Test Lab
Cert 2951.01

TEST REPORT

Applicant	SHENZHEN YUXINXIN ELECTRONICS CO., LTD
Address	Building7, XinXing Industrial Park, FuYong Town Bao'An District, ShenZhen City, GuangDong, China

Manufacturer or Supplier	SHENZHEN YUXINXIN ELECTRONICS CO., LTD
Address	Building7, XinXing Industrial Park, FuYong Town Bao'An District, ShenZhen City, GuangDong, China
Product	Wireless Headphone(RX)
Brand Name	YUXINXIN
Model	FM8898(EW208)-RX
Date of tests	Jan. 09 ~ Jan. 12, 2012

The submitted sample of the above equipment has been tested for according to the requirements of the following standards:

☒ **FCC Part 15, Subpart B, Class B**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Glyn He Project Engineer / EMC Department	Approved by Sam Tung Manager/ EMC Department
Glyn	Date: Jan. 12, 2012

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Jan. 12, 2012

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China

Tel.: +86 769 8593 5656
Fax: +86 769 8593 1080
Email: customerservice.dg@cn.bureauveritas.com

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart B			
Standard Section	**Test Item**	**Result**	**Remark**
15.107	Conducted Emission Test	N/A	N/A
15.109	Radiated Emission Test (30MHz ~ 1GHz)	PASS	Meets Class B Limit Minimum passing margin is –4.27 dB at 932.10 MHz
	Radiated Emission Test (Above 1GHz)	PASS	Meets Class B Limit Minimum passing margin is –5.95 dB at 5600 MHz

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44dB
Radiated emissions	30MHz ~ 200MHz	3.19dB
	200MHz ~1000MHz	3.21dB
	1GHz ~ 18GHz	2.26dB

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless Headphone(RX)
MODEL NO.	FM8898(EW208)-RX,
ADDITIONAL MODEL & MODEL DIFFERENCE:	FM8898H(EW209)-RX, YU-2.4G-01(RX), YU-RF1009(RX), YU-FM8899(RX), YU-FM1082(RX), YU-FM1083(RX), YU-FM1101(RX), YU-RF1102(RX), YU-RF8138(RX), YU-YX2011(RX), YU-RF8139(RX), YU-RF8149(RX), YU-RF868(RX), YU-FM2010(RX), YU-FM2011(RX), YU-RF8138(RX),YU-RF8168(RX), YU-RF8169(RX), YU-RF2108(RX), YU-RF2168(RX), YU-RF2358(RX), YU-RF2688(RX), YU-RF2698(RX) Only differences are the trade name and model No. for trading purpose.
FCC ID	ZRH2012010603A
NOMINAL VOLTAGE	DC 3V By battery
MODULATION TYPE	FM
OPERATING FREQUENCY	915.5MHz, 916.0MHz, 916.5MHz
ANTENNA TYPE	Integral Antenna
I/O PORTS	Audio input Port
DATA CABLE SUPPLIED	Audio line: Unshielded, Detachable 1.0m

NOTE:

1 For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2 For the test results, the EUT had been tested with all conditions. But only the worst case was showed in test report.

2.2 DESCRIPTION OF TEST MODES

The EUT was tested under the following modes. And the final worst mode was marked in boldface and recorded in this report.

◆ **Radiated Disturbance Test**

Test Mode
Receiving
Audio In

◆ **The final worst mode**

Test Mode
Receiving

2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	iPhone 4	APPLE	A1332	81124KCJA4S	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

3 EMISSION TEST

3.1 RADIATED EMISSION MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.109)

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
30 – 88	90	39.1	100	40.0
88 – 216	150	43.5	150	43.5
216 – 960	210	46.4	200	46.0
960 – 1000	300	49.5	500	54.0

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

Note: (1) The lower limit shall apply at the transition frequencies.

(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).

(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

3.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Spectrum Analyzer Agilent	E4446A	MY46180622	Apr. 25, 11	Apr. 25, 12
Spectrum Analyzer Agilent	E7405A	MY45118807	May 25,11	May 25,12
Test Receiver ROHDE & SCHWARZ	ESVD	847398/003	May 25,11	May 25,12
Test software	ADT_Radiated_V7.6.15	N/A	N/A	N/A
Bilog Antenna TESEQ	CBL 6111D	27089	Jul 24,11	Jul 24,12
Horn Antenna EMCO	3117	00062558	Nov.07,11	Nov.07,12
10mSemi-anechoic Chamber ETS-LINDGREN	21.4m*12.1m*8.8m	NSEMC006	May 02,11	May 02,12
RF Cable IMRO	IMRO-400	10m Cable 1#10m	May 02,11	May 02,12
RF Cable IMRO	IMRO-400	10m Cable 2#3m	May 02,11	May 02,12
Signal Amplifier EMCI	EMC330	980095	Nov 07,11	Nov 07,12
Signal Amplifier EMCI	EMC0140045	980102	Nov 07,11	Nov 07,12
Spectrum Analyzer HP	8593E	3448U00806	May 25,11	May 25,12
RF Cable DRAKA	M06/25-RG102	10m Cable 2#	May 02,11	May 02,12

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA and NIM/CHINA.
2. The test was performed in Chamber 10m.

