



FCC PART 15.249



TEST REPORT

For

Airsound Technologies Limited

Chapel House, West Mead Drive, Swindon, SN5 7UN, United Kingdom

FCC ID: 2AA8C-M10-01

Report Type: Original Report		Product Type: Compact Spatial Soundbar with Bluetooth and Wireless Subwoofer	
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Report Number:	R2DG140314005-00B		
Report Date:	2014-03-26		
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Airsound Technologies Limited* 's product, model number: *M10 (FCC ID: 2AA8C-M10-01)* (the "EUT") in this report was a *Compact Spatial Soundbar with Bluetooth and Wireless Subwoofer*, M10 was measured approximately: 50.0 cm (L) x 9.9 cm (W) x 8.8 cm (H), M9 was measured approximately: 30.0 cm (L) x 9.6 cm (W) x 9.7 cm (H), M12 was measured approximately: 60.0 cm (L) x 9.6 cm (W) x 9.7 cm (H), rated input voltage: DC 22V from adapter.

#1 Adapter Information:

Model: KSAS0652200250M2
Input: AC 100-240V 50/60Hz 1.2A
Output: DC 22V, 2.5A

#2 Adapter Information:

Model: SKF2200250Y1BA
Input: AC 100-240V 50/60Hz 1.3A
Output: DC 22V, 2.5A

Note: The series product, model M9, M10, M12 are electrically identical, the difference between them are the model name, enclosure shape and dimension, we selected M10 for fully testing, the details was explained in the attached declaration letter.

** All measurement and test data in this report was gathered from production sample serial number: 140314005 (Assigned by BAACL .Dongguan). The EUT was received on 2014-03-18.*

Objective

This type approval report is prepared on behalf of *Airsound Technologies Limited* in accordance with Part 2-Subpart J, and Part 15-Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.249 rules

Related Submittal(s)/Grant(s)

FCC Part15C DSS submissions with FCC ID: *2AA8C-M10-01 for Bluetooth.*

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Dongguan).

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 02, 2012. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Dongguan) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 500069-0).



The current scope of accreditations can be found at <http://ts.nist.gov/standards/scopes/5000690.htm>

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in Engineering Mode, which was provided by the manufacturer. The engineering mode was configured as maximum power and switched the channels by keys.

3 channels were provided by the manufacturer:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2404	2	2440	3	2478

EUT was tested with Channel 2404 MHz, 2440 MHz and 2478 MHz

EUT Exercise Software

The test software was built in the equipment, and the maximum power configured by the system.

Equipment Modifications

No modifications were made to the unit tested.

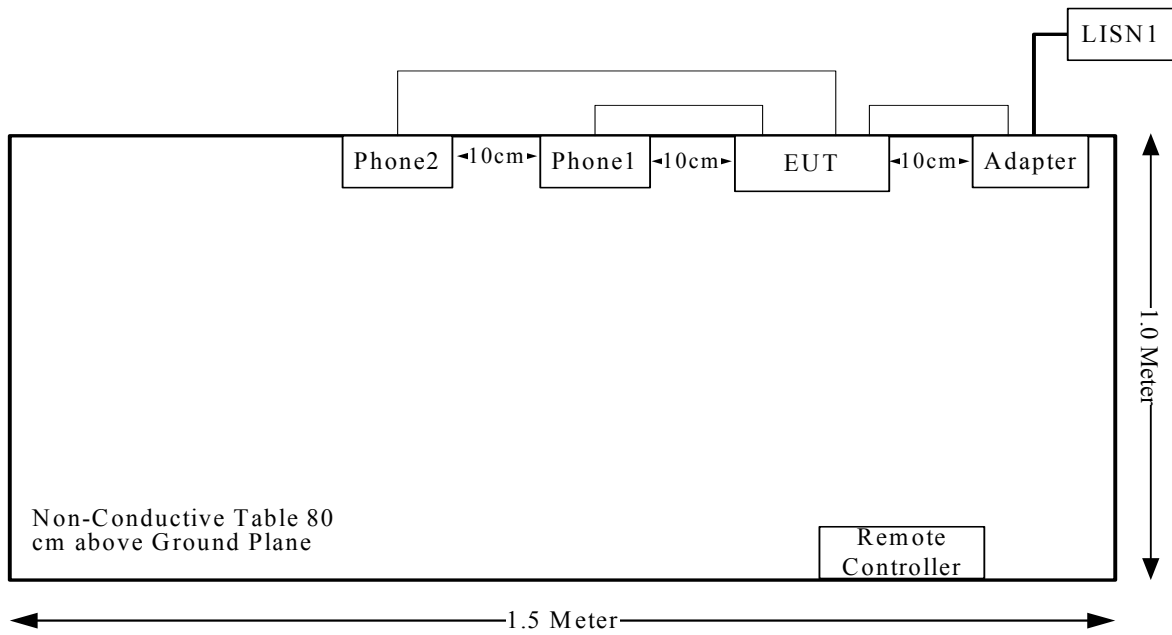
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
HUAWEI	Phone1	C8813D	-
SUMSANG	Phone2	I9220	-

External Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Audio in line	No	No	1.5	Audio port of phone	EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207(a)	Conduction Emissions	Compliance
15.205, §15.209, §15.249	Radiated Emissions	Compliance
§15.215 (c)	20 dB Bandwidth	Compliance

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

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.

Antenna Connector Construction

The EUT has one integral antenna arrangement for 2.4G which was permanently attached and the antenna gain is 3.0 dBi, fulfill the requirement of this section. Please refer to the internal photos.

