

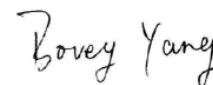
## FCC RADIO TEST REPORT

**Report Reference No.** ..... : NTEK-2011NT1009327E

Compiled by (+ signature) ..... : Tom Zhang



Approved by (+ signature) ..... : Bovey Yang



**Applicant's name** ..... : BELINK Company Limited.

Address..... : 469 Soi Prawit lae Pluaen, Prachachuen Rd, Lad Yao, Chatuchak, Bangkok 10900, Thailand.

**Manufacture's Name** ..... : Rosstone Audio Technology Co.,Ltd.

Address..... : 11 Huangqishan Road YongHeEconomicZone, GuangZhou,China.

### Test specification:

Standard ..... : FCC Part15.249

Test procedure ..... : ANSI C63.4-2003

### Test item description

Product name ..... : Wireless Audio Presentation

**FCC ID** ..... : **Z9XP20**

Trademark ..... : PZent

Model and/or type reference : P20

Rating(s) ..... : DC 3.7V

### Testing Laboratory information:

Testing Laboratory Name ..... : NTEK Testing Technology Co., Ltd

Address ..... : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao ' an District, Shenzhen P.R. China.

This device described above has been tested by NTEK Testing Technology Co., Ltd, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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**Testing** ..... :

Date of receipt of test item ..... : 10 Oct. 2011

Date (s) of performance of tests ..... : 10 Oct. 2011 ~14 Nov. 2011

Date of Issue ..... : 14 Nov. 2011

Test Result..... : **Pass**

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## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249)			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.249	Radiated Spurious Emission	Pass	
15.249	Occupied Bandwidth	Pass	

## 1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd

Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

FCC FRN Registration Nombre:238937; IC Registration Nombre:9270A-1

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	Radiated Emission Test	$\pm 3.17\text{dB}$
3	RF power,conducted	$\pm 0.16\text{dB}$
4	Spurious emissions,conducted	$\pm 0.21\text{dB}$
5	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
6	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Audio Presentation	
Trade Name	PZent	
Model Name	P20	
OEM Brand/Model Name	N/A	
Model Difference	N/A	
Product Description	The EUT is a Wireless Audio Presentation	
	Operation Frequency:	2403~2477 MHz
	Modulation Type:	GFSK
	Antenna Designation:	Printed ANT
	Antenna Gain(Peak)	1.0 dBi
	EIRP	95.51dbuv/m@3m
Channel List	Please refer to the Note 2.	
Power Source	DC 3.7V by battery	
Connecting I/O Port(s)	Please refer to the User's Manual	
Products Covered	N/A	
EUT Modification(s)	N/A	

Note:

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

2.

Channel	Frequency (MHz)
01	2403
02	2405
03	2407
.....	.....
36	2473
37	2475
38	2477

3.

Table for Filed Antenna

Ant .	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Printed Antenna	NA	1.0	Antenna

## 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	CH1
Mode 2	CH19
Mode 3	CH38

For Conducted Emission	
Final Test Mode	Description
-	"N/A" denotes test is not applicable in this Test Report

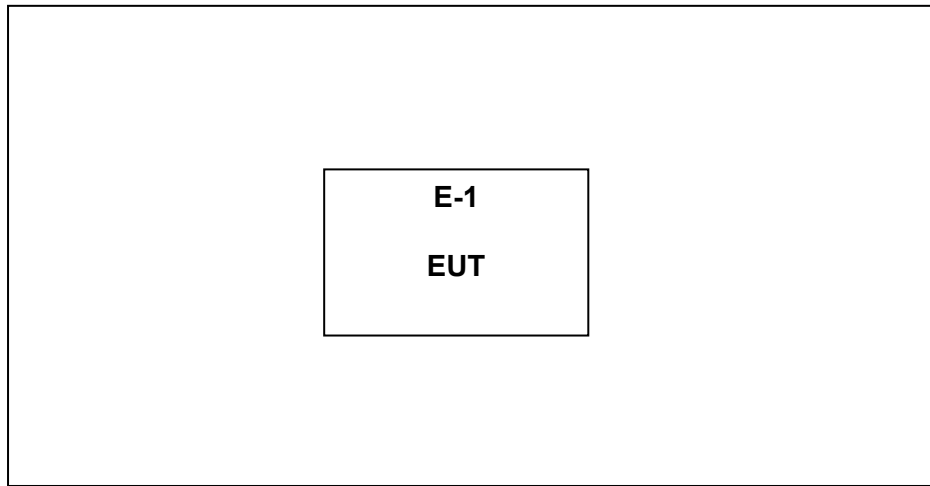
For Radiated Emission	
Final Test Mode	Description
Mode 1	CH1
Mode 2	CH19
Mode 3	CH38

Note:

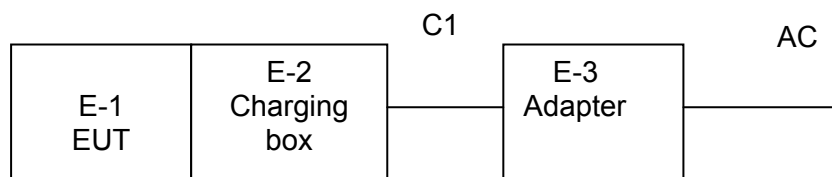
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The EUT use new battery.

## 2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated:



Conducted:





## 2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Wireless Audio Presentation	PZent	P20	N/A	EUT
E-2	Charging box	PZent	P20	N/A	
E-3	ADAPTER	PZent	P20	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C1	N/A	N/A	1.5m	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

## 2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

### Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	160400005	Jul. 06. 2012
2	Test Receiver	R&S	ESPI	101318	Jul. 06. 2012
3	Bilog Antenna	TESEQ	CBL6111D	31216	Jul. 06. 2012
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	Jul. 06. 2012
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	Jul. 06. 2012
6	Horn Antenna	EM	EM-AH-10180	2011071402	Jul. 06. 2012
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	Jul. 06. 2012
8	Amplifier	EM	EM-30180	060538	Jul. 06. 2012
9	Loop Antenna	ARA	PLA-1030/B	1029	Jul. 06. 2012
10	Power Meter	R&S	NRVS	100696	Jul. 06. 2012

### Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Receiver	R&S	ESCI	101160	Jul. 06. 2012
2	LISN	R&S	ENV216	101313	Jul. 06. 2012
3	LISN	EMCO	3816/2	00042990	Jul. 06. 2012
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	Jul. 06. 2012
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	Jul. 06. 2012
6	Absorbing clamp	R&S	MOS-21	100423	Jul. 06. 2012

### **3. TEST RESULT**

#### **3.1 ANTENNA REQUIREMENT**

##### **3.1.1 STANDARD REQUIREMENT**

15.203 requirement: For intentional device, according to 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.

##### **3.1.2 EUT ANTENNA**

The EUT antenna is integral Antenna. It comply with the standard requirement.

### 3.2 CONDUCTED EMISSION MEASUREMENT

#### 3.2.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5			66 - 56 *	56 - 46 *	CISPR
0.50 -5.0			56.00	46.00	CISPR
5.0 -30.0			60.00	50.00	CISPR

0.15 -0.5			66 - 56 *	56 - 46 *	LP002.
0.50 -5.0			56.00	46.00	LP002.
5.0 -30.0			60.00	50.00	LP002.

