

FCC 47 CFR PART 15 SUBPART B
TEST REPORT
For

Spracht

Portable Conferencing + Wireless Speaker

Model No.: BS669, BLU NOTE + CHAT, WS-4012

Prepared for : Spracht
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Date of Test : July 23, 2012 to July 24, 2012
Date of Report : July 24

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TEST REPORT DESCRIPTION

Applicant : Spracht
 Manufacturer : Shenzhen Addition Audio Science & Technology CO., LTD.
 EUT : Portable Conferencing + Wireless Speaker
 Model No. : BS669, BLU NOTE + CHAT, WS-4012
 Operation Voltage: DC 5V/1A powered by adapter(input: AC100-240V, 50/60Hz)
 or Battery DC3.7V 1800mAh

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B & FCC / ANSI C63.4-2009

The device described above is tested by Global Certification Corp. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Global Certification Corp. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Global Certification Corp.

Date of Test : July 23, 2012 to July 24, 2012



Approved & Authorized Signer :

Alex Chou

Alex Chou / Manager

1. SUMMARY OF TEST RESULT

EMISSION		
Description of Test Item	Standard & Limits	Results
Conducted Disturbance at Mains Terminals	FCC Part 15, Subpart B, Class B ANSI C63.4: 2009	Pass
Radiated Disturbance	FCC Part 15, Subpart B, Class B ANSI C63.4: 2009	Pass

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	Portable Conferencing + Wireless Speaker
Model Number	:	BS669, BLU NOTE + CHAT, WS-4012
Operation Voltage	:	DC 5V/1A powered by adapter(input: AC100-240V, 50/60Hz) or Battery DC3.7V 1800mAh
Applicant	:	Spracht
Address	:	2672 Bayshore Parkway, Bldg 900 Mountain View, CA 94043, USA
Manufacturer	:	Shenzhen Addition Audio Science & Technology CO., LTD.
Address	:	Mingzhuo Industry Park, Guangming Main Street, Guangming New District, Shenzhen, China
Date of Received	:	July 26, 2012
Date of Test	:	July 26, 2012 to July 27, 2012

2.2. Description of Support Device

PC	:	Manufacturer: LENOVO M/N: 9702 S/N: L3C4410 CE, FCC: DOC
LCD Monitor	:	Manufacturer: LENOVO M/N: 9227-AE6 S/N: 4M0293084302824 CE, FCC: DOC
Keyboard	:	Manufacturer: LENOVO M/N: KU-0225 S/N: 0585494 CE, FCC: DOC
Mouse	:	Manufacturer: LENOVO M/N: MO28UOL S/N: 44G7862 068 CE, FCC: DOC

2.3. Measurement Uncertainty

Conducted Emission Uncertainty	:	2.8dB
Radiated Emission Uncertainty	:	3.3dB (3m Chamber)

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. For Power Line Conducted Emission Measurement

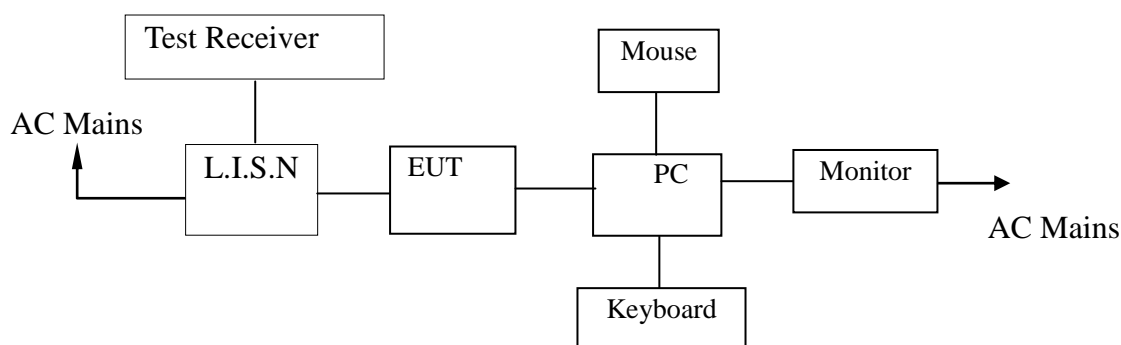
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	100162	May 29, 2012	1 Year
2.	L.I.S.N.	Rohde & Schwarz	ENV216	3560.6550.12	May 29, 2012	1 Year
3.	50Ω Coaxial Switch	Anritsu	MP59B	6100214550	N/A	N/A
4.	Voltage Probe	Rohde & Schwarz	TK9416	N/A	May 29, 2012	1 Year
5.	I.S.N	Rohde & Schwarz	ENY22	1109.9508.02	May 29, 2012	1 Year

