



Underwriters Laboratories Inc.  
1285 Walt Whitman Rd.  
Melville, NY 11747

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(631) 271-6200

Job Number:	740133
File Number:	MC8319
Date:	17 Dec 07
Model:	M812
FCC ID:	VJS-M812

## Electromagnetic Compatibility Test Report

For

### Altec Lansing Technologies

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Underwriters Laboratories Inc.  
1285 Walt Whitman Rd.  
Melville, NY 11747

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to public safety and committed to  
quality service for over 100 years**

Tel: (631) 271-6200 Fax: (631)439-6095

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

## Test Report Details

Tests Performed By: **Underwriters Laboratories Inc.  
1285 Walt Whitman Rd.  
Melville, NY 11747**

Tests Performed For: **Altec Lansing Technologies  
P. O. Box 277  
Milford, PA 18337**

Applicant Contact: **STEVE BACHO**  
Phone: **570-296-1310**  
E-mail: **STEVE.BACHO@ALTECLANSING.COM**

Test Report Date: **17 Dec 07**

Product Type: **Wireless Speaker System**

Product standards: **FCC Part 15, Subpart C, 15.247**

Model Number: **M812**

Sample Serial Number: **Prototype**

EUT Category: **Digital Transmitter**

Testing Start Date: **19 July 07**

Date Testing Complete: **16 Dec 07**

**Overall Results: Compliant**

Underwriters Laboratories Inc. reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. Underwriters Laboratories Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Underwriters Laboratories Inc. issued reports. This report shall not be used to claim, constitute or imply product certification, approval, or endorsement by NVLAP, A2LA, or any agency of the US government.

This report may contain test results that are not covered by the NVLAP or A2LA accreditation. The scope of accreditation is limited to the specific tests that are listed on the NVLAP and/or A2LA websites referenced at the end of this report.

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Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
None	-	-	-


## 1.0 GENERAL - Product Description

### 1.1 Equipment Description


The M812 is a high performance speaker and transmitter base combination that allows you to connect and wirelessly listen to most iPods, FM radio stations and auxiliary audio sources.

### 1.2 Equipment Marking Plate

**M812**  
**ALTEC LANSING**  
**WIRELESS SPEAKER SYSTEM FOR iPod®**




**CAUTION**  
RISK OF ELECTRIC SHOCK  
 DO NOT OPEN




**AVIS:** AUCUNE PIÈCE SE TROUVANT À L'INTÉRIEUR NE PEUT ÊTRE ENTRETENUE PAR L'UTILISATEUR.

**CAUTION:** NO USER SERVICEABLE PARTS INSIDE.

**ATTENTION:** NO CONTIENE PIEZAS REPARABLES POR EL USUARIO.




CLASS II



2001148

CONFORMS TO  
 ANSI/UL STD. 60065  
 CERTIFIED TO  
 CAN/CSA STD. C22.2  
 No. 60065



---

100-240VAC ~ / 50-60Hz / 600mA

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

---

ALTEC LANSING, MILFORD, PA 18337 USA  
 MADE IN CHINA

**1.3 Device Configuration During Test**

**1.3.1 Equipment Used During Test:**

Use	Product Type	Manufacturer	Model	Comments
EUT	Speaker System	Altec Lansing Technologies	M812	Consists of a Transmitter Base and a Wireless Speaker
AE	MP3 Player	Apple	iPod	None
AE	Laptop	IBM	2373T64	None

Note: EUT - Equipment Under Test, AE - Auxiliary/Associated Equipment, or SIM - Simulator (Not Subjected to Test)

**1.3.2 Input/Output Ports:**

Port #	Name	Type*	Cable Max. >3m (Y/N)	Cable Shielded (Y/N)	Comments
0	Enclosure	N/E	—	—	None
1	Mains	AC	N	N	None
2	Aux	I/O	N	N	None

Note:  
 AC = AC Power Port      DC = DC Power Port      N/E = Non-Electrical  
 I/O = Signal Input or Output Port (Not Involved in Process Control)  
 TP = Telecommunication Ports

**1.3.3 EUT Internal Operating Frequencies:**

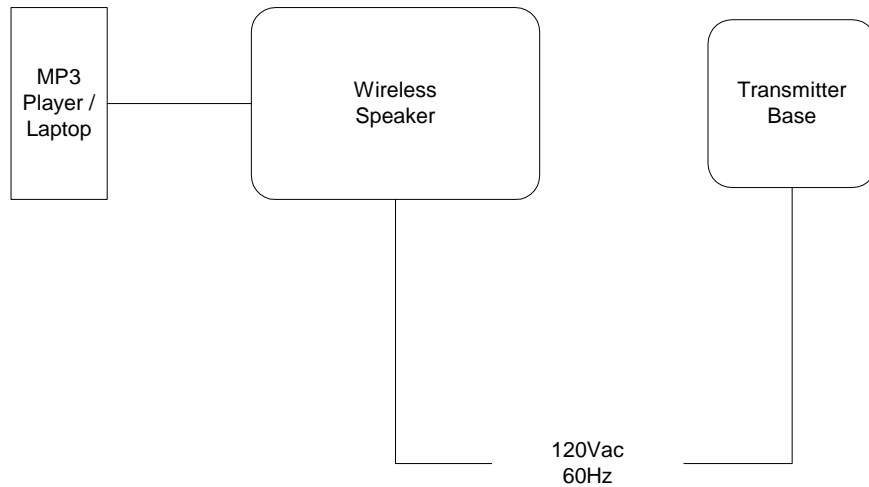
Frequency (MHz)	Description
2400-2483.5	Fundamental (3 RF Channels are used in this band)

**1.3.4 Power Interface:**

Mode # /Rated	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
Rated	100-240Vac	0.6	-	50-60Hz	Single Phase	Transmitter Base & Wireless Speaker
1	120Vac	-	-	60Hz	Single Phase	Transmitter Base & Wireless Speaker

**1.4 Block Diagram:**

The diagram below illustrates the configuration of the equipment above.



**1.5 EUT Configurations**

Mode #	Description
1	Wireless speaker and transmitter base independently powered from 120Vac/60Hz source. MP3 player or laptop connected to the base as an audio source. It was determined from preliminary measurements that connecting an audio source via Aux connection, as opposed to docked, produced the worse case conditions. It was in this configuration that all testing was performed.

**1.6 EUT Operation Modes**

<b>Mode #</b>	<b>Description</b>
1	Transmitter Base operating on Channel 1 (2412MHz)
2	Transmitter Base operating on Channel 2 (2436MHz)
3	Transmitter Base operating on Channel 3 (2463MHz)
4	Wireless Speaker operating on Channel 1 (2412MHz)
5	Wireless Speaker operating on Channel 2 (2436MHz)
6	Wireless Speaker operating on Channel 3 (2463MHz)
7	Transmitter Base operating in Receive Mode
8	Wireless Speaker operating in Receive Mode



## 2.0 Summary

The tests listed in the Summary of Testing section of this report have been performed and the results recorded by Underwriters Laboratories Inc. in accordance with the procedures stated in each test requirement and specification. The applicant determined the list of tests performed were applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

### 2.1 Deviations from standard test methods

None

### 2.2 Device Modifications Necessary for Compliance

For Radiated Emissions:

- Added ferrite (Fair-Rite Part Number: 0443164151, or equivalent) to power cable of the wireless speaker. See photo for details.



**2.3 Reference Standards**

Standard Number	Standard Name	Standard Date
FCC Part 15, Subpart C, 15.247	Code of Federal Regulations, Part 15, Radio Frequency Devices	2007
Publication Number 558074	FCC OET KBD Publication – New Guidance on Measurements for Digital Transmission Systems in Section 15.247	2007

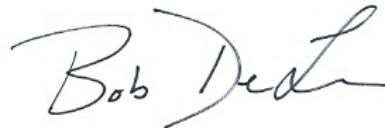
**2.4 Results Summary**

This product is considered Class B

Requirement – Test	Result (Compliant / Non-Compliant)*
15.207 Conducted Emissions - Mains	Compliant
15.247 ERP	Compliant
15.247 Output Power	Compliant
15.247 Power Spectral Density	Compliant
15.215 Bandedge Measurements	Compliant
15.247 Occupied Bandwidth	Compliant
15.209 Radiated Emissions	Compliant
15.205 Restricted Band Radiated Emissions	Compliant
1.1307 Maximum Permissible Exposure	Compliant

Test Engineer:

Reviewer:

Mike Antola (Ext.23053)  
 Senior Project Engineer  
 International EMC Services  
 Conformity Assessment Services-

Bob DeLisi (Ext.22452)  
 Senior Staff Engineer  
 International EMC Services  
 Conformity Assessment Services

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

### 3.0 Calibration of Equipment Used for Measurement

All test equipment and test accessories are calibrated on a regular basis. The maximum time between calibrations is one year or the manufacturers' recommendation, whichever is less.

All test equipment calibrations are traceable to the National Institute of Standards and Technology (NIST); therefore, all test data recorded in this report is traceable to NIST.

### 4.0 EMISSIONS TEST RESULTS

The emissions tests were performed according to following regulations:

----- United States -----

Code of Federal Regulations Title 47	Part 15, Radio Frequency Devices
--------------------------------------	----------------------------------

Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be verified at the time the test is conducted.

Ambient Temperature, °C	22.5 ± 2.5	Relative Humidity, %	45 ± 15	Barometric Pressure, mBar	950 ± 150
-------------------------	------------	----------------------	---------	---------------------------	-----------

**4.1 Test Conditions and Results – Mains Terminal – Conducted Emissions**

Test Description	Measurements were made on a ground plane. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN.	
Basic Standard	FCC Part 15, Subpart C, 15.207	
UL LPG	80-EM-S0026	
	Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range	150kHz to 30MHz	Mains
<b>Limits</b>		
Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Supplementary information: None		

**Table 1 Conducted Emissions EUT Configuration Settings**

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1-6
Supplementary information: None		

**Table 2 Conducted Emissions Test Equipment**

Test Equipment Used			
Description	Manufacturer	Model	Identifier
<b>Conducted Emissions – GP 1</b>			
Spectrum Analyzer	Agilent	E7402A	ME5B-123
LISN	Solar	9252-50-R-24-BNC	ME5A-636
LISN	EMCO	3825/2R	ME5-790
Switch Driver	HP	11713A	44397
RF Switch Box	UL	4	44404
Measurement Software	UL	Version 9.3	44736
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43734

**Figure 1 Test Setup for Conducted Emissions**

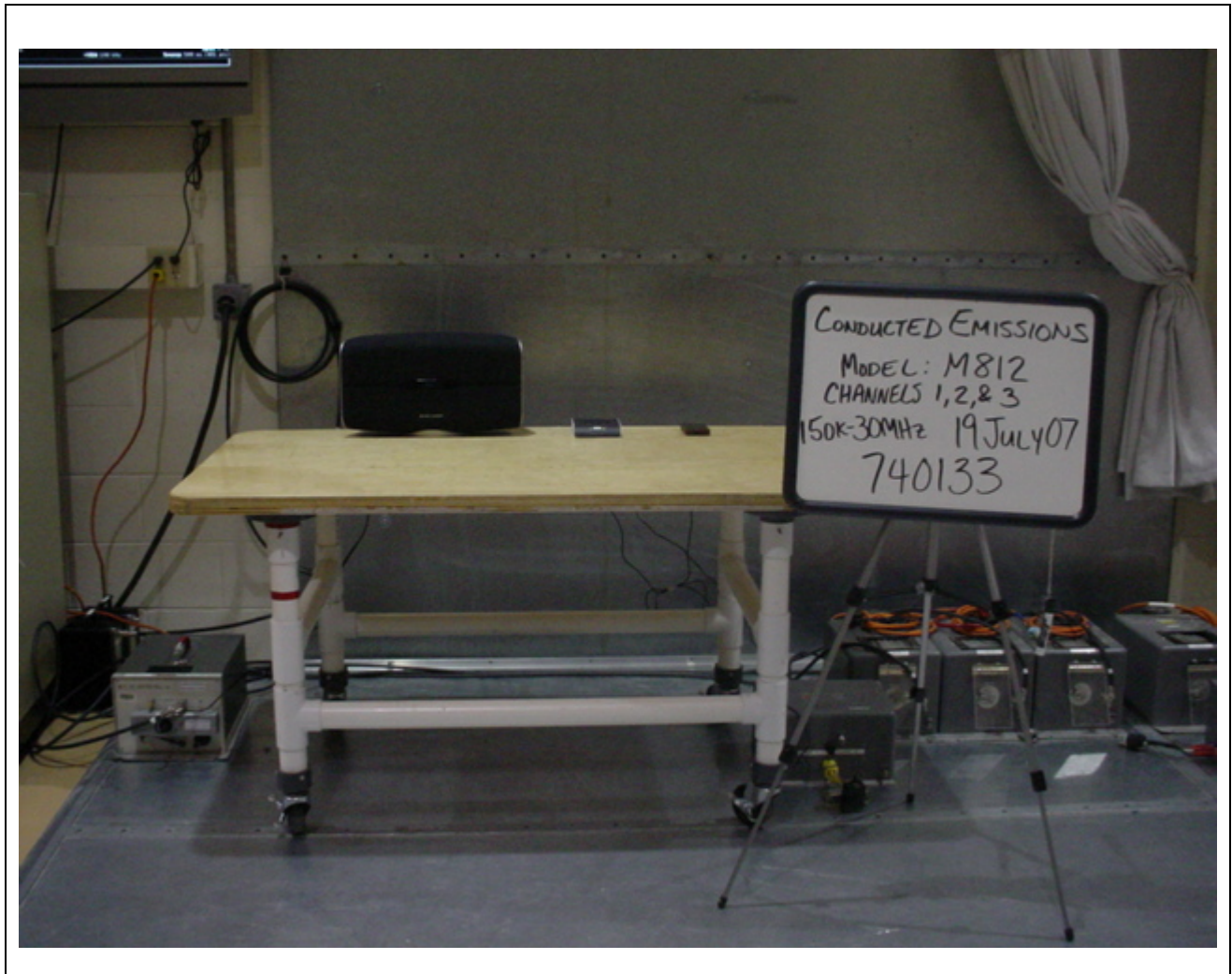
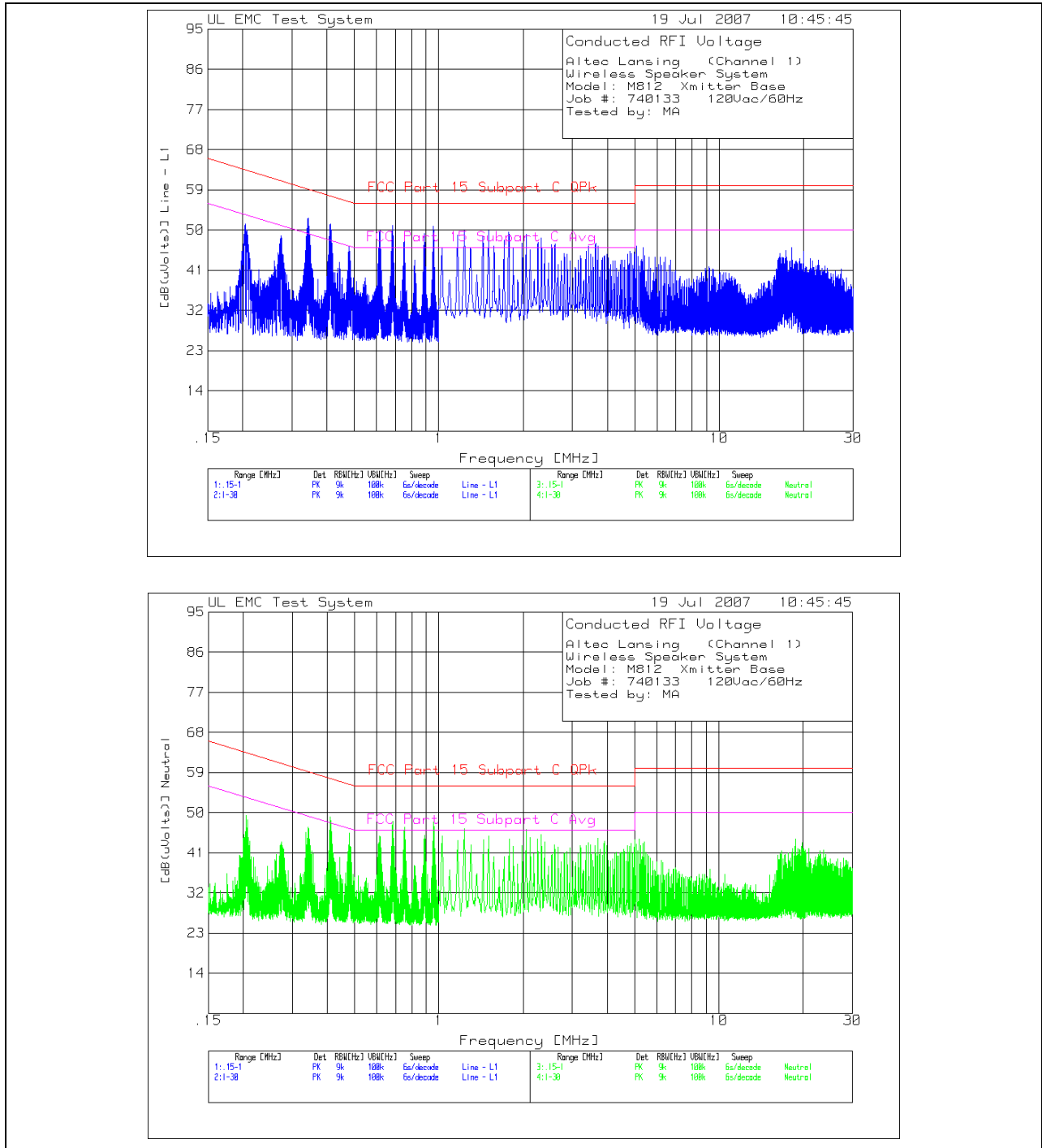


Figure 2 Conducted Emissions Graph



**Table 3 Conducted Emissions Data Points**

Altec Lansing (Channel 1)  
 Wireless Speaker System  
 Model: M812 Xmitter Base  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
-----											
Line - L1 .15 - 1MHz											
1	.95887	40.59 pk	10.3	0	50.89	56	46	-	-	-	-
				Margin [dB]		-5.11	4.89	-	-	-	-
2	.88911	38.97 pk	10.3	0	49.27	56	46	-	-	-	-
				Margin [dB]		-6.73	3.27	-	-	-	-
3	.82254	32.94 pk	10.4	0	43.34	56	46	-	-	-	-
				Margin [dB]		-12.66	-2.66	-	-	-	-
4	.75278	37.12 pk	10.4	0	47.52	56	46	-	-	-	-
				Margin [dB]		-8.48	1.52	-	-	-	-
5	.68366	40.58 pk	10.4	0	50.98	56	46	-	-	-	-
				Margin [dB]		-5.02	4.98	-	-	-	-
6	.61645	39.49 pk	10.4	0	49.89	56	46	-	-	-	-
				Margin [dB]		-6.11	3.89	-	-	-	-
7	.47906	35.92 pk	10.5	0	46.42	56.4	46.4	-	-	-	-
				Margin [dB]		-9.98	.02	-	-	-	-
8	.41185	40.73 pk	10.6	0	51.33	57.6	47.6	-	-	-	-
				Margin [dB]		-6.27	3.73	-	-	-	-
9	.34252	42.05 pk	10.7	0	52.75	59.1	49.1	-	-	-	-
				Margin [dB]		-6.35	3.65	-	-	-	-
10	.27403	37.8 pk	10.9	0	48.7	61	51	-	-	-	-
				Margin [dB]		-12.3	-2.3	-	-	-	-
11	.20555	39.92 pk	11.4	0	51.32	63.4	53.4	-	-	-	-
				Margin [dB]		-12.08	-2.08	-	-	-	-
-----											
Line - L1 1 - 30MHz											
12	1.23148	39.62 pk	10.3	0	49.92	56	46	-	-	-	-
				Margin [dB]		-6.08	3.92	-	-	-	-
13	1.50636	39.53 pk	10.3	0	49.83	56	46	-	-	-	-
				Margin [dB]		-6.17	3.83	-	-	-	-
14	1.77401	39.28 pk	10.3	0	49.58	56	46	-	-	-	-
				Margin [dB]		-6.42	3.58	-	-	-	-
15	2.32377	37.75 pk	10.4	0	48.15	56	46	-	-	-	-
				Margin [dB]		-7.85	2.15	-	-	-	-
16	2.59865	36.55 pk	10.4	0	46.95	56	46	-	-	-	-
				Margin [dB]		-9.05	.95	-	-	-	-
17	3.62584	36.62 pk	10.4	0	47.02	56	46	-	-	-	-
				Margin [dB]		-8.98	1.02	-	-	-	-
18	4.79771	34.82 pk	10.5	0	45.32	56	46	-	-	-	-
				Margin [dB]		-10.68	-.68	-	-	-	-
-----											
Neutral .15 - 1MHz											
19	.9559	37.54 pk	10.3	0	47.84	56	46	-	-	-	-
				Margin [dB]		-8.16	1.84	-	-	-	-
20	.88954	34.68 pk	10.3	0	44.98	56	46	-	-	-	-
				Margin [dB]		-11.02	-1.02	-	-	-	-
21	.75278	36.3 pk	10.4	0	46.7	56	46	-	-	-	-
				Margin [dB]		-9.3	.7	-	-	-	-
22	.68557	37.7 pk	10.4	0	48.1	56	46	-	-	-	-
				Margin [dB]		-7.9	2.1	-	-	-	-
23	.61592	34.36 pk	10.4	0	44.76	56	46	-	-	-	-
				Margin [dB]		-11.24	-1.24	-	-	-	-
24	.47906	34.96 pk	10.5	0	45.46	56.4	46.4	-	-	-	-
				Margin [dB]		-10.94	-.94	-	-	-	-