Result: Compliant.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

Measurement Uncertainty

Compliance or non-compliance with a disturbance limit shall be determined in the following manner:

If U_{lab} is less than or equal to U_{cispr} of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 1, then:

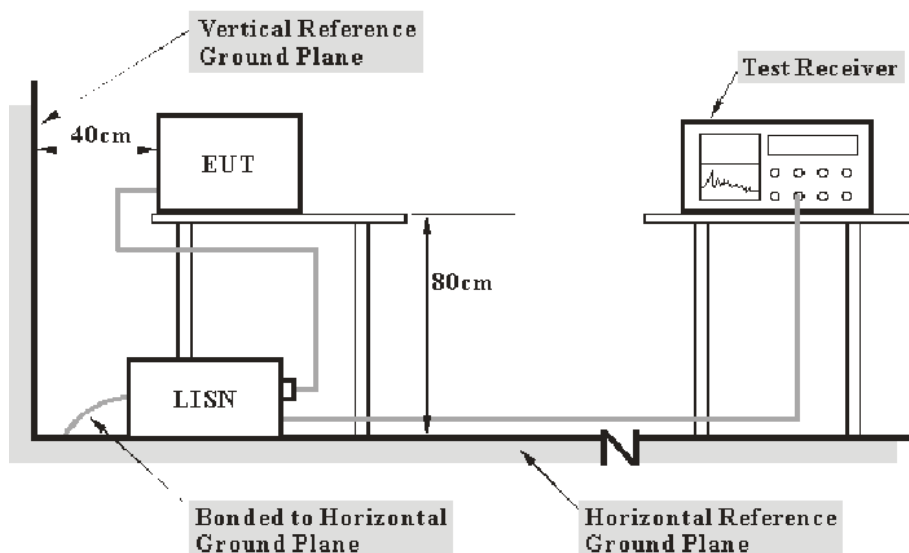
- compliance is deemed to occur if no measured disturbance level, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit.

Based on CISPR 16-4-2-2011, measurement uncertainty of conducted disturbance at mains port using AMN at Bay Area Compliance Laboratories Corp. (Dongguan) is 3.46 dB (150 kHz to 30 MHz).

Table 1 – Values of U_{cispr}

Measurement	U_{cispr}
Conducted disturbance at mains port using AMN (150 kHz to 30 MHz)	3.4 dB

EUT Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter was connected to a 120 VAC/60 Hz power source

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$$V_C = V_R + A_C + VDF$$

$$C_f = A_C + VDF$$

Herein,

V_C (cord. Reading): corrected voltage amplitude

V_R : reading voltage amplitude

A_C : attenuation caused by cable loss

VDF : voltage division factor of AMN

C_f : Correction Factor

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2013-11-20	2014-11-19
R&S	Two-line V-network	ENV216	3560.6550.12	2014-01-22	2015-01-21
R&S	L.I.S.N	ESH3-Z5	100113	N/A	N/A
BACL	Test Software	BACL-EMC	V1.0-2010	N/A	N/A

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to National Primary Standards and International System of Units (SI).

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

4.47 dB at 0.385 MHz in the **Line** conducted mode for adapter: KSAS0652200250M2

Test Data

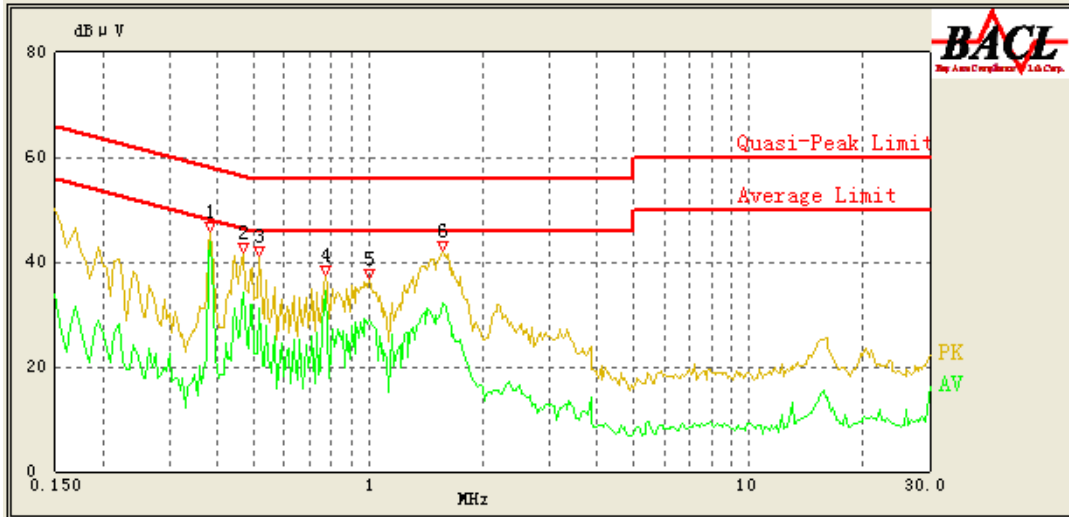
Environmental Conditions

Temperature:	21.5 °C
Relative Humidity:	40 %
ATM Pressure:	101.7 kPa

The testing was performed by Ares Liu on 2014-03-21.

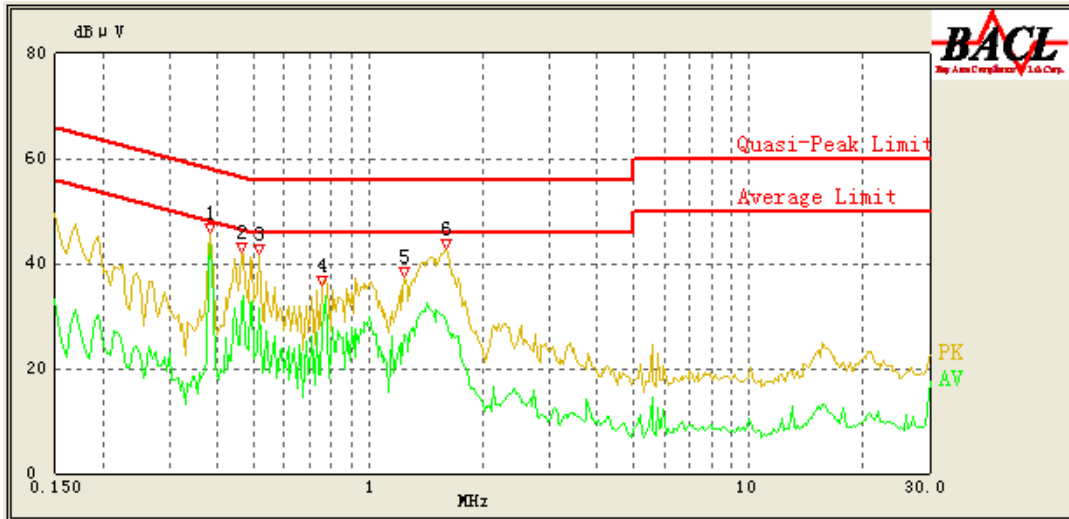
Test Mode: Transmitting (Adapter: KSAS0652200250M2)

