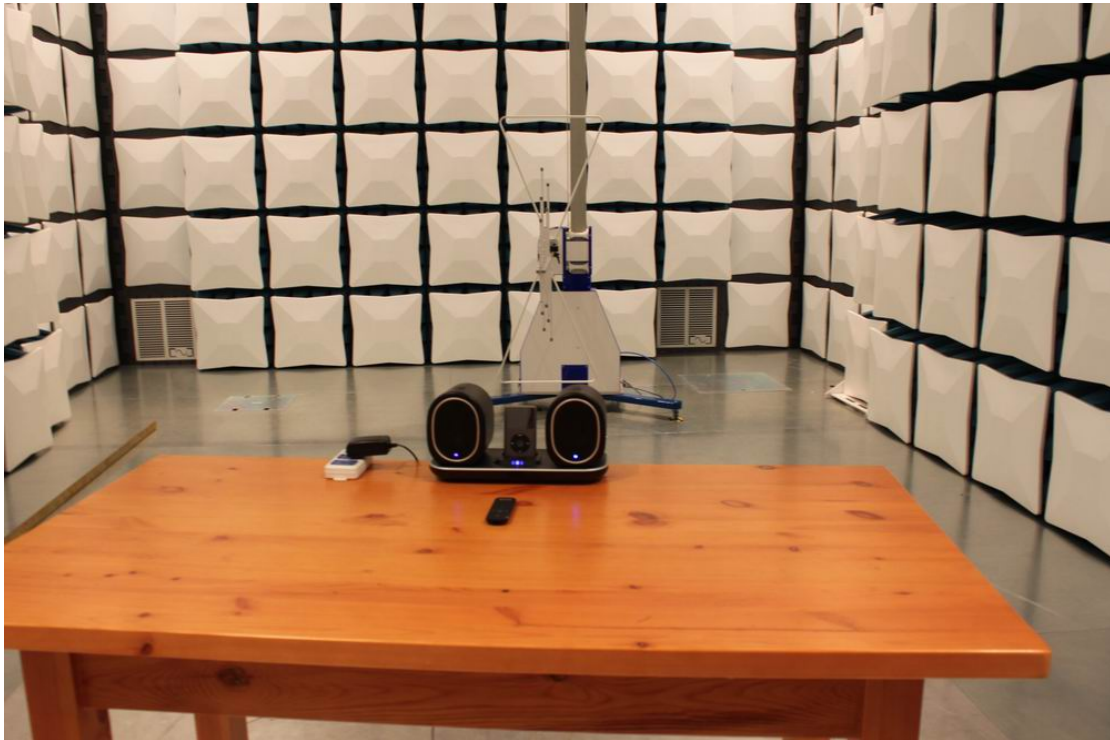
11.1.Photos of Power Line Conducted Emission Test