3.2. For Radiated Emission Measurement(3m Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	May 29, 2012	1 Year
2.	Pre-Amplifier	HP	8447D	2944A07999	May 29, 2012	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	142	May 29, 2012	1 Year
4.	Loop Antenna	ARA	PLA-1030/B	1029	May 29, 2012	1 Year
5.	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	May 29, 2012	1 Year
6.	Horn Antenna	Schwarzbeck	BBHA 9120	D143	May 29, 2012	1 Year
7.	Cable	Schwarzbeck	AK9513	ACRX1	May 29, 2012	1 Year
8.	Cable	Rosenberger	N/A	FP2RX2	May 29, 2012	1 Year
9.	Cable	Schwarzbeck	AK9513	CRPX1	May 29, 2012	1 Year
10.	Cable	Schwarzbeck	AK9513	CRRX2	May 29, 2012	1 Year

4. POWER LINE CONDUCTED EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



(EUT: Portable Conferencing + Wireless Speaker)

4.2. Measuring Standard

FCC Part 15, Subpart B, Class B ANSI C63.4: 2009

4.3. Power Line Conducted Emission Limits (Class B)

Frequency (MHz)	Limit (Db μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0

NOTE1-The lower limit shall apply at the transition frequencies.
 NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

4.4. EUT Configuration on Measurement

The following equipments are installed on Conducted Emission Measurement to meet FCC requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Portable Conferencing + Wireless Speaker
 Model Number : BS669, BLU NOTE + CHAT, WS-4012

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown on Section 4.1.

4.5.2. Turn on the power of all equipments.

4.5.3. Let the EUT work in connecting to PC and measure it.

4.6. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the FCC regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver ESCS30) is set at 9kHz in 150kHz~30MHz and 200Hz in 9kHz~150kHz.

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

4.7. Measuring Results

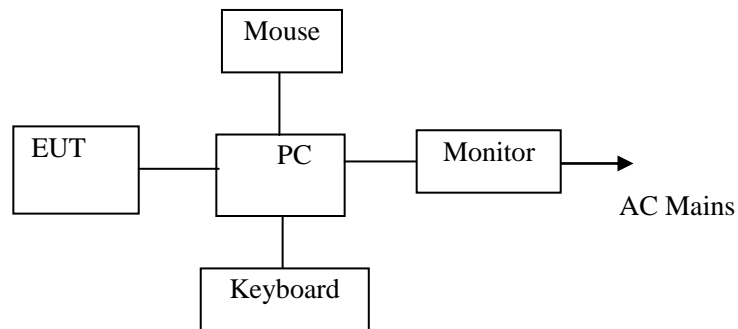
PASS.

Please refer to Appendix I.

5. RADIATED EMISSION MEASUREMENT

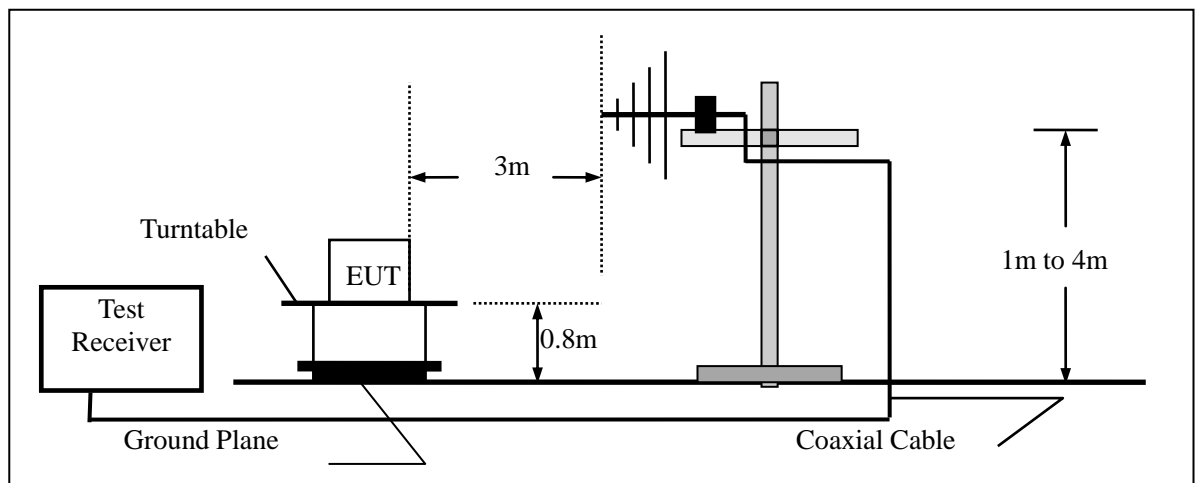
5.1. Block Diagram of Test Setup

5.1.1. Block diagram of connection between the EUT and simulators



(EUT: Portable Conferencing + Wireless Speaker)