25	.41015	38.48 pk	10.6	0	49.08	57.6	47.6	-	-	-	-
				Margin [dB]		-8.52	1.48	-	-	-	-
26	.34146	36.04 pk	10.7	0	46.74	59.2	49.2	-	-	-	-
				Margin [dB]		-12.46	-2.46	-	-	-	-
27	.27467	32.48 pk	10.9	0	43.38	61	51	-	-	-	-
				Margin [dB]		-17.62	-7.62	-	-	-	-
28	.20449	37.91 pk	11.4	0	49.31	63.4	53.4	-	-	-	-
				Margin [dB]		-14.09	-4.09	-	-	-	-

Neutral 1 - 30MHz

29	1.02894	34.37 pk	10.3	0	44.67	56	46	-	-	-	-
				Margin [dB]		-11.33	-1.33	-	-	-	-
30	1.23148	36.06 pk	10.3	0	46.36	56	46	-	-	-	-
				Margin [dB]		-9.64	.36	-	-	-	-
31	1.50636	34.49 pk	10.3	0	44.79	56	46	-	-	-	-
				Margin [dB]		-11.21	-1.21	-	-	-	-
32	2.04889	35.84 pk	10.4	0	46.24	56	46	-	-	-	-
				Margin [dB]		-9.76	.24	-	-	-	-
33	3.69095	33.81 pk	10.4	0	44.21	56	46	-	-	-	-
				Margin [dB]		-11.79	-1.79	-	-	-	-
34	5.00025	33.41 pk	10.5	0	43.91	60	50	-	-	-	-
				Margin [dB]		-16.09	-6.09	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection  
 tm - Trace Math Result



Job Number: 740133

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

Altec Lansing (Channel 1)  
Wireless Speaker System  
Model: M812 Wireless Speaker  
Job #: 740133 120Vac/60Hz  
Tested by: MA

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
=====										
Line - L1 .15 - 1MHz										
.4161	38.11 qp	10.6	0	48.71	57.5	47.5	-	-	-	-
			Margin [dB]:		-8.79	1.21	-	-	-	-
.45323	34.83 qp	10.5	0	45.33	56.8	46.8	-	-	-	-
			Margin [dB]:		-11.47	-1.47	-	-	-	-
.44423	40.42 qp	10.5	0	50.92	57	47	-	-	-	-
			Margin [dB]:		-6.08	3.92	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector  
qp - Quasi-Peak detector  
av - Average detector  
avlg - denotes average log detection  
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk  
LIMIT 2: FCC Part 15 Subpart C Avg  
LIMIT 3: NONE  
LIMIT 4: NONE  
LIMIT 5: NONE  
LIMIT 6: NONE

Altec Lansing (Channel 1)
Wireless Speaker System
Model: M812 Xmitter Base
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level Limit:1 [dB(uVolts)], 2, 3, 4, 5, 6. Rows include Line - L1 .15 - 1MHz and Neutral .15 - 1MHz.

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

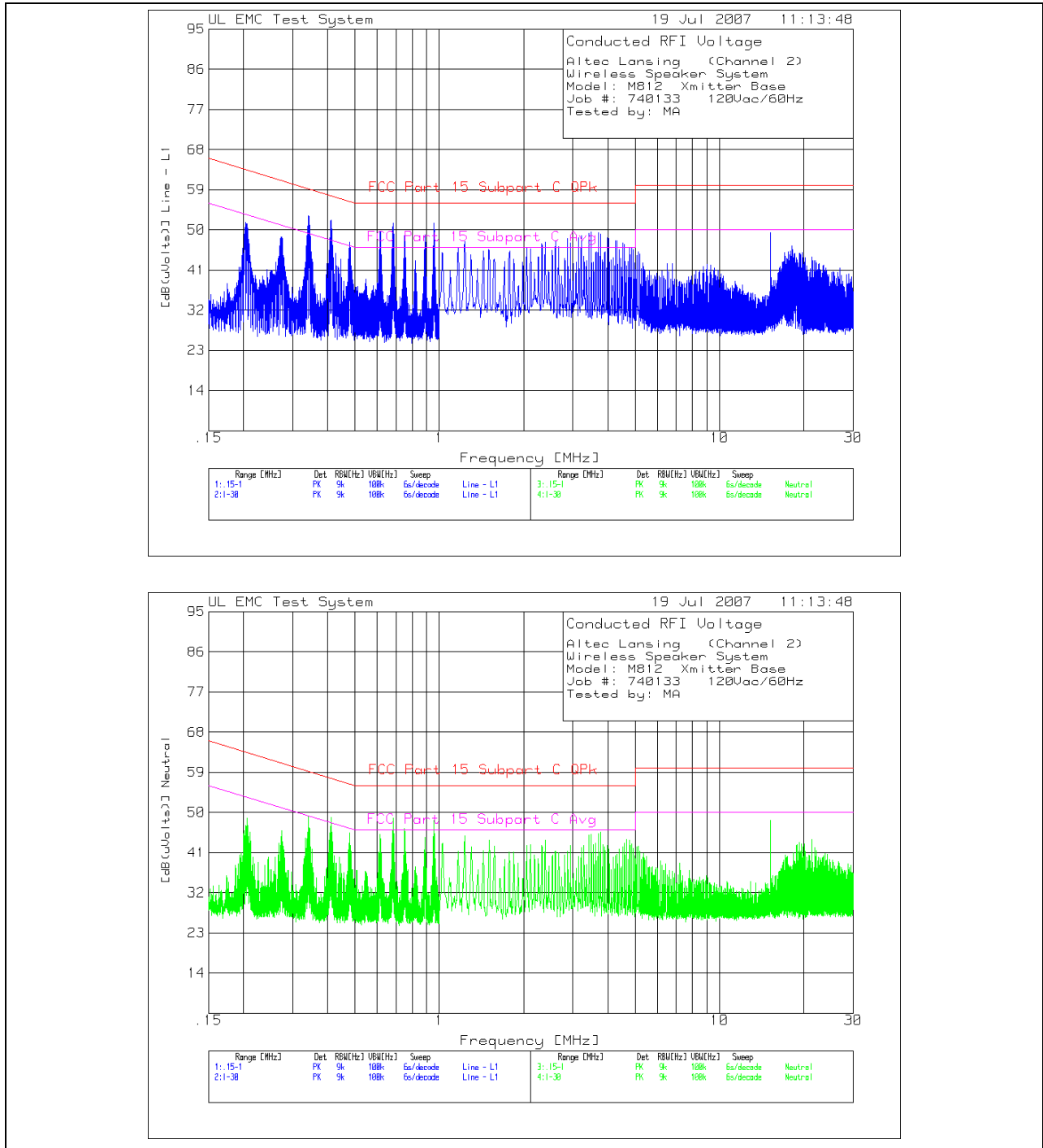
.27467	14.35 ave	10.9	0	25.25	61	51	-	-	-	-
			Margin [dB]:		-35.75	-25.75	-	-	-	-
.20449	16.98 ave	11.4	0	28.38	63.4	53.4	-	-	-	-
			Margin [dB]:		-35.02	-25.02	-	-	-	-
Neutral 1 - 30MHz										
1.0299	15.44 ave	10.3	0	25.74	56	46	-	-	-	-
			Margin [dB]:		-30.26	-20.26	-	-	-	-
1.23148	16.78 ave	10.3	0	27.08	56	46	-	-	-	-
			Margin [dB]:		-28.92	-18.92	-	-	-	-
1.50636	15.93 ave	10.3	0	26.23	56	46	-	-	-	-
			Margin [dB]:		-29.77	-19.77	-	-	-	-
2.04889	15.56 ave	10.4	0	25.96	56	46	-	-	-	-
			Margin [dB]:		-30.04	-20.04	-	-	-	-
3.69095	16.1 ave	10.4	0	26.5	56	46	-	-	-	-
			Margin [dB]:		-29.5	-19.5	-	-	-	-
5.00025	12.14 ave	10.5	0	22.64	60	50	-	-	-	-
			Margin [dB]:		-37.36	-27.36	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

Figure 3 Conducted Emissions Graph



**Table 4 Conducted Emissions Data Points**

Altec Lansing (Channel 2)  
 Wireless Speaker System  
 Model: M812 Xmitter Base  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
-----											
Line - L1	.15	-----									
1	.9576	41.24 pk	10.3	0	51.54	56	46	-	-	-	-
				Margin [dB]		-4.46	5.54	-	-	-	-
2	.88975	38.6 pk	10.3	0	48.9	56	46	-	-	-	-
				Margin [dB]		-7.1	2.9	-	-	-	-
3	.82084	32.64 pk	10.4	0	43.04	56	46	-	-	-	-
				Margin [dB]		-12.96	-2.96	-	-	-	-
4	.75257	38.24 pk	10.4	0	48.64	56	46	-	-	-	-
				Margin [dB]		-7.36	2.64	-	-	-	-
5	.68366	41.08 pk	10.4	0	51.48	56	46	-	-	-	-
				Margin [dB]		-4.52	5.48	-	-	-	-
6	.61497	39.3 pk	10.4	0	49.7	56	46	-	-	-	-
				Margin [dB]		-6.3	3.7	-	-	-	-
7	.47927	36.75 pk	10.5	0	47.25	56.4	46.4	-	-	-	-
				Margin [dB]		-9.15	.85	-	-	-	-
8	.41058	41.55 pk	10.6	0	52.15	57.6	47.6	-	-	-	-
				Margin [dB]		-5.45	4.55	-	-	-	-
9	.34167	42.41 pk	10.7	0	53.11	59.2	49.2	-	-	-	-
				Margin [dB]		-6.09	3.91	-	-	-	-
10	.27382	37.52 pk	10.9	0	48.42	61	51	-	-	-	-
				Margin [dB]		-12.58	-2.58	-	-	-	-
11	.20428	40.35 pk	11.4	0	51.75	63.4	53.4	-	-	-	-
				Margin [dB]		-11.65	-1.65	-	-	-	-
-----											
Line - L1	1	-----									
12	1.23148	37.12 pk	10.3	0	47.42	56	46	-	-	-	-
				Margin [dB]		-8.58	1.42	-	-	-	-
13	1.49913	35.22 pk	10.3	0	45.52	56	46	-	-	-	-
				Margin [dB]		-10.48	-.48	-	-	-	-
14	1.78124	34.87 pk	10.3	0	45.17	56	46	-	-	-	-
				Margin [dB]		-10.83	-.83	-	-	-	-
15	2.04889	35.65 pk	10.4	0	46.05	56	46	-	-	-	-
				Margin [dB]		-9.95	.05	-	-	-	-
16	2.38888	36.84 pk	10.4	0	47.24	56	46	-	-	-	-
				Margin [dB]		-8.76	1.24	-	-	-	-
17	2.87354	37.6 pk	10.4	0	48	56	46	-	-	-	-
				Margin [dB]		-8	2	-	-	-	-
18	3.48117	39.21 pk	10.4	0	49.61	56	46	-	-	-	-
				Margin [dB]		-6.39	3.61	-	-	-	-
19	3.96583	37.8 pk	10.4	0	48.2	56	46	-	-	-	-
				Margin [dB]		-7.8	2.2	-	-	-	-
20	4.51559	36.63 pk	10.5	0	47.13	56	46	-	-	-	-
				Margin [dB]		-8.87	1.13	-	-	-	-
21	4.78324	35.65 pk	10.5	0	46.15	56	46	-	-	-	-
				Margin [dB]		-9.85	.15	-	-	-	-
22	15.21427	38.44 pk	11	0	49.44	60	50	-	-	-	-
				Margin [dB]		-10.56	-.56	-	-	-	-
23	18.06436	35.62 pk	10.8	0	46.42	60	50	-	-	-	-
				Margin [dB]		-13.58	-3.58	-	-	-	-
24	19.72811	33.97 pk	10.9	0	44.87	60	50	-	-	-	-
				Margin [dB]		-15.13	-5.13	-	-	-	-

Neutral .15 - 1MHz -----											
25	.95823	38 pk	10.3	0	48.3	56	46	-	-	-	-
				Margin [dB]		-7.7	2.3	-	-	-	-
26	.8889	34.2 pk	10.3	0	44.5	56	46	-	-	-	-
				Margin [dB]		-11.5	-1.5	-	-	-	-
27	.75109	35.94 pk	10.4	0	46.34	56	46	-	-	-	-
				Margin [dB]		-9.66	.34	-	-	-	-
28	.68387	38.38 pk	10.4	0	48.78	56	46	-	-	-	-
				Margin [dB]		-7.22	2.78	-	-	-	-
29	.61454	34.76 pk	10.4	0	45.16	56	46	-	-	-	-
				Margin [dB]		-10.84	-.84	-	-	-	-
30	.47906	34.94 pk	10.5	0	45.44	56.4	46.4	-	-	-	-
				Margin [dB]		-10.96	-.96	-	-	-	-
31	.41121	38.23 pk	10.6	0	48.83	57.6	47.6	-	-	-	-
				Margin [dB]		-8.77	1.23	-	-	-	-
32	.34125	38.34 pk	10.7	0	49.04	59.2	49.2	-	-	-	-
				Margin [dB]		-10.16	-.16	-	-	-	-
33	.20576	37.34 pk	11.4	0	48.74	63.4	53.4	-	-	-	-
				Margin [dB]		-14.66	-4.66	-	-	-	-

Neutral 1 - 30MHz -----											
34	1.02894	32.84 pk	10.3	0	43.14	56	46	-	-	-	-
				Margin [dB]		-12.86	-2.86	-	-	-	-
35	1.23148	34.42 pk	10.3	0	44.72	56	46	-	-	-	-
				Margin [dB]		-11.28	-1.28	-	-	-	-
36	1.77401	30.89 pk	10.3	0	41.19	56	46	-	-	-	-
				Margin [dB]		-14.81	-4.81	-	-	-	-
37	2.38888	33.38 pk	10.4	0	43.78	56	46	-	-	-	-
				Margin [dB]		-12.22	-2.22	-	-	-	-
38	3.21352	31.74 pk	10.4	0	42.14	56	46	-	-	-	-
				Margin [dB]		-13.86	-3.86	-	-	-	-
39	4.58069	32.62 pk	10.4	0	43.02	56	46	-	-	-	-
				Margin [dB]		-12.98	-2.98	-	-	-	-
40	4.92068	31.48 pk	10.5	0	41.98	56	46	-	-	-	-
				Margin [dB]		-14.02	-4.02	-	-	-	-
41	15.2215	37.34 pk	10.9	0	48.24	60	50	-	-	-	-
				Margin [dB]		-11.76	-1.76	-	-	-	-
42	18.889	31.95 pk	10.8	0	42.75	60	50	-	-	-	-
				Margin [dB]		-17.25	-7.25	-	-	-	-
43	21.37017	32.57 pk	11.3	0	43.87	60	50	-	-	-	-
				Margin [dB]		-16.13	-6.13	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk  
LIMIT 2: FCC Part 15 Subpart C Avg  
LIMIT 3: NONE  
LIMIT 4: NONE  
LIMIT 5: NONE  
LIMIT 6: NONE

pk - Peak detector  
qp - Quasi-Peak detector  
av - Average detector  
avlg - denotes average log detection  
ave - denotes average detection  
tm - Trace Math Result

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

Altec Lansing (Channel 2)  
Wireless Speaker System  
Model: M812 Xmitter Base  
Job #: 740133 120Vac/60Hz  
Tested by: MA

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
=====										
Line - L1 .15 - 1MHz										
.95775	38.04 qp	10.3	0	48.34	56	46	-	-	-	-
			Margin [dB]:	-7.66	2.34	-	-	-	-	-
.68438	38.16 qp	10.4	0	48.56	56	46	-	-	-	-
			Margin [dB]:	-7.44	2.56	-	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

- pk - Peak detector
- qp - Quasi-Peak detector
- av - Average detector
- avlg - denotes average log detection
- ave - denotes average detection

- LIMIT 1: FCC Part 15 Subpart C QPk
- LIMIT 2: FCC Part 15 Subpart C Avg
- LIMIT 3: NONE
- LIMIT 4: NONE
- LIMIT 5: NONE
- LIMIT 6: NONE

Altec Lansing (Channel 2)
Wireless Speaker System
Model: M812 Xmitter Base
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level Limit:1 [dB(uVolts)], 2, 3, 4, 5, 6. Rows include Line - L1 .15 - 1MHz and Neutral .15 - 1MHz.



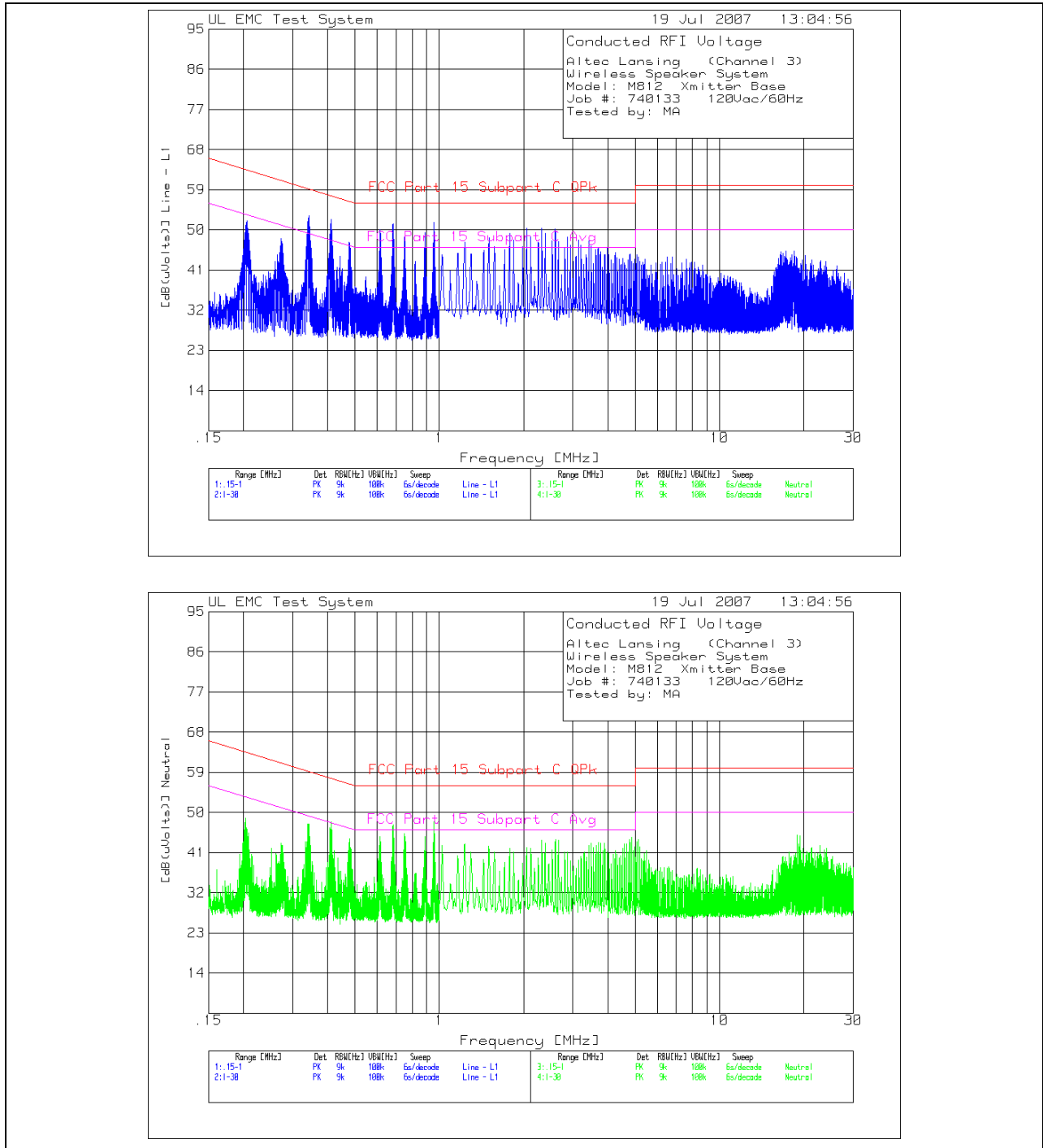
.75109	16.24 ave	10.4	0	26.64	56	46	-	-	-	-
			Margin [dB]:		-29.36	-19.36	-	-	-	-
.68387	17.66 ave	10.4	0	28.06	56	46	-	-	-	-
			Margin [dB]:		-27.94	-17.94	-	-	-	-
.61454	15.7 ave	10.4	0	26.1	56	46	-	-	-	-
			Margin [dB]:		-29.9	-19.9	-	-	-	-
.47906	15.32 ave	10.5	0	25.82	56.4	46.4	-	-	-	-
			Margin [dB]:		-30.58	-20.58	-	-	-	-
.41121	18.47 ave	10.6	0	29.07	57.6	47.6	-	-	-	-
			Margin [dB]:		-28.53	-18.53	-	-	-	-
.34125	17.62 ave	10.7	0	28.32	59.2	49.2	-	-	-	-
			Margin [dB]:		-30.88	-20.88	-	-	-	-
.20576	17.02 ave	11.4	0	28.42	63.4	53.4	-	-	-	-
			Margin [dB]:		-34.98	-24.98	-	-	-	-
Neutral 1 - 30MHz										
1.0299	15.68 ave	10.3	0	25.98	56	46	-	-	-	-
			Margin [dB]:		-30.02	-20.02	-	-	-	-
1.23148	16.72 ave	10.3	0	27.02	56	46	-	-	-	-
			Margin [dB]:		-28.98	-18.98	-	-	-	-
1.77401	14.79 ave	10.3	0	25.09	56	46	-	-	-	-
			Margin [dB]:		-30.91	-20.91	-	-	-	-
2.38888	15.61 ave	10.4	0	26.01	56	46	-	-	-	-
			Margin [dB]:		-29.99	-19.99	-	-	-	-
3.21352	14.84 ave	10.4	0	25.24	56	46	-	-	-	-
			Margin [dB]:		-30.76	-20.76	-	-	-	-
4.58069	15.35 ave	10.4	0	25.75	56	46	-	-	-	-
			Margin [dB]:		-30.25	-20.25	-	-	-	-
4.92068	12.94 ave	10.5	0	23.44	56	46	-	-	-	-
			Margin [dB]:		-32.56	-22.56	-	-	-	-
15.2215	34.73 ave	10.9	0	45.63	60	50	-	-	-	-
			Margin [dB]:		-14.37	-4.37	-	-	-	-
18.889	6.17 ave	10.8	0	16.97	60	50	-	-	-	-
			Margin [dB]:		-43.03	-33.03	-	-	-	-
21.37017	5.26 ave	11.3	0	16.56	60	50	-	-	-	-
			Margin [dB]:		-43.44	-33.44	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