USB Transmitter

11.2.Photos of Radiated Emission Test

30-1000MHz

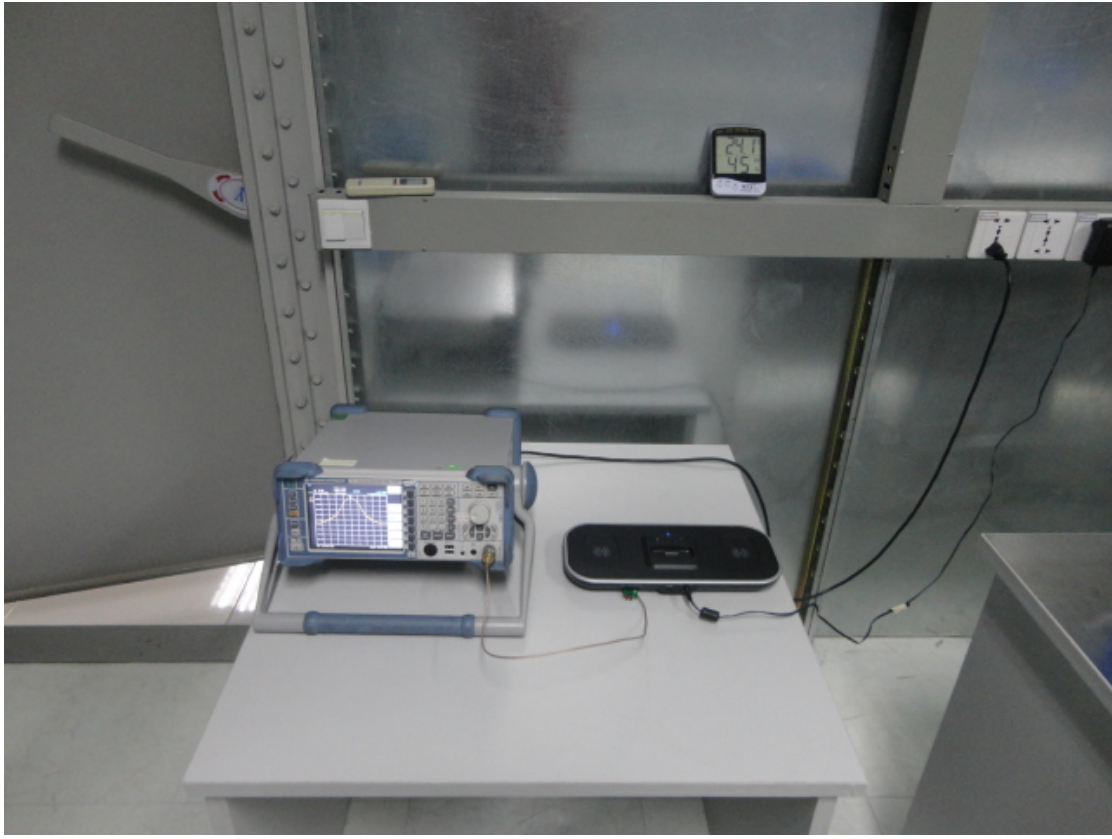


USB Transmitter

Above 1000MHz



USB Transmitter



12. PHOTOS OF THE EUT

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT



Figure 3
General Appearance of the EUT
Speaker(different appearance)



Figure 4
General Appearance of the EUT
Speaker(different appearance)