3.1.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4 (section 12).

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters Semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The EUT position(X. Y. Z) were checked and worse case was happened in Y position. So Y position was chose for find measurement. The EUT was tested in Chamber Site.

f. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

g. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz

NOTE:

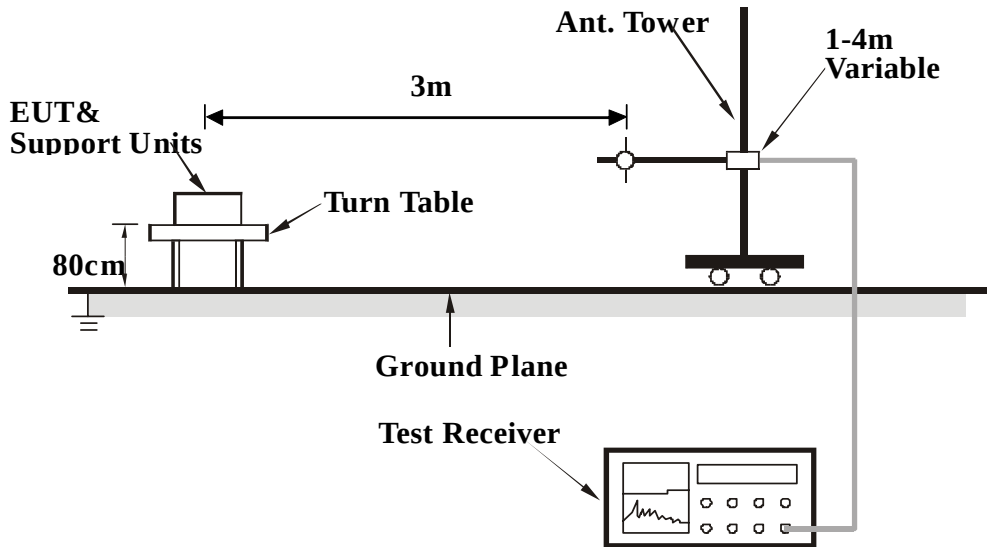
1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.
3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the receiver antenna.
4. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
5. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
6. Margin value = Emission level – Limit value.