5.1.2. Block diagram of test setup (In chamber)



(EUT: Portable Conferencing + Wireless Speaker)

5.2. Measuring Standard

FCC Part 15, Subpart B, Class B ANSI C63.4: 2009

5.3. Radiated Emission Limits (Class B)

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

Frequency (GHz)	Distance (Meters)	Field Strengths Limit	
		Average ($\text{dB}\mu\text{V/m}$)	Peak ($\text{dB}\mu\text{V/m}$)
1~15	3	54	74

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.

5.4. EUT Configuration on Measurement

The FCC Class B regulations test method must be used to find the maximum emission during radiated emission measurement.

EUT : Portable Conferencing + Wireless Speaker
 Model Number : BS669, BLU NOTE + CHAT, WS-4012
 Test Voltage : AC 120V, 60Hz (AC mains of PC) ,
 DC 3.7V (via built-in Li-ion battery)

5.5. Operating Condition of EUT

5.5.1. Setup the EUT as shown on Section 5.1.

5.5.2. Turn on the power of all equipments.

5.5.3. Let the EUT work in following mode and measure it.

5.6. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) and horn antenna are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the Receiver (ESU26) is set at 120kHz.

5.7.Measuring Results

PASS.

The frequency range from 30MHz to 1GHz is investigated.

Please refer to Appendix II.