Figure 5
Inside of the EUT
Speaker

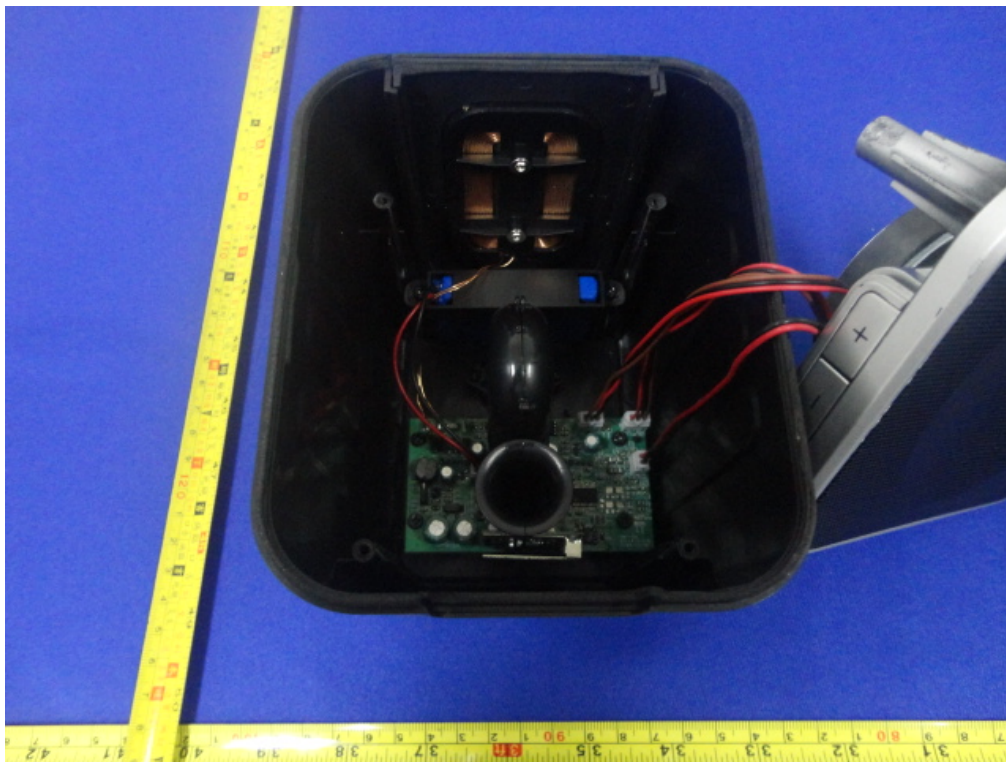


Figure 6
Inside of the EUT
Speaker

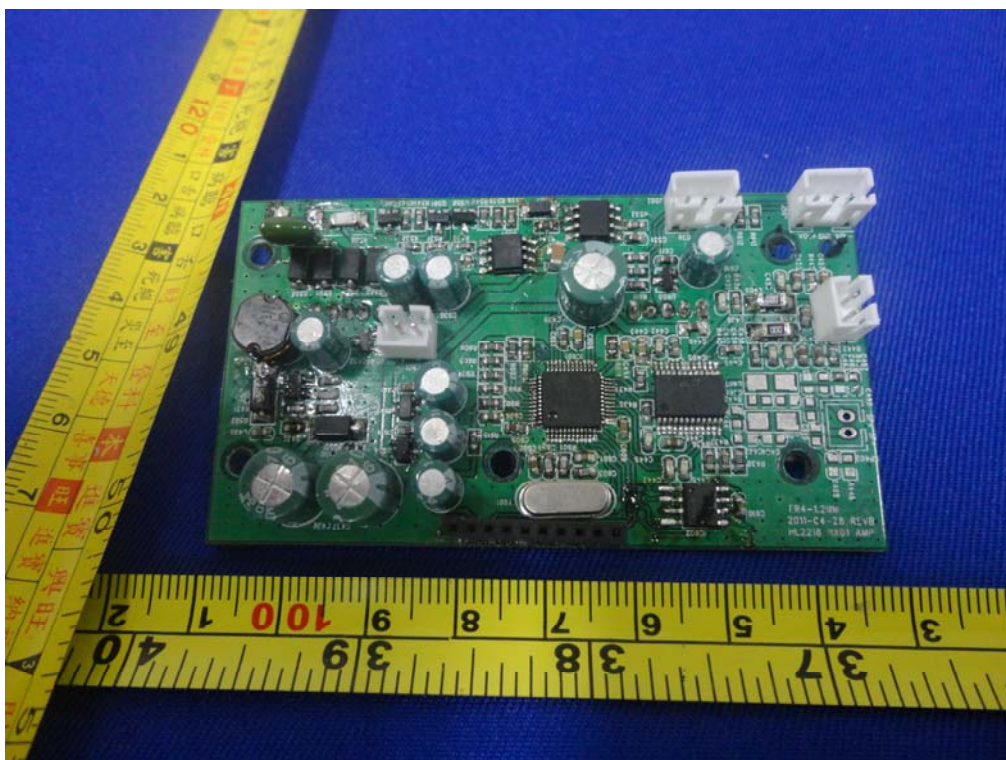


Figure 7
Inside of the EUT
Speaker

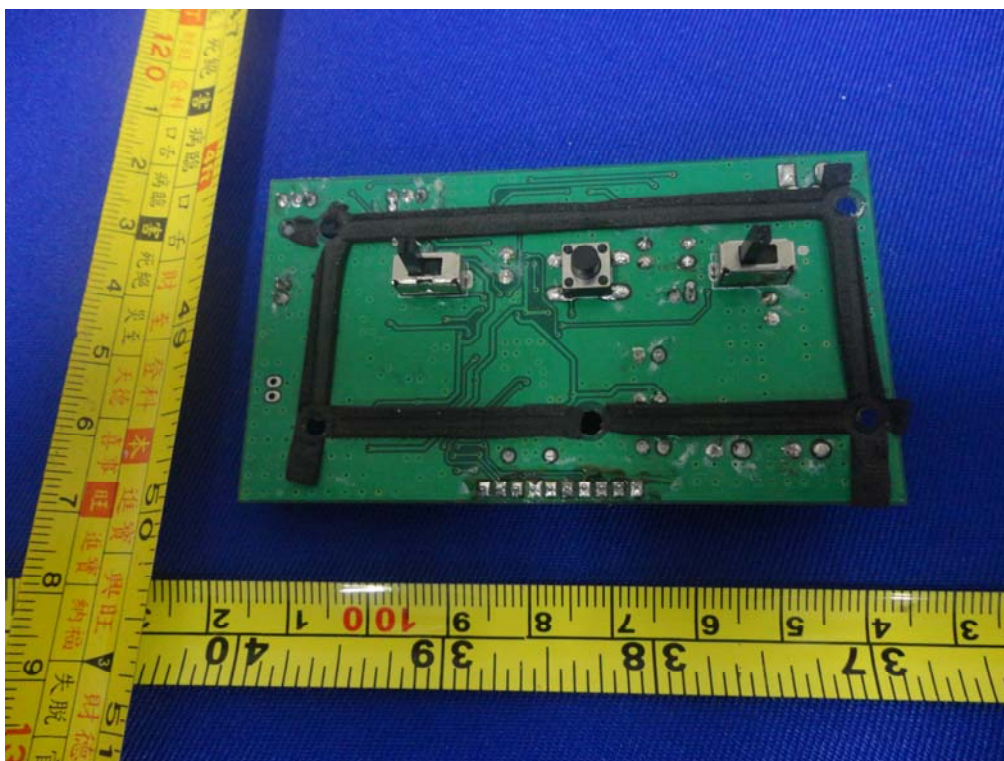