3.1.4 DEVIATION FROM TEST STANDARD

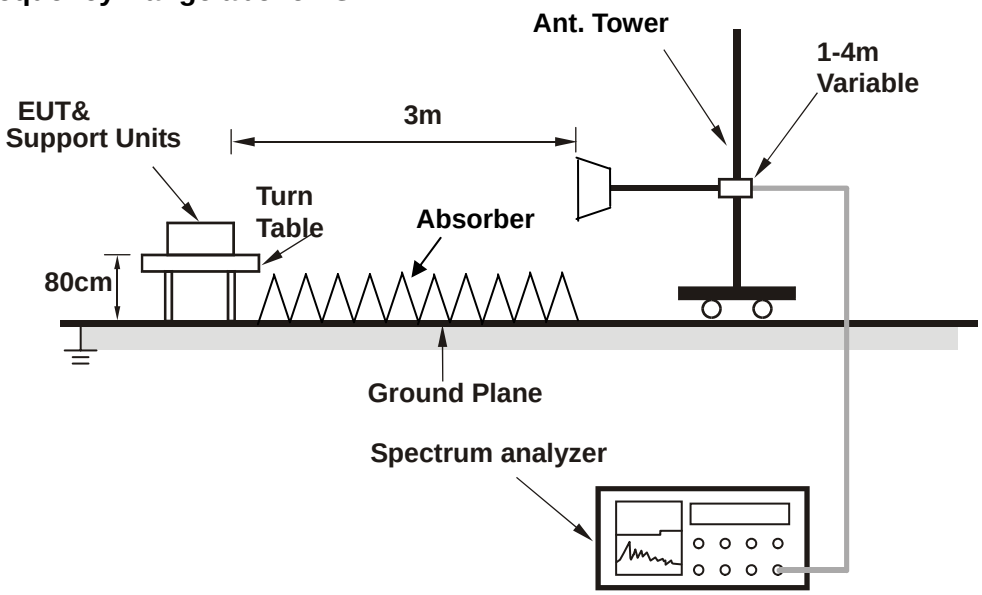
No deviation

3.1.5 TEST SETUP

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



3.1.6 EUT OPERATING CONDITIONS

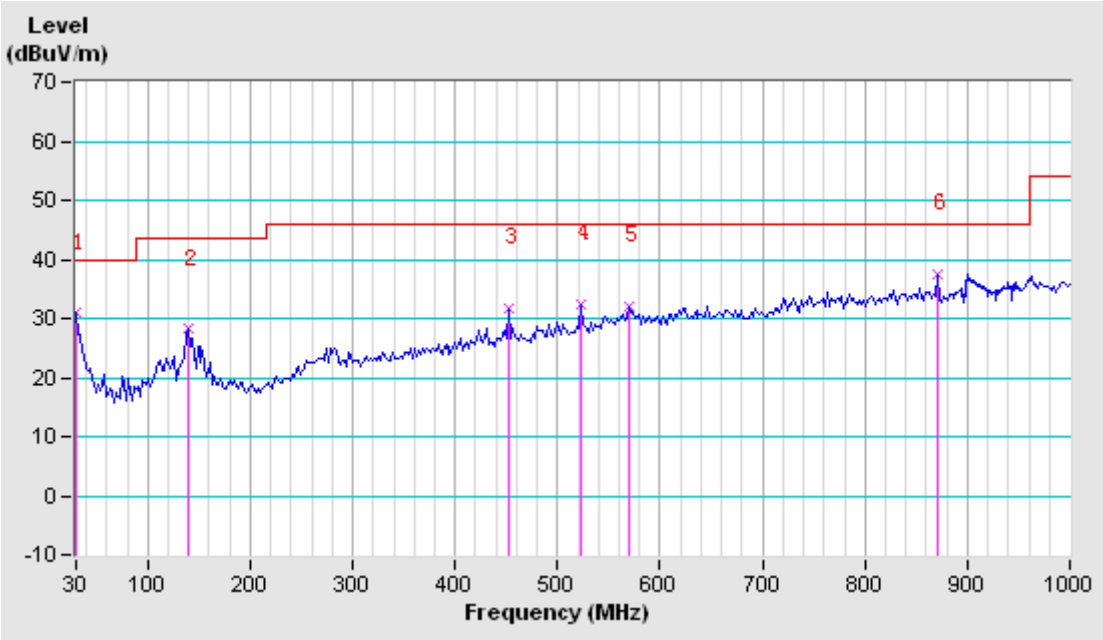
a. Turned on the power and connected of all equipment.

b. EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.

3.1.7 TEST RESULTS (BELOW 1GHz)

TEST MODE	Receiving	**FREQUENCY RANGE**	30-1000MHz
INPUT POWER	DC 3V By Battery	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	20 deg. C, 47% RH,	**TESTED BY**: Glyn	

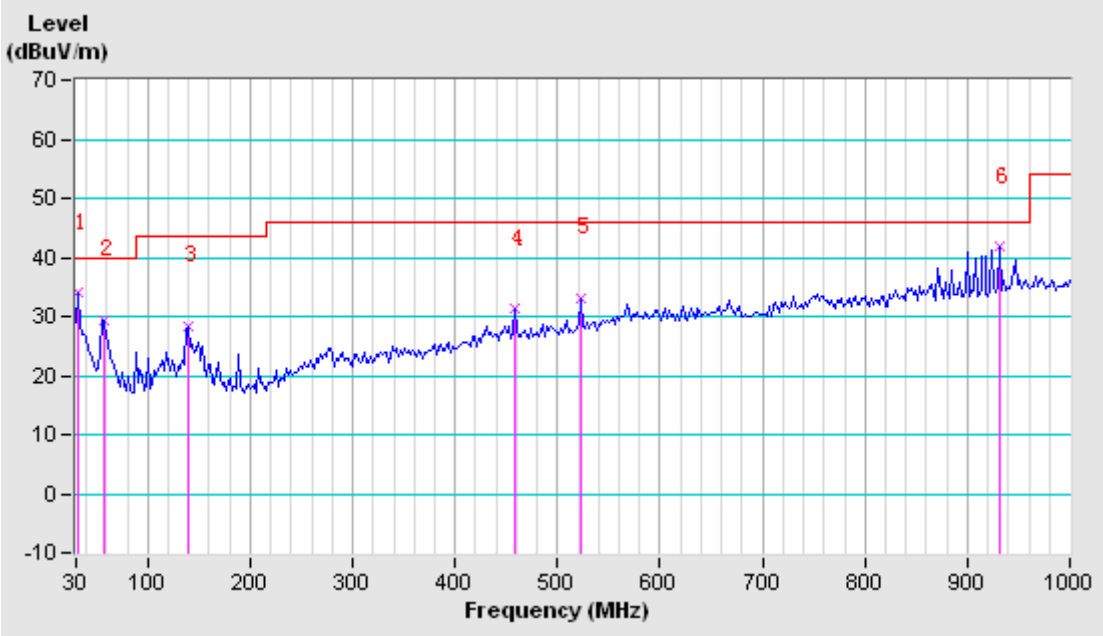
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	30.00	19.93	10.99	30.92	40.00	-9.08	210	56
2	138.64	12.68	15.50	28.18	43.50	-15.32	163	182
3	452.92	19.14	12.57	31.71	46.00	-14.29	180	263
4	522.76	20.58	11.74	32.32	46.00	-13.68	200	212
5	569.32	22.40	9.64	32.04	46.00	-13.96	216	360
6	870.02	26.02	11.56	37.58	46.00	-8.42	200	220