AC120 V, 60 Hz, Line:



Frequency (MHz)	Cord. Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/AV/QP)
0.385	44.84	10.05	58.17	13.33	QP
0.385	43.70	10.05	48.17	4.47	AV
0.470	39.27	9.97	56.51	17.24	QP
0.470	34.29	9.97	46.51	12.22	AV
0.515	36.82	9.94	56.00	19.18	QP
0.515	31.10	9.94	46.00	14.90	AV
0.770	35.13	9.80	56.00	20.87	QP
0.770	34.60	9.80	46.00	11.40	AV
1.000	34.65	9.72	56.00	21.35	QP
1.000	28.77	9.72	46.00	17.23	AV
1.575	37.50	9.72	56.00	18.50	QP
1.575	32.21	9.72	46.00	13.79	AV

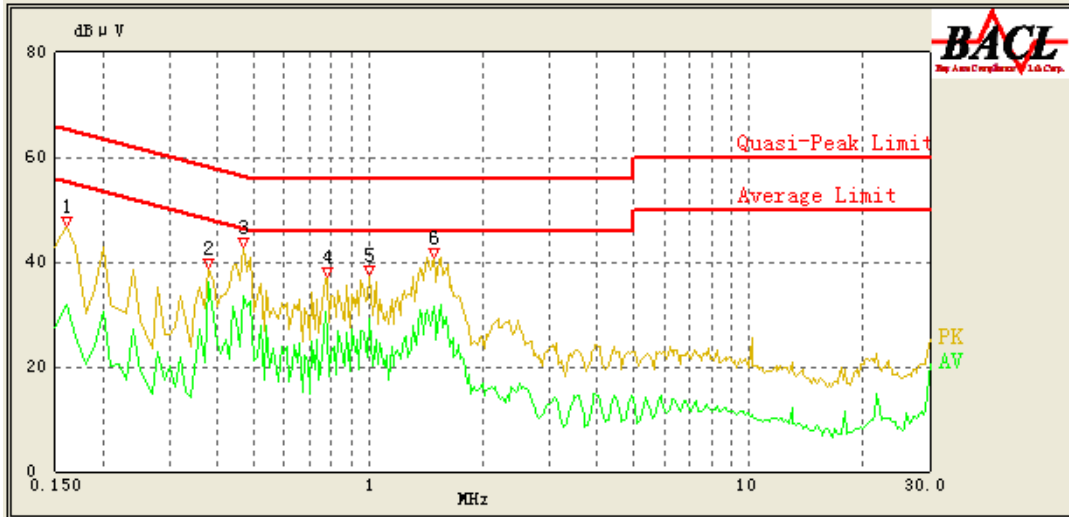
AC120 V, 60 Hz, Neutral:



Frequency (MHz)	Cord. Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/AV/QP)
0.385	44.89	10.28	58.17	13.28	QP
0.385	43.38	10.28	48.17	4.79	AV
0.465	38.16	10.05	56.60	18.44	QP
0.465	32.28	10.05	46.60	14.32	AV
0.515	37.31	9.94	56.00	18.69	QP
0.515	31.34	9.94	46.00	14.66	AV
0.755	32.36	9.82	56.00	23.64	QP
0.755	27.49	9.82	46.00	18.51	AV
1.240	34.31	9.80	56.00	21.69	QP
1.240	26.50	9.80	46.00	19.50	AV
1.600	39.20	9.76	56.00	16.80	QP
1.600	29.22	9.76	46.00	16.78	AV

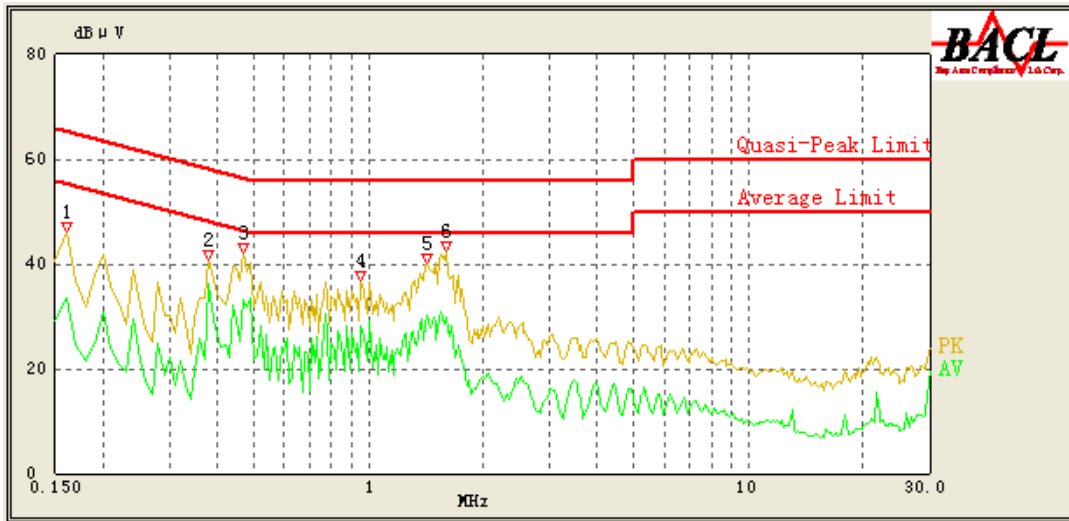
Test Mode: Transmitting (Adapter: SKF2200250Y1BA)

AC120 V, 60 Hz, Line:



Frequency (MHz)	Cord. Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/AV/QP)
0.160	43.01	9.65	65.46	22.45	QP
0.160	31.73	9.65	55.46	23.73	AV
0.380	39.09	10.05	58.28	19.19	QP
0.380	36.07	10.05	48.28	12.21	AV
0.470	38.97	9.97	56.51	17.54	QP
0.470	33.57	9.97	46.51	12.94	AV
0.780	33.02	9.79	56.00	22.98	QP
0.780	26.60	9.79	46.00	19.40	AV
1.000	33.37	9.72	56.00	22.63	QP
1.000	29.07	9.72	46.00	16.93	AV
1.480	37.82	9.72	56.00	18.18	QP
1.480	31.40	9.72	46.00	14.60	AV

AC120 V, 60 Hz, Neutral:



Frequency (MHz)	Cord. Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/AV/QP)
0.160	44.26	9.93	65.46	21.20	QP
0.160	33.63	9.93	55.46	21.83	AV
0.380	37.47	10.29	58.28	20.81	QP
0.380	36.19	10.29	48.28	12.09	AV
0.470	39.79	10.03	56.51	16.72	QP
0.470	33.05	10.03	46.51	13.46	AV
0.950	33.61	9.82	56.00	22.39	QP
0.950	28.21	9.82	46.00	17.79	AV
1.430	38.87	9.78	56.00	17.13	QP
1.430	30.02	9.78	46.00	15.98	AV
1.600	37.17	9.76	56.00	18.83	QP
1.600	29.76	9.76	46.00	16.24	AV

FCC§15.205, §15.209&§15.249- RADIATED EMISSIONS

Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

(d) 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 §15.209, whichever is the lesser attenuation.

Measurement Uncertainty

Compliance or non-compliance with a disturbance limit shall be determined in the following manner:

If U_{lab} is less than or equal to U_{cispr} of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 1, then:

- compliance is deemed to occur if no measured disturbance level, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit.

Based on CISPR 16-4-2: 2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:

30M~200MHz: 5.0 dB

200M~1GHz: 6.2 dB

1G~6GHz: 4.45 dB

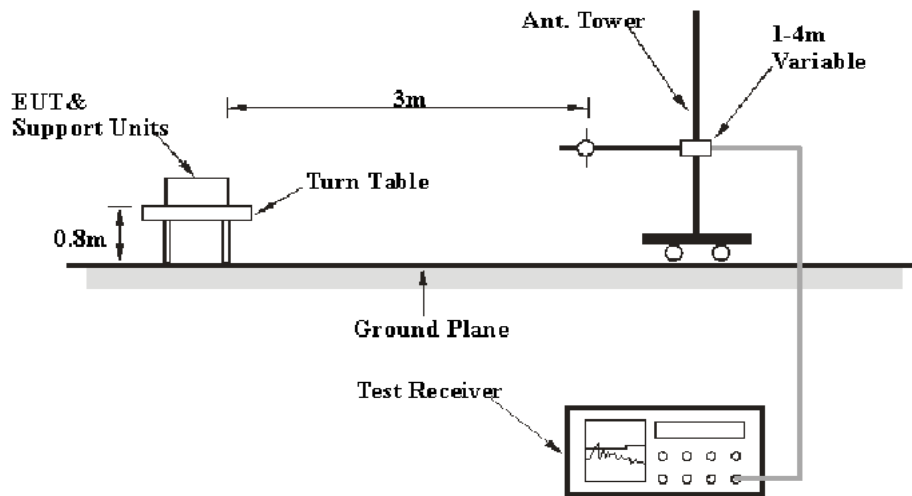
6G~18GHz: 5.23 dB

Table 1 – Values of U_{cispr}

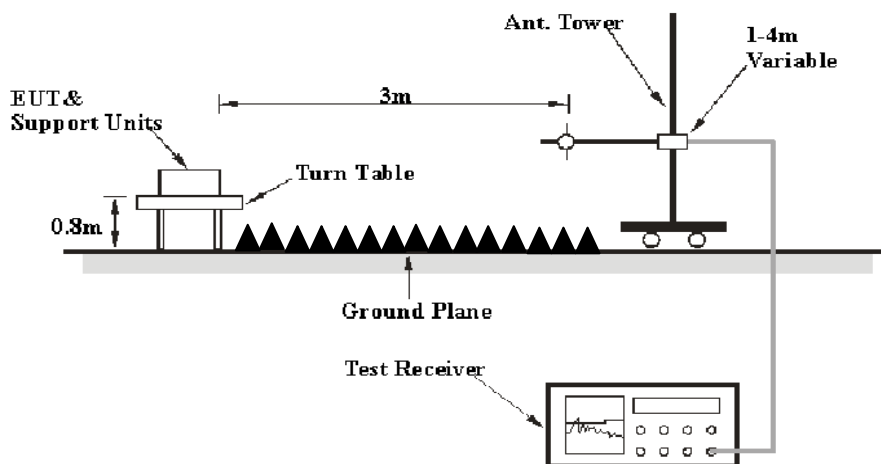
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

EUT Setup

Below 1 GHz:



Above 1 GHz:



The radiated emission and out of band emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209/15.205 and FCC 15.249 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter was connected to a 120 VAC/60 Hz power source

Test Equipment Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30MHz – 1000 MHz	120 kHz	300 kHz	120kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Procedure

For the radiated emissions test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode from 30MHz to 1GHz, Peak and average detection mode above 1 GHz.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Extrapolation result}$$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2013-05-06	2014-05-05
Sunol Sciences	Antenna	JB3	A060611-1	2011-09-06	2014-09-05
HP	Amplifier	8447E	2434A02181	2013-09-06	2014-09-05
R&S	Spectrum Analyzer	FSEM	DE31388	2013-05-07	2014-05-06
ETS LINDGREN	Horn Antenna	3115	000 527 35	2012-09-06	2015-09-05
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2014-02-19	2015-02-18
R&S	Spectrum Analyzer	FSP 38	100478	2013-06-16	2014-06-15
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-01 1304	2013-06-16	2014-06-15
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2013-09-06	2014-09-05

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to National Primary Standards and International System of Units (SI).