Figure 8
Inside of the EUT
Speaker

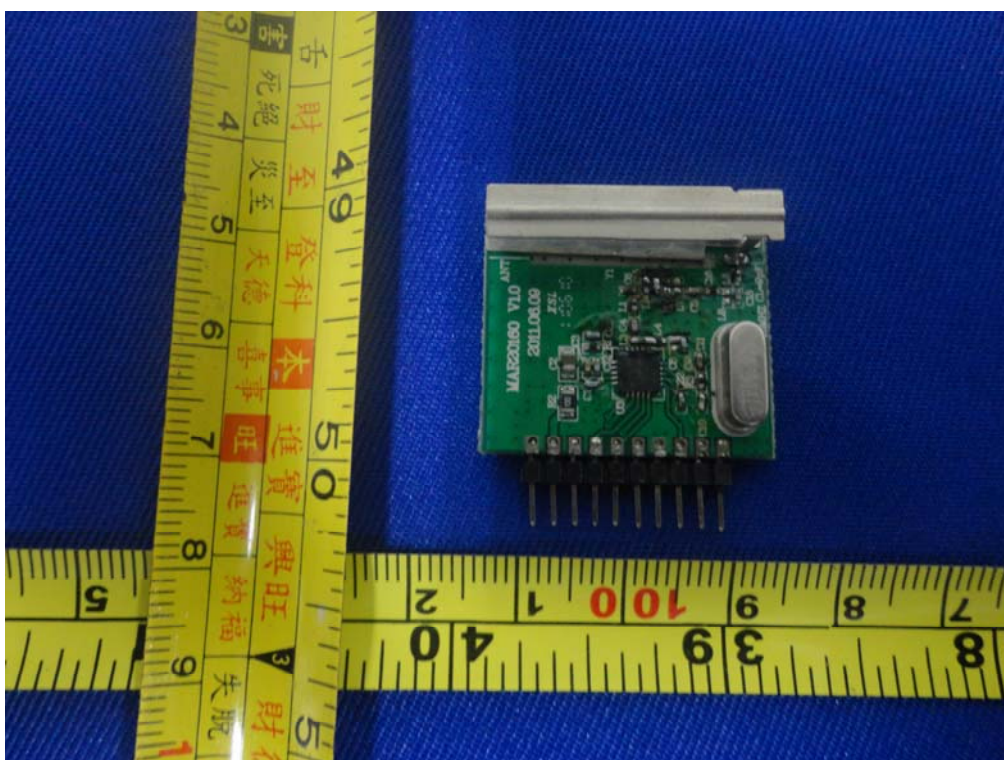


Figure 9
Inside of the EUT
Speaker

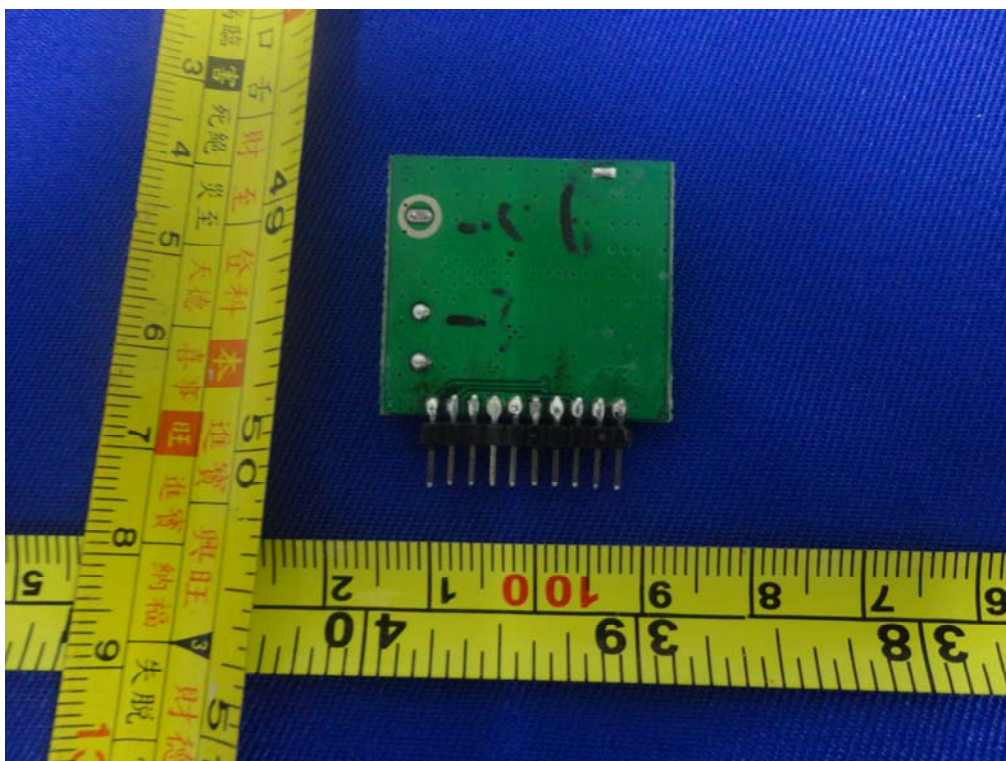


Figure 10
Inside of the EUT
USB Transmitter