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

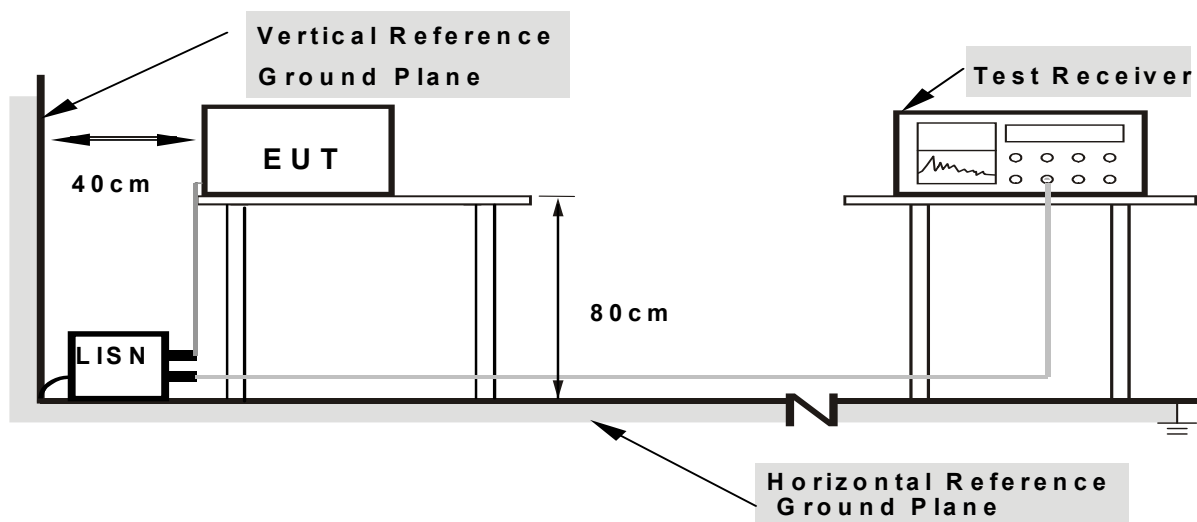
### 3.2.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.2.3 DEVIATION FROM TEST STANDARD

No deviation

### 3.2.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

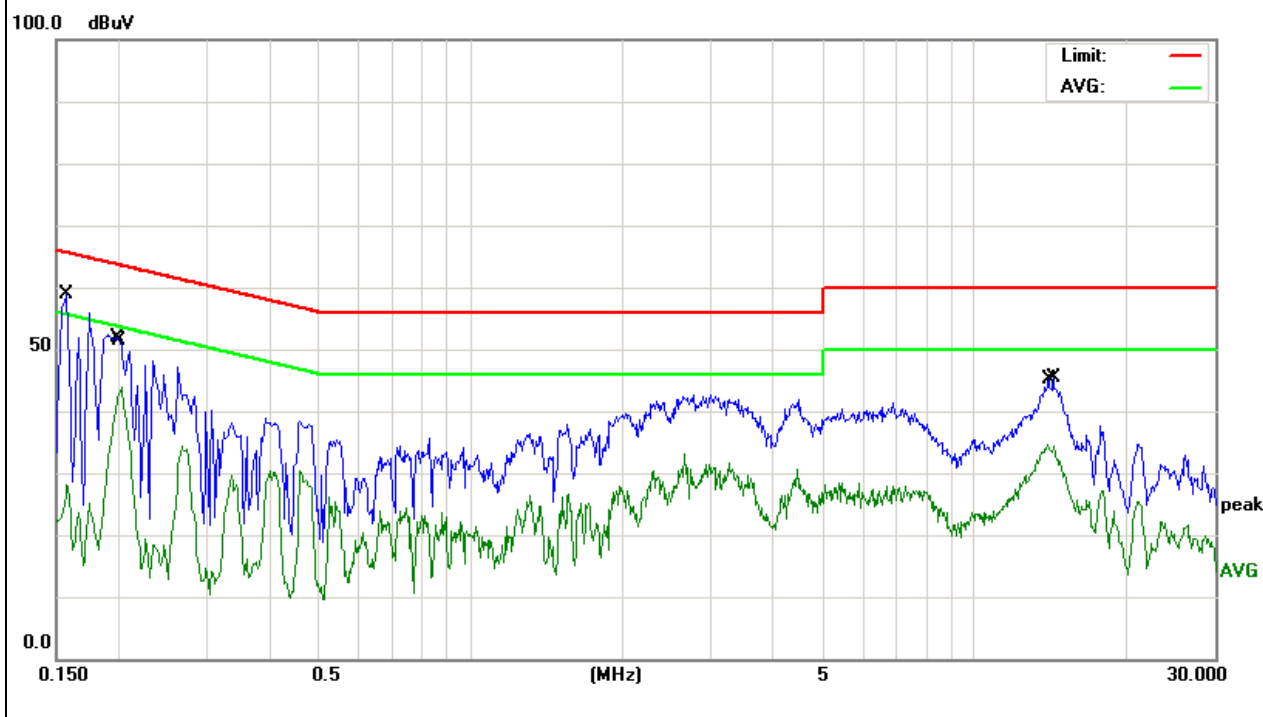
### 3.2.5 TEST RESULT

EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2011-11-8
Test Mode :	charging	Phase :	Line
Test Voltage :	DC 3.7V by battery		

Freq. (MHz)	Reading (dBuV)	Factor (dBuV)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
0.158	48.3	10.69	58.99	65.56	-6.57	QP
0.158	17.53	10.69	28.22	55.56	-27.34	AVG
0.1997	40.87	10.44	51.31	63.62	-12.31	QP
0.202	33.41	10.44	43.85	53.52	-9.67	AVG
13.958	23.81	10.7	34.51	50	-15.49	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. '\*' means the worst case

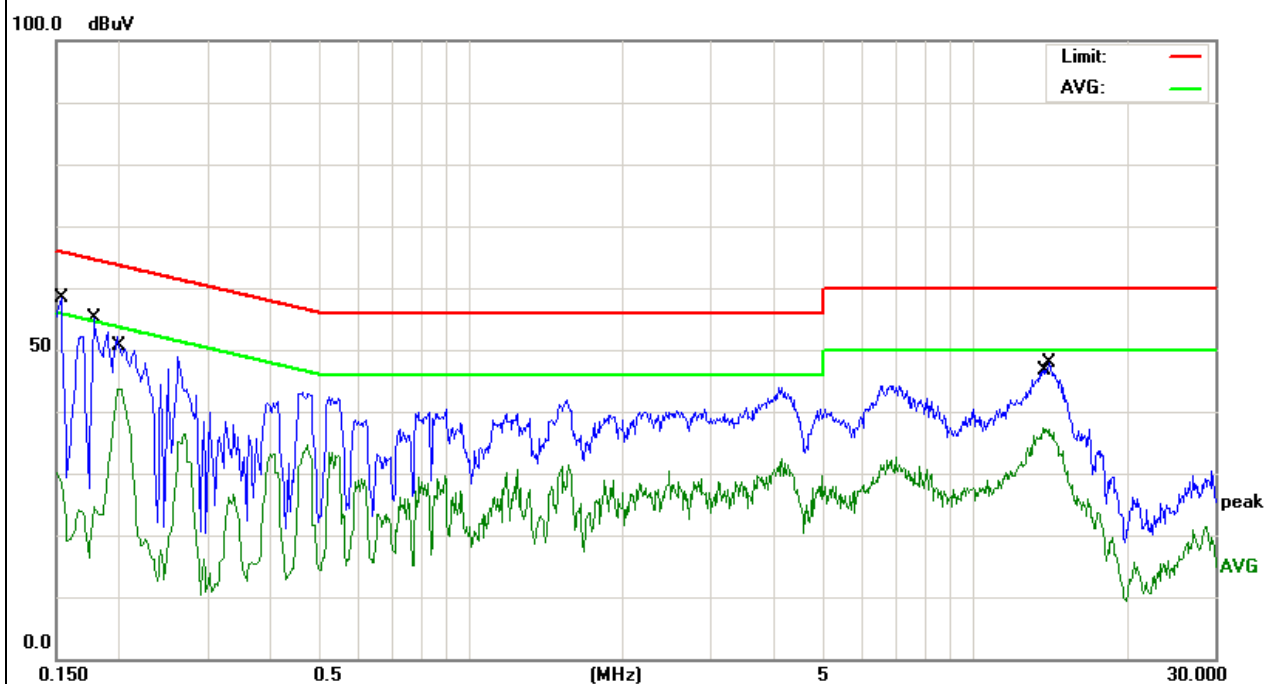


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2011-11-8
Test Mode :	Charging	Phase :	Neutral
Test Voltage :	DC 3.7V by battery		

Freq.	Reading	Factor	Measurement	Limit	Over	Detector
(MHz)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	
0.15	18.58	11.49	30.07	55.99	-25.92	AVG
0.1539	47.25	11.03	58.28	65.78	-7.5	QP
0.1796	42.52	10.38	52.9	64.5	-11.6	QP
0.202	33.28	10.43	43.71	53.52	-9.81	AVG
13.682	26.62	10.72	37.34	50	-12.66	AVG
14.098	37.23	10.72	47.95	60	-12.05	QP

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. '\*' means the worst case



### 3.3 RADIATED EMISSION MEASUREMENT

#### 3.3.1 Radiated Emission Limits ( FCC 15.209 )

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

#### LIMITS OF RADIATED EMISSION MEASUREMENT ( FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
2400 - 2483.5	50	500

Notes:

- (1) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP



**3.3.2 TEST PROCEDURE**

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

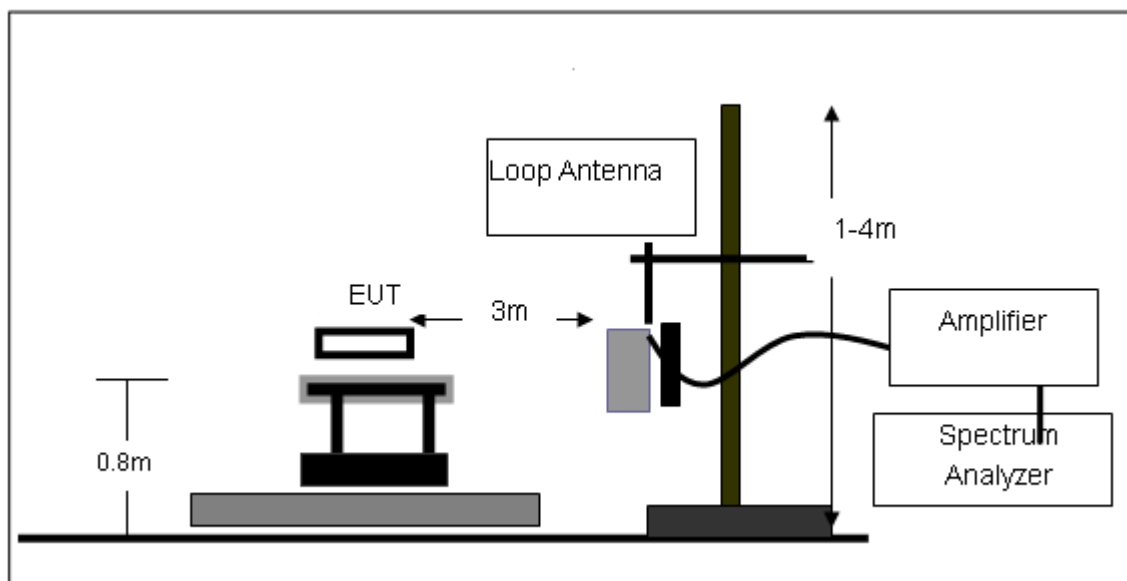
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

**3.3.3 DEVIATION FROM TEST STANDARD**

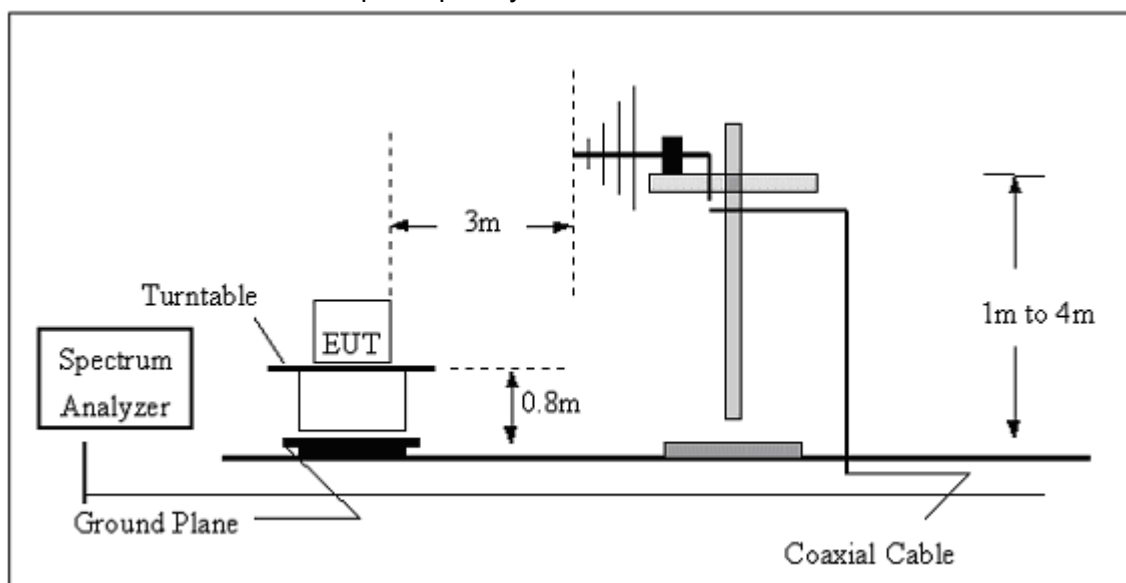
No deviation

### 3.3.4 TEST SETUP

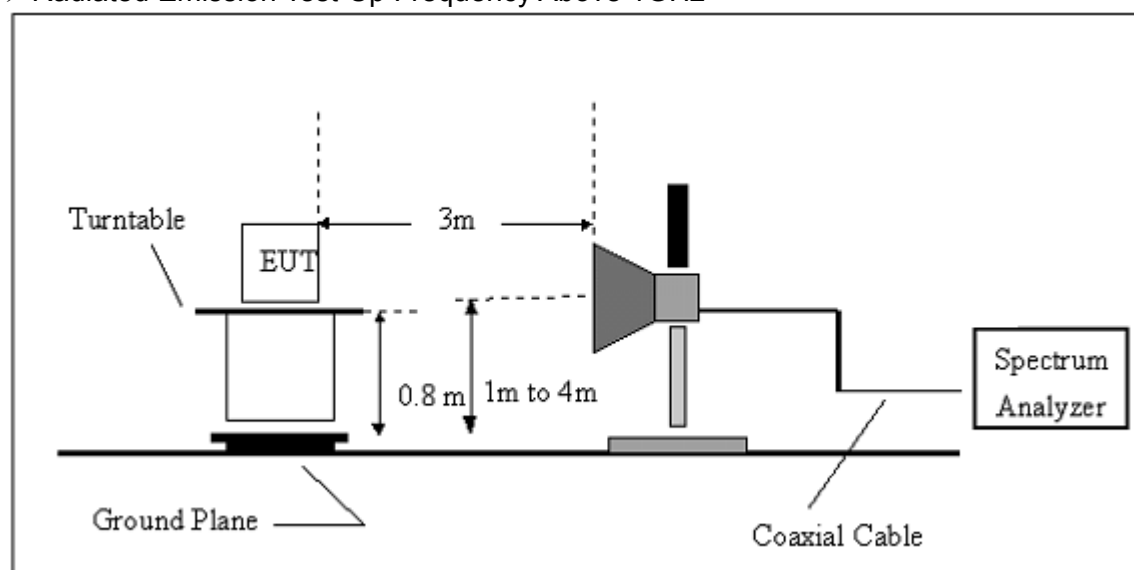
#### (A) Radiated Emission Test-Up Frequency Below 30MHz



#### (B) Radiated Emission Test-Up Frequency 30MHz~1GHz



## (C) Radiated Emission Test-Up Frequency Above 1GHz



### 3.3.5 TEST RESULTS (BLOW 30MHz)

EUT :	Wireless Audio Presentation	Model Name. :	P20
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC3.7V by battery
Test Mode :	DC 3.7V	Polarization :	--

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

#### 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 =  $20 \log (\text{specific distance}/\text{test distance})$ (dB);