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209 &15.205 & 15.249, with the worst margin reading of:

6.08 dB at 2440MHz in the **Horizontal** polarization

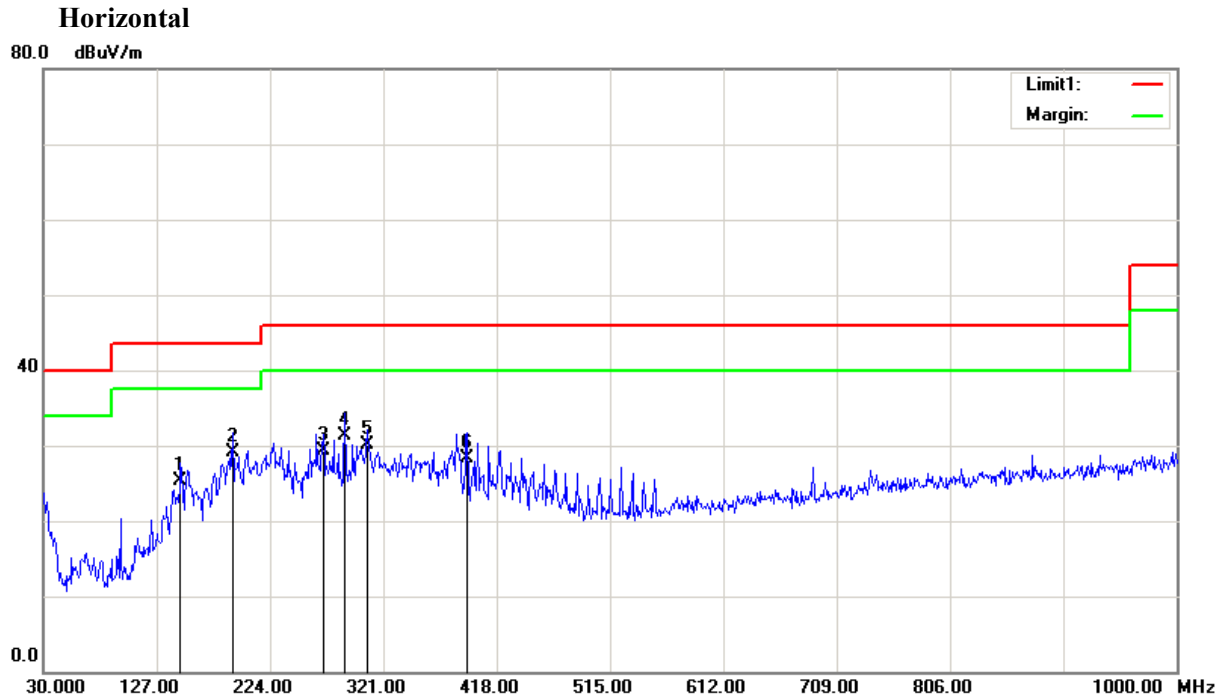
Test Data**Environmental Conditions**

Temperature:	22.6 °C
Relative Humidity:	70 %
ATM Pressure:	100.8kPa

The testing was performed by Ares Liu on 2014-03-19.

1) Below 1GHz

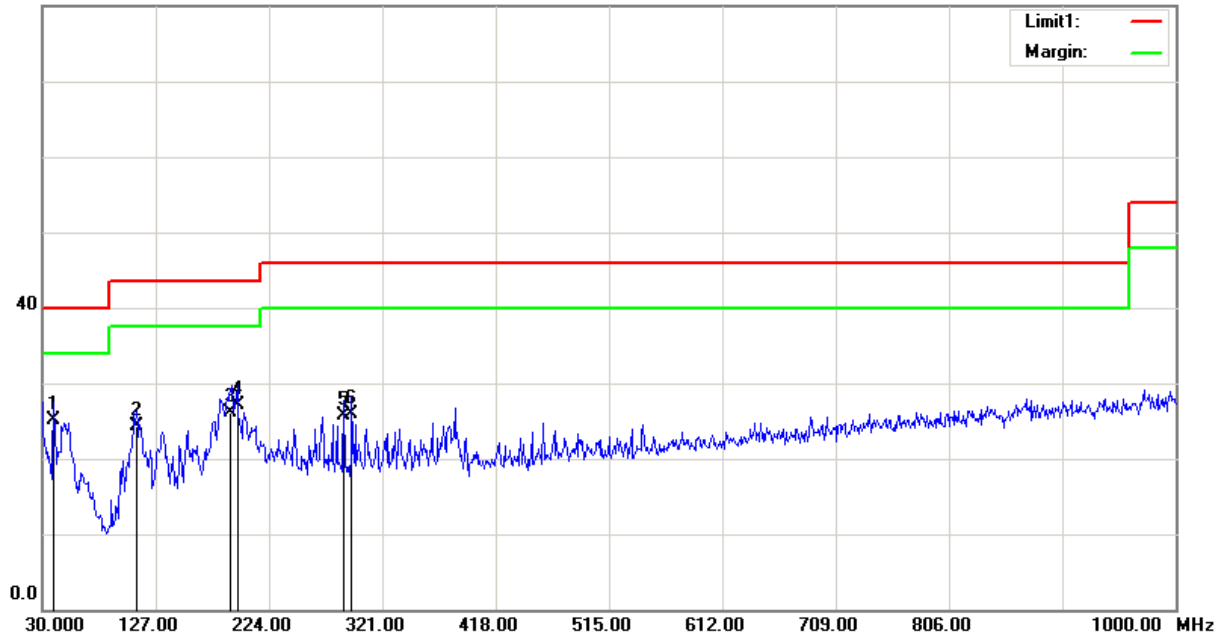
Mode: Transmitting (Adapter: KSAS0652200250M2)



Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
147.3700	32.63	QP	-7.33	25.30	43.50	18.20
191.9900	37.33	QP	-8.23	29.10	43.50	14.40
269.5900	35.40	QP	-6.10	29.30	46.00	16.70
288.0200	37.10	QP	-5.70	31.40	46.00	14.60
307.4200	35.66	QP	-5.46	30.20	46.00	15.80
392.7800	32.01	QP	-3.61	28.40	46.00	17.60