Figure 4 Conducted Emissions Graph



**Table 5 Conducted Emissions Data Points**

Altec Lansing (Channel 3)  
 Wireless Speaker System  
 Model: M812 Xmitter Base  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
-----											
Line - L1	.15	- 1MHz -----									
1	.95802	41.47 pk	10.3	0	51.77	56	46	-	-	-	-
				Margin [dB]		-4.23	5.77	-	-	-	-
2	.88932	39.06 pk	10.3	0	49.36	56	46	-	-	-	-
				Margin [dB]		-6.64	3.36	-	-	-	-
3	.82042	32.48 pk	10.4	0	42.88	56	46	-	-	-	-
				Margin [dB]		-13.12	-3.12	-	-	-	-
4	.75109	37.54 pk	10.4	0	47.94	56	46	-	-	-	-
				Margin [dB]		-8.06	1.94	-	-	-	-
5	.68409	40.91 pk	10.4	0	51.31	56	46	-	-	-	-
				Margin [dB]		-4.69	5.31	-	-	-	-
6	.61475	39.59 pk	10.4	0	49.99	56	46	-	-	-	-
				Margin [dB]		-6.01	3.99	-	-	-	-
7	.47715	36.7 pk	10.5	0	47.2	56.4	46.4	-	-	-	-
				Margin [dB]		-9.2	.8	-	-	-	-
8	.41058	41.75 pk	10.6	0	52.35	57.6	47.6	-	-	-	-
				Margin [dB]		-5.25	4.75	-	-	-	-
9	.34252	42.51 pk	10.7	0	53.21	59.1	49.1	-	-	-	-
				Margin [dB]		-5.89	4.11	-	-	-	-
10	.27234	37.12 pk	10.9	0	48.02	61	51	-	-	-	-
				Margin [dB]		-12.98	-2.98	-	-	-	-
11	.20576	40.55 pk	11.4	0	51.95	63.4	53.4	-	-	-	-
				Margin [dB]		-11.45	-1.45	-	-	-	-
-----											
Line - L1	1	- 30MHz -----									
12	1.23148	37.01 pk	10.3	0	47.31	56	46	-	-	-	-
				Margin [dB]		-8.69	1.31	-	-	-	-
13	1.0217	34.16 pk	10.3	0	44.46	56	46	-	-	-	-
				Margin [dB]		-11.54	-1.54	-	-	-	-
14	1.50636	37.88 pk	10.3	0	48.18	56	46	-	-	-	-
				Margin [dB]		-7.82	2.18	-	-	-	-
15	1.78124	38.89 pk	10.3	0	49.19	56	46	-	-	-	-
				Margin [dB]		-6.81	3.19	-	-	-	-
16	2.04889	40.01 pk	10.4	0	50.41	56	46	-	-	-	-
				Margin [dB]		-5.59	4.41	-	-	-	-
17	2.25143	36.8 pk	10.4	0	47.2	56	46	-	-	-	-
				Margin [dB]		-8.8	1.2	-	-	-	-
18	2.32377	40.04 pk	10.4	0	50.44	56	46	-	-	-	-
				Margin [dB]		-5.56	4.44	-	-	-	-
19	2.59142	39.84 pk	10.4	0	50.24	56	46	-	-	-	-
				Margin [dB]		-5.76	4.24	-	-	-	-
20	2.8663	38.03 pk	10.4	0	48.43	56	46	-	-	-	-
				Margin [dB]		-7.57	2.43	-	-	-	-
21	4.24071	34.35 pk	10.5	0	44.85	56	46	-	-	-	-
				Margin [dB]		-11.15	-1.15	-	-	-	-
22	3.41606	37.16 pk	10.4	0	47.56	56	46	-	-	-	-
				Margin [dB]		-8.44	1.56	-	-	-	-
23	3.96583	35.6 pk	10.4	0	46	56	46	-	-	-	-
				Margin [dB]		-10	0	-	-	-	-
24	4.79047	34.02 pk	10.5	0	44.52	56	46	-	-	-	-
				Margin [dB]		-11.48	-1.48	-	-	-	-
25	16.55251	34.26 pk	10.9	0	45.16	60	50	-	-	-	-
				Margin [dB]		-14.84	-4.84	-	-	-	-

Neutral .15 - 1MHz -----

26	.20428	37.31 pk	11.4	0	48.71	63.4	53.4	-	-	-	-
				Margin [dB]		-14.69	-4.69	-	-	-	-
27	.27319	32.27 pk	10.9	0	43.17	61	51	-	-	-	-
				Margin [dB]		-17.83	-7.83	-	-	-	-
28	.33849	36.63 pk	10.7	0	47.33	59.2	49.2	-	-	-	-
				Margin [dB]		-11.87	-1.87	-	-	-	-
29	.41121	37.23 pk	10.6	0	47.83	57.6	47.6	-	-	-	-
				Margin [dB]		-9.77	.23	-	-	-	-
30	.48012	33.65 pk	10.5	0	44.15	56.3	46.3	-	-	-	-
				Margin [dB]		-12.15	-2.15	-	-	-	-
31	.61603	34.18 pk	10.4	0	44.58	56	46	-	-	-	-
				Margin [dB]		-11.42	-1.42	-	-	-	-
32	.68578	36.88 pk	10.4	0	47.28	56	46	-	-	-	-
				Margin [dB]		-8.72	1.28	-	-	-	-
33	.75193	34.86 pk	10.4	0	45.26	56	46	-	-	-	-
				Margin [dB]		-10.74	-.74	-	-	-	-
34	.88742	34.36 pk	10.3	0	44.66	56	46	-	-	-	-
				Margin [dB]		-11.34	-1.34	-	-	-	-
35	.95781	37.55 pk	10.3	0	47.85	56	46	-	-	-	-
				Margin [dB]		-8.15	1.85	-	-	-	-

Neutral 1 - 30MHz -----

36	1.0217	32.25 pk	10.3	0	42.55	56	46	-	-	-	-
				Margin [dB]		-13.45	-3.45	-	-	-	-
37	1.23148	32.58 pk	10.3	0	42.88	56	46	-	-	-	-
				Margin [dB]		-13.12	-3.12	-	-	-	-
38	1.49913	32.12 pk	10.3	0	42.42	56	46	-	-	-	-
				Margin [dB]		-13.58	-3.58	-	-	-	-
39	2.04889	31.74 pk	10.4	0	42.14	56	46	-	-	-	-
				Margin [dB]		-13.86	-3.86	-	-	-	-
40	2.59865	33.51 pk	10.4	0	43.91	56	46	-	-	-	-
				Margin [dB]		-12.09	-2.09	-	-	-	-
41	3.4884	32.65 pk	10.4	0	43.05	56	46	-	-	-	-
				Margin [dB]		-12.95	-2.95	-	-	-	-
42	4.78324	33.52 pk	10.4	0	43.92	56	46	-	-	-	-
				Margin [dB]		-12.08	-2.08	-	-	-	-
43	18.88177	34.08 pk	10.8	0	44.88	60	50	-	-	-	-
				Margin [dB]		-15.12	-5.12	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk  
LIMIT 2: FCC Part 15 Subpart C Avg  
LIMIT 3: NONE  
LIMIT 4: NONE  
LIMIT 5: NONE  
LIMIT 6: NONE

pk - Peak detector  
qp - Quasi-Peak detector  
av - Average detector  
avlg - denotes average log detection  
ave - denotes average detection  
tm - Trace Math Result

Altec Lansing (Channel 3)
Wireless Speaker System
Model: M812 Xmitter Base
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level [dB(uVolts)], Limit:1, 2, 3, 4, 5, 6. Includes data for Line - L1 .15 - 1MHz and Line - L1 1 - 30MHz.

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Altec Lansing (Channel 3)  
 Wireless Speaker System  
 Model: M812 Xmitter Base  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
-----										
Line - L1 .15 - 1MHz										
.95802	26.67 ave	10.3	0	36.97	56	46	-	-	-	-
			Margin [dB]:		-19.03	-9.03	-	-	-	-
.88932	24.87 ave	10.3	0	35.17	56	46	-	-	-	-
			Margin [dB]:		-20.83	-10.83	-	-	-	-
.82042	15.12 ave	10.4	0	25.52	56	46	-	-	-	-
			Margin [dB]:		-30.48	-20.48	-	-	-	-
.75109	24.06 ave	10.4	0	34.46	56	46	-	-	-	-
			Margin [dB]:		-21.54	-11.54	-	-	-	-
.68409	26.91 ave	10.4	0	37.31	56	46	-	-	-	-
			Margin [dB]:		-18.69	-8.69	-	-	-	-
.61475	25.6 ave	10.4	0	36	56	46	-	-	-	-
			Margin [dB]:		-20	-10	-	-	-	-
.47715	23.15 ave	10.5	0	33.65	56.4	46.4	-	-	-	-
			Margin [dB]:		-22.75	-12.75	-	-	-	-
.41058	27.46 ave	10.6	0	38.06	57.6	47.6	-	-	-	-
			Margin [dB]:		-19.54	-9.54	-	-	-	-
.34252	27.43 ave	10.7	0	38.13	59.1	49.1	-	-	-	-
			Margin [dB]:		-20.97	-10.97	-	-	-	-
.27234	21.07 ave	10.9	0	31.97	61	51	-	-	-	-
			Margin [dB]:		-29.03	-19.03	-	-	-	-
.20576	25.77 ave	11.4	0	37.17	63.4	53.4	-	-	-	-
			Margin [dB]:		-26.23	-16.23	-	-	-	-
Line - L1 1 - 30MHz										
1.23148	25.79 ave	10.3	0	36.09	56	46	-	-	-	-
			Margin [dB]:		-19.91	-9.91	-	-	-	-
1.0299	23.37 ave	10.3	0	33.67	56	46	-	-	-	-
			Margin [dB]:		-22.33	-12.33	-	-	-	-
1.50636	24.92 ave	10.3	0	35.22	56	46	-	-	-	-
			Margin [dB]:		-20.78	-10.78	-	-	-	-
1.78124	24.5 ave	10.3	0	34.8	56	46	-	-	-	-
			Margin [dB]:		-21.2	-11.2	-	-	-	-
2.04889	25.09 ave	10.4	0	35.49	56	46	-	-	-	-
			Margin [dB]:		-20.51	-10.51	-	-	-	-
2.25143	22.97 ave	10.4	0	33.37	56	46	-	-	-	-
			Margin [dB]:		-22.63	-12.63	-	-	-	-
2.32377	25.49 ave	10.4	0	35.89	56	46	-	-	-	-
			Margin [dB]:		-20.11	-10.11	-	-	-	-
2.59142	24.96 ave	10.4	0	35.36	56	46	-	-	-	-
			Margin [dB]:		-20.64	-10.64	-	-	-	-
2.8663	22.36 ave	10.4	0	32.76	56	46	-	-	-	-
			Margin [dB]:		-23.24	-13.24	-	-	-	-
4.24071	22.7 ave	10.5	0	33.2	56	46	-	-	-	-
			Margin [dB]:		-22.8	-12.8	-	-	-	-
3.41606	25.14 ave	10.4	0	35.54	56	46	-	-	-	-
			Margin [dB]:		-20.46	-10.46	-	-	-	-
3.96583	22.97 ave	10.4	0	33.37	56	46	-	-	-	-
			Margin [dB]:		-22.63	-12.63	-	-	-	-
4.79047	23.64 ave	10.5	0	34.14	56	46	-	-	-	-
			Margin [dB]:		-21.86	-11.86	-	-	-	-
16.55251	18.13 ave	10.9	0	29.03	60	50	-	-	-	-
			Margin [dB]:		-30.97	-20.97	-	-	-	-
Neutral .15 - 1MHz										
.20428	17.05 ave	11.4	0	28.45	63.4	53.4	-	-	-	-
			Margin [dB]:		-34.95	-24.95	-	-	-	-

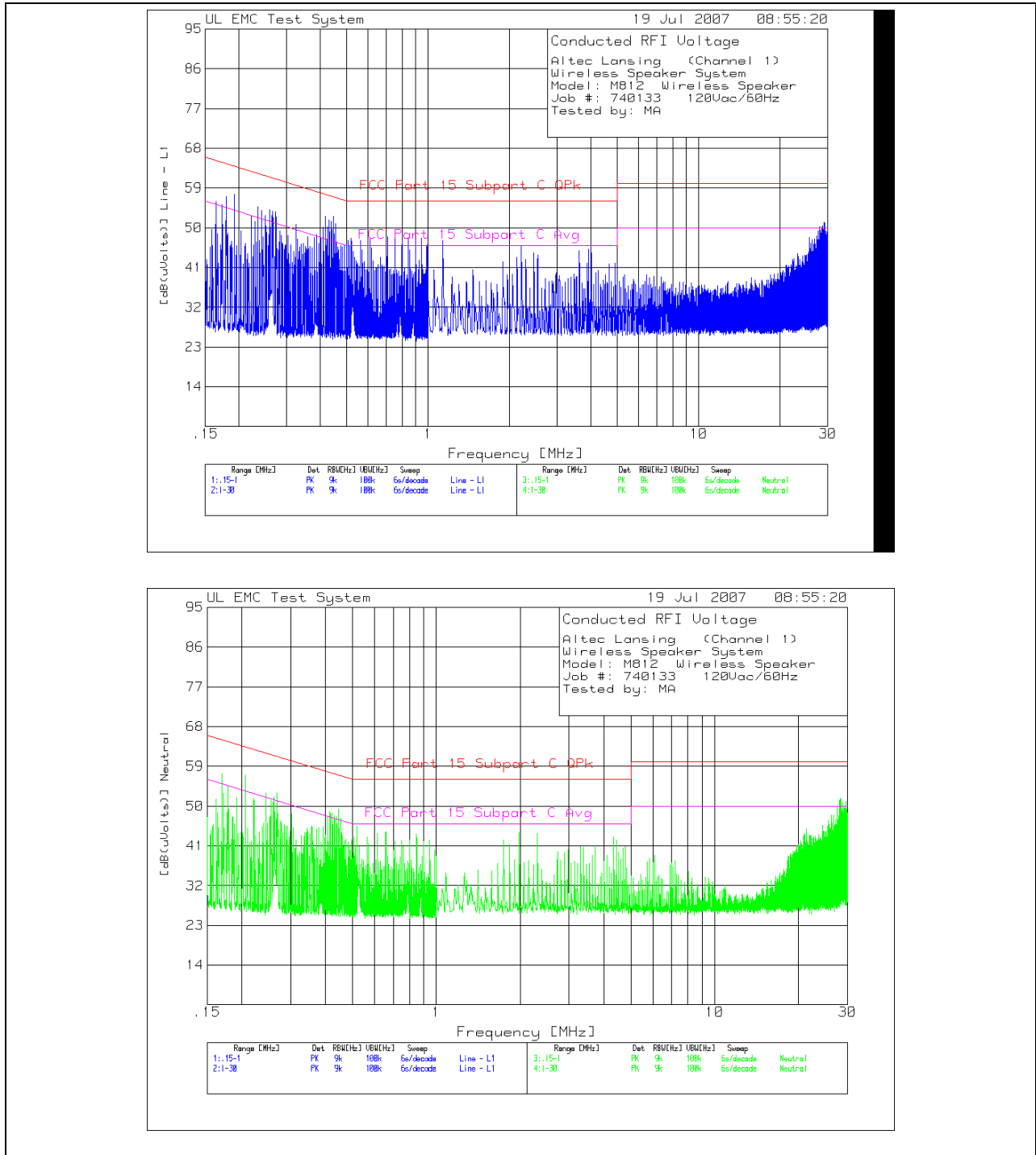
.27319	14.29 ave	10.9	0	25.19	61	51	-	-	-	-
			Margin [dB]:		-35.81	-25.81	-	-	-	-
.33849	17.66 ave	10.7	0	28.36	59.2	49.2	-	-	-	-
			Margin [dB]:		-30.84	-20.84	-	-	-	-
.41121	18.48 ave	10.6	0	29.08	57.6	47.6	-	-	-	-
			Margin [dB]:		-28.52	-18.52	-	-	-	-
.48012	15.15 ave	10.5	0	25.65	56.3	46.3	-	-	-	-
			Margin [dB]:		-30.65	-20.65	-	-	-	-
.61603	15.64 ave	10.4	0	26.04	56	46	-	-	-	-
			Margin [dB]:		-29.96	-19.96	-	-	-	-
.68578	17.6 ave	10.4	0	28	56	46	-	-	-	-
			Margin [dB]:		-28	-18	-	-	-	-
.75193	16.12 ave	10.4	0	26.52	56	46	-	-	-	-
			Margin [dB]:		-29.48	-19.48	-	-	-	-
.88742	15.08 ave	10.3	0	25.38	56	46	-	-	-	-
			Margin [dB]:		-30.62	-20.62	-	-	-	-
.95781	17.41 ave	10.3	0	27.71	56	46	-	-	-	-
			Margin [dB]:		-28.29	-18.29	-	-	-	-
Neutral 1 - 30MHz										
1.0299	15.28 ave	10.3	0	25.58	56	46	-	-	-	-
			Margin [dB]:		-30.42	-20.42	-	-	-	-
1.23148	16.88 ave	10.3	0	27.18	56	46	-	-	-	-
			Margin [dB]:		-28.82	-18.82	-	-	-	-
1.49913	16 ave	10.3	0	26.3	56	46	-	-	-	-
			Margin [dB]:		-29.7	-19.7	-	-	-	-
2.04889	15.77 ave	10.4	0	26.17	56	46	-	-	-	-
			Margin [dB]:		-29.83	-19.83	-	-	-	-
2.59865	16.14 ave	10.4	0	26.54	56	46	-	-	-	-
			Margin [dB]:		-29.46	-19.46	-	-	-	-
3.4884	15.43 ave	10.4	0	25.83	56	46	-	-	-	-
			Margin [dB]:		-30.17	-20.17	-	-	-	-
4.78324	15.27 ave	10.4	0	25.67	56	46	-	-	-	-
			Margin [dB]:		-30.33	-20.33	-	-	-	-
18.88177	7.54 ave	10.8	0	18.34	60	50	-	-	-	-
			Margin [dB]:		-41.66	-31.66	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