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

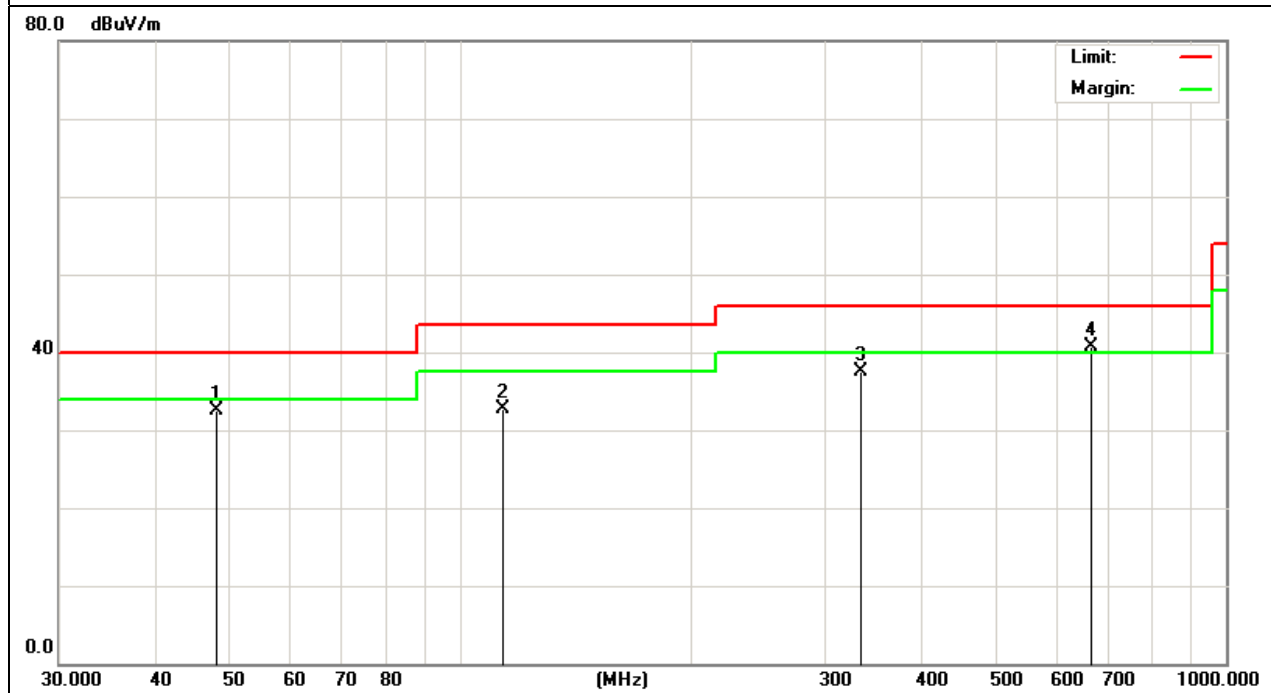
### 3.3.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX	Polarization :	Horizontal
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
48.0236	23.38	9.12	32.5	40	-7.5	Quasi-Peak
114.0235	21.02	11.63	32.65	43.5	-10.85	Quasi-Peak
332.5789	22.45	14.99	37.44	46	-8.56	Quasi-Peak
667.1486	18.74	22.01	40.75	46	-5.25	Quasi-Peak

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

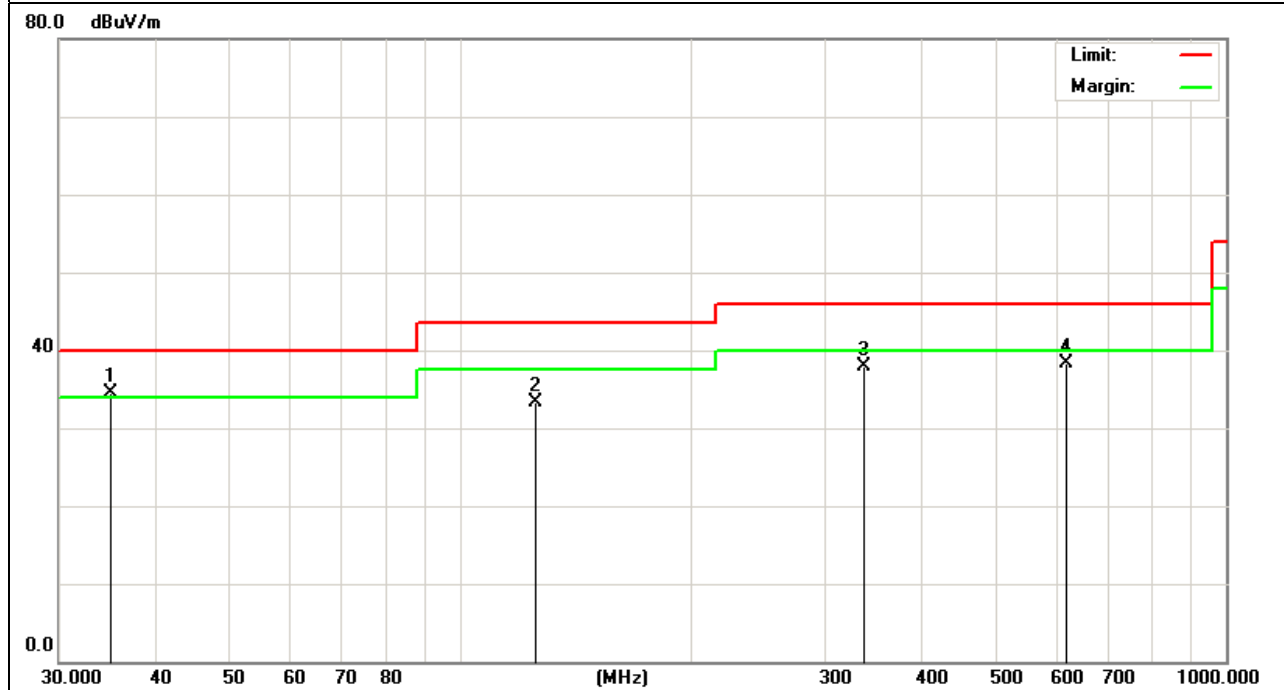


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX	Polarization :	Vertical
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
35.0236	18.85	15.65	34.5	40	-5.5	Quasi-Peak
125.48	21.45	11.91	33.36	43.5	-10.14	Quasi-Peak
336.7561	22.92	15.05	37.97	46	-8.03	Quasi-Peak
618.4689	16.25	22	38.25	46	-7.75	Quasi-Peak

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



### 3.3.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2403MHz	Polarization :	Horizontal
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2403	112.97	-17.46	95.51	114.0 0	-18.49	peak
2403	84.91	-17.46	67.45	94	-26.55	AVG
4806	64.76	-8.16	56.6	74	-17.4	peak
4806	56.41	-8.16	48.25	54	-5.75	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

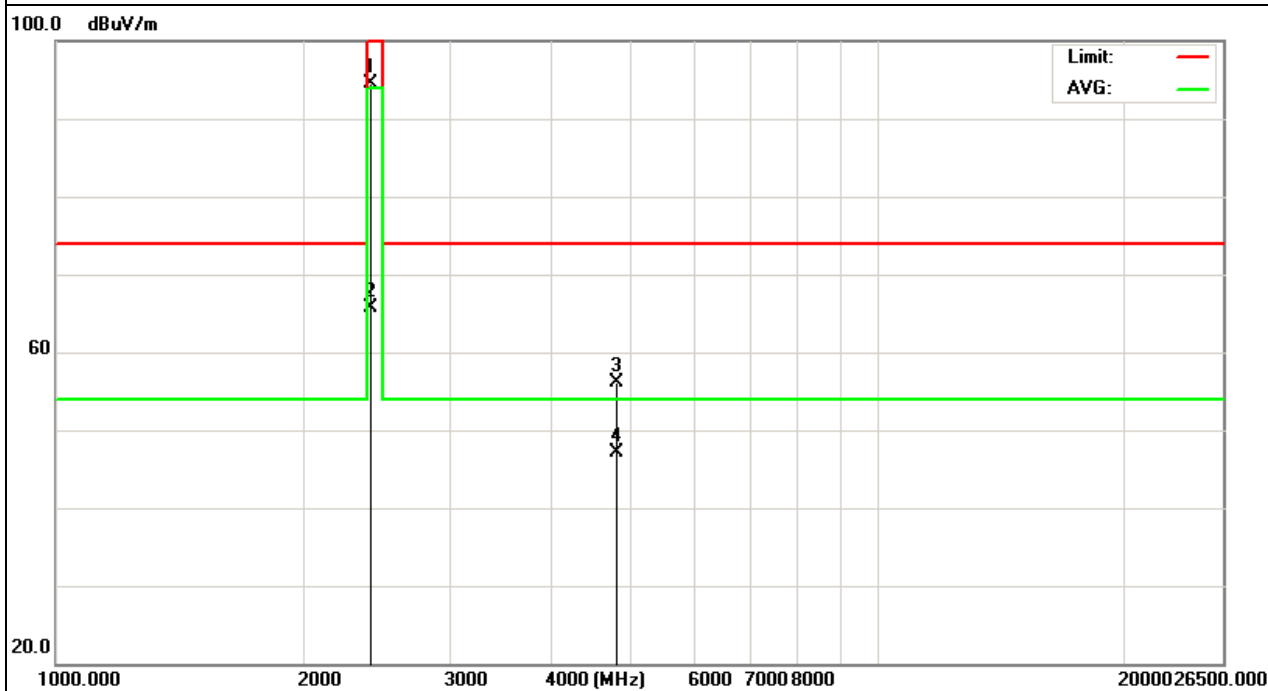


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2403MHz	Polarization :	Vertical
Test Power :	DC 3.7V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2403	111.91	-17.46	94.45	114.0 0	-19.55	peak
2403	83.12	-17.46	65.66	94	-28.34	AVG
4806	64.19	-8.16	56.03	74	-17.97	peak
4806	55.23	-8.16	47.07	54	-6.93	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