6. PHOTOGRAPHS

6.1.Photos of Conducted Emission Measurement

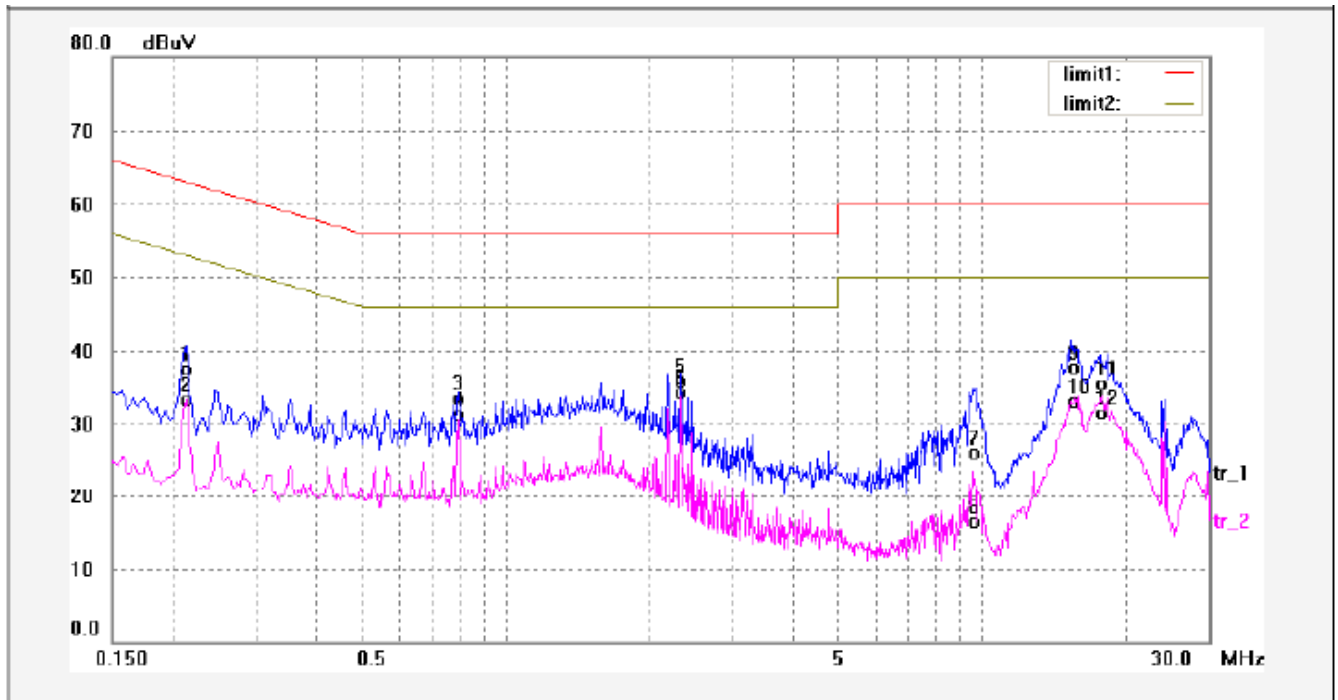


6.2.Photos of Radiation Emission Measurement



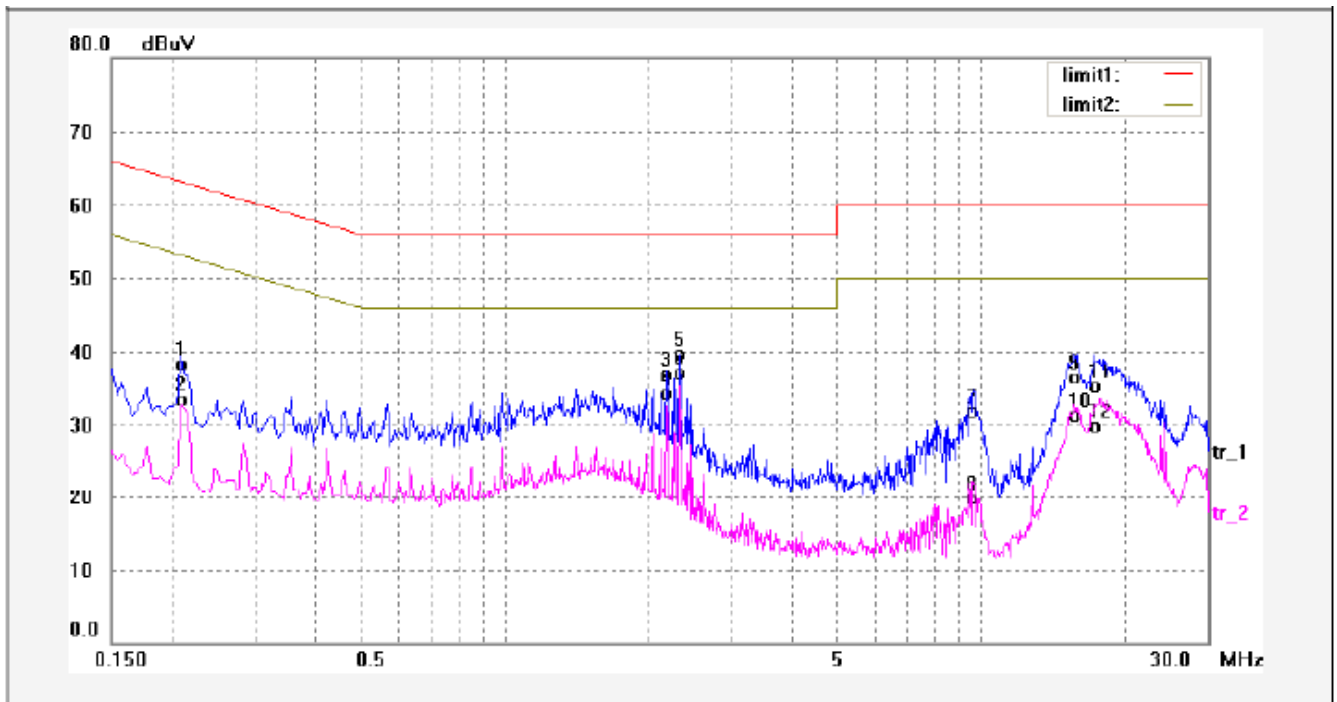
APPENDIX I

Live Line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.2140	26.10	10.66	36.76	63.04	-26.28	QP	
2	0.2140	21.88	10.66	32.54	53.04	-20.50	AVG	
3	0.7980	20.49	12.17	32.66	56.00	-23.34	QP	
4	0.7980	18.35	12.17	30.52	46.00	-15.48	AVG	
5	2.3420	22.93	12.26	35.19	56.00	-20.81	QP	
6	2.3420	21.33	12.26	33.59	46.00	-12.41	AVG	
7	9.7540	13.37	11.93	25.30	60.00	-34.70	QP	
8	9.7540	3.74	11.93	15.67	50.00	-34.33	AVG	
9	15.4260	24.79	12.12	36.91	60.00	-23.09	QP	
10	15.4260	20.27	12.12	32.39	50.00	-17.61	AVG	
11	17.7300	22.28	12.36	34.64	60.00	-25.36	QP	
12	17.7300	18.29	12.36	30.65	50.00	-19.35	AVG	