Figure 5 Conducted Emissions Graph





**Table 6 Conducted Emissions Data Points**

Altec Lansing (Channel 1)  
 Wireless Speaker System  
 Model: M812 Wireless Speaker  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
-----											
Line - L1	.15	-----									
1	.19241	46.09 pk	11.5	0	57.59	63.9	53.9	-	-	-	-
				Margin [dB]		-6.31	3.69	-	-	-	-
2	.17905	45.37 pk	11.7	0	57.07	64.5	54.5	-	-	-	-
				Margin [dB]		-7.43	2.57	-	-	-	-
3	.16399	44 pk	11.9	0	55.9	65.3	55.3	-	-	-	-
				Margin [dB]		-9.4	.6	-	-	-	-
4	.22209	41.59 pk	11.2	0	52.79	62.7	52.7	-	-	-	-
				Margin [dB]		-9.91	.09	-	-	-	-
5	.23502	43.67 pk	11.1	0	54.77	62.3	52.3	-	-	-	-
				Margin [dB]		-7.53	2.47	-	-	-	-
6	.25919	43.04 pk	11	0	54.04	61.5	51.5	-	-	-	-
				Margin [dB]		-7.46	2.54	-	-	-	-
7	.27319	42.64 pk	10.9	0	53.54	61	51	-	-	-	-
				Margin [dB]		-7.46	2.54	-	-	-	-
8	.32471	40.12 pk	10.7	0	50.82	59.6	49.6	-	-	-	-
				Margin [dB]		-8.78	1.22	-	-	-	-
9	.35863	37.3 pk	10.6	0	47.9	58.8	48.8	-	-	-	-
				Margin [dB]		-10.9	-.9	-	-	-	-
10	.38641	37.92 pk	10.6	0	48.52	58.1	48.1	-	-	-	-
				Margin [dB]		-9.58	.42	-	-	-	-
11	.4163	42.02 pk	10.6	0	52.62	57.5	47.5	-	-	-	-
				Margin [dB]		-4.88	5.12	-	-	-	-
12	.45425	40.46 pk	10.5	0	50.96	56.8	46.8	-	-	-	-
				Margin [dB]		-5.84	4.16	-	-	-	-
13	.44577	42.17 pk	10.5	0	52.67	57	47	-	-	-	-
				Margin [dB]		-4.33	5.67	-	-	-	-
14	.51298	35.44 pk	10.5	0	45.94	56	46	-	-	-	-
				Margin [dB]		-10.06	-.06	-	-	-	-
15	.56366	36.69 pk	10.4	0	47.09	56	46	-	-	-	-
				Margin [dB]		-8.91	1.09	-	-	-	-
16	.61051	37.2 pk	10.4	0	47.6	56	46	-	-	-	-
				Margin [dB]		-8.4	1.6	-	-	-	-
17	.70932	37.61 pk	10.4	0	48.01	56	46	-	-	-	-
				Margin [dB]		-7.99	2.01	-	-	-	-
18	.75384	37.84 pk	10.4	0	48.24	56	46	-	-	-	-
				Margin [dB]		-7.76	2.24	-	-	-	-
19	.80452	36.8 pk	10.4	0	47.2	56	46	-	-	-	-
				Margin [dB]		-8.8	1.2	-	-	-	-
20	.84586	37.2 pk	10.4	0	47.6	56	46	-	-	-	-
				Margin [dB]		-8.4	1.6	-	-	-	-
21	.89717	37.05 pk	10.3	0	47.35	56	46	-	-	-	-
				Margin [dB]		-8.65	1.35	-	-	-	-
22	.94212	37.24 pk	10.3	0	47.54	56	46	-	-	-	-
				Margin [dB]		-8.46	1.54	-	-	-	-
23	.98643	35.45 pk	10.3	0	45.75	56	46	-	-	-	-
				Margin [dB]		-10.25	-.25	-	-	-	-
-----											
Line - L1	1	-----									
24	1.13021	36.8 pk	10.3	0	47.1	56	46	-	-	-	-
				Margin [dB]		-8.9	1.1	-	-	-	-
25	2.20803	35.36 pk	10.4	0	45.76	56	46	-	-	-	-
				Margin [dB]		-10.24	-.24	-	-	-	-

26	2.45398	33.97 pk	10.4	0	44.37	56	46	-	-	-	-
				Margin [dB]		-11.63	-1.63	-	-	-	-
27	3.61861	34.42 pk	10.4	0	44.82	56	46	-	-	-	-
				Margin [dB]		-11.18	-1.18	-	-	-	-
28	29.89873	38.28 pk	11.1	0	49.38	60	50	-	-	-	-
				Margin [dB]		-10.62	-.62	-	-	-	-
29	29.08132	40.22 pk	11.1	0	51.32	60	50	-	-	-	-
				Margin [dB]		-8.68	1.32	-	-	-	-
30	27.99626	39.12 pk	11.1	0	50.22	60	50	-	-	-	-
				Margin [dB]		-9.78	.22	-	-	-	-
31	26.25293	36.32 pk	11	0	47.32	60	50	-	-	-	-
				Margin [dB]		-12.68	-2.68	-	-	-	-
32	25.67423	36.82 pk	11	0	47.82	60	50	-	-	-	-
				Margin [dB]		-12.18	-2.18	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection  
 tm - Trace Math Result

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

Altec Lansing (Channel 1)
Wireless Speaker System
Model: M812 Wireless Speaker
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level [dB(uVolts)], Limit:1, 2, 3, 4, 5, 6. Rows include test results for frequencies .4161, .45323, and .44423 MHz.

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

Altec Lansing (Channel 1)
Wireless Speaker System
Model: M812 Wireless Speaker
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level [dB(uVolts)], Limit:1, 2, 3, 4, 5, 6. Rows include test results for frequencies from .19241 to 3.61861 MHz.

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

			Margin [dB]:		-39.53	-29.53	-	-	-	-
29.89873	16.71 ave	11.1	0	27.81	60	50	-	-	-	-
			Margin [dB]:		-32.19	-22.19	-	-	-	-
29.08132	17.78 ave	11.1	0	28.88	60	50	-	-	-	-
			Margin [dB]:		-31.12	-21.12	-	-	-	-
27.99626	15.45 ave	11.1	0	26.55	60	50	-	-	-	-
			Margin [dB]:		-33.45	-23.45	-	-	-	-
26.25293	13.65 ave	11	0	24.65	60	50	-	-	-	-
			Margin [dB]:		-35.35	-25.35	-	-	-	-
25.67423	13.32 ave	11	0	24.32	60	50	-	-	-	-
			Margin [dB]:		-35.68	-25.68	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector

qp - Quasi-Peak detector

av - Average detector

avlg - denotes average log detection

ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk

LIMIT 2: FCC Part 15 Subpart C Avg

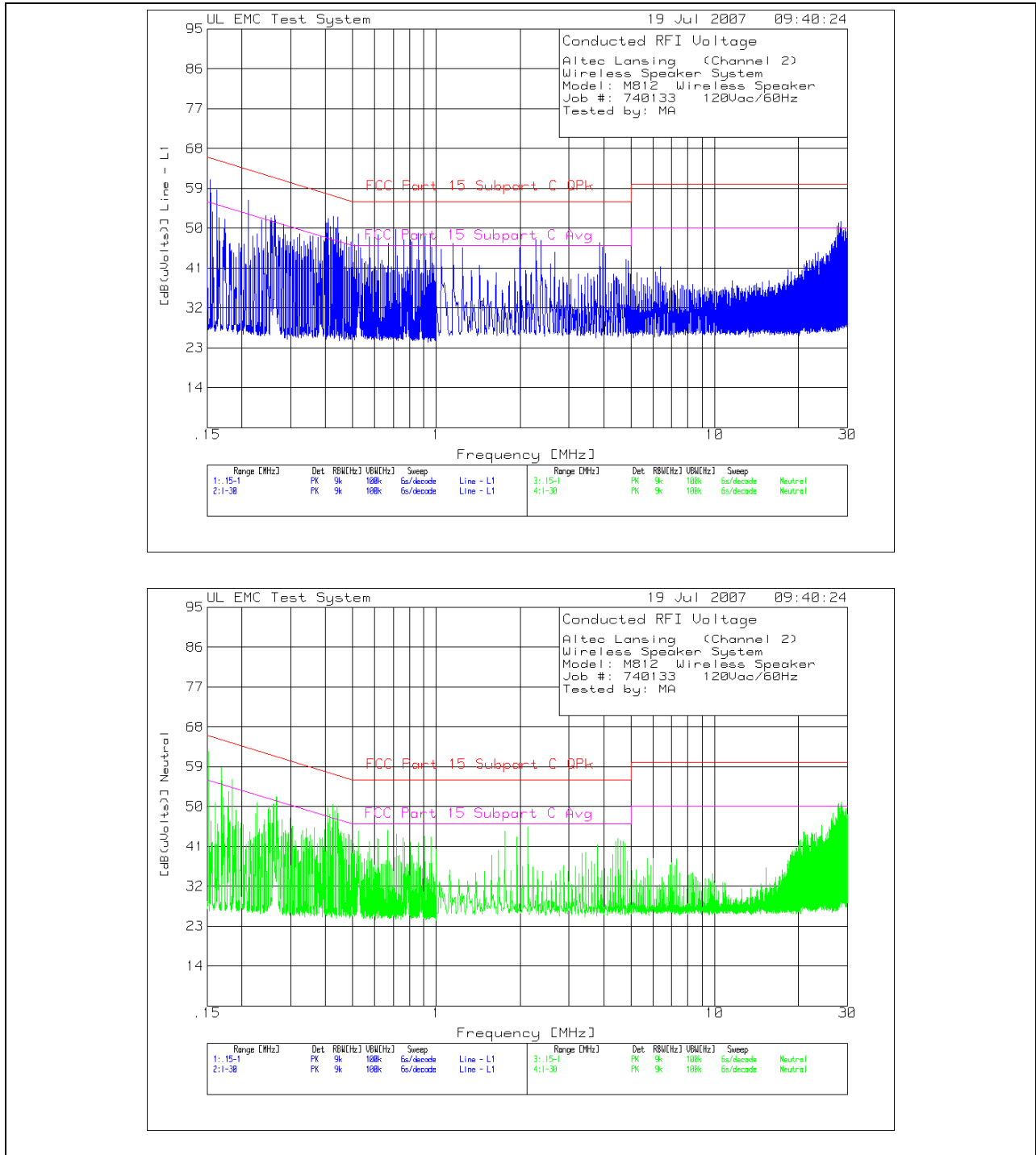
LIMIT 3: NONE

LIMIT 4: NONE

LIMIT 5: NONE

LIMIT 6: NONE

Figure 6 Conducted Emissions Graph



**Table 7 Conducted Emissions Data Points**

Altec Lansing (Channel 2)  
 Wireless Speaker System  
 Model: M812 Wireless Speaker  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
-----											
Line - L1 .15 - 1MHz											
1	.15445	48.89 pk	12	0	60.89	65.8	55.8	-	-	-	-
				Margin [dB]		-4.91	5.09	-	-	-	-
2	.16293	46.67 pk	11.9	0	58.57	65.3	55.3	-	-	-	-
				Margin [dB]		-6.73	3.27	-	-	-	-
3	.21128	45.04 pk	11.3	0	56.34	63.2	53.2	-	-	-	-
				Margin [dB]		-6.86	3.14	-	-	-	-
4	.26216	41.78 pk	11	0	52.78	61.4	51.4	-	-	-	-
				Margin [dB]		-8.62	1.38	-	-	-	-
5	.35142	37.5 pk	10.7	0	48.2	58.9	48.9	-	-	-	-
				Margin [dB]		-10.7	-7	-	-	-	-
6	.40803	41.56 pk	10.6	0	52.16	57.7	47.7	-	-	-	-
				Margin [dB]		-5.54	4.46	-	-	-	-
7	.44259	42.07 pk	10.5	0	52.57	57	47	-	-	-	-
				Margin [dB]		-4.43	5.57	-	-	-	-
8	.52465	38.16 pk	10.5	0	48.66	56	46	-	-	-	-
				Margin [dB]		-7.34	2.66	-	-	-	-
9	.57405	37.64 pk	10.4	0	48.04	56	46	-	-	-	-
				Margin [dB]		-7.96	2.04	-	-	-	-
10	.61963	38.12 pk	10.4	0	48.52	56	46	-	-	-	-
				Margin [dB]		-7.48	2.52	-	-	-	-
11	.71398	39.28 pk	10.4	0	49.68	56	46	-	-	-	-
				Margin [dB]		-6.32	3.68	-	-	-	-
12	.8607	38.55 pk	10.4	0	48.95	56	46	-	-	-	-
				Margin [dB]		-7.05	2.95	-	-	-	-
13	.95124	38.39 pk	10.3	0	48.69	56	46	-	-	-	-
				Margin [dB]		-7.31	2.69	-	-	-	-
-----											
Line - L1 1 - 30MHz											
14	1.0434	34.88 pk	10.3	0	45.18	56	46	-	-	-	-
				Margin [dB]		-10.82	-82	-	-	-	-
15	1.14467	36.31 pk	10.3	0	46.61	56	46	-	-	-	-
				Margin [dB]		-9.39	.61	-	-	-	-
16	1.23871	35.2 pk	10.3	0	45.5	56	46	-	-	-	-
				Margin [dB]		-10.5	-.5	-	-	-	-
17	2.28037	36.93 pk	10.4	0	47.33	56	46	-	-	-	-
				Margin [dB]		-8.67	1.33	-	-	-	-
18	3.86456	36.33 pk	10.4	0	46.73	56	46	-	-	-	-
				Margin [dB]		-9.27	.73	-	-	-	-
19	29.49364	38.79 pk	11.1	0	49.89	60	50	-	-	-	-
				Margin [dB]		-10.11	-.11	-	-	-	-
20	28.34348	40.47 pk	11.1	0	51.57	60	50	-	-	-	-
				Margin [dB]		-8.43	1.57	-	-	-	-
21	27.5984	39.48 pk	11	0	50.48	60	50	-	-	-	-
				Margin [dB]		-9.52	.48	-	-	-	-
22	26.20953	35.23 pk	11	0	46.23	60	50	-	-	-	-
				Margin [dB]		-13.77	-3.77	-	-	-	-
23	25.09554	33.32 pk	11	0	44.32	60	50	-	-	-	-
				Margin [dB]		-15.68	-5.68	-	-	-	-
24	22.90372	33.12 pk	11.1	0	44.22	60	50	-	-	-	-
				Margin [dB]		-15.78	-5.78	-	-	-	-
-----											
Neutral .15 - 1MHz											
25	.15212	50.48 pk	12	0	62.48	65.9	55.9	-	-	-	-

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

				Margin [dB]	-3.42	6.58	-	-	-	-
26	.16908	47.02 pk	11.8	0	58.82	65	55	-	-	-
				Margin [dB]	-6.18	3.82	-	-	-	-
27	.18541	44.49 pk	11.6	0	56.09	64.2	54.2	-	-	-
				Margin [dB]	-8.11	1.89	-	-	-	-
28	.26661	41.34 pk	10.9	0	52.24	61.2	51.2	-	-	-
				Margin [dB]	-8.96	1.04	-	-	-	-
29	.40697	39.06 pk	10.6	0	49.66	57.7	47.7	-	-	-
				Margin [dB]	-8.04	1.96	-	-	-	-
30	.44026	39.51 pk	10.5	0	50.01	57.1	47.1	-	-	-
				Margin [dB]	-7.09	2.91	-	-	-	-
31	.6684	34.24 pk	10.4	0	44.64	56	46	-	-	-
				Margin [dB]	-11.36	-1.36	-	-	-	-
32	.90374	33.01 pk	10.3	0	43.31	56	46	-	-	-
				Margin [dB]	-12.69	-2.69	-	-	-	-
Neutral 1 - 30MHz -----										
33	1.75954	34.1 pk	10.3	0	44.4	56	46	-	-	-
				Margin [dB]	-11.6	-1.6	-	-	-	-
34	2.1357	35.07 pk	10.4	0	45.47	56	46	-	-	-
				Margin [dB]	-10.53	-.53	-	-	-	-
35	4.50112	32.43 pk	10.4	0	42.83	56	46	-	-	-
				Margin [dB]	-13.17	-3.17	-	-	-	-
36	27.89499	39.66 pk	11	0	50.66	60	50	-	-	-
				Margin [dB]	-9.34	.66	-	-	-	-
37	26.62909	35.24 pk	11	0	46.24	60	50	-	-	-
				Margin [dB]	-13.76	-3.76	-	-	-	-
38	24.27089	34.82 pk	11	0	45.82	60	50	-	-	-
				Margin [dB]	-14.18	-4.18	-	-	-	-
39	22.38289	32.65 pk	11.1	0	43.75	60	50	-	-	-
				Margin [dB]	-16.25	-6.25	-	-	-	-
40	20.93614	32.62 pk	11.6	0	44.22	60	50	-	-	-
				Margin [dB]	-15.78	-5.78	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk  
LIMIT 2: FCC Part 15 Subpart C Avg  
LIMIT 3: NONE  
LIMIT 4: NONE  
LIMIT 5: NONE  
LIMIT 6: NONE

pk - Peak detector  
qp - Quasi-Peak detector  
av - Average detector  
avlg - denotes average log detection  
ave - denotes average detection  
tm - Trace Math Result



Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

Altec Lansing (Channel 2)
Wireless Speaker System
Model: M812 Wireless Speaker
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level [dB(uVolts)], Limit:1, 2, 3, 4, 5, 6. Rows include Line .15 - 1MHz and Neutral .15 - 1MHz with various frequency points and margin values.

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

- pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

- LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Altec Lansing (Channel 2)
Wireless Speaker System
Model: M812 Wireless Speaker
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level [dB(uVolts)], Limit:1, 2, 3, 4, 5, 6. Rows include Line - L1 .15 - 1MHz and Line - L1 1 - 30MHz.

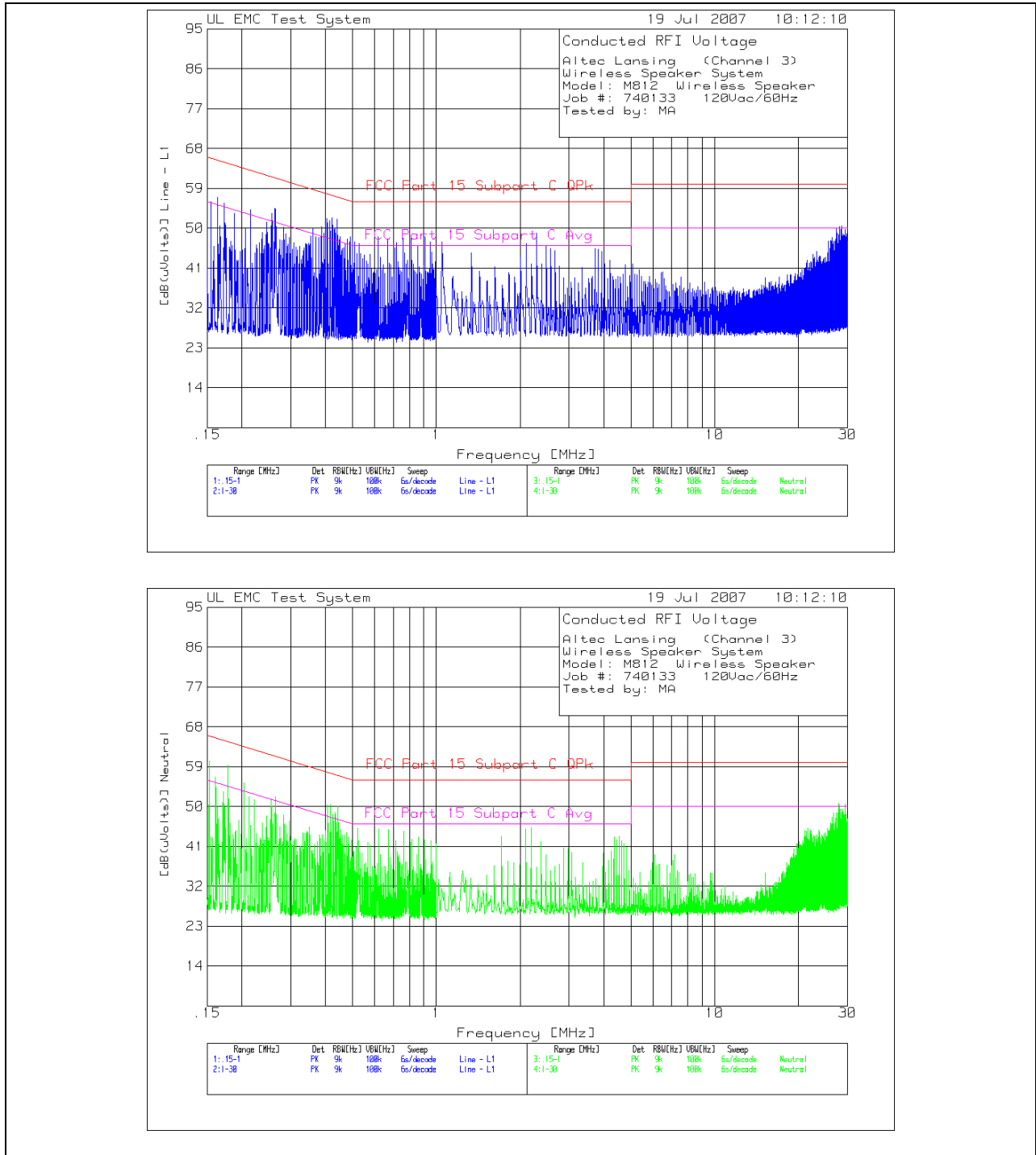
.18541	11.49 ave	11.6	0	23.09	64.2	54.2	-	-	-	-
			Margin [dB]:		-41.11	-31.11	-	-	-	-
.26661	25.3 ave	10.9	0	36.2	61.2	51.2	-	-	-	-
			Margin [dB]:		-25	-15	-	-	-	-
.40697	14.43 ave	10.6	0	25.03	57.7	47.7	-	-	-	-
			Margin [dB]:		-32.67	-22.67	-	-	-	-
.44026	24.33 ave	10.5	0	34.83	57.1	47.1	-	-	-	-
			Margin [dB]:		-22.27	-12.27	-	-	-	-
.6684	3.82 ave	10.4	0	14.22	56	46	-	-	-	-
			Margin [dB]:		-41.78	-31.78	-	-	-	-
.90374	2.77 ave	10.3	0	13.07	56	46	-	-	-	-
			Margin [dB]:		-42.93	-32.93	-	-	-	-
Neutral 1 - 30MHz										
1.75954	2.95 ave	10.3	0	13.25	56	46	-	-	-	-
			Margin [dB]:		-42.75	-32.75	-	-	-	-
2.1357	1.47 ave	10.4	0	11.87	56	46	-	-	-	-
			Margin [dB]:		-44.13	-34.13	-	-	-	-
4.50112	-1.43 ave	10.4	0	8.97	56	46	-	-	-	-
			Margin [dB]:		-47.03	-37.03	-	-	-	-
27.89499	15.02 ave	11	0	26.02	60	50	-	-	-	-
			Margin [dB]:		-33.98	-23.98	-	-	-	-
26.62909	12.97 ave	11	0	23.97	60	50	-	-	-	-
			Margin [dB]:		-36.03	-26.03	-	-	-	-
24.27089	11.21 ave	11	0	22.21	60	50	-	-	-	-
			Margin [dB]:		-37.79	-27.79	-	-	-	-
22.38289	9.48 ave	11.1	0	20.58	60	50	-	-	-	-
			Margin [dB]:		-39.42	-29.42	-	-	-	-
20.93614	8.97 ave	11.6	0	20.57	60	50	-	-	-	-
			Margin [dB]:		-39.43	-29.43	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