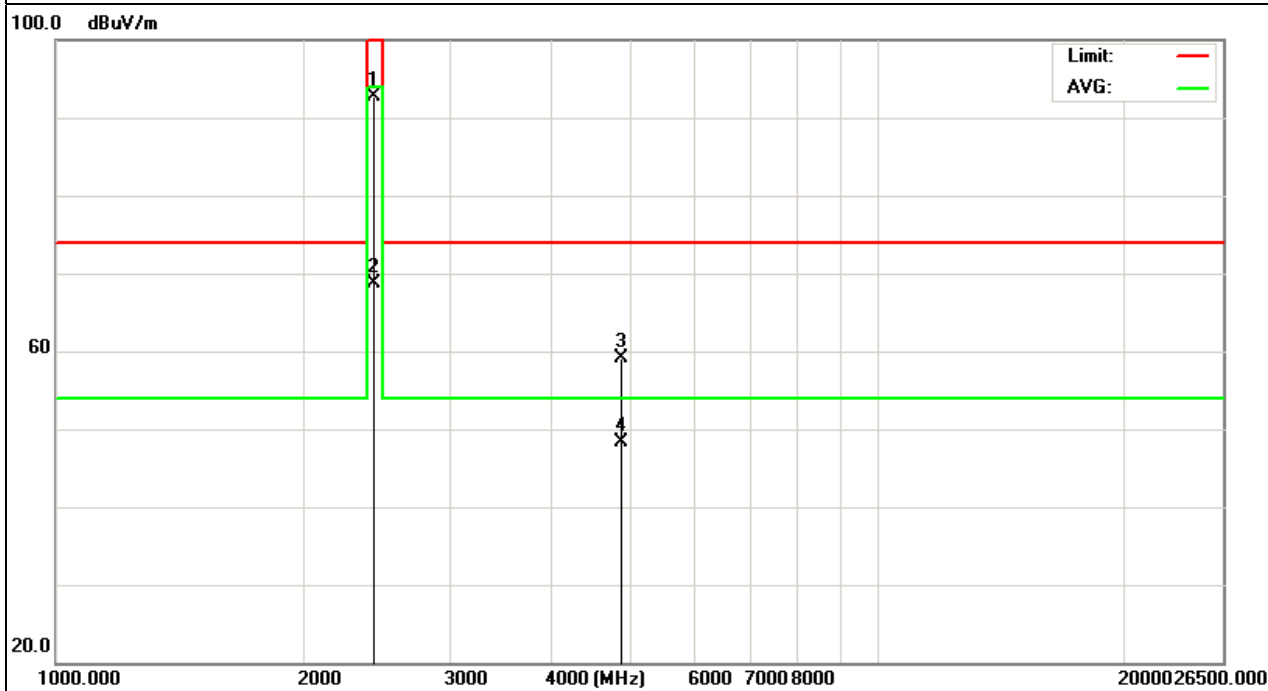


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2439MHz	Polarization :	Horizontal
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2439	110.12	-17.45	92.67	114.0 0	-21.33	peak
2439	86.21	-17.45	68.76	94	-25.24	AVG
4878	67.21	-8.2	59.01	74	-14.99	peak
4878	56.41	-8.2	48.21	54	-5.79	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

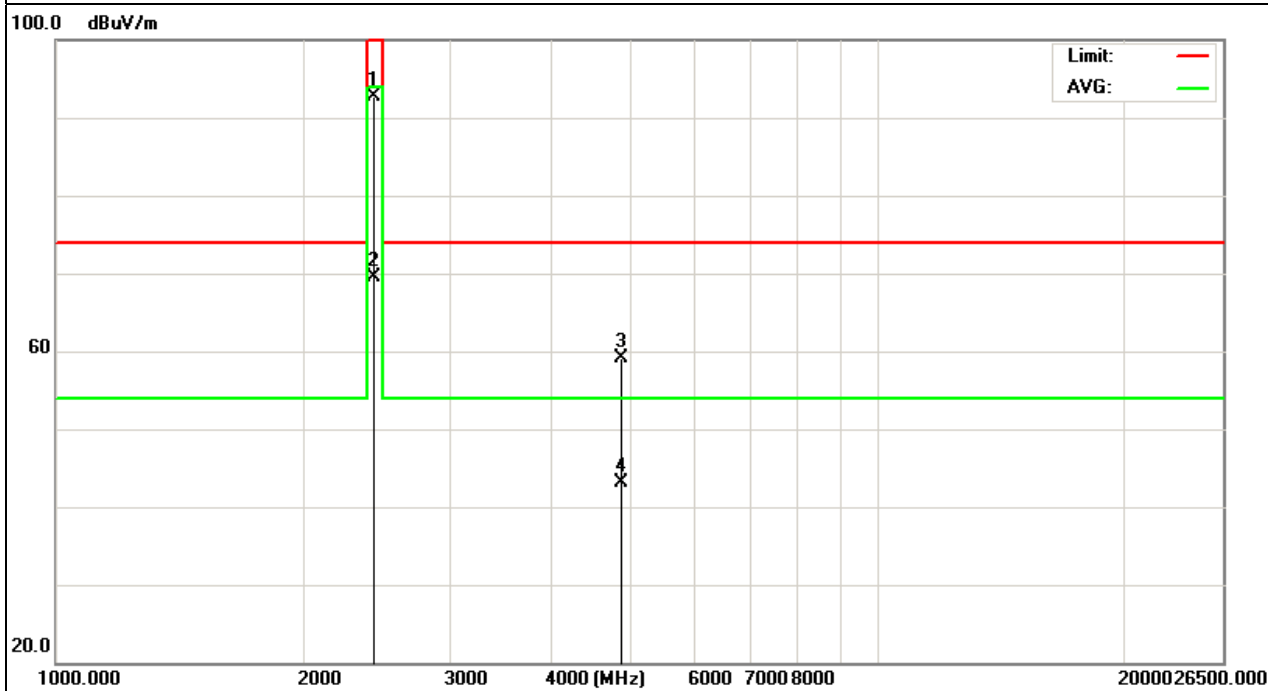


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2439MHz	Polarization :	Vertical
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2439	110.21	-17.45	92.76	114.0 0	-21.24	peak
2439	86.9	-17.45	69.45	94	-24.55	AVG
4878	67.33	-8.2	59.13	74	-14.87	peak
4878	51.23	-8.2	43.03	54	-10.97	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