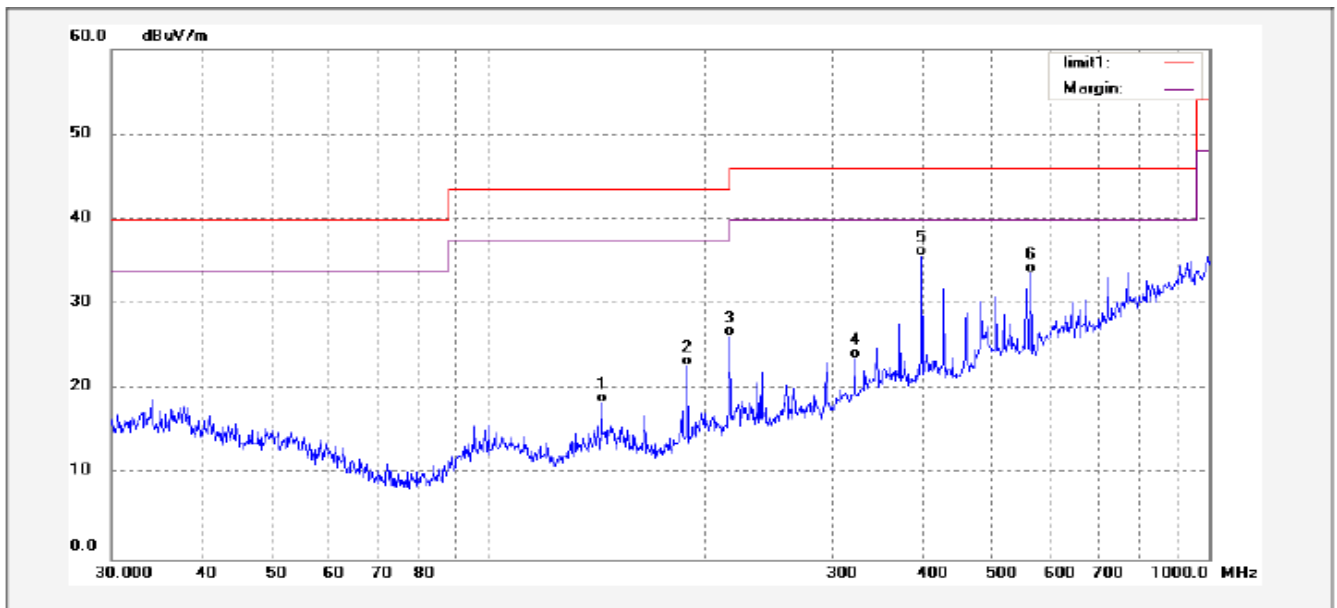
Neutral Line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.2100	26.87	10.66	37.53	63.20	-25.67	QP	
2	0.2100	22.05	10.66	32.71	53.20	-20.49	AVG	
3	2.1980	23.95	12.25	36.20	56.00	-19.80	QP	
4	2.1980	21.18	12.25	33.43	46.00	-12.57	AVG	
5	2.3420	26.62	12.26	38.88	56.00	-17.12	QP	
6	2.3420	24.02	12.26	36.28	46.00	-9.72	AVG	
7	9.6700	19.11	11.92	31.03	60.00	-28.97	QP	
8	9.6700	7.24	11.92	19.16	50.00	-30.84	AVG	
9	15.7500	23.62	12.13	35.75	60.00	-24.25	QP	
10	15.7500	18.35	12.13	30.48	50.00	-19.52	AVG	
11	17.3819	22.07	12.44	34.51	60.00	-25.49	QP	
12	17.3819	16.58	12.44	29.02	50.00	-20.98	AVG	