Figure 7 Conducted Emissions Graph



**Table 8 Conducted Emissions Data Points**

Altec Lansing (Channel 3)  
 Wireless Speaker System  
 Model: M812 Wireless Speaker  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
-----											
Line - L1 .15 - 1MHz											
1	.16421	45.02 pk	11.9	0	56.92	65.2	55.2	-	-	-	-
				Margin [dB]		-8.28	1.72	-	-	-	-
2	.1888	41.77 pk	11.6	0	53.37	64.1	54.1	-	-	-	-
				Margin [dB]		-10.73	-.73	-	-	-	-
3	.21488	42.82 pk	11.3	0	54.12	63	53	-	-	-	-
				Margin [dB]		-8.88	1.12	-	-	-	-
4	.26322	43.51 pk	11	0	54.51	61.3	51.3	-	-	-	-
				Margin [dB]		-6.79	3.21	-	-	-	-
5	.36096	39.27 pk	10.6	0	49.87	58.7	48.7	-	-	-	-
				Margin [dB]		-8.83	1.17	-	-	-	-
6	.42224	41.84 pk	10.5	0	52.34	57.4	47.4	-	-	-	-
				Margin [dB]		-5.06	4.94	-	-	-	-
7	.49178	37.5 pk	10.5	0	48	56.1	46.1	-	-	-	-
				Margin [dB]		-8.1	1.9	-	-	-	-
8	.61878	37.69 pk	10.4	0	48.09	56	46	-	-	-	-
				Margin [dB]		-7.91	2.09	-	-	-	-
9	.7602	37.39 pk	10.4	0	47.79	56	46	-	-	-	-
				Margin [dB]		-8.21	1.79	-	-	-	-
10	.90925	37.81 pk	10.3	0	48.11	56	46	-	-	-	-
				Margin [dB]		-7.89	2.11	-	-	-	-
11	.81045	37.91 pk	10.4	0	48.31	56	46	-	-	-	-
				Margin [dB]		-7.69	2.31	-	-	-	-
12	.43973	41.47 pk	10.5	0	51.97	57.1	47.1	-	-	-	-
				Margin [dB]		-5.13	4.87	-	-	-	-
-----											
Line - L1 1 - 30MHz											
13	1.05064	36.53 pk	10.3	0	46.83	56	46	-	-	-	-
				Margin [dB]		-9.17	.83	-	-	-	-
14	1.33275	34.09 pk	10.3	0	44.39	56	46	-	-	-	-
				Margin [dB]		-11.61	-1.61	-	-	-	-
15	2.09953	36.09 pk	10.4	0	46.49	56	46	-	-	-	-
				Margin [dB]		-9.51	.49	-	-	-	-
16	2.29484	38.53 pk	10.4	0	48.93	56	46	-	-	-	-
				Margin [dB]		-7.07	2.93	-	-	-	-
17	2.48291	35.75 pk	10.4	0	46.15	56	46	-	-	-	-
				Margin [dB]		-9.85	.15	-	-	-	-
18	3.71265	34.95 pk	10.4	0	45.35	56	46	-	-	-	-
				Margin [dB]		-10.65	-.65	-	-	-	-
19	29.443	38.58 pk	11.1	0	49.68	60	50	-	-	-	-
				Margin [dB]		-10.32	-.32	-	-	-	-
20	28.46645	39.39 pk	11.1	0	50.49	60	50	-	-	-	-
				Margin [dB]		-9.51	.49	-	-	-	-
21	27.31629	38.8 pk	11.1	0	49.9	60	50	-	-	-	-
				Margin [dB]		-10.1	-.1	-	-	-	-
22	25.56573	36.07 pk	11	0	47.07	60	50	-	-	-	-
				Margin [dB]		-12.93	-2.93	-	-	-	-
23	23.22923	33.73 pk	11.1	0	44.83	60	50	-	-	-	-
				Margin [dB]		-15.17	-5.17	-	-	-	-
24	22.46969	32.93 pk	11.1	0	44.03	60	50	-	-	-	-
				Margin [dB]		-15.97	-5.97	-	-	-	-

Neutral .15 - 1MHz -----

25	.15276	48.34 pk	12	0	60.34	65.8	55.8	-	-	-	-
				Margin [dB]		-5.46	4.54	-	-	-	-
26	.1782	47.61 pk	11.7	0	59.31	64.6	54.6	-	-	-	-
				Margin [dB]		-5.29	4.71	-	-	-	-
27	.20364	43.87 pk	11.4	0	55.27	63.5	53.5	-	-	-	-
				Margin [dB]		-8.23	1.77	-	-	-	-
28	.26386	41.28 pk	10.9	0	52.18	61.3	51.3	-	-	-	-
				Margin [dB]		-9.12	.88	-	-	-	-
29	.4074	39.76 pk	10.6	0	50.36	57.7	47.7	-	-	-	-
				Margin [dB]		-7.34	2.66	-	-	-	-
30	.44259	39.48 pk	10.5	0	49.98	57	47	-	-	-	-
				Margin [dB]		-7.02	2.98	-	-	-	-
31	.52295	34.63 pk	10.4	0	45.03	56	46	-	-	-	-
				Margin [dB]		-10.97	-.97	-	-	-	-
32	.67094	34.34 pk	10.4	0	44.74	56	46	-	-	-	-
				Margin [dB]		-11.26	-1.26	-	-	-	-
33	.76572	34.01 pk	10.4	0	44.41	56	46	-	-	-	-
				Margin [dB]		-11.59	-1.59	-	-	-	-
34	.86282	32.79 pk	10.3	0	43.09	56	46	-	-	-	-
				Margin [dB]		-12.91	-2.91	-	-	-	-

Neutral 1 - 30MHz -----

35	1.71614	32.96 pk	10.3	0	43.26	56	46	-	-	-	-
				Margin [dB]		-12.74	-2.74	-	-	-	-
36	2.19356	34.82 pk	10.4	0	45.22	56	46	-	-	-	-
				Margin [dB]		-10.78	-.78	-	-	-	-
37	4.53729	32.82 pk	10.4	0	43.22	56	46	-	-	-	-
				Margin [dB]		-12.78	-2.78	-	-	-	-
38	29.3996	39.47 pk	11	0	50.47	60	50	-	-	-	-
				Margin [dB]		-9.53	.47	-	-	-	-
39	28.80644	38.41 pk	11	0	49.41	60	50	-	-	-	-
				Margin [dB]		-10.59	-.59	-	-	-	-
40	27.85158	39.67 pk	11	0	50.67	60	50	-	-	-	-
				Margin [dB]		-9.33	.67	-	-	-	-
41	26.65079	37.48 pk	11	0	48.48	60	50	-	-	-	-
				Margin [dB]		-11.52	-1.52	-	-	-	-
42	24.91469	33.17 pk	11	0	44.17	60	50	-	-	-	-
				Margin [dB]		-15.83	-5.83	-	-	-	-
43	23.70666	33.67 pk	11	0	44.67	60	50	-	-	-	-
				Margin [dB]		-15.33	-5.33	-	-	-	-
44	21.94163	33.69 pk	11.1	0	44.79	60	50	-	-	-	-
				Margin [dB]		-15.21	-5.21	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection  
 tm - Trace Math Result

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

Altec Lansing (Channel 3)
Wireless Speaker System
Model: M812 Wireless Speaker
Job #: 740133 120Vac/60Hz
Tested by: MA

Table with columns: Test Frequency [MHz], Meter Reading [dB(uV)], Gain/Loss Factor [dB], Transducer Factor [dB], Level [dB(uVolts)], Limit:1, 2, 3, 4, 5, 6. Rows include Line .15 - 1MHz and Neutral .15 - 1MHz with various frequency points and margin values.

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Altec Lansing (Channel 3)  
 Wireless Speaker System  
 Model: M812 Wireless Speaker  
 Job #: 740133 120Vac/60Hz  
 Tested by: MA

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
=====										
Line - L1 .15 - 1MHz										
.16421	16.05 ave	11.9	0	27.95	65.2	55.2	-	-	-	-
			Margin [dB]:		-37.25	-27.25	-	-	-	-
.1888	11.35 ave	11.6	0	22.95	64.1	54.1	-	-	-	-
			Margin [dB]:		-41.15	-31.15	-	-	-	-
.21488	10.25 ave	11.3	0	21.55	63	53	-	-	-	-
			Margin [dB]:		-41.45	-31.45	-	-	-	-
.26322	28.78 ave	11	0	39.78	61.3	51.3	-	-	-	-
			Margin [dB]:		-21.52	-11.52	-	-	-	-
.36096	14.86 ave	10.6	0	25.46	58.7	48.7	-	-	-	-
			Margin [dB]:		-33.24	-23.24	-	-	-	-
.42224	19.03 ave	10.5	0	29.53	57.4	47.4	-	-	-	-
			Margin [dB]:		-27.87	-17.87	-	-	-	-
.49178	12.54 ave	10.5	0	23.04	56.1	46.1	-	-	-	-
			Margin [dB]:		-33.06	-23.06	-	-	-	-
.61878	13.2 ave	10.4	0	23.6	56	46	-	-	-	-
			Margin [dB]:		-32.4	-22.4	-	-	-	-
.7602	9.19 ave	10.4	0	19.59	56	46	-	-	-	-
			Margin [dB]:		-36.41	-26.41	-	-	-	-
.90925	7.02 ave	10.3	0	17.32	56	46	-	-	-	-
			Margin [dB]:		-38.68	-28.68	-	-	-	-
.81045	5.6 ave	10.4	0	16	56	46	-	-	-	-
			Margin [dB]:		-40	-30	-	-	-	-
.43973	26.63 ave	10.5	0	37.13	57.1	47.1	-	-	-	-
			Margin [dB]:		-19.97	-9.97	-	-	-	-
=====										
Line - L1 1 - 30MHz										
1.05064	15.62 ave	10.3	0	25.92	56	46	-	-	-	-
			Margin [dB]:		-30.08	-20.08	-	-	-	-
1.33275	5.47 ave	10.3	0	15.77	56	46	-	-	-	-
			Margin [dB]:		-40.23	-30.23	-	-	-	-
2.09953	7.66 ave	10.4	0	18.06	56	46	-	-	-	-
			Margin [dB]:		-37.94	-27.94	-	-	-	-
2.29484	10.47 ave	10.4	0	20.87	56	46	-	-	-	-
			Margin [dB]:		-35.13	-25.13	-	-	-	-
2.48291	4.92 ave	10.4	0	15.32	56	46	-	-	-	-
			Margin [dB]:		-40.68	-30.68	-	-	-	-
3.71265	8.74 ave	10.4	0	19.14	56	46	-	-	-	-
			Margin [dB]:		-36.86	-26.86	-	-	-	-
29.443	15.4 ave	11.1	0	26.5	60	50	-	-	-	-
			Margin [dB]:		-33.5	-23.5	-	-	-	-
28.46645	16.55 ave	11.1	0	27.65	60	50	-	-	-	-
			Margin [dB]:		-32.35	-22.35	-	-	-	-
27.31629	13.93 ave	11.1	0	25.03	60	50	-	-	-	-
			Margin [dB]:		-34.97	-24.97	-	-	-	-
25.56573	11.06 ave	11	0	22.06	60	50	-	-	-	-
			Margin [dB]:		-37.94	-27.94	-	-	-	-
23.22923	8.87 ave	11.1	0	19.97	60	50	-	-	-	-
			Margin [dB]:		-40.03	-30.03	-	-	-	-
22.46969	8.56 ave	11.1	0	19.66	60	50	-	-	-	-
			Margin [dB]:		-40.34	-30.34	-	-	-	-
=====										
Neutral .15 - 1MHz										
.15276	8.41 ave	12	0	20.41	65.8	55.8	-	-	-	-
			Margin [dB]:		-45.39	-35.39	-	-	-	-
.1782	20.13 ave	11.7	0	31.83	64.6	54.6	-	-	-	-
			Margin [dB]:		-32.77	-22.77	-	-	-	-



.20364	9.09 ave	11.4	0	20.49	63.5	53.5	-	-	-	-
			Margin [dB]:		-43.01	-33.01	-	-	-	-
.26386	25.43 ave	10.9	0	36.33	61.3	51.3	-	-	-	-
			Margin [dB]:		-24.97	-14.97	-	-	-	-
.4074	14.84 ave	10.6	0	25.44	57.7	47.7	-	-	-	-
			Margin [dB]:		-32.26	-22.26	-	-	-	-
.44259	24.32 ave	10.5	0	34.82	57	47	-	-	-	-
			Margin [dB]:		-22.18	-12.18	-	-	-	-
.52295	19.66 ave	10.4	0	30.06	56	46	-	-	-	-
			Margin [dB]:		-25.94	-15.94	-	-	-	-
.67094	3.87 ave	10.4	0	14.27	56	46	-	-	-	-
			Margin [dB]:		-41.73	-31.73	-	-	-	-
.76572	7.41 ave	10.4	0	17.81	56	46	-	-	-	-
			Margin [dB]:		-38.19	-28.19	-	-	-	-
.86282	4.56 ave	10.3	0	14.86	56	46	-	-	-	-
			Margin [dB]:		-41.14	-31.14	-	-	-	-
Neutral 1 - 30MHz										
1.71614	1.14 ave	10.3	0	11.44	56	46	-	-	-	-
			Margin [dB]:		-44.56	-34.56	-	-	-	-
2.19356	2.68 ave	10.4	0	13.08	56	46	-	-	-	-
			Margin [dB]:		-42.92	-32.92	-	-	-	-
4.53729	-2.37 ave	10.4	0	8.03	56	46	-	-	-	-
			Margin [dB]:		-47.97	-37.97	-	-	-	-
29.3996	15.73 ave	11	0	26.73	60	50	-	-	-	-
			Margin [dB]:		-33.27	-23.27	-	-	-	-
28.80644	17.13 ave	11	0	28.13	60	50	-	-	-	-
			Margin [dB]:		-31.87	-21.87	-	-	-	-
27.85158	15.24 ave	11	0	26.24	60	50	-	-	-	-
			Margin [dB]:		-33.76	-23.76	-	-	-	-
26.65079	13.32 ave	11	0	24.32	60	50	-	-	-	-
			Margin [dB]:		-35.68	-25.68	-	-	-	-
24.91469	11.27 ave	11	0	22.27	60	50	-	-	-	-
			Margin [dB]:		-37.73	-27.73	-	-	-	-
23.70666	10.36 ave	11	0	21.36	60	50	-	-	-	-
			Margin [dB]:		-38.64	-28.64	-	-	-	-
21.94163	9.4 ave	11.1	0	20.5	60	50	-	-	-	-
			Margin [dB]:		-39.5	-29.5	-	-	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk  
 LIMIT 2: FCC Part 15 Subpart C Avg  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

**4.2 Test Conditions and Results – Occupied Bandwidth**

Test Description	Measurements were made in the laboratory environment. A Dipole (or equivalent) antenna tuned to the transmit frequency was attached to the input of a spectrum analyzer. The device was operated and the spectrum analyzer resolution bandwidth set per the appropriate standard.
Basic Standard	FCC Part 15, Subpart C, 15.247
<b>Occupied Bandwidth Limits</b>	
OBW must be greater than 500kHz	

**Table 9 Occupied Bandwidth Configuration Settings**

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1,2,3
Supplementary information: None		

**Table 10 Occupied Bandwidth Spectrum Analyzer Settings**

Resolution Bandwidth (MHz)	Occupied Bandwidth Requirements
100kHz	> 500kHz
Supplementary information: None	

**Table 11 Occupied Bandwidth Test Equipment**

<b>Test Equipment Used</b>			
Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Advantest	R3261C	ME5A-229
Horn Antenna	EMCO	RGA-180	ME5-565
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268
Measurement Software	UL	Version 9.3	44740