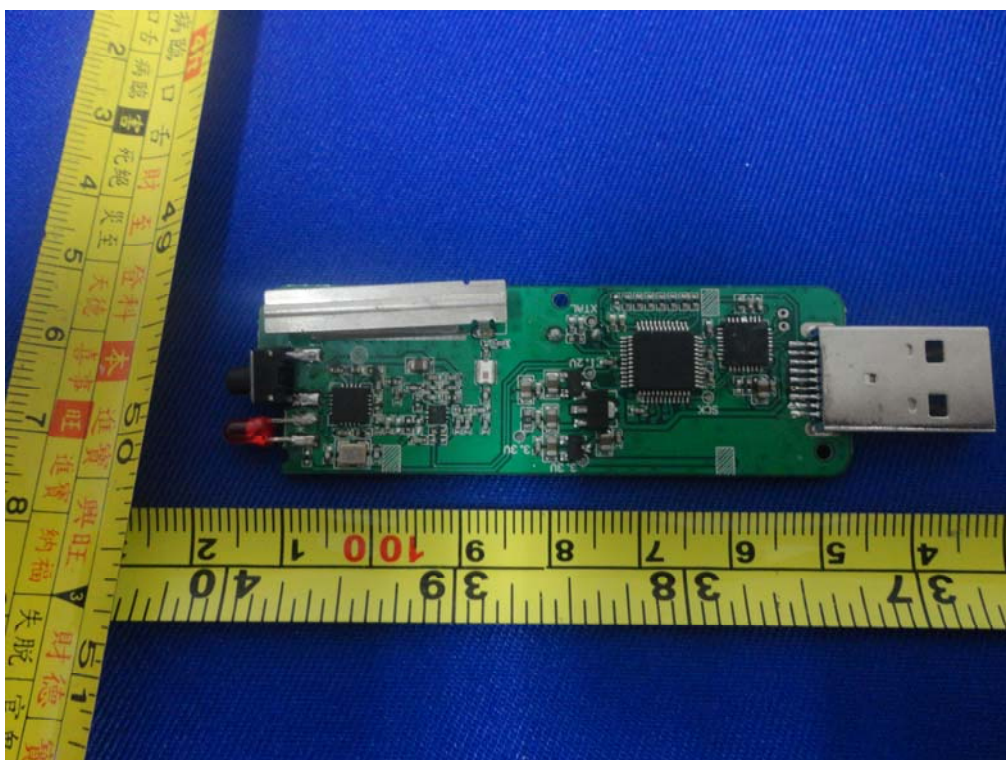


Figure 11
Inside of the EUT
USB Transmitter

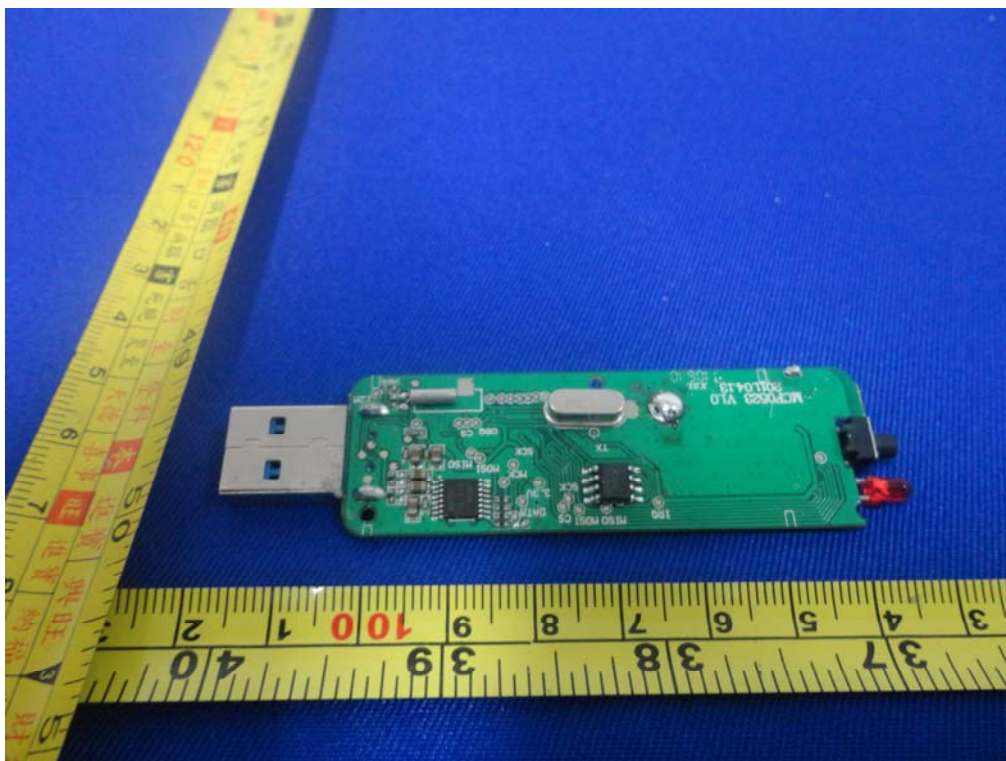


Figure 12
Inside of the EUT
Docking



Figure 13
Inside of the EUT
Docking