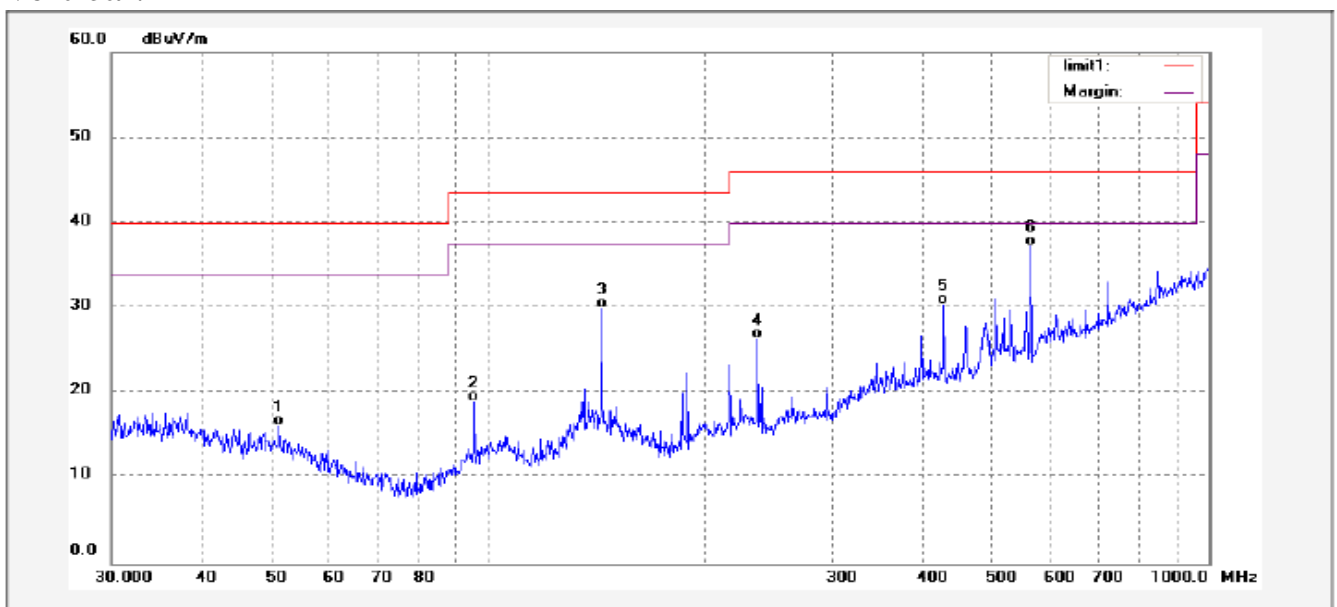
APPENDIX II

Horizontal:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	143.7760	6.95	11.39	18.34	43.50	-25.16	QP	
2	189.1076	8.72	14.02	22.74	43.50	-20.76	QP	
3	216.1197	10.90	15.33	26.23	46.00	-19.77	QP	
4	322.5896	4.88	18.78	23.66	46.00	-22.34	QP	
5	399.6981	14.73	20.91	35.64	46.00	-10.36	QP	
6	565.9776	10.14	23.48	33.62	46.00	-12.38	QP	

Vertical:

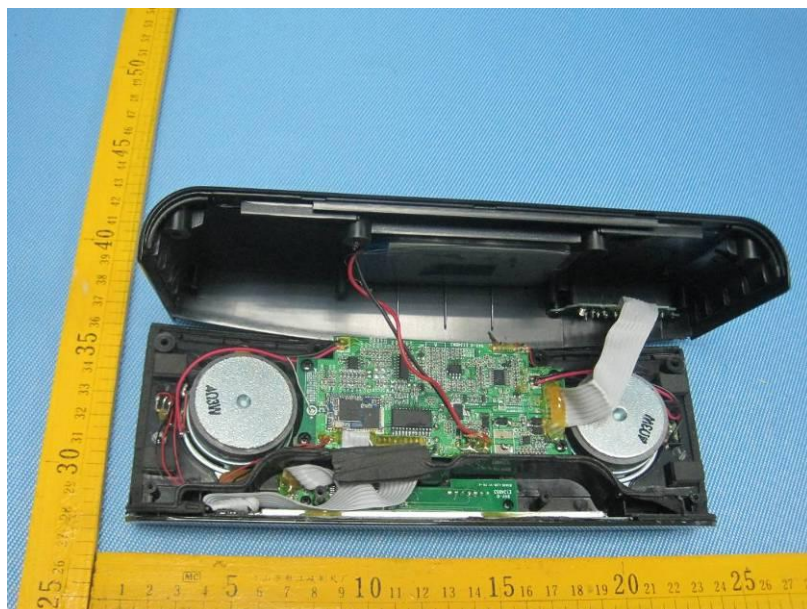


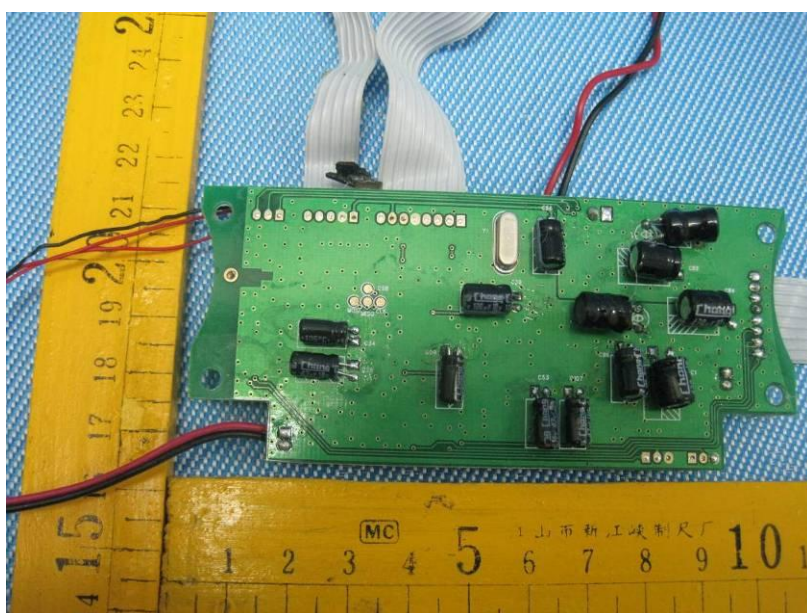
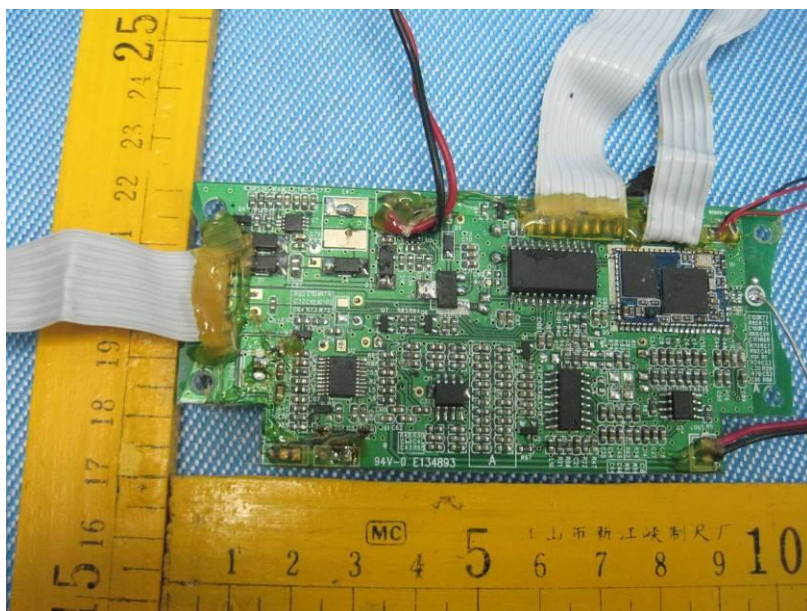
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	51.3557	1.59	14.52	16.11	40.00	-23.89	QP	
2	95.6485	5.70	13.26	18.96	43.50	-24.54	QP	
3	143.7760	18.53	11.39	29.92	43.50	-13.58	QP	
4	236.7928	10.71	15.66	26.37	46.00	-19.63	QP	
5	428.7960	9.87	20.50	30.37	46.00	-15.63	QP	
6	565.9776	13.80	23.48	37.28	46.00	-8.72	QP	

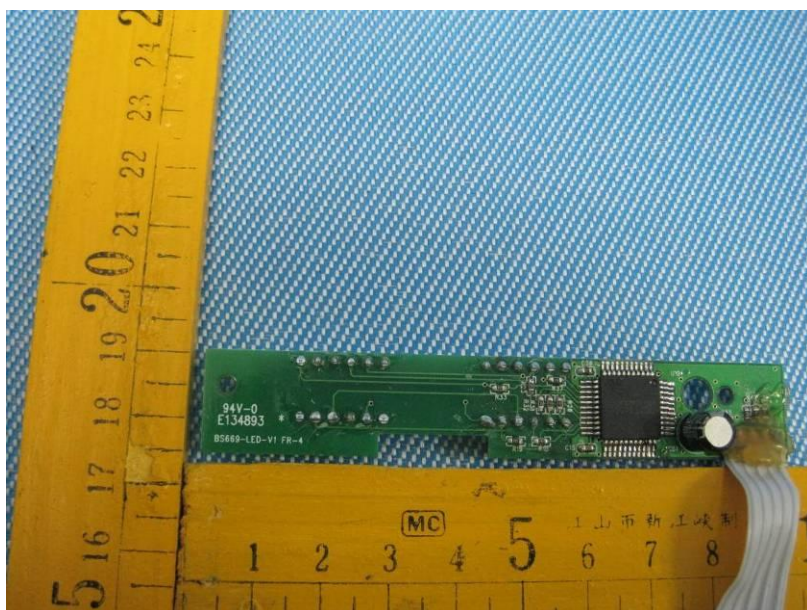
APPENDIX III (Photos of EUT)