**Figure 8 Test Setup for Occupied Bandwidth**



Figure 9 Occupied Bandwidth Graph – Channel 1

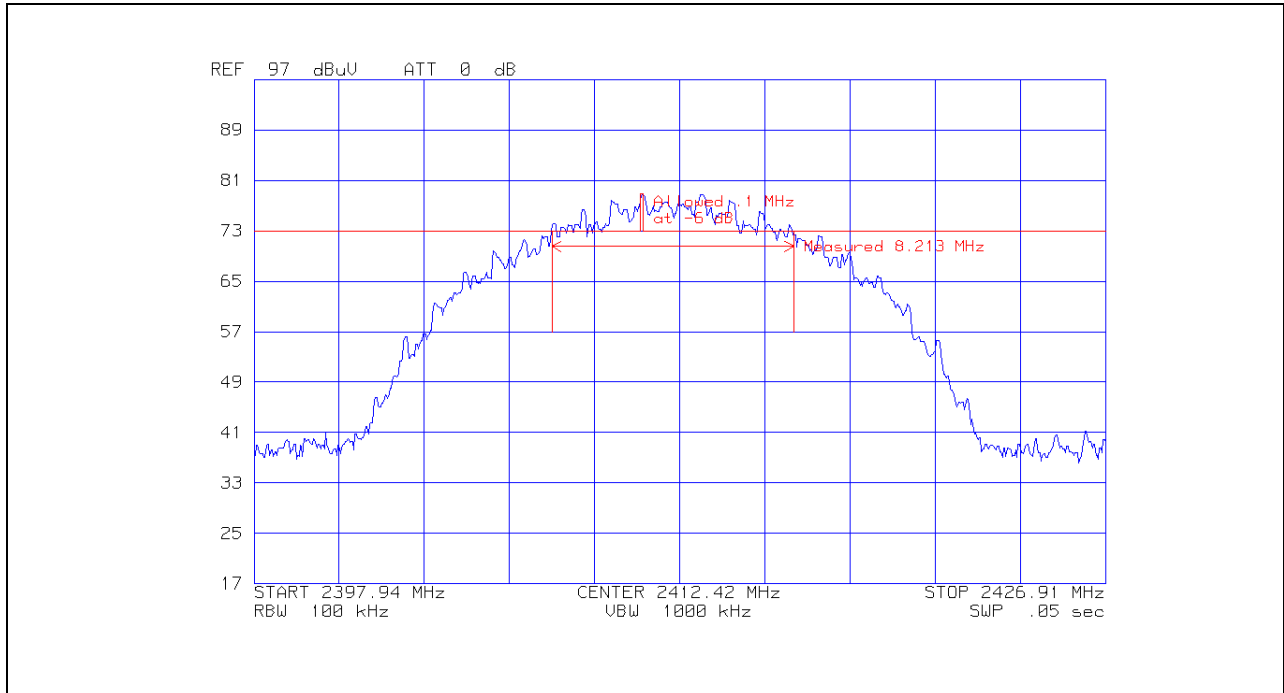


Figure 10 Occupied Bandwidth Graph – Channel 2

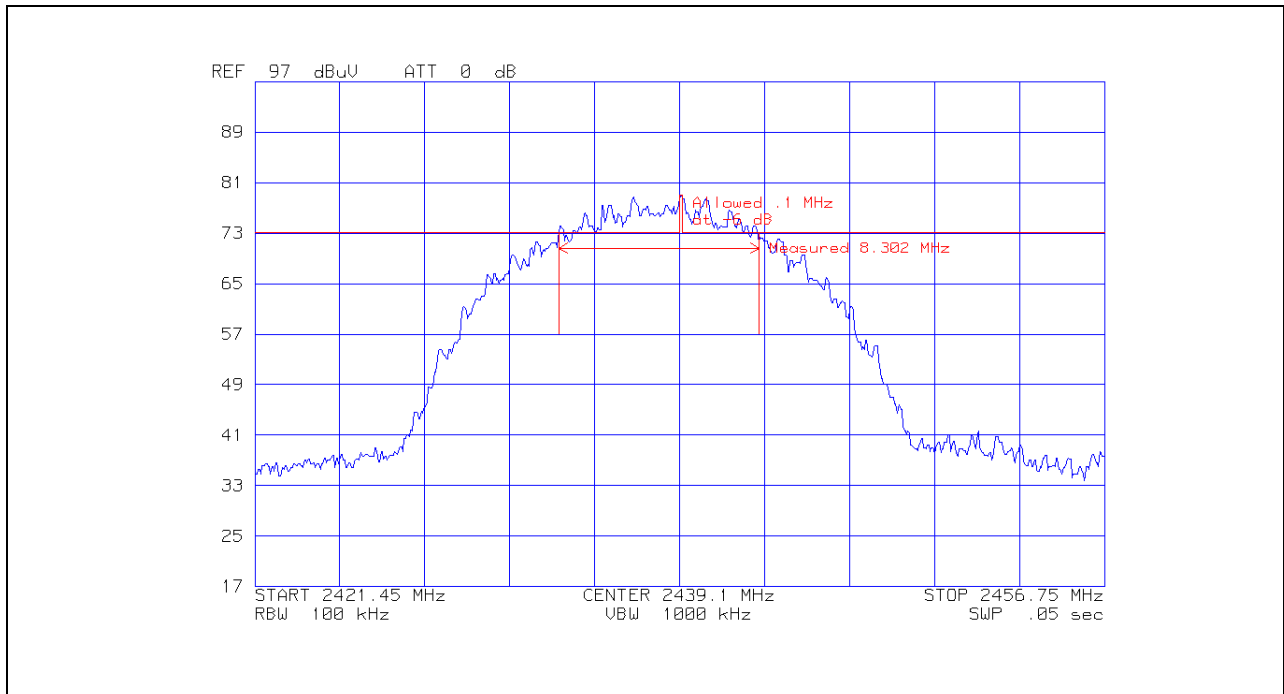
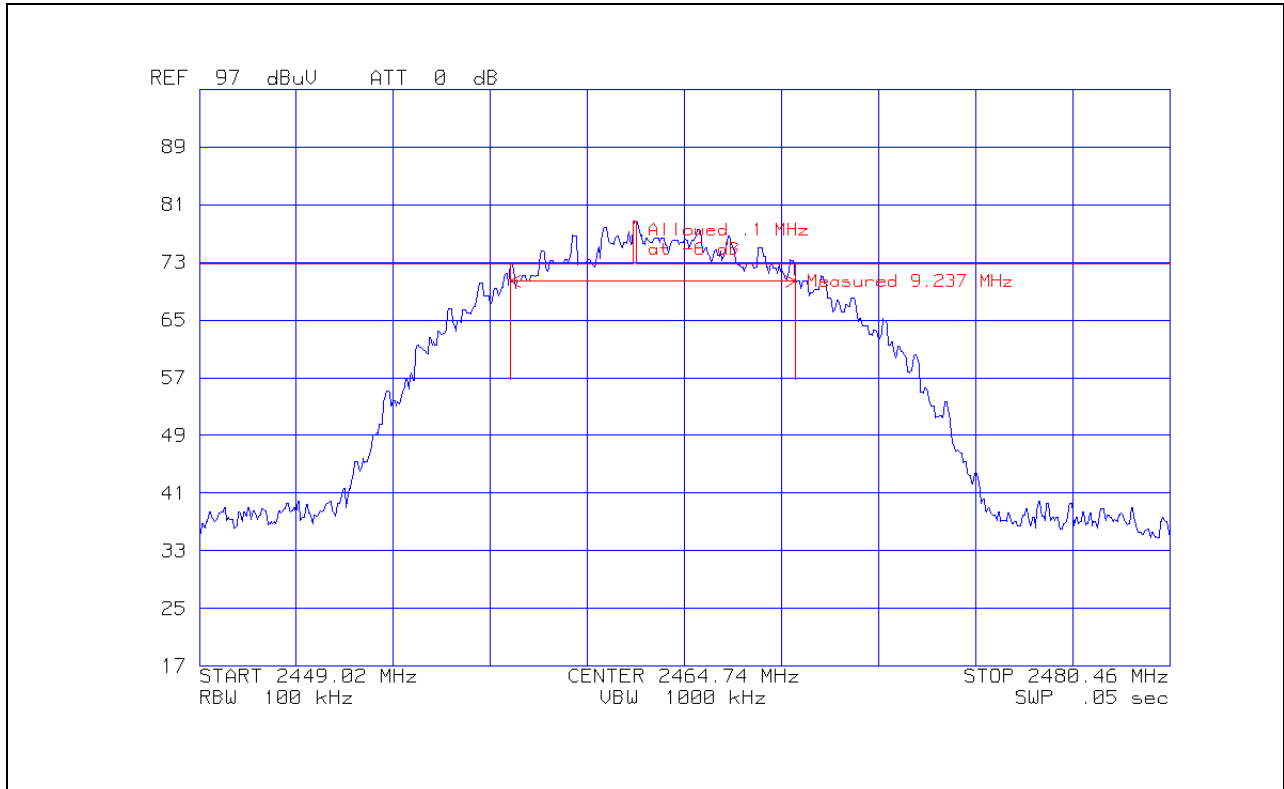


Figure 11 Occupied Bandwidth Graph – Channel 3



**4.3 Test Conditions and Results – Bandedge Measurement**

Test Description	Conducted and radiated measurements were made for this test. Measurements were made in the laboratory environment. The transmit antenna of the EUT was attached directly to the input of a spectrum analyzer. The device was operated and the spectrum analyzer resolution bandwidth set per the appropriate standard. A plot of the spectrum analyzer display screen is produced with marker points displaying the intended signal along with the -20dB frequency and the signal strength at the bandedges. Measurements were made in a 10-meter semi-anechoic chamber that complies to CISPR 16/ANSI C63.4. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3-meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in both horizontal and vertical polarities. Points were marked displaying the intended signal along with the -20dB frequency and the signal strength at the bandedges	
Basic Standard	FCC Part 15, Subpart C, 15.247	
<b>Limits</b>		
<b>Bandedge Frequencies</b>	<b>Criteria</b>	
2400MHz	Outside OBW (low channel)	
2483.5MHz	Outside OBW (high channel)	

**Table 12 Bandedge Measurement Configuration Settings**

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1,3
Supplementary information: None		

**Table 13 Bandedge Measurement Spectrum Analyzer Settings**

Resolution Bandwidth	Video Bandwidth
1MHz	1MHz
Supplementary information: None	

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

**Table 14 Bandedge Measurement Test Equipment**

<b>Test Equipment Used</b>			
Description	Manufacturer	Model	Identifier
Spectrum Analyzer	Advantest	R3261C	ME5A-229
EMI Receiver	Rohde & Schwarz	ESI26	ME5B-081
Preamp	HP	8449B	5914
Horn Antenna	EMCO	RGA-180	ME5-565
20dB Pad	MCL	BW-N20W5+	31618
Temp/Humidity/ Pressure Meter	Cole Parmer	99760-00	4268
Measurement Software	UL	Version 9.3	44740

**Table 15 Radiated Bandedge Data Points – Low Channel**

Altec Lansing [Channel 1]  
 Wireless Speaker System  
 Model: M812 Aux In Mode  
 Job: 740133 120V 60Hz  
 Tested By: MA

Test	Meter	Gain/Loss	Transducer	Level	Limit:1	2	3	4	5	6
Frequency	Reading	Factor	Factor	dB[uVolts/meter]						
[MHz]	[dB(uV)]	[dB]	[dB]							
Horizontal 1000 - 3000MHz										
<u>Fundamental</u>										
2411.8236	112.15 pk	-32.7	28.7	108.15	54	-	-	-	-	-
Azimuth: 268 Height:151 Horz					Margin [dB]:	54.15	-	-	-	-
<u>-20dB Down Frequency</u>										
2403.8577	92.43 pk	-32.8	28.7	88.33	54	-	-	-	-	-
Azimuth: 268 Height:151 Horz					Margin [dB]:	34.33	-	-	-	-
<u>Bandedges</u>										
2400	74.91 pk	-32.8	28.7	70.81	54	-	-	-	-	-
Azimuth: 268 Height:151 Horz					Margin [dB]:	16.81	-	-	-	-
2390.0113	74.1 pk	-32.8	28.7	70	54	-	-	-	-	-
Azimuth: 268 Height:151 Horz					Margin [dB]:	16	-	-	-	-
2390.0113	54.75 ave	-32.8	28.7	50.65	54	-	-	-	-	-
Azimuth: 268 Height:151 Horz					Margin [dB]:	-3.35	-	-	-	-
2400	54.67 ave	-32.8	28.7	50.57	54	-	-	-	-	-
Azimuth: 268 Height:151 Horz					Margin [dB]:	-3.43	-	-	-	-
Vertical 1000 - 3000MHz										
<u>Fundamental</u>										
2411.8236	104.49 pk	-32.7	28.5	100.29	54	-	-	-	-	-
Azimuth: 7 Height:101 Vert					Margin [dB]:	46.29	-	-	-	-
<u>-20dB Down Frequency</u>										
2403.8076	85.06 pk	-32.8	28.5	80.76	54	-	-	-	-	-
Azimuth: 7 Height:101 Vert					Margin [dB]:	26.76	-	-	-	-
<u>Bandedges</u>										
2400.0501	70.67 pk	-32.8	28.5	66.37	54	-	-	-	-	-
Azimuth: 7 Height:101 Vert					Margin [dB]:	12.37	-	-	-	-
2390.0301	66.27 pk	-32.8	28.5	61.97	54	-	-	-	-	-
Azimuth: 7 Height:101 Vert					Margin [dB]:	7.97	-	-	-	-
2390.0301	49.38 ave	-32.8	28.5	45.08	54	-	-	-	-	-
Azimuth: 7 Height:101 Vert					Margin [dB]:	-8.92	-	-	-	-
2400	47.97 ave	-32.8	28.5	43.67	54	-	-	-	-	-
Azimuth: 7 Height:101 Vert					Margin [dB]:	-10.33	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C 15.209

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - Average log detector  
 ave - Average detector



Table 16 Radiated Bandedge Data Points – High Channel

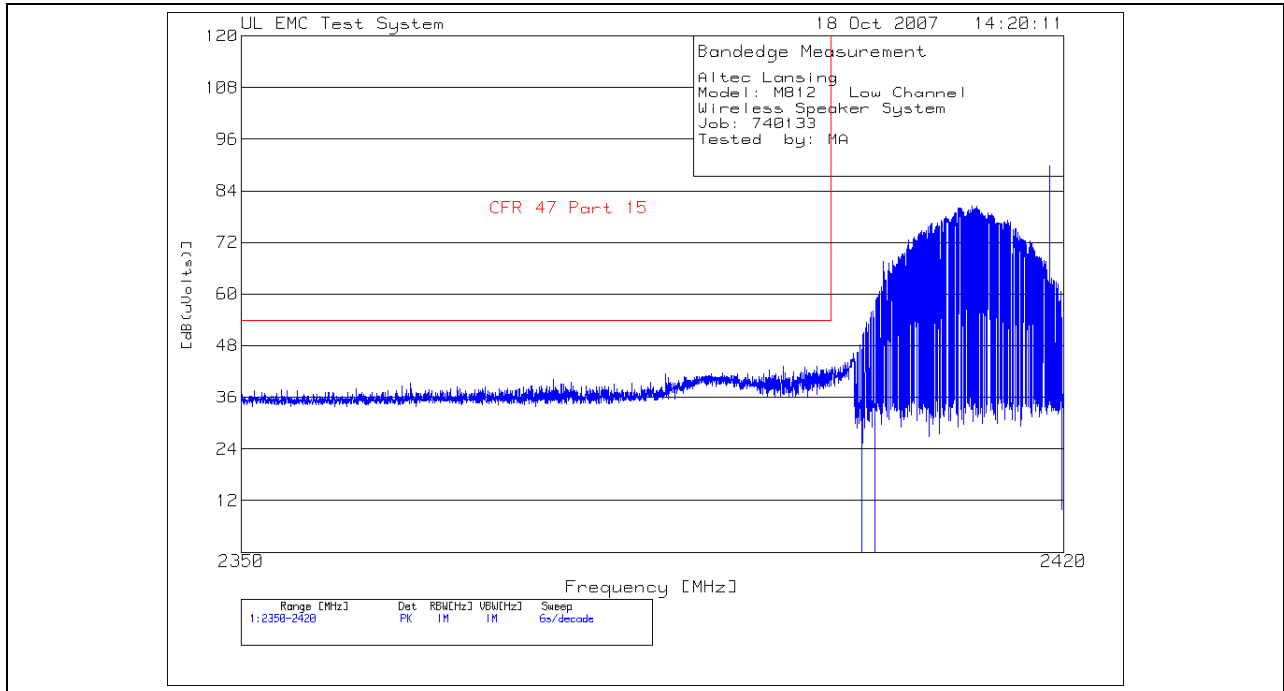
Altec Lansing [Channel 3]
Wireless Speaker System
Model: M812 Aux In Mode
Job: 740133 120V 60Hz
Tested By: MA

Table with columns: Test, Meter, Gain/Loss, Transducer Level, Limit:1, 2, 3, 4, 5, 6. Rows include Fundamental and Bandedges for Horizontal and Vertical orientations.

LIMIT 1: FCC Part 15 Subpart C 15.209

- pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Figure 13 Conducted Bandedge Measurement Graph – Low Channel



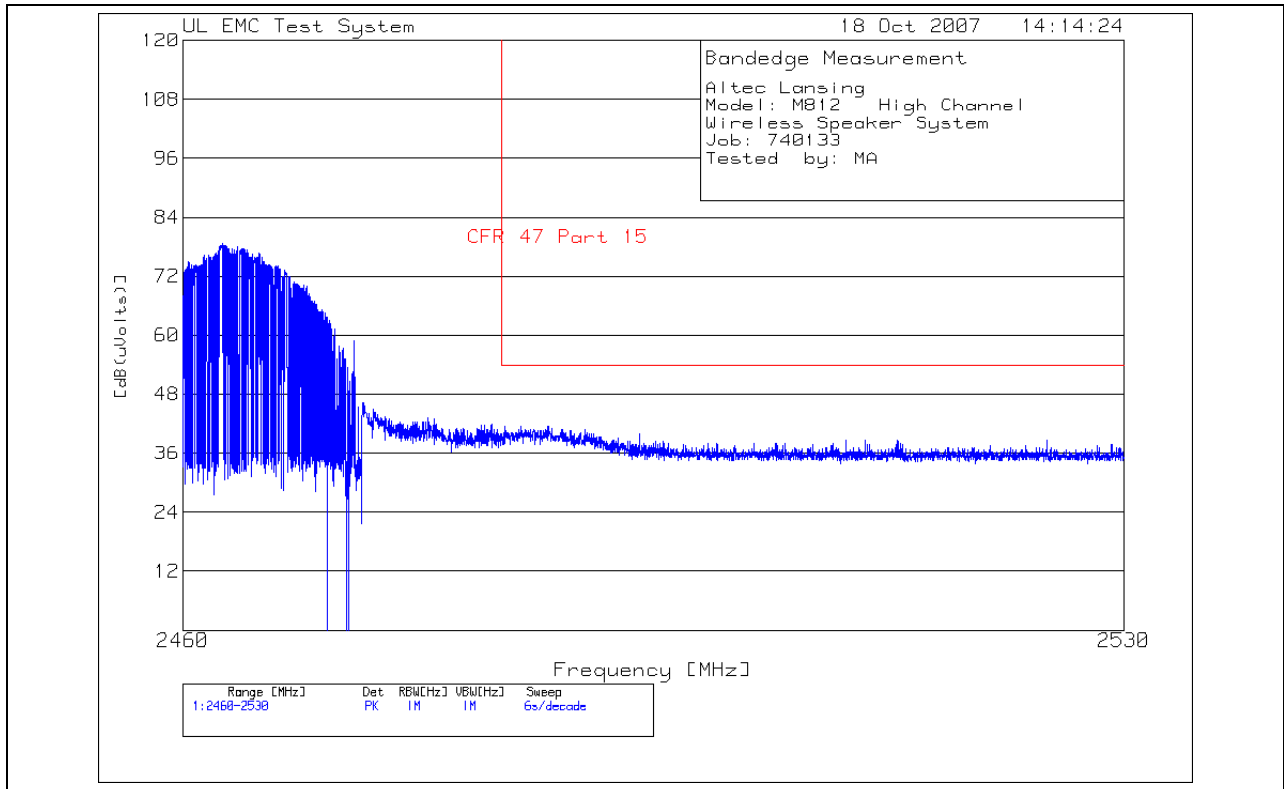
Altec Lansing  
 Model: M812 Low Channel  
 Wireless Speaker System  
 Job: 740133  
 Tested by: MA

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Attenuator Factor [dB]	Level [dB(uV)]
Range 1 2350 - 2420MHz				
1	2412.469	80.5 pk	19.6	100.1
2	2403.878	59.2 pk	19.6	78.8
3	2400.043	43 pk	19.6	62.6

LIMIT 1: CFR 47 Part 15

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection  
 tm - Trace Math Result

Figure 15 Conducted Bandedge Measurement Graph – High Channel



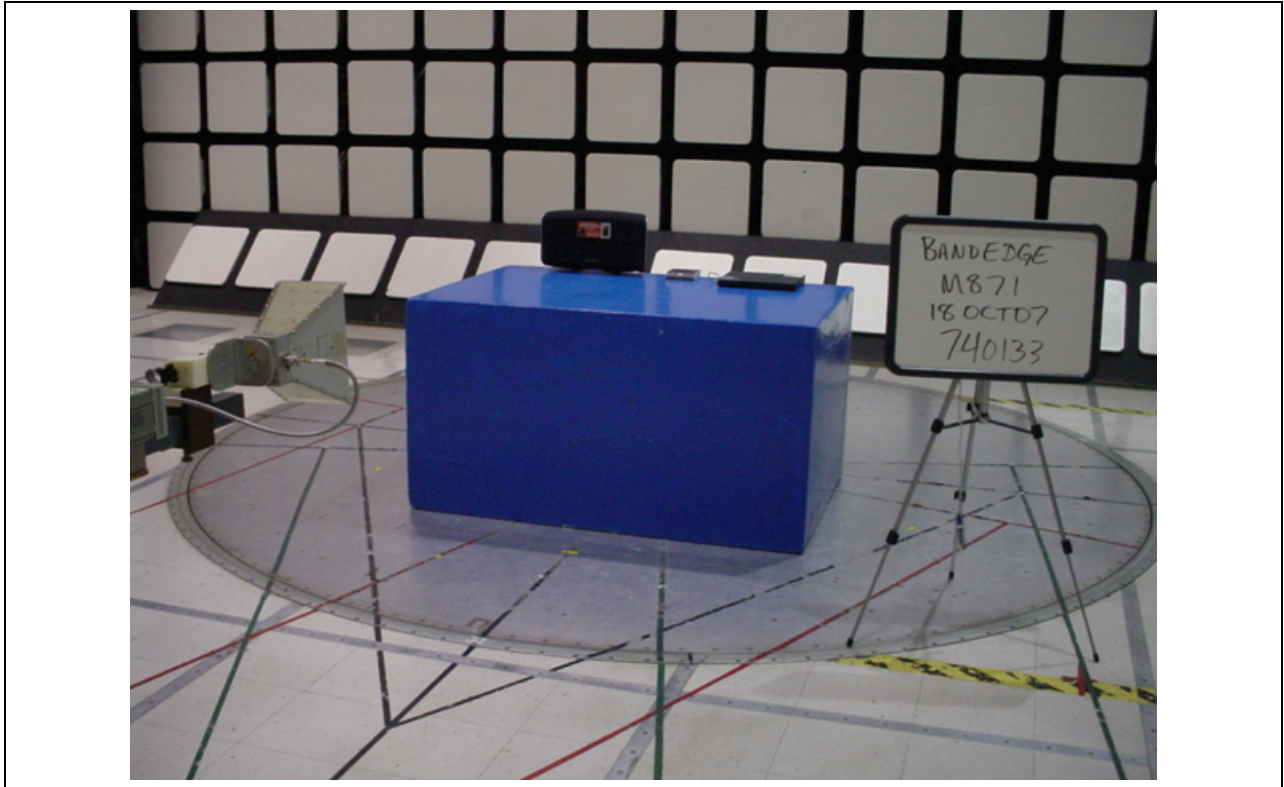
Altec Lansing  
 Model: M812 High Channel  
 Wireless Speaker System  
 Job: 740133  
 Tested by: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Attenuator Factor [dB]	Level [dB(uV)]
Range 1 2460 - 2530MHz				
1	2462.887	78.7 pk	19.6	98.3
2	2471.487	58 pk	19.6	77.6
3	2483.453	40 pk	19.6	59.6