REMARKS: The emission levels of other frequencies were very low against the limit.

TEST MODE	Receiving	**FREQUENCY RANGE**	30-1000MHz
INPUT POWER	DC 3V By Battery	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	20 deg. C, 47% RH	**TESTED BY**: Glyn	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	31.94	18.82	15.14	33.96	40.00	-6.04	100	135
2	57.16	8.78	20.56	29.34	40.00	-10.66	100	205
3	138.64	12.68	15.62	28.30	43.50	-15.20	100	112
4	458.74	19.33	11.86	31.19	46.00	-14.81	100	65
5	522.76	20.58	12.44	33.02	46.00	-12.98	100	240
6	**932.10**	**27.52**	**14.21**	**41.73**	**46.00**	**-4.27**	**100**	**25**

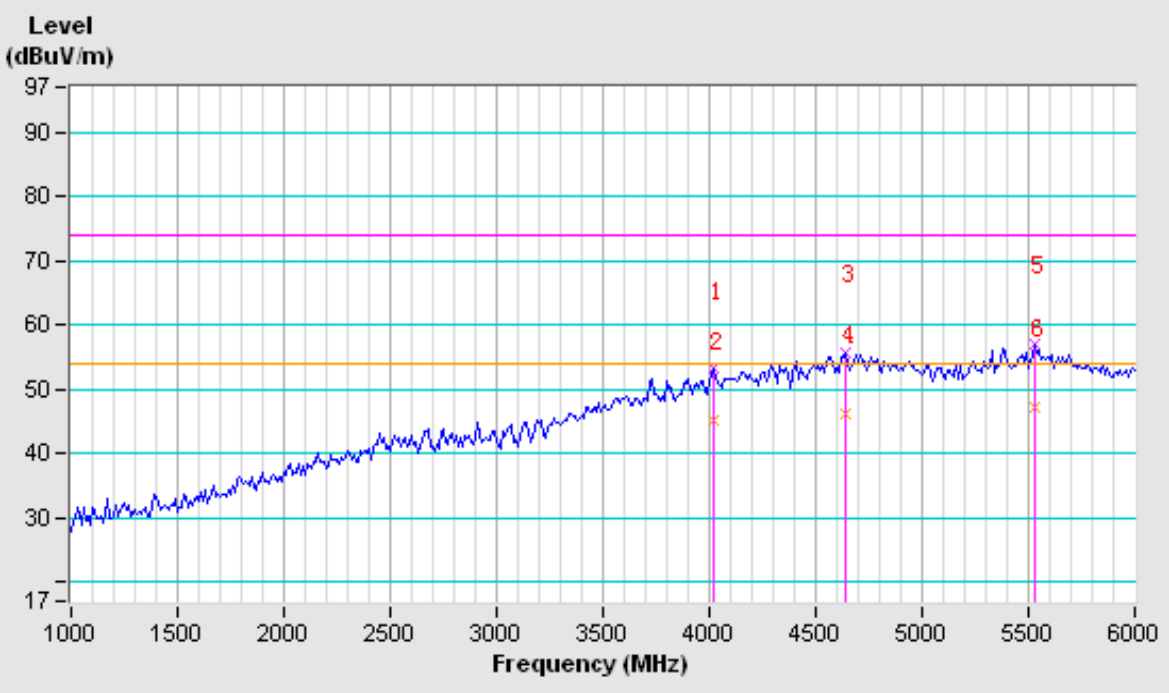


REMARKS: The emission levels of other frequencies were very low against the limit.