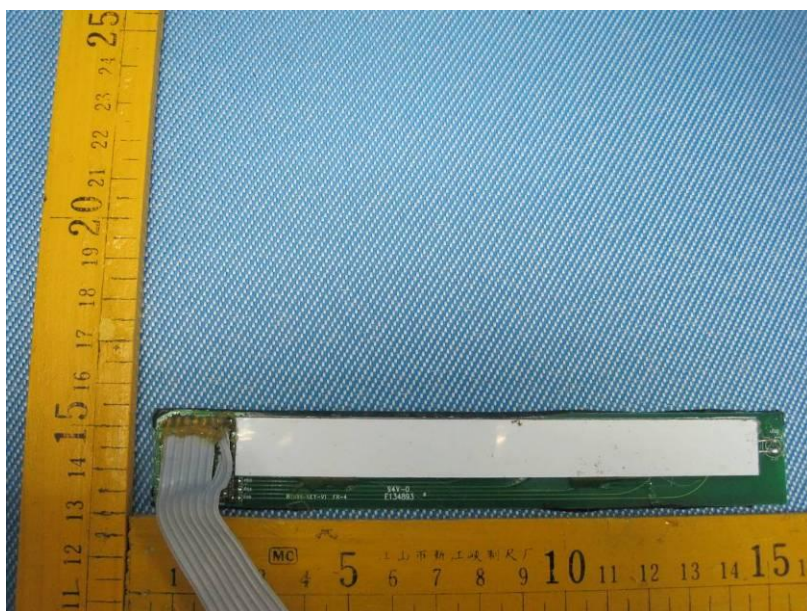


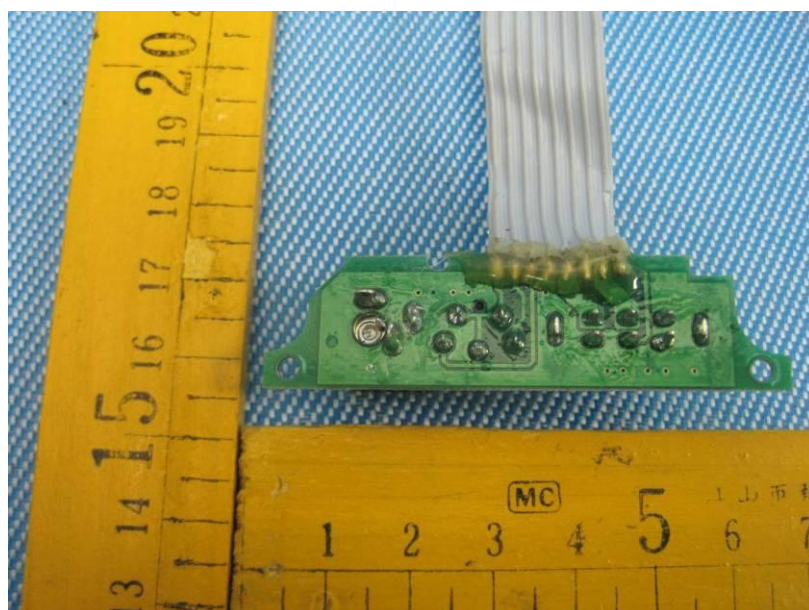
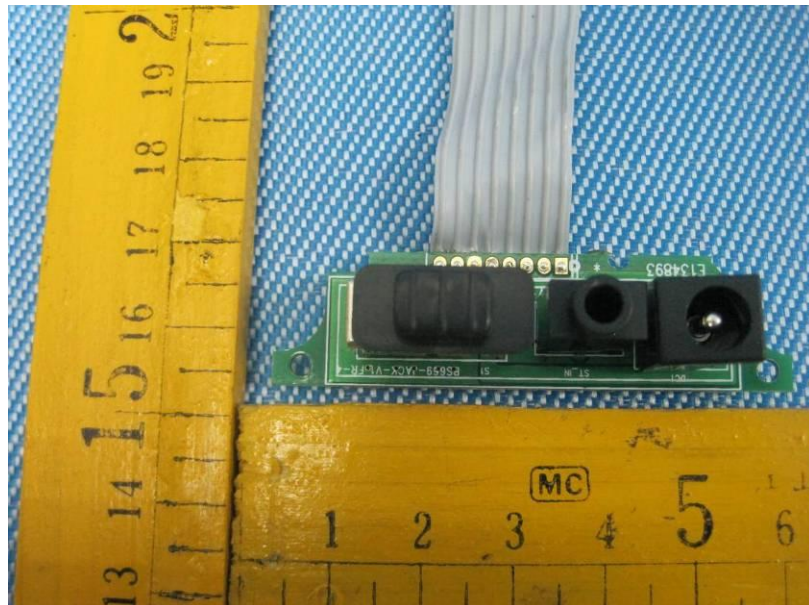












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