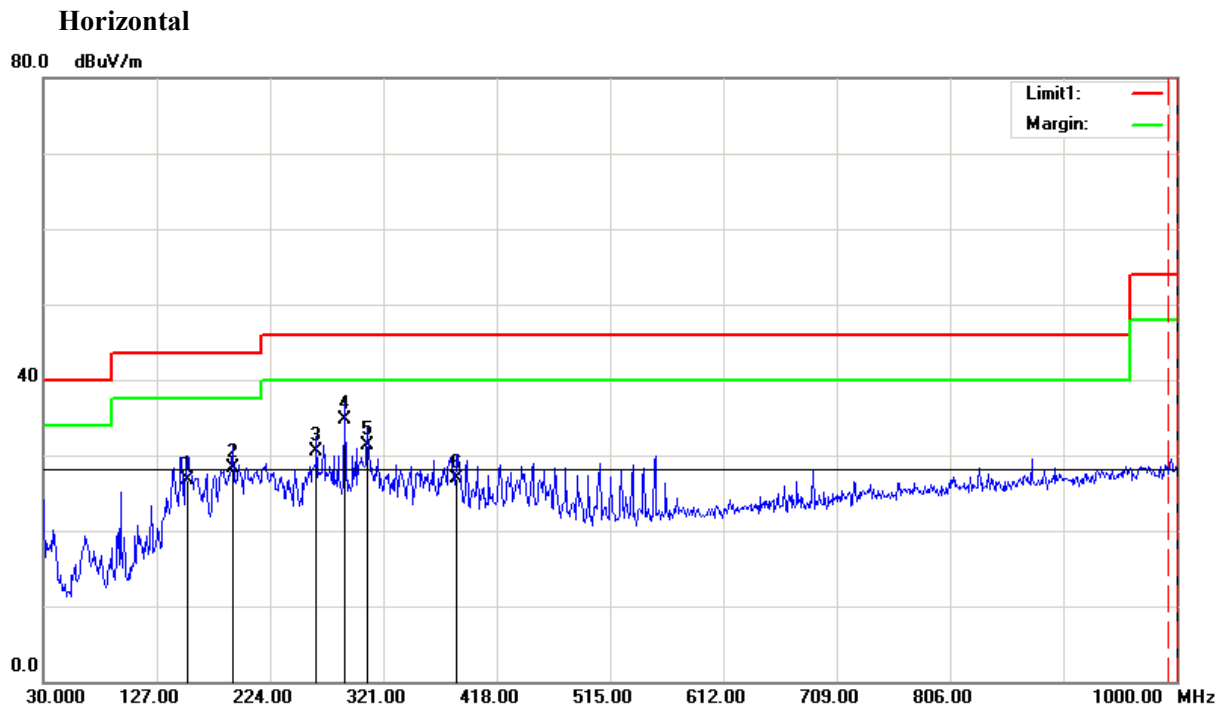
Vertical

80.0 dBuV/m



Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
39.7000	31.05	QP	-5.95	25.10	40.00	14.90
110.5100	31.39	QP	-7.09	24.30	43.50	19.20
191.0200	34.42	QP	-8.32	26.10	43.50	17.40
196.8400	34.75	QP	-7.55	27.20	43.50	16.30
288.0200	31.40	QP	-5.70	25.70	46.00	20.30
294.8100	31.52	QP	-5.62	25.90	46.00	20.10

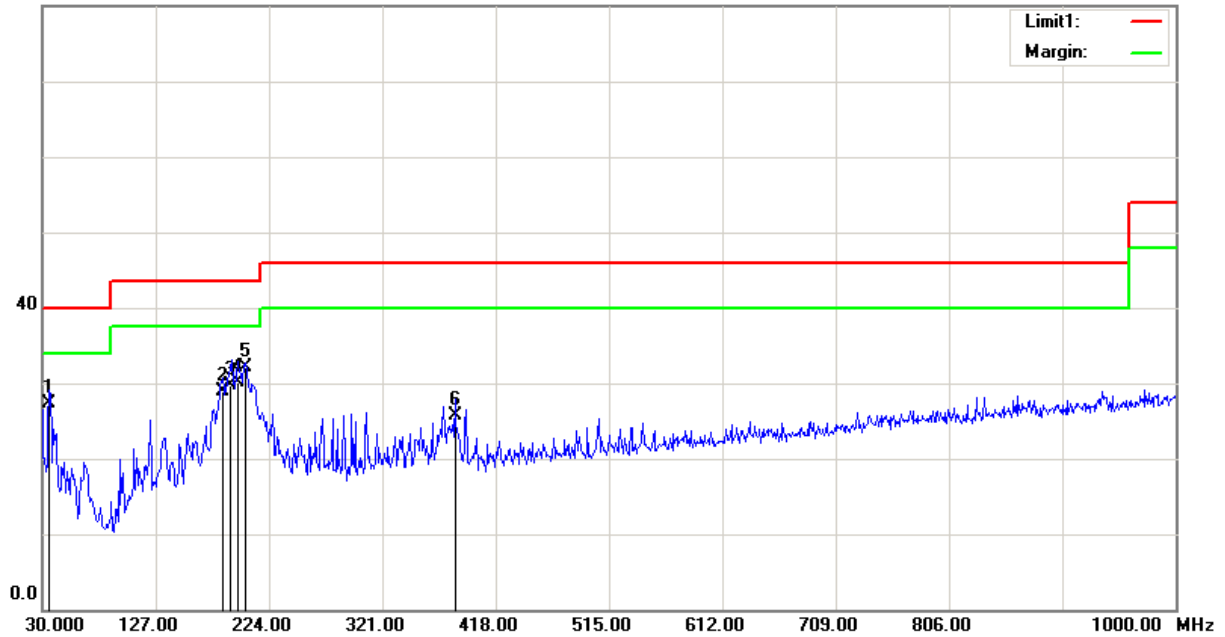
Mode: Transmitting (Adapter: SKF2200250Y1BA)



Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
153.1900	34.05	QP	-7.25	26.80	43.50	16.70
191.9900	36.53	QP	-8.23	28.30	43.50	15.20
263.7700	36.94	QP	-6.34	30.60	46.00	15.40
288.0200	40.40	QP	-5.70	34.70	46.00	11.30
307.4200	36.86	QP	-5.46	31.40	46.00	14.60
384.0500	30.71	QP	-3.71	27.00	46.00	19.00

Vertical

80.0 dBuV/m



Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
35.8200	30.32	QP	-3.02	27.30	40.00	12.70
184.2300	37.38	QP	-8.48	28.90	43.50	14.60
191.0200	38.02	QP	-8.32	29.70	43.50	13.80
196.8400	37.65	QP	-7.55	30.10	43.50	13.40
203.6300	39.94	QP	-7.74	32.20	43.50	11.30
383.0800	29.43	QP	-3.73	25.70	46.00	20.30

2) Above 1GHz

Test Mode: Transmitting

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB(1/m))					
frequency: 2404 MHz									
2404	91.84	PK	H	25.65	4.42	27.32	94.59	114.00	19.41
2404	80.33	AV	H	25.65	4.42	27.32	83.08	94.00	10.92
2404	91.67	PK	V	25.65	4.42	27.32	94.42	114.00	19.58
2404	79.91	AV	V	25.65	4.42	27.32	82.66	94.00	11.34
2390	52.79	PK	H	25.61	4.39	27.32	55.47	74.00	18.53
2390	25.79	AV	H	25.61	4.39	27.32	28.47	54.00	25.53
2483.5	40.81	PK	H	25.86	4.49	27.36	43.80	74.00	30.20
2483.5	23.59	AV	H	25.86	4.49	27.36	26.58	54.00	27.42
4808	53.57	PK	H	30.60	5.99	27.41	62.75	74.00	11.25
4808	32.37	AV	H	30.60	5.99	27.41	41.55	54.00	12.45
7212	38.69	PK	V	34.11	7.45	25.91	54.34	74.00	19.66
7212	24.85	AV	V	34.11	7.45	25.91	40.50	54.00	13.50
2562	43.96	PK	H	26.06	4.64	27.40	47.26	74.00	26.74
2562	32.50	AV	H	26.06	4.64	27.40	35.80	54.00	18.20
frequency: 2440 MHz									
2440	91.37	PK	V	25.74	4.40	27.34	94.17	114.00	19.83
2440	80.24	AV	V	25.74	4.40	27.34	83.04	94.00	10.96
2440	95.37	PK	H	25.74	4.40	27.34	98.17	114.00	15.83
2440	85.12	AV	H	25.74	4.40	27.34	87.92	94.00	6.08
2390	49.56	PK	H	25.61	4.39	27.32	52.24	74.00	21.76
2390	21.44	AV	H	25.61	4.39	27.32	24.12	54.00	29.88
2483.5	50.12	PK	H	25.86	4.49	27.36	53.11	74.00	20.89
2483.5	21.22	AV	H	25.86	4.49	27.36	24.21	54.00	29.79
4880	57.79	PK	H	30.79	6.08	27.42	67.24	74.00	6.76
4880	28.63	AV	H	30.79	6.08	27.42	38.08	54.00	15.92
2600	43.10	PK	H	26.16	4.63	27.42	46.47	74.00	27.53
2600	31.59	AV	H	26.16	4.63	27.42	34.96	54.00	19.04
7320	38.66	PK	V	34.37	7.51	25.88	54.66	74.00	19.34
7320	25.11	AV	V	34.37	7.51	25.88	41.11	54.00	12.89
frequency: 2478 MHz									
2478	92.64	PK	V	25.84	4.47	27.36	95.59	114.00	18.41
2478	81.75	AV	V	25.84	4.47	27.36	84.70	94.00	9.30
2478	92.75	PK	H	25.84	4.47	27.36	95.70	114.00	18.30
2478	82.67	AV	H	25.84	4.47	27.36	85.62	94.00	8.38
2483.5	62.46	PK	H	25.86	4.49	27.36	65.45	74.00	8.55
2483.5	25.66	AV	H	25.86	4.49	27.36	28.65	54.00	25.35
2390	40.75	PK	H	25.61	4.39	27.32	43.43	74.00	30.57
2390	24.36	AV	H	25.61	4.39	27.32	27.04	54.00	26.96
4956	46.85	PK	H	30.99	5.89	27.43	56.30	74.00	17.70
4956	25.47	AV	H	30.99	5.89	27.43	34.92	54.00	19.08
2510	49.02	PK	H	25.93	4.55	27.38	52.12	74.00	21.88
2510	21.32	AV	H	25.93	4.55	27.38	24.42	54.00	29.58
7434	38.69	PK	V	34.64	7.57	25.95	54.95	74.00	19.05
7434	25.02	AV	V	34.64	7.57	25.95	41.28	54.00	12.72

FCC §15.215(c) – 20 dB BANDWIDTH TESTING

Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2013-06-16	2014-06-15

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	24.8 °C
Relative Humidity:	67 %
ATM Pressure:	100.8 kPa

* The testing was performed by Ares Liu on 2014-03-20.

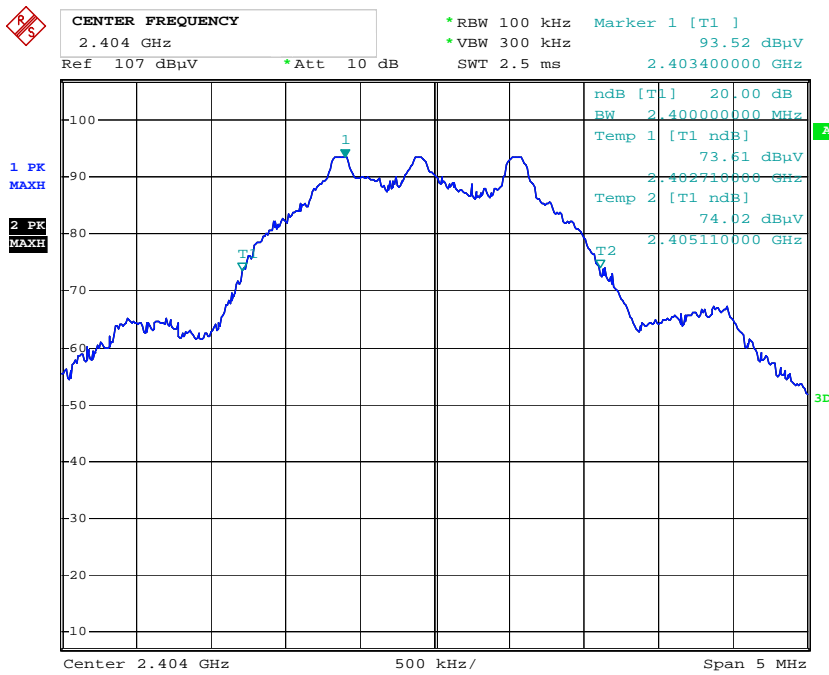
Test Result: Compliance.