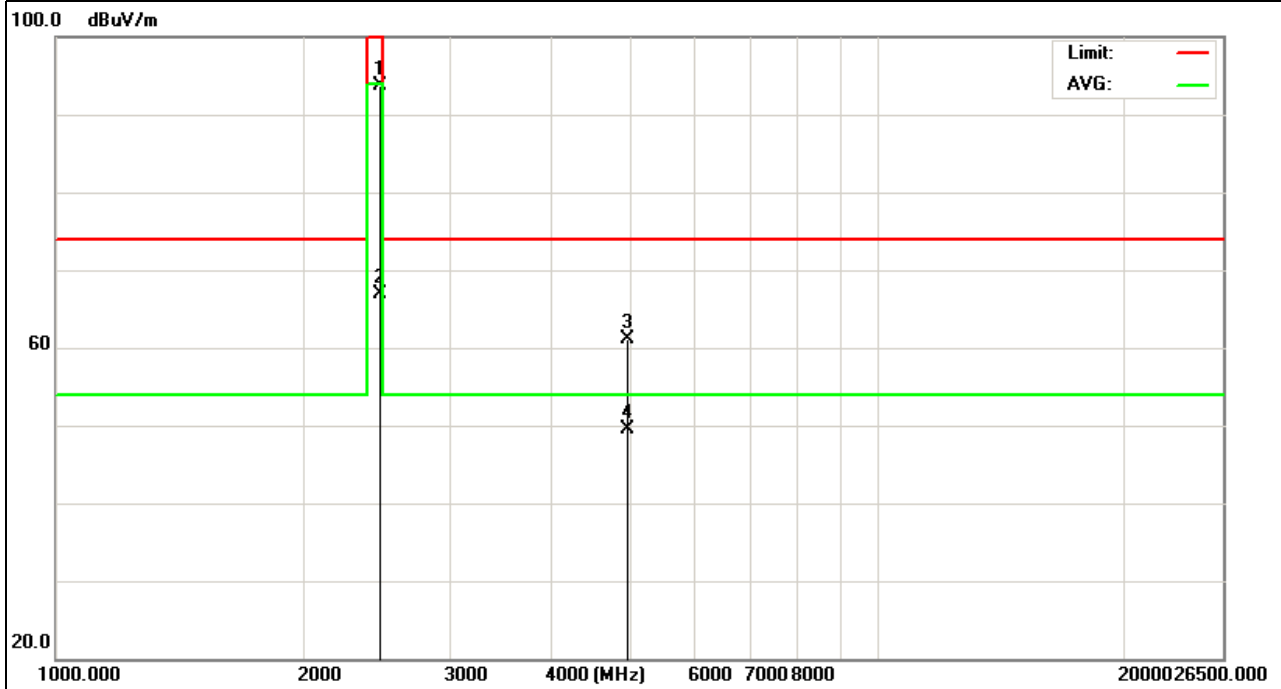


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2477MHz	Polarization :	Horizontal
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2477	111.09	-17.36	93.73	114	-20.27	peak
2477	84.23	-17.36	66.87	94	-27.13	AVG
4954	69.24	-8.13	61.11	74	-12.89	peak
4954	57.67	-8.13	49.54	54	-4.46	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

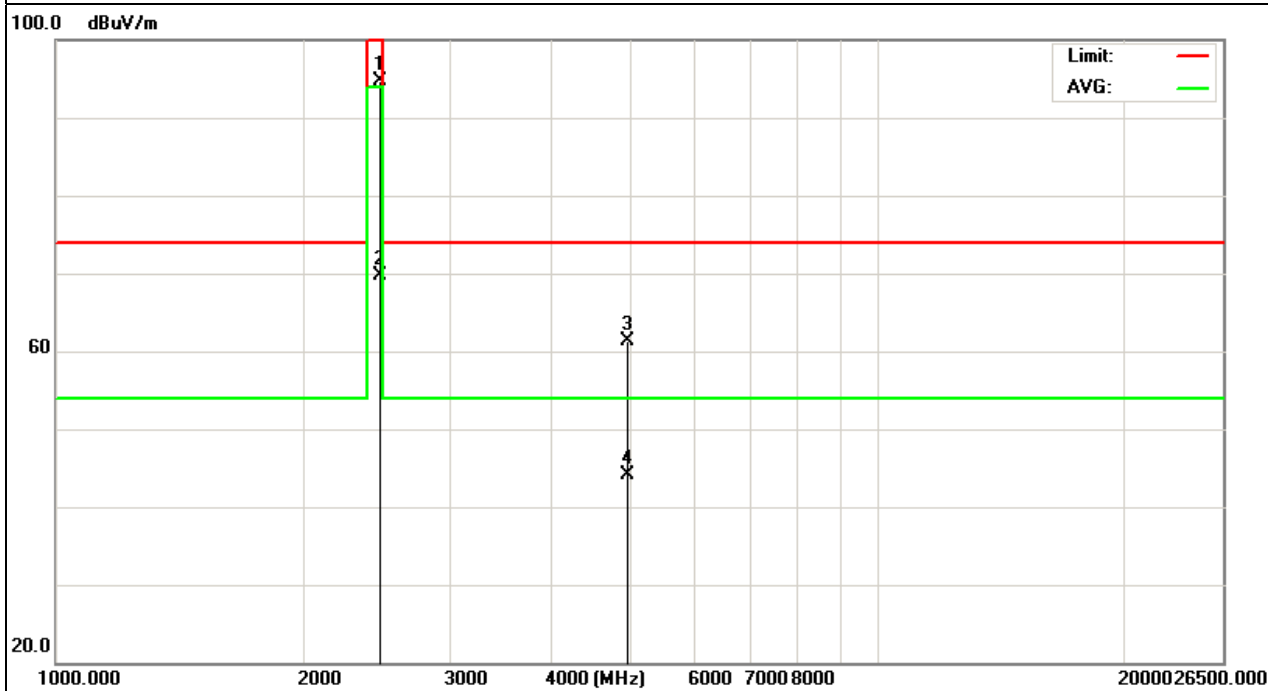


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2477MHz	Polarization :	Vertical
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2477	112.08	-17.36	94.72	114.0 0	-19.28	peak
2477	87.12	-17.36	69.76	94	-24.24	AVG
4954	69.45	-8.13	61.32	74	-12.68	peak
4954	52.21	-8.13	44.08	54	-9.92	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



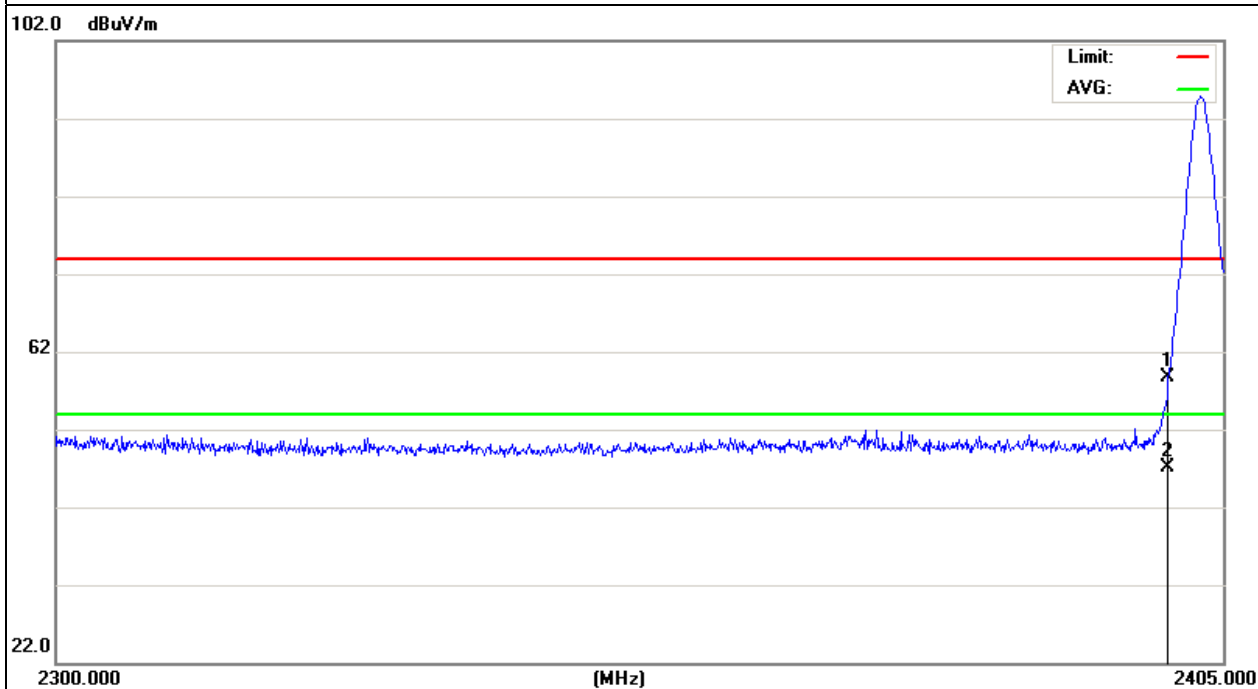
## Band Edge Emission:

EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2403MHz	Polarization :	Vertical
Test Power :	DC 3.7V		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2400	23.7	35	58.7	74	-15.3	peak
2400	12.18	35	47.18	54	-6.82	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