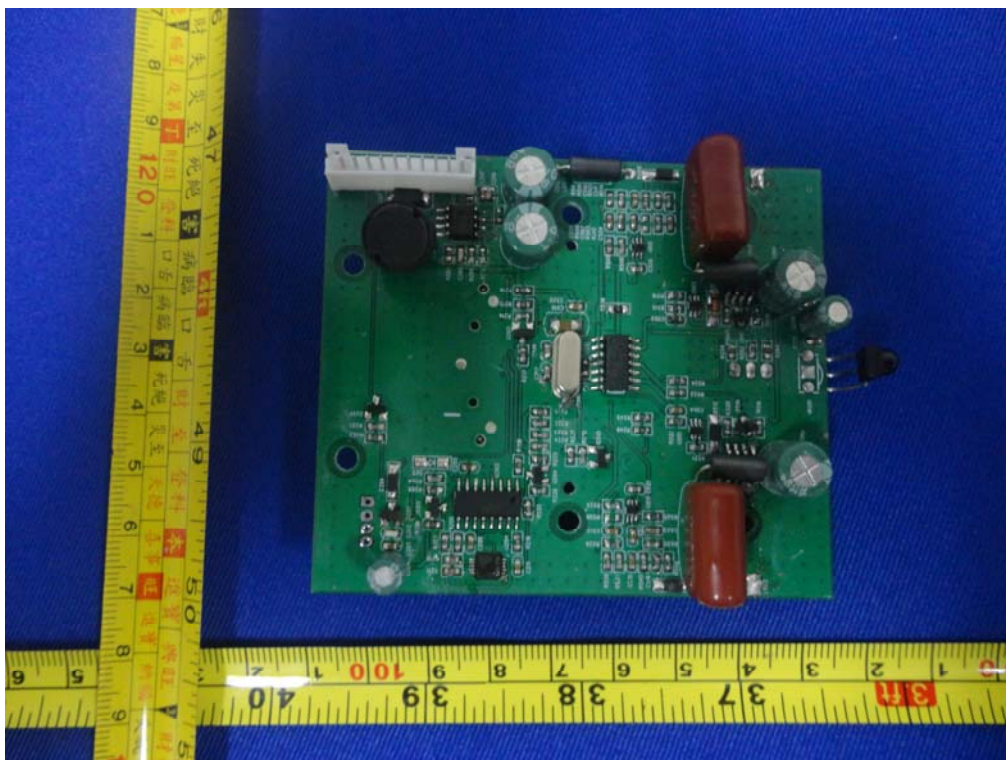


Figure 14
Inside of the EUT
Docking

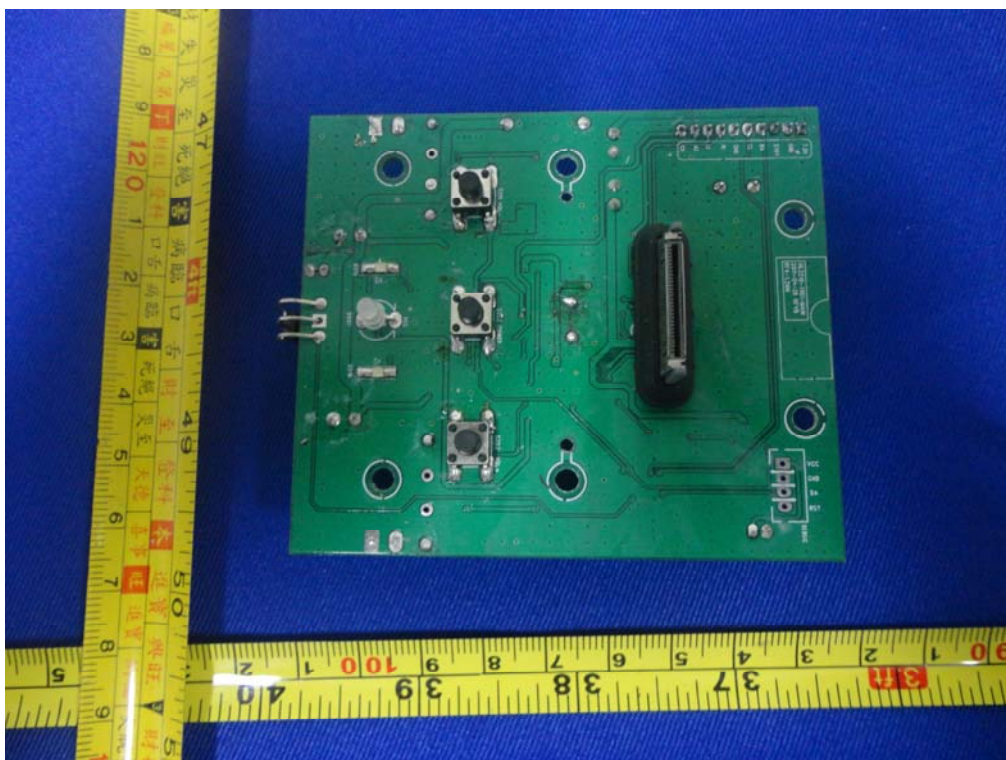


Figure 15
Inside of the EUT
Docking

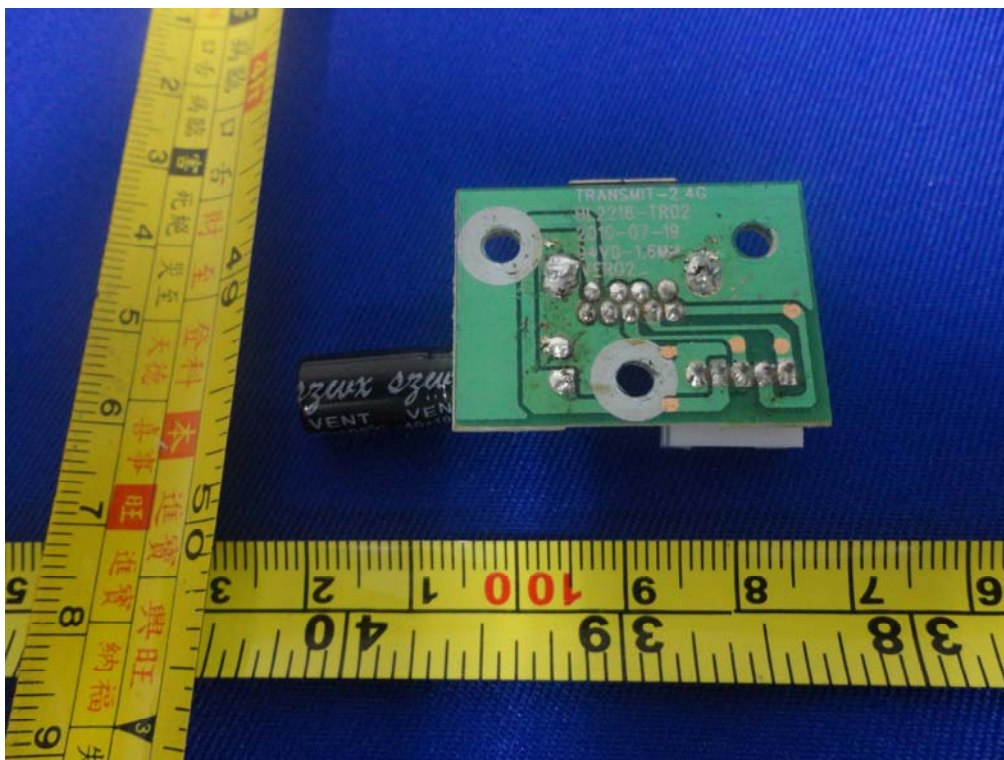


Figure 16
Inside of the EUT
Docking