Please refer to following tables and plots

Test Mode: Transmitting

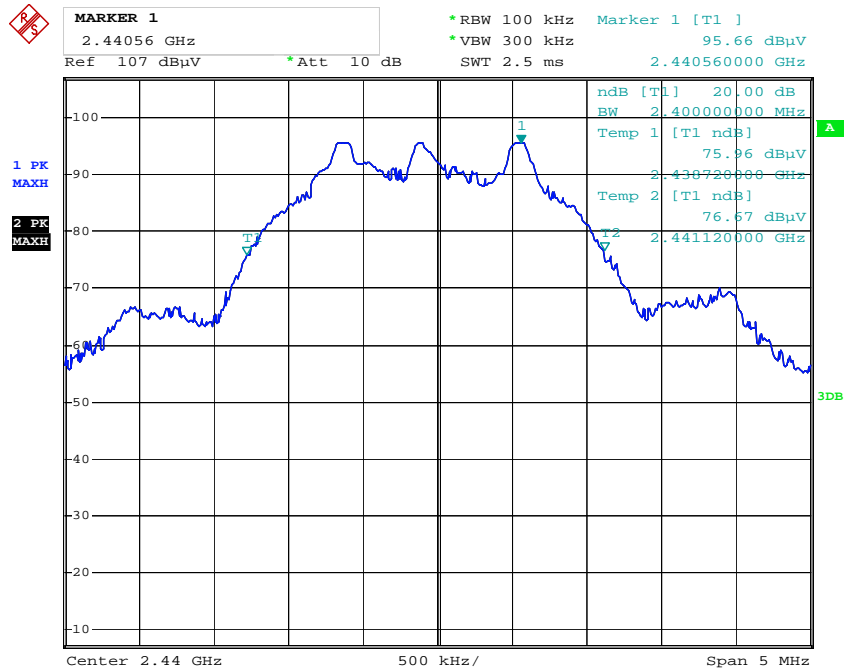
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	2404	2.400
Middle	2440	2.400
High	2478	2.430

Low Channel



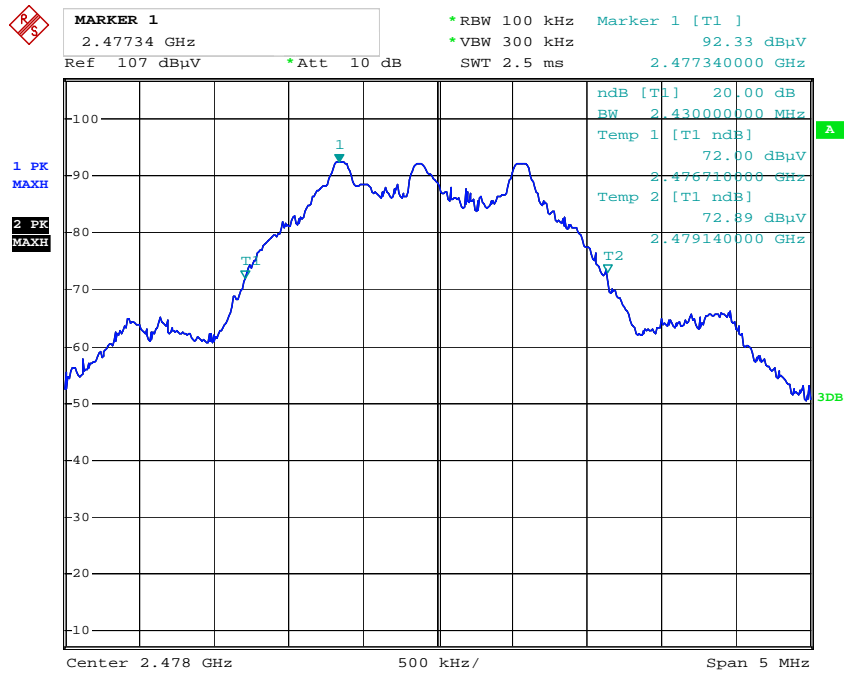
Date: 20.MAR.2014 17:12:36

Middle Channel



Date: 20.MAR.2014 17:15:23

High Channel



Date: 20.MAR.2014 17:18:52

DECLARATION OF SIMILARITY

airSOUND™ Technologies Limited

Date: 7th April, 2014

To: Bay Area Compliance Laboratories Corp. (Dongguan)
No.69 Pulong Village Puxinhu Industry Zone Tangxia,
Dongguan,
China

Dear Sir/Madam

DECLARATION OF SIMILARITY

We, airSOUND™ Technologies Limited, hereby declare that product: Spatial Soundbar with Bluetooth and Wireless Subwoofer, models: M9 and M12 are electrically identical with the same electromagnetic emissions and electromagnetic compatibility characteristics as model name: M10 that was tested by BACL, the results of which are featured in BACL project: R2DG140314005, R2DG140314005-03.

A description of the differences between the tested model and those that are declared similar are as follows:

M9, M10, and M12 are just different in the model name, enclosure shape and dimension.

Yours sincerely,



Matthew Kitchin

Title: R&D Program Manager

Date: 7th April, 2014

airSOUND™ Technologies Limited

Chapel House, West Mead Drive, Swindon, SN5 7UN, United Kingdom

******* END OF REPORT *******