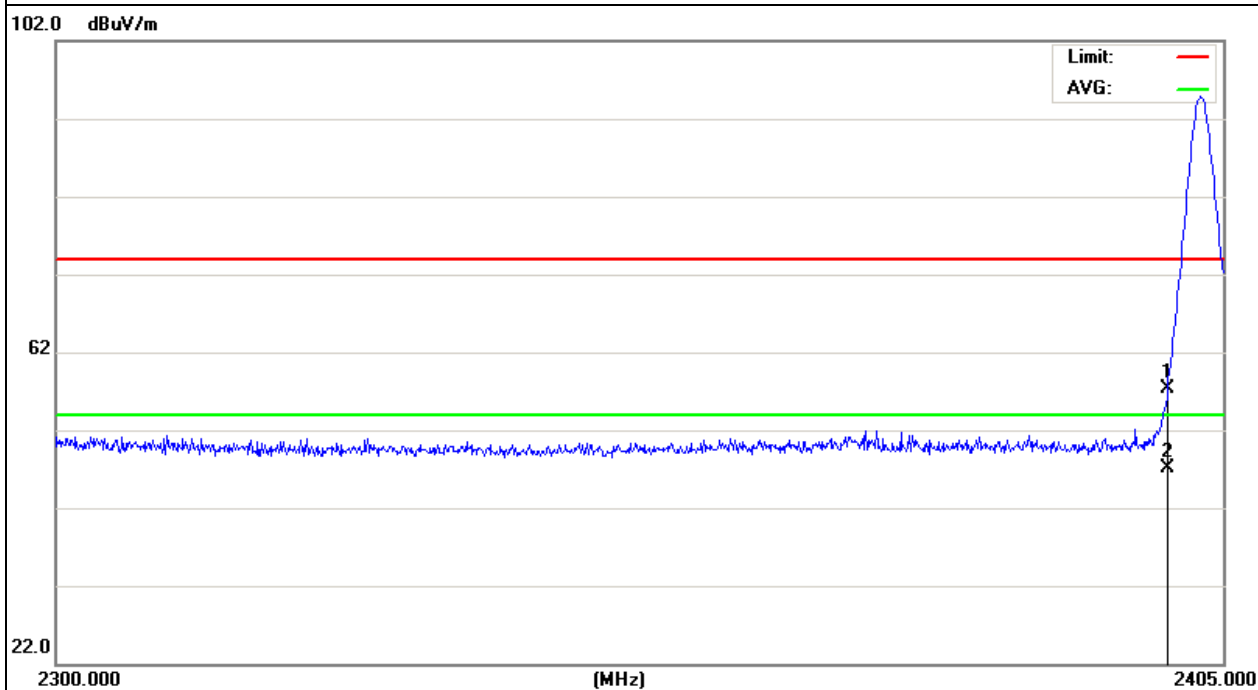


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2403MHz	Polarization :	Horizontal
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2400	22.35	35	57.35	74	-16.65	
2400	12.09	35	47.09	54	-6.91	AVG

Remark:

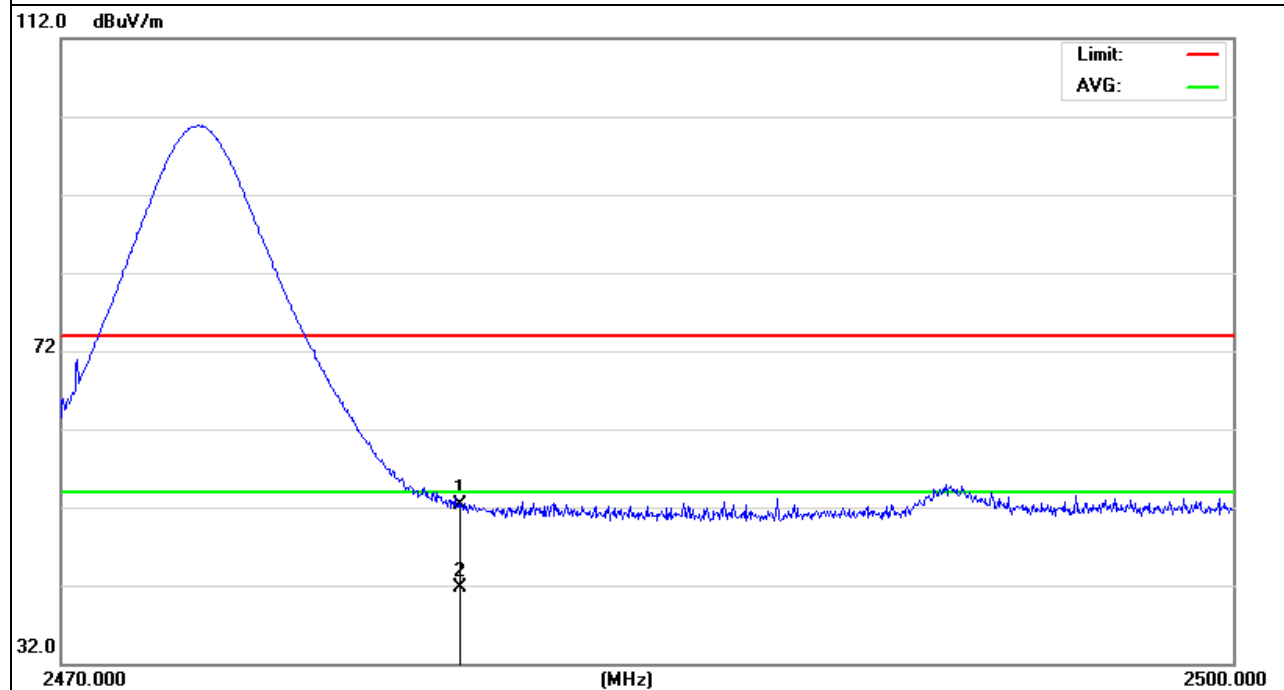
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2477MHz	Polarization :	Vertical
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	17.09	35.25	52.34	74	-21.66	peak
2483.5	6.48	35.25	41.73	54	-12.27	AVG

Remark:  
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

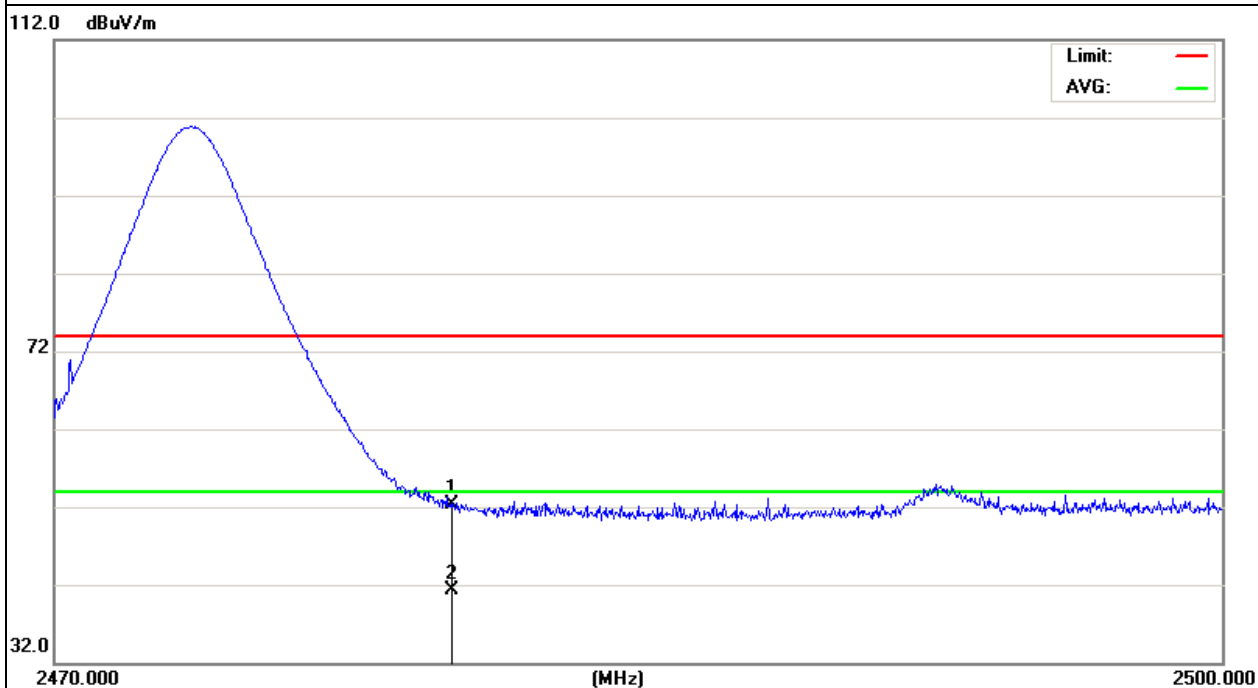


EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2011-11-8
Test Mode :	TX 2477MHz	Polarization :	Horizontal
Test Power :	DC 3.7V		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.5	17.15	35.25	52.4	74	-21.6	peak
2483.5	5.98	35.25	41.23	54	-12.77	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.