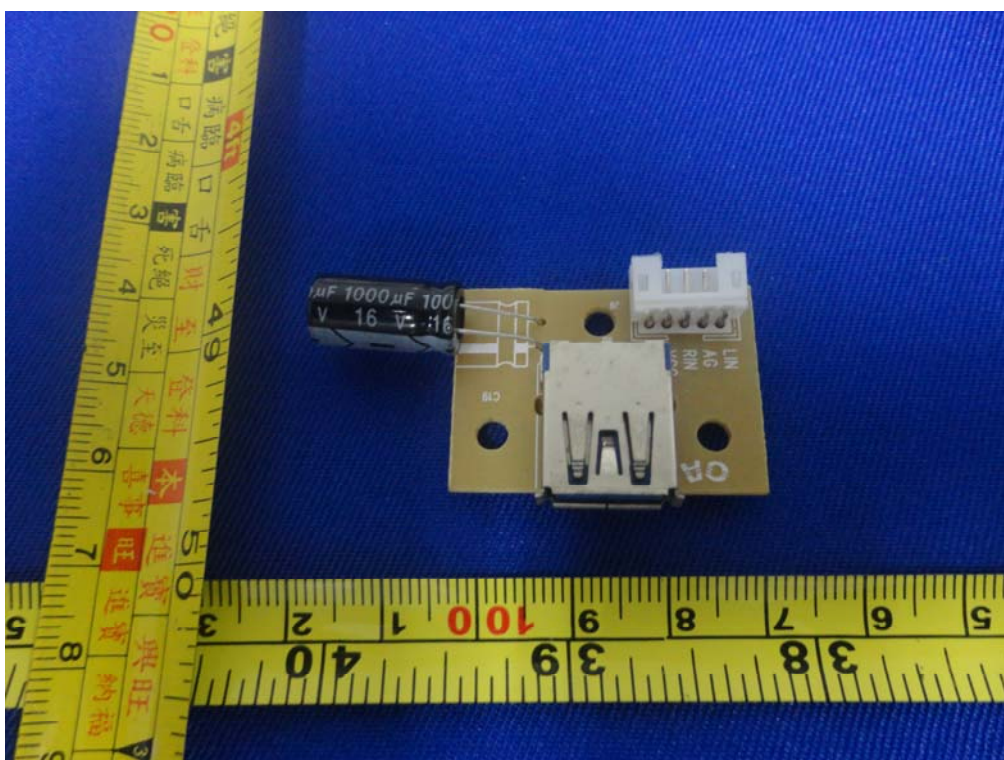


Figure 17
Inside of the EUT
Docking

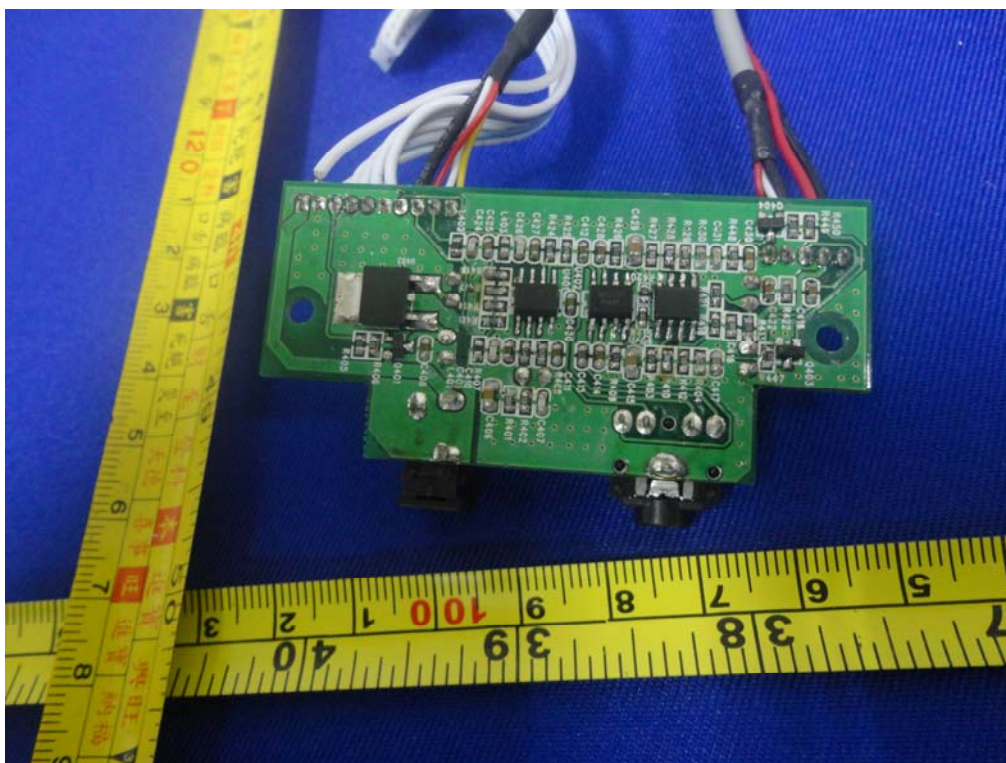


Figure 18
Inside of the EUT
Docking

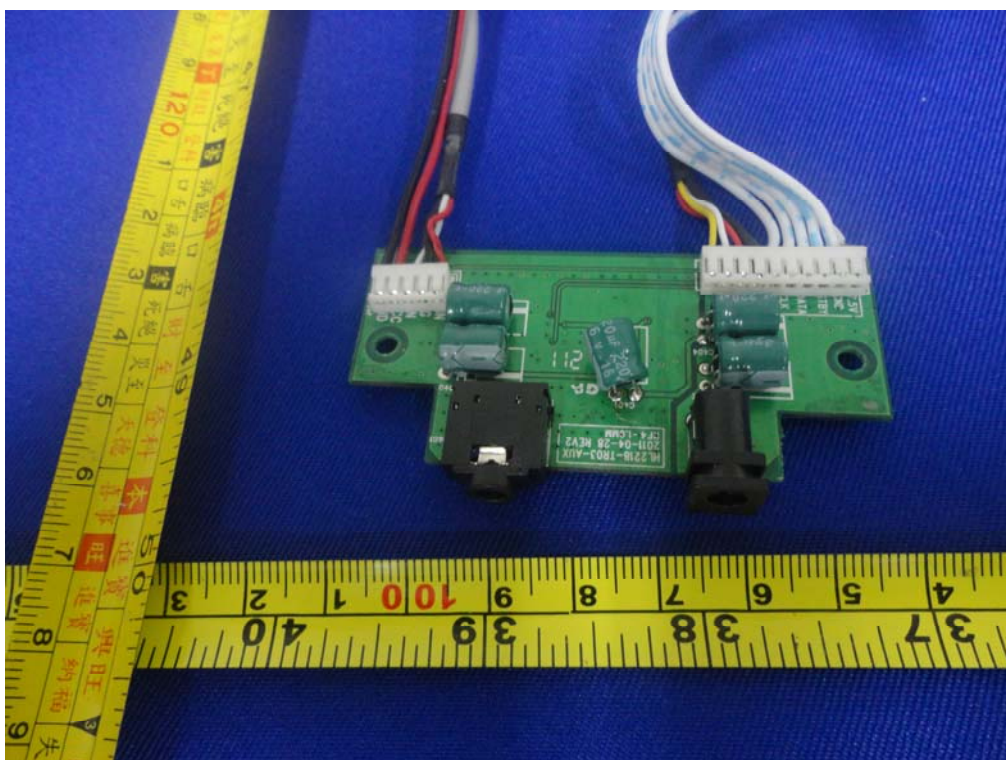


Figure 19
General Appearance of the Adapter
GP303E-075-240



Figure 20
General Appearance of the Adapter
GP303E-075-240



Figure 21
General Appearance of the Adapter
PSEC075240V W



Figure 22
General Appearance of the Adapter
PSEC075240V W