LIMIT 1: CFR 47 Part 15

pk - Peak detector  
 qp - Quasi-Peak detector  
 av - Average detector  
 avlg - denotes average log detection  
 ave - denotes average detection  
 tm - Trace Math Result

**Figure 16 Radiated Bandedge Setup**



**Figure 17 Conducted Bandedge Setup Photo**



**4.4 Test Conditions and Results – Peak Power**

Test Description	The following measurements were performed with the output of the EUT connected to the input of the power meter. A 50-ohm, 20 dB (nominal) attenuator is located between the power meter and the EUT output connector. Measurements are performed on all three channels.	
Basic Standard	FCC Part 15, Subpart C, 15.209	
	Frequency	Channel
Fully configured sample scanned over the following frequency range	2412MHz	1
	2436MHz	2
	2463MHz	3
<b>Limits</b>		
1 Watt		

**Table 17 Peak Power Measurement Test Equipment**

<b>Test Equipment Used</b>			
Description	Manufacturer	Model	Identifier
Power Meter	Rohde & Schwarz	NRVD	ME5B-081
Power Meter Sensor	Rohde & Schwarz	NRVZ51	ME5B-078
20dB Pad	MCL	BW-N20W5+	31618
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

**Table 18 Peak Power Data Points**

Altec Lansing  
Wireless Speaker System  
Model: M812 Channels 1,2,3  
Job#: 740133  
Tested by: MA

Test Frequency [MHz]	Pwr Mtr Reading [dBm]	Attenuator Factor [dB]	Power Level [dBm]	Power Level [mWatts]	Limit [Watts]
=====					
Channel 1					
2412	-20.8	19.6	-1.2	0.76	1.0
Channel 2					
2436	-20.9	19.6	-1.3	0.74	1.0
Channel 3					
2463	-21.8	19.6	-2.2	0.60	1.0

**4.5 Test Conditions and Results – Power Spectral Density**

Test Description	The following measurements were performed with the output of the EUT connected to the input of the power meter. A 50-ohm, 20 dB (nominal) attenuator is located between the measuring receiver and the EUT output connector. Measurements are performed on all three channels.	
Basic Standard	FCC Part 15, Subpart C, 15.209	
	Frequency	Channel
Fully configured sample scanned over the following frequency range	2412MHz	1
	2436MHz	2
	2463MHz	3
<b>Limits</b>		
8dBm		

**Table 19 Power Spectral Density Measurement Spectrum Analyzer Settings**

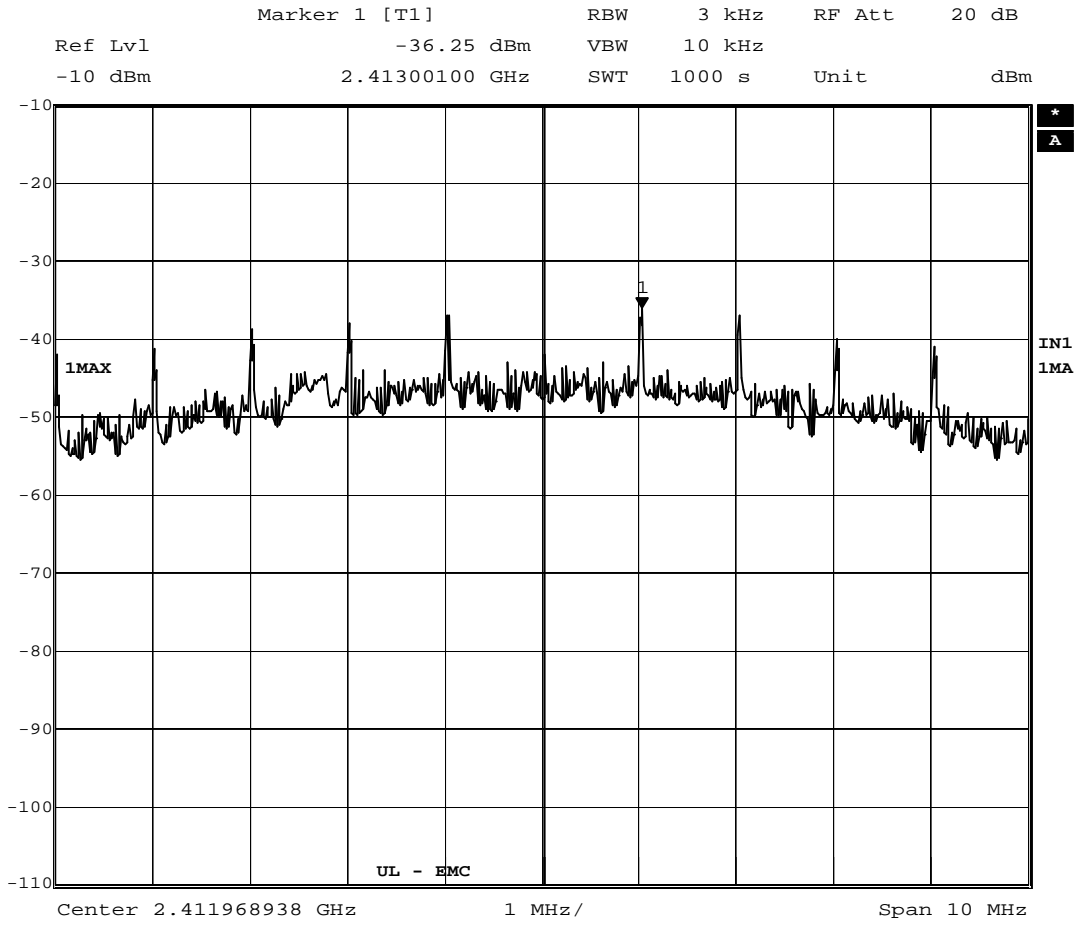
Resolution Bandwidth	Video Bandwidth	Sweep Time
3kHz	30kHz	1000sec
Supplementary information: None		

**Table 20 Power Spectral Density Measurement Test Equipment**

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Rohde & Schwarz	ESI26	ME5B-081
20dB Pad	MCL	BW-N20W5+	31618
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268



Table 21 Power Spectral Density – Channel 1

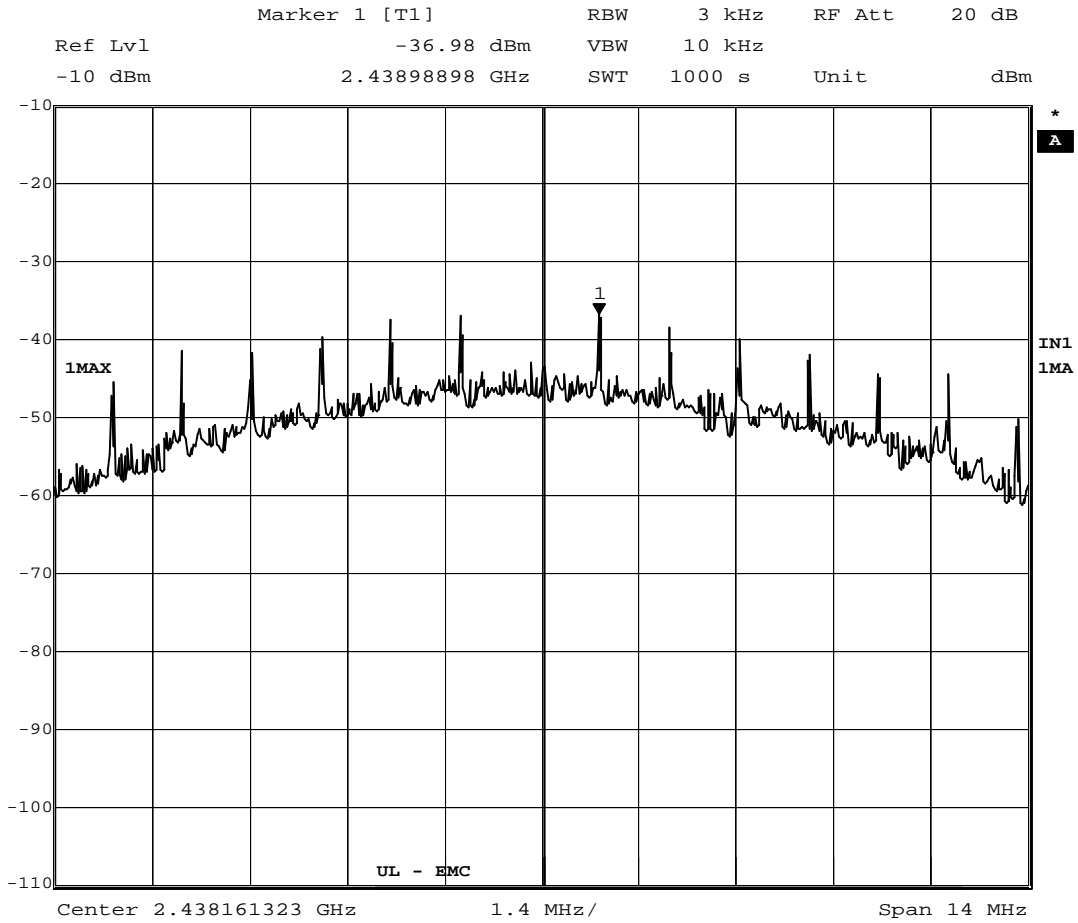


Date: 14.DEC.2007 12:46:52

Altec Lansing  
 Wireless Speaker System  
 Model: M812  
 Job#: 740133  
 Tested by: MA

Test Frequency [MHz]	Meter Reading [dBm]	Attenuator Factor [dB]	Power Level [dBm]	Limit [dBm]
Channel 1 2412	-36.25	19.6	-16.65	8.0

Table 22 Power Spectral Density – Channel 2

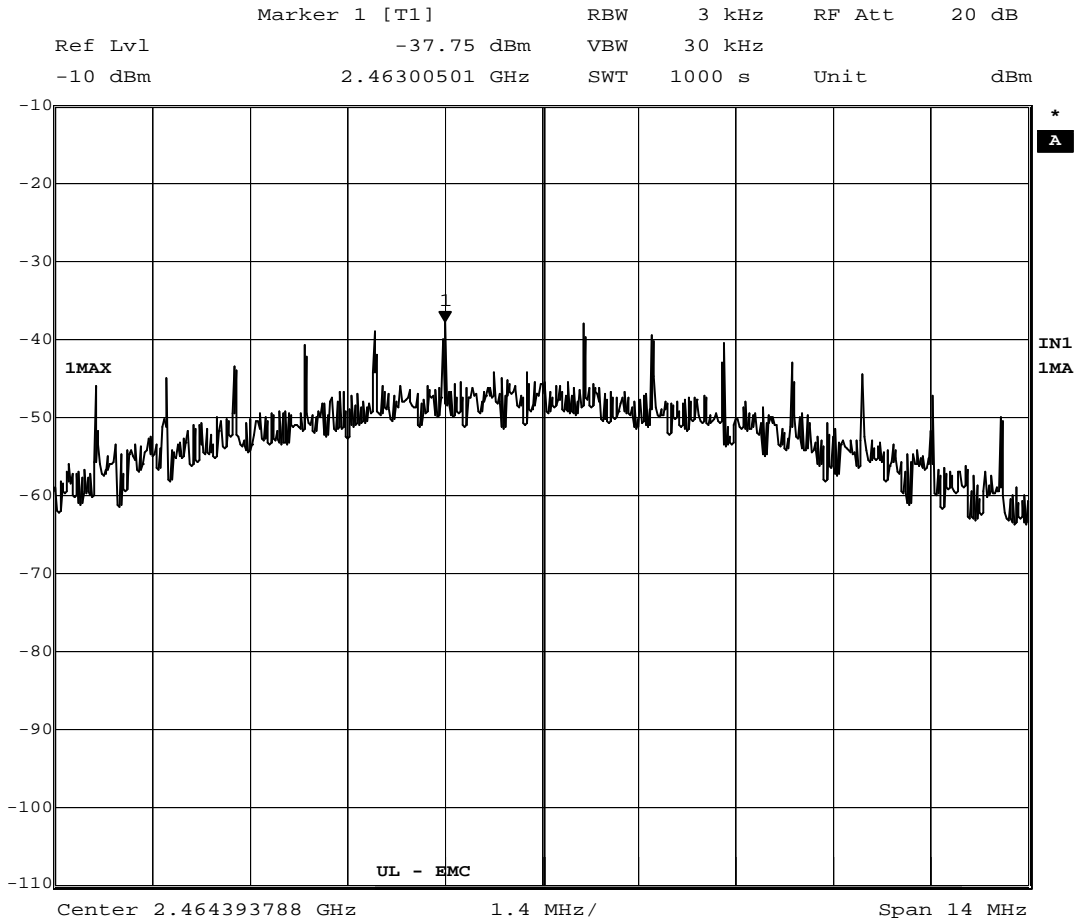


Date: 14.DEC.2007 13:15:12

Altec Lansing  
 Wireless Speaker System  
 Model: M812  
 Job#: 740133  
 Tested by: MA

Test Frequency [MHz]	Meter Reading [dBm]	Attenuator Factor [dB]	Power Level [dBm]	Limit [dBm]
Channel 2 2436	-36.98	19.6	-17.38	8.0

Table 23 Power Spectral Density – Channel 3



Date: 14.DEC.2007 13:17:13

Altec Lansing  
 Wireless Speaker System  
 Model: M812  
 Job#: 740133  
 Tested by: MA

Test Frequency [MHz]	Meter Reading [dBm]	Attenuator Factor [dB]	Power Level [dBm]	Limit [dBm]
Channel 3 2463	-37.75	19.6	-18.15	8.0

**4.6 Test Conditions and Results – Radiated Emissions (Receive Mode)**

Test Description	Measurements were made in a 10-meter semi-anechoic chamber that complies to CISPR 16/ANSI C63.4. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3-meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in both horizontal and vertical polarities. Final measurements (quasi-peak or average as noted) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4-meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.	
Basic Standard	FCC Part 15, Subpart B	
UL LPG	80-EM-S0029	
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	30MHz – 1GHz	(3 meter measurement distance)
	1 – 12GHz	(3 meter measurement distance)
<b>Limits - Class B</b>		
Frequency (MHz)	Limit (dBµV/m)	
	Quasi-Peak	Average
30 – 88	40	-
88 – 216	43.5	-
216-960	46	-
960-1000	54	-
1000-12000	-	54
Supplementary information: None		

**Table 24 Radiated Emissions EUT Configuration Settings**

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	7,8
Supplementary information: None		

Job Number: 740133  
 Model Number: M812  
 Client Name: Altec Lansing Technologies

File Number: MC8319  
 FCC ID: VJS-M812

**Table 25 Radiated Emissions Test Equipment**

<b>Test Equipment Used</b>			
Description	Manufacturer	Model	Identifier
<b>30-1000MHz</b>			
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081
Bicon Antenna	Schaffner	VBA6106A	54
Log-P Antenna	Schaffner	UPA6109	44067
Switch Driver	HP	11713A	ME7A-627
System Controller	Sunol Sciences	SC99V	44396
Camera Controller	Panasonic	WV-CU254	44395
RF Switch Box	UL	1	44398
Measurement Software	UL	Version 9.3	44740
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268
<b>Above 1GHz</b>			
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081
Horn Antenna	EMCO	3115	ME5A-766
Preamplifier (1 - 26GHz)	HP	8449B	ME5-914
Switch Driver	HP	11713A	ME7A-627
System Controller	Sunol Sciences	SC99V	44396
Camera Controller	Panasonic	WV-CU254	44395
RF Switch Box	UL	1	44398
Measurement Software	UL	Version 9.3	44740
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268

Figure 18 Test setup for Radiated Emissions

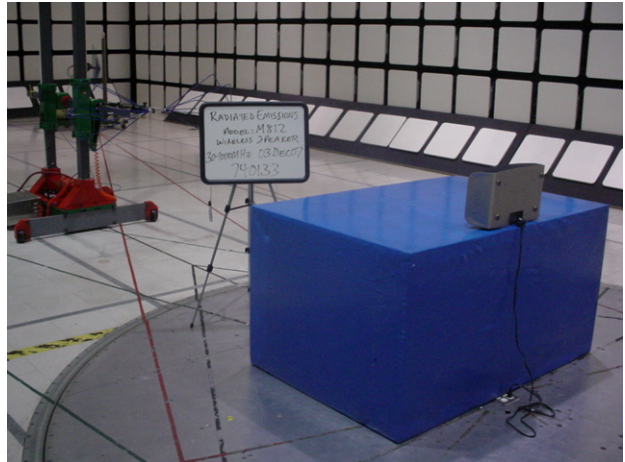


Transmitter Base 30-1000MHz

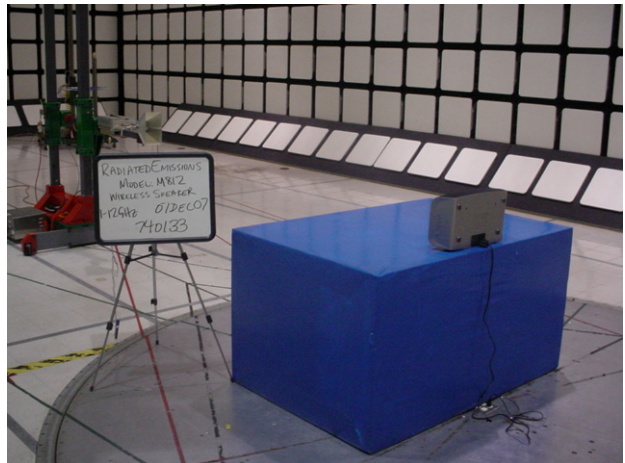
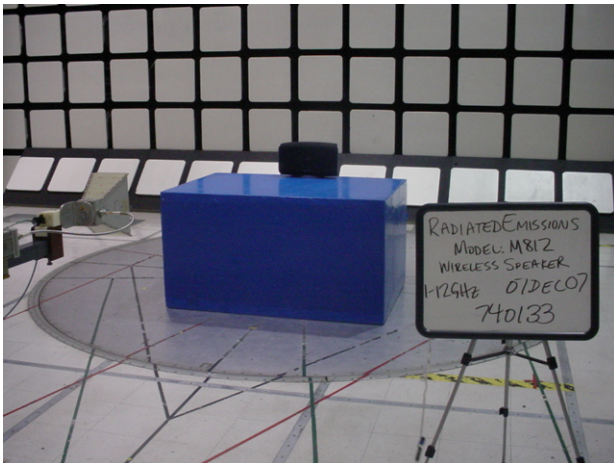