#### 4. BANDWIDTH TEST

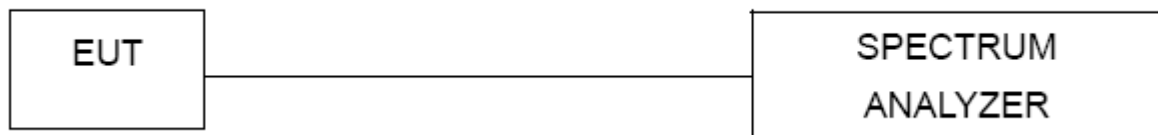
##### 4.1 TEST PROCEDURE

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

##### 4.2 DEVIATION FROM STANDARD

No deviation.

##### 4.3 TEST SETUP

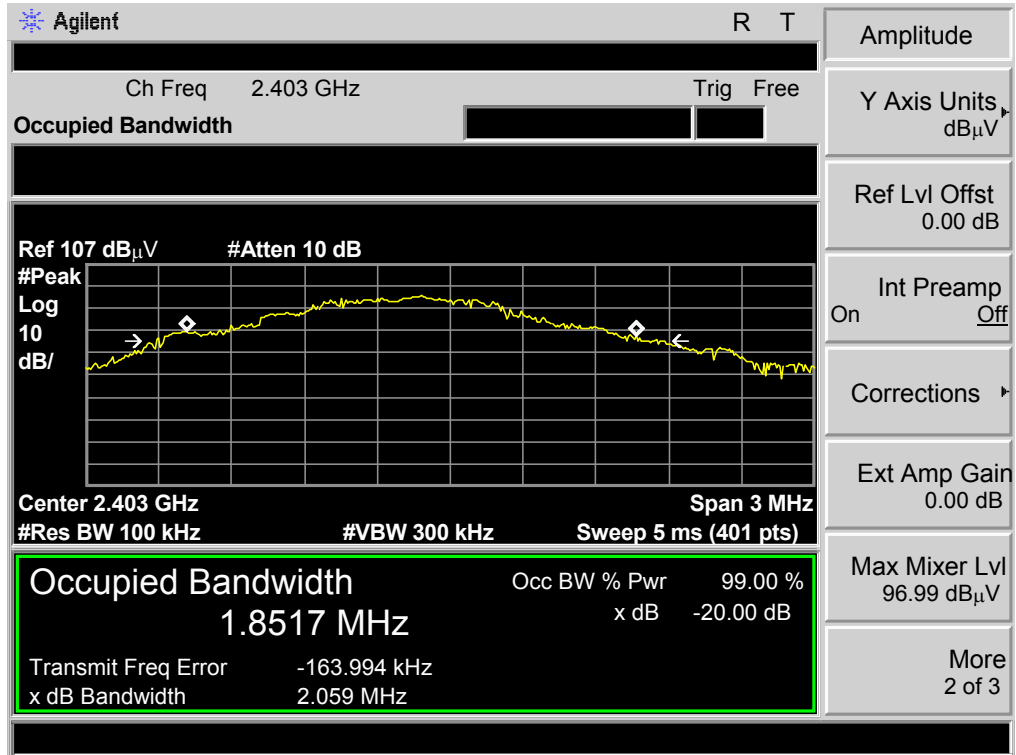


#### 4.4 TEST RESULTS

EUT :	Wireless Audio Presentation	Model Name :	P20
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 3.7V
Test Mode :	TX CH 1/19/38		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)	99% Bandwidth (MHz)
CH01	2403	2.05	1.85
CH19	2439	1.94	1.72
CH38	2477	1.97	1.74

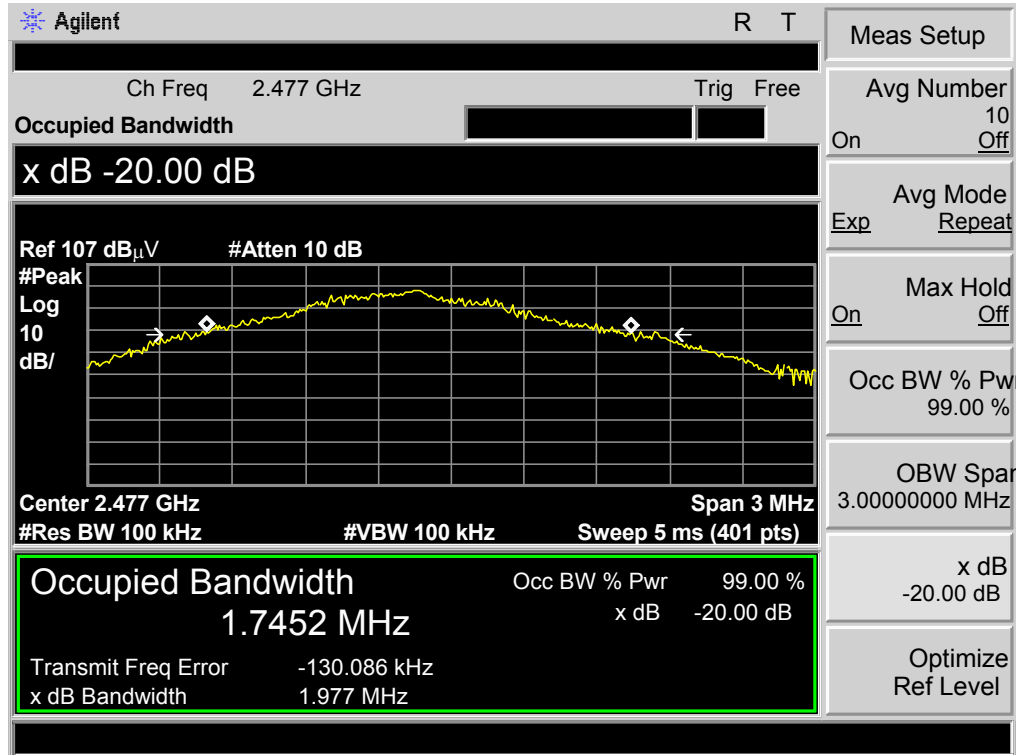
### The Lowest Channel: 2403MHz



### The Middle Channel: 2439GHz

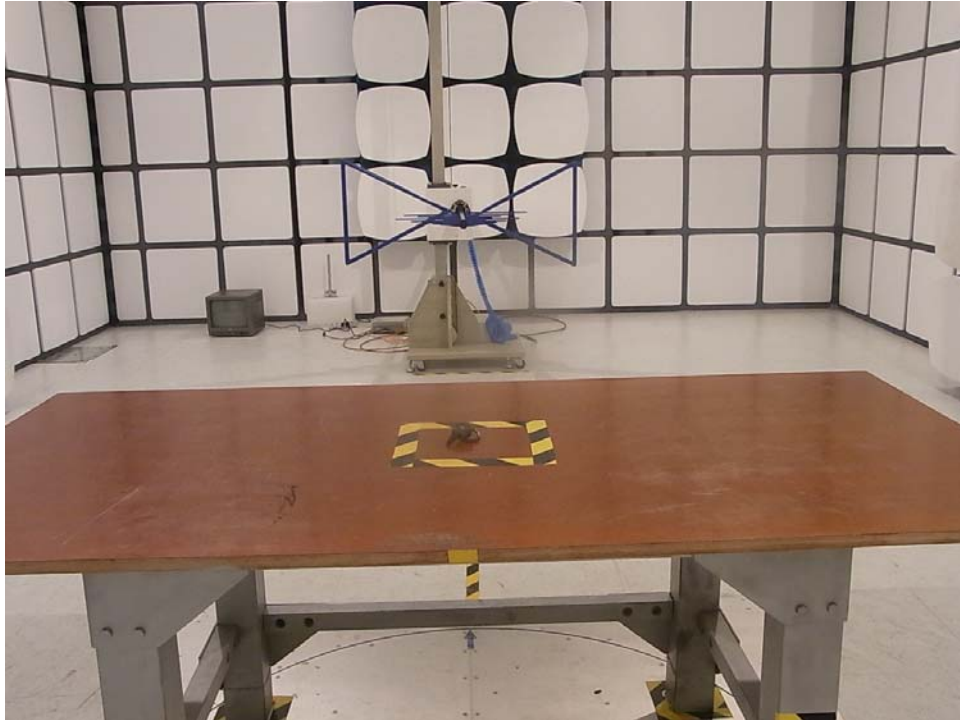


### The High Channel:2477MHz



## 5. EUT TEST PHOTO

### Radiated Measurement Photos



**Conducted Measurement Photos**