3.1.8 TEST RESULTS (ABOVE 1GHz)

TEST MODE	Receiving	**FREQUENCY RANGE**	1000-6000MHz
INPUT POWER	DC 3V By Battery	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Peak/Average, 1MHz
ENVIRONMENTAL CONDITIONS	20 deg. C, 47% RH,	**TESTED BY**: Glyn	

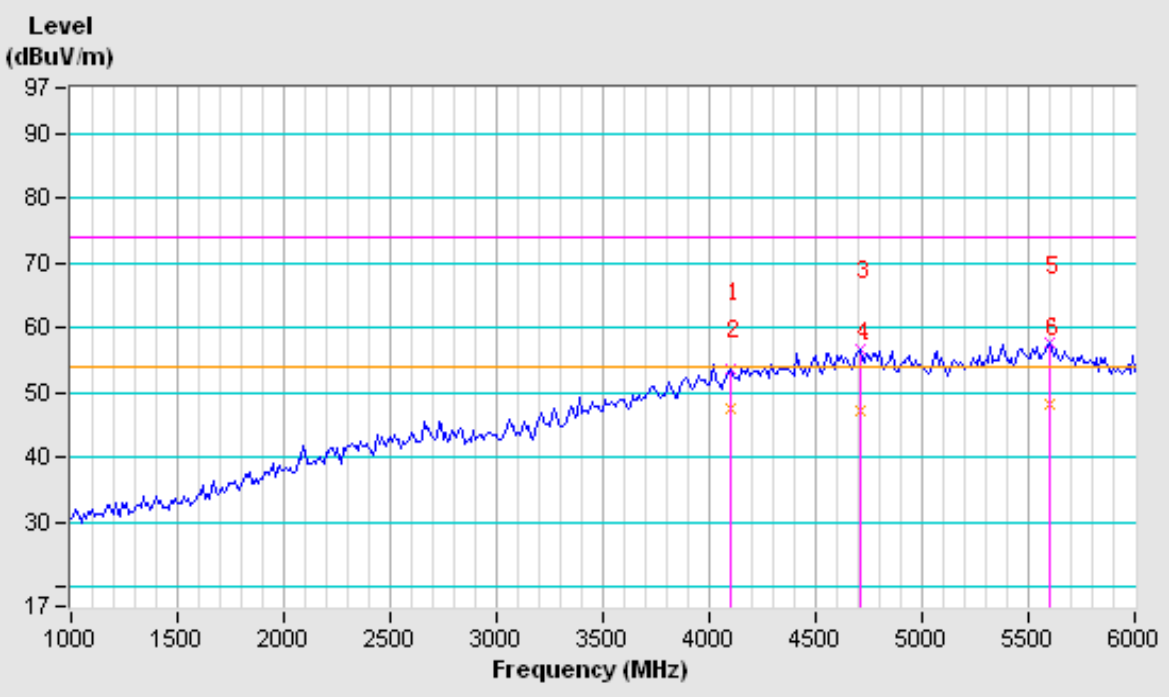
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	4020.00(PK)	46.69	6.44	53.13	74.00	-20.87	302	55
2	4020.00(AV)	46.69	-1.53	45.16	54.00	-8.84	302	55
3	4640.00(PK)	49.30	6.30	55.60	74.00	-18.40	250	130
4	4640.00(AV)	49.30	-3.02	46.28	54.00	-7.72	250	130
5	5530.00(PK)	50.48	6.45	56.93	74.00	-17.07	271	60
6	5530.00(AV)	50.48	-3.26	47.22	54.00	-6.78	271	60



REMARKS: The emission levels of other frequencies were very low against the limit.

TEST MODE	Receiving	**FREQUENCY RANGE**	1000-6000MHz
INPUT POWER	DC 3V By Battery	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Peak/Average, 1MHz
ENVIRONMENTAL CONDITIONS	20 deg. C, 47% RH	**TESTED BY**: Glyn	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	4100.00	47.13	6.38	53.51	74.00	-20.49	100	263
2	4100.00	47.13	0.41	47.54	54.00	-6.46	100	263
3	4710.00	49.28	7.32	56.60	74.00	-17.40	100	200
4	4710.00	49.28	-2.05	47.23	54.00	-6.77	100	200
5	5600.00	50.26	7.25	57.51	74.00	-16.49	100	168
6	**5600.00**	**50.26**	**-2.21**	**48.05**	**54.00**	**-5.95**	**100**	**168**



REMARKS: The emission levels of other frequencies were very low against the limit.

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

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