Transmitter Base 1-12GHz

Figure 19 Test setup for Radiated Emissions

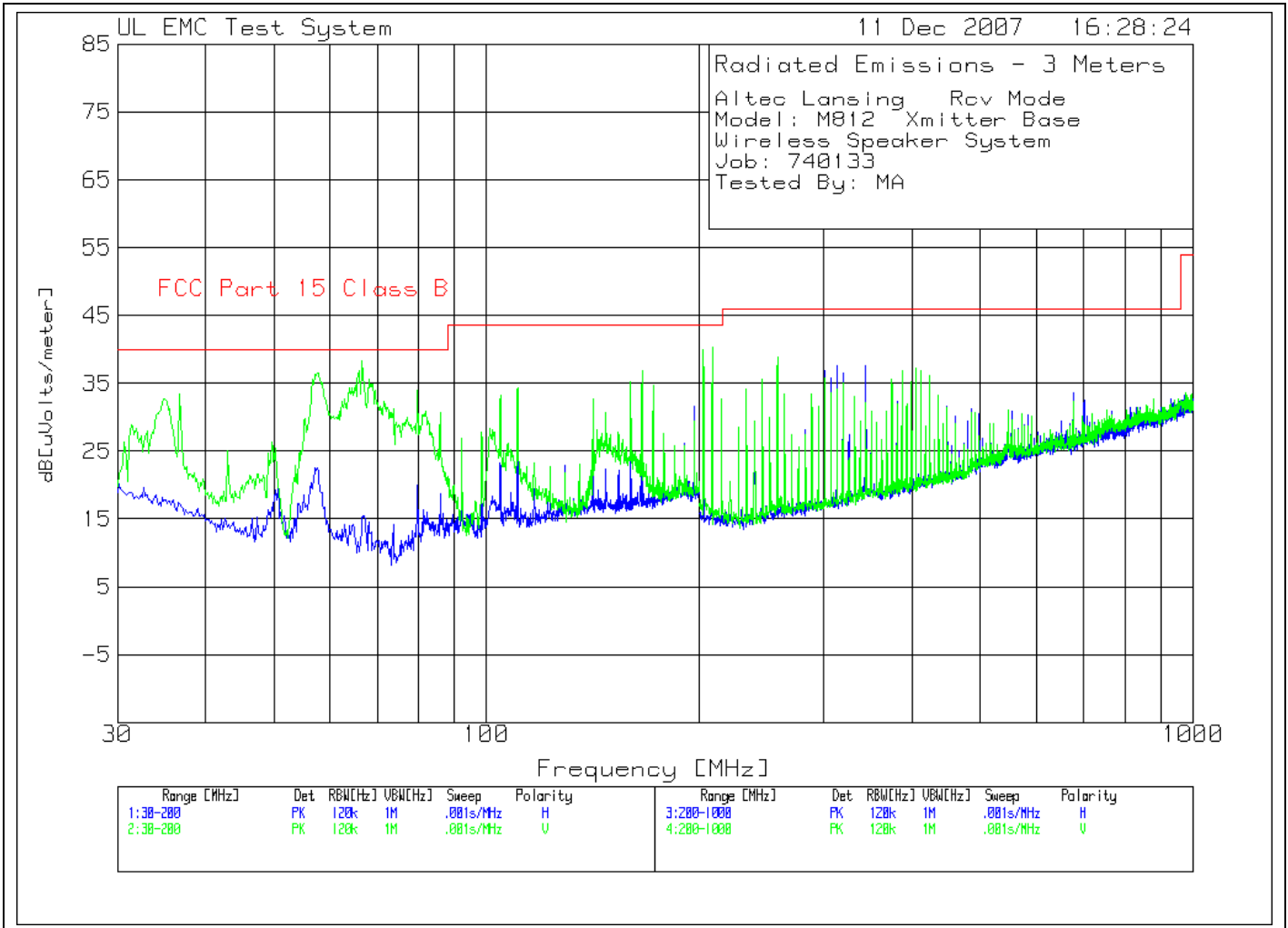


Wireless Speaker 30-1000MHz



Wireless Speaker 1-12GHz

Figure 20 Radiated Emissions Graph





**Table 26 Radiated Emissions Data Points**

Altec Lansing Rcv Mode  
 Model: M812 Xmitter Base  
 Wireless Speaker System  
 Job: 740133  
 Tested By: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
Vertical 30 - 200MHz -----											
1	66.5866	32.04 pk	.4	5.9	38.34	40	-	-	-	-	-
	Azimuth:357	Height:101	Vert	Margin [dB]		-1.66	-	-	-	-	-
2	57.7377	28.76 pk	.4	7.3	36.46	40	-	-	-	-	-
	Azimuth:102	Height:101	Vert	Margin [dB]		-3.54	-	-	-	-	-
3	165.966	20.18 pk	1	15.7	36.88	43.5	-	-	-	-	-
	Azimuth:65	Height:101	Vert	Margin [dB]		-6.62	-	-	-	-	-
8	36.8068	18.56 pk	.2	14.6	33.36	40	-	-	-	-	-
	Azimuth:343	Height:101	Vert	Margin [dB]		-6.64	-	-	-	-	-
Horizontal 200 - 1000MHz -----											
7	313.2566	21.84 pk	1.6	14.1	37.54	46	-	-	-	-	-
	Azimuth:18	Height:199	Horz	Margin [dB]		-8.46	-	-	-	-	-
Vertical 200 - 1000MHz -----											
4	208.8044	27.5 pk	1.1	11.7	40.3	43.5	-	-	-	-	-
	Azimuth:93	Height:101	Vert	Margin [dB]		-3.2	-	-	-	-	-
5	202.4012	26.75 pk	1.1	12.1	39.95	43.5	-	-	-	-	-
	Azimuth:305	Height:101	Vert	Margin [dB]		-3.55	-	-	-	-	-
6	258.029	24.23 pk	1.4	13.2	38.83	46	-	-	-	-	-
	Azimuth:263	Height:101	Vert	Margin [dB]		-7.17	-	-	-	-	-

LIMIT 1: FCC Part 15 Class B  
 LIMIT 2: NONE  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

pk - Peak detector  
 qp - Quasi-Peak detector

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

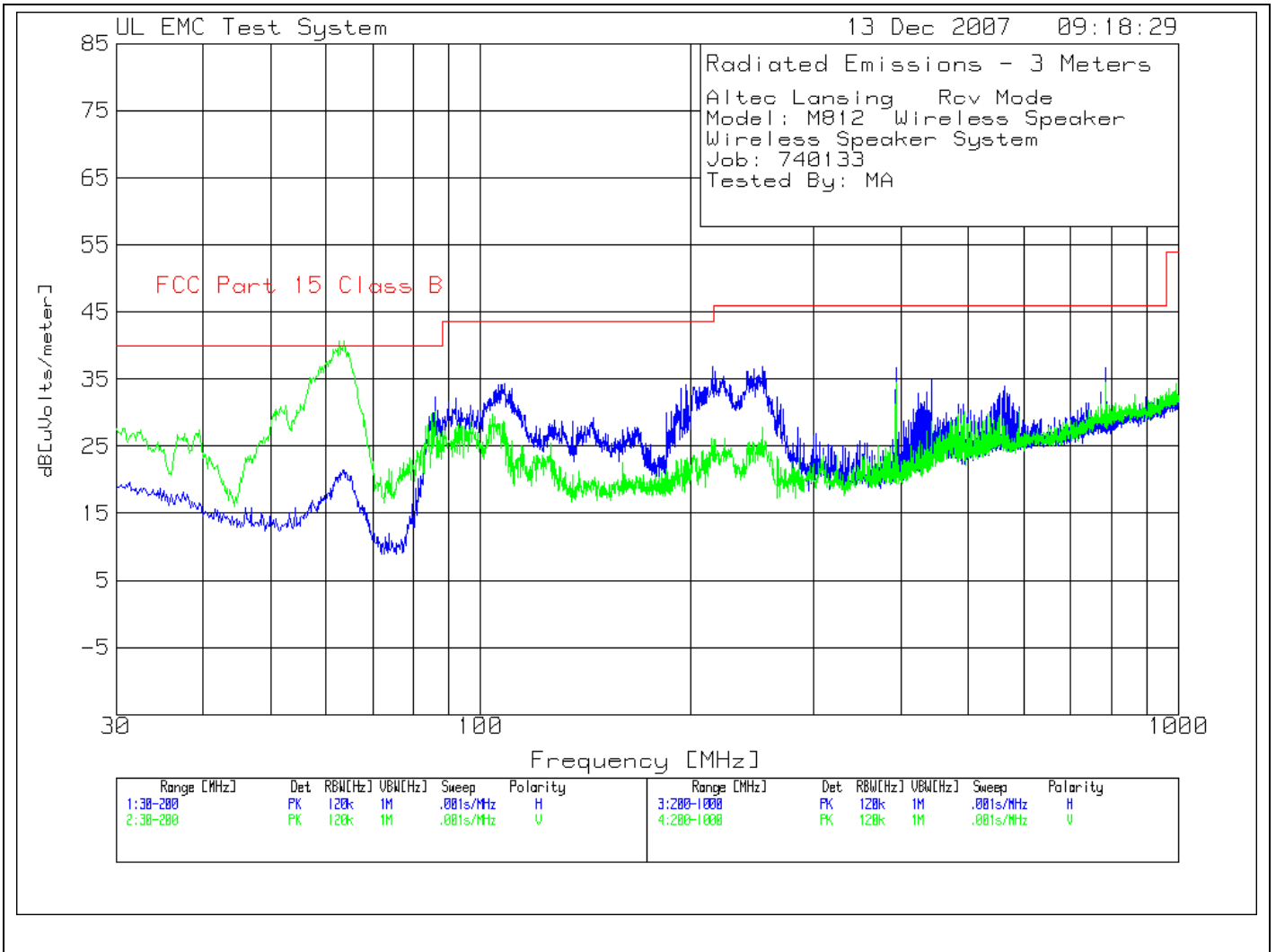
Altec Lansing Rcv Mode  
Model: M812 Xmitter Base  
Wireless Speaker System  
Job: 740133  
Tested By: MA

Test	Meter	Gain/Loss	Transducer	Level	Limit:1	2	3	4	5	6
Frequency	Reading	Factor	Factor	dB[uVolts/meter]						
[MHz]	[dB(uV)]	[dB]	[dB]							
=====										
Vertical 30 - 200MHz										
57.7162	19.24 qp	.4	7.3	26.94	40	-	-	-	-	-
Azimuth: 282	Height:106	Vert		Margin [dB]:	-13.06	-	-	-	-	-
66.515	24.69 qp	.4	5.9	30.99	40	-	-	-	-	-
Azimuth: 272	Height:104	Vert		Margin [dB]:	-9.01	-	-	-	-	-
Vertical 200 - 1000MHz										
202.7412	25.25 qp	1.1	12.1	38.45	43.5	-	-	-	-	-
Azimuth: 17	Height:105	Vert		Margin [dB]:	-5.05	-	-	-	-	-
208.8751	24.9 qp	1.1	11.7	37.7	43.5	-	-	-	-	-
Azimuth: 35	Height:104	Vert		Margin [dB]:	-5.8	-	-	-	-	-

LIMIT 1: FCC Part 15 Class B  
LIMIT 2: NONE  
LIMIT 3: NONE  
LIMIT 4: NONE  
LIMIT 5: NONE  
LIMIT 6: NONE

pk - Peak detector  
qp - Quasi-Peak detector  
av - Average detector  
avlg - Average log detector  
ave - Average detector

Figure 21 Radiated Emissions Graph



**Table 27 Radiated Emissions Data Points**

Altec Lansing Rcv Mode  
 Model: M812 Wireless Speaker  
 Wireless Speaker System  
 Job: 740133  
 Tested By: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
Horizontal 30 - 200MHz -----											
3	85.986	23.65 pk	.5	8.2	32.35	40	-	-	-	-	-
	Azimuth:324	Height:250	Horz	Margin [dB]	-7.65	-	-	-	-	-	-
4	108.2783	22.17 pk	.7	11.5	34.37	43.5	-	-	-	-	-
	Azimuth:180	Height:250	Horz	Margin [dB]	-9.13	-	-	-	-	-	-
Vertical 30 - 200MHz -----											
1	63.6937	34.17 pk	.4	6.2	40.77	40	-	-	-	-	-
	Azimuth:136	Height:100	Vert	Margin [dB]	.77	-	-	-	-	-	-
2	52.4625	21.59 pk	.4	9	30.99	40	-	-	-	-	-
	Azimuth:100	Height:100	Vert	Margin [dB]	-9.01	-	-	-	-	-	-
Horizontal 200 - 1000MHz -----											
5	214.8074	24 pk	1.3	11.6	36.9	43.5	-	-	-	-	-
	Azimuth:345	Height:100	Horz	Margin [dB]	-6.6	-	-	-	-	-	-
6	246.023	22.79 pk	1.3	12.4	36.49	46	-	-	-	-	-
	Azimuth:17	Height:100	Horz	Margin [dB]	-9.51	-	-	-	-	-	-
7	393.2966	18.65 pk	2	16	36.65	46	-	-	-	-	-
	Azimuth:17	Height:300	Horz	Margin [dB]	-9.35	-	-	-	-	-	-

LIMIT 1: FCC Part 15 Class B  
 LIMIT 2: NONE  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

pk - Peak detector  
 qp - Quasi-Peak detector

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

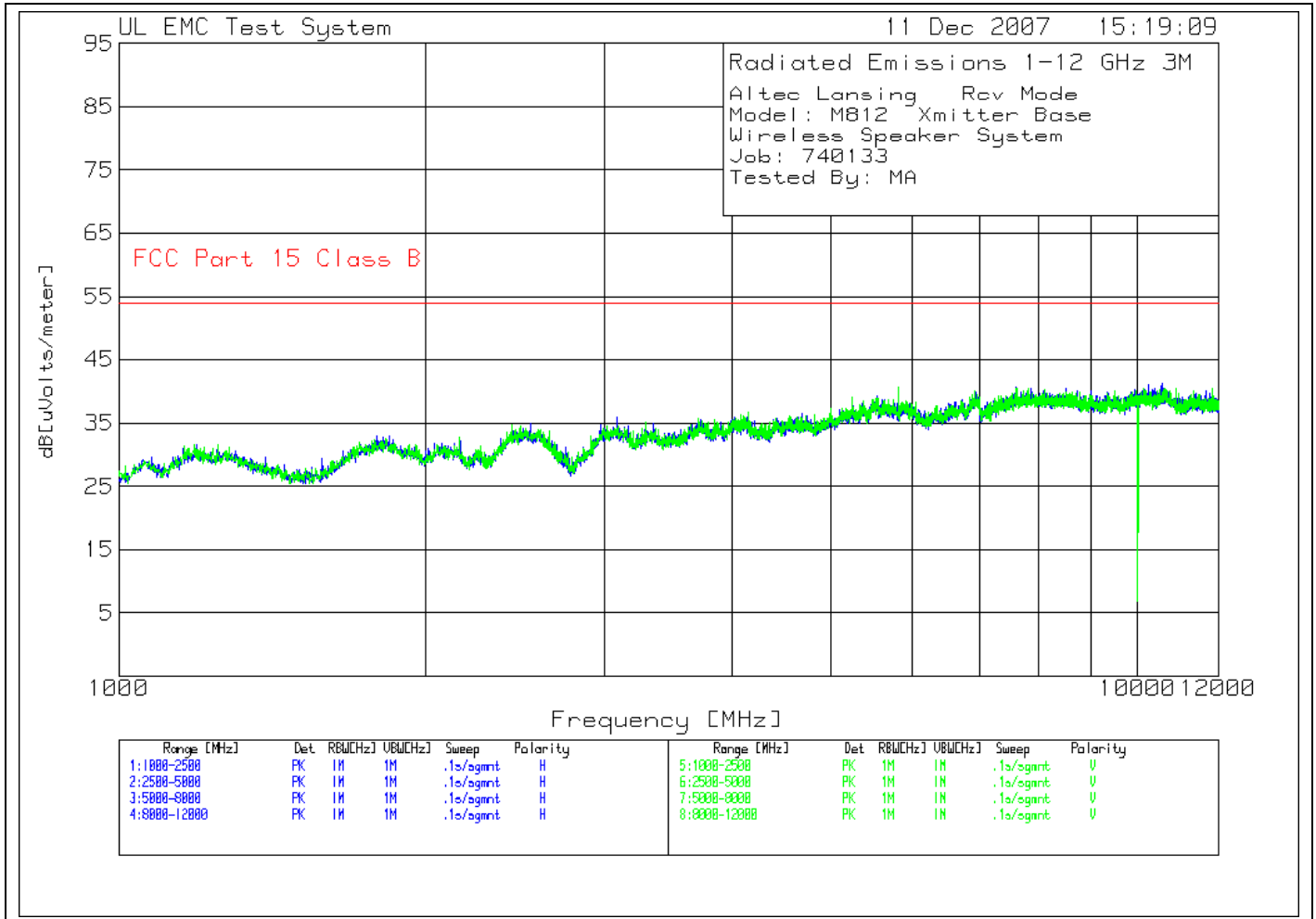
Altec Lansing Rcv Mode  
Model: M812 Wireless Speaker  
Wireless Speaker System  
Job: 740133  
Tested By: MA

Test	Meter	Gain/Loss	Transducer	Level	Limit:1	2	3	4	5	6
Frequency [MHz]	Reading [dB(uV)]	Factor [dB]	Factor [dB]	dB[uVolts/meter]						
=====										
Vertical 30 - 200MHz										
64.1293	30.7 qp	.5	6.1	37.3	40	-	-	-	-	-
Azimuth: 271	Height:104	Vert	Margin [dB]:		-2.7	-	-	-	-	-

LIMIT 1: FCC Part 15 Class B  
LIMIT 2: NONE  
LIMIT 3: NONE  
LIMIT 4: NONE  
LIMIT 5: NONE  
LIMIT 6: NONE

pk - Peak detector  
qp - Quasi-Peak detector  
av - Average detector  
avlg - Average log detector  
ave - Average detector

Figure 22 Radiated Emissions Graph



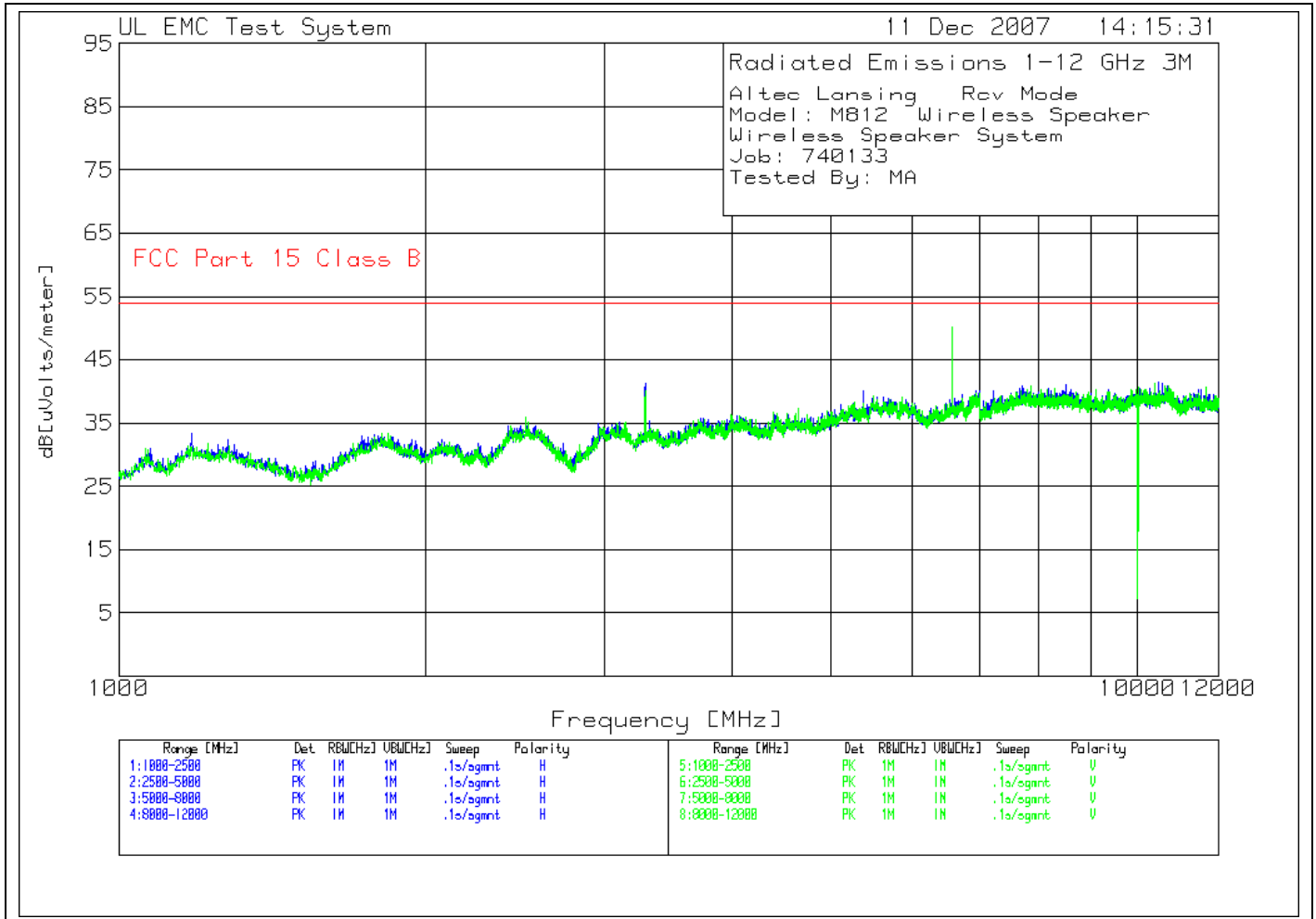
**Table 28 Radiated Emissions Data Points**

Altec Lansing Rcv Mode  
 Model: M812 Xmitter Base  
 Wireless Speaker System  
 Job: 740133  
 Tested By: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
Horizontal 2500 - 5000MHz -----											
6	4649.767	33.23 pk	-30.1	32.8	35.93	54	-	-	-	-	-
	Azimuth:112	Height:199	Horz	Margin [dB]		-18.07	-	-	-	-	-
Horizontal 8000 - 12000MHz -----											
1	10567.284	29.75 pk	-27.2	38.7	41.25	54	-	-	-	-	-
	Azimuth:220	Height:101	Horz	Margin [dB]		-12.75	-	-	-	-	-
2	8074.037	30.35 pk	-27.3	37.1	40.15	54	-	-	-	-	-
	Azimuth:251	Height:101	Horz	Margin [dB]		-13.85	-	-	-	-	-
Vertical 5000 - 8000MHz -----											
4	5822.548	35.02 pk	-28.7	34.4	40.72	54	-	-	-	-	-
	Azimuth:84	Height:199	Vert	Margin [dB]		-13.28	-	-	-	-	-
5	5240.16	34.67 pk	-29.4	33.8	39.07	54	-	-	-	-	-
	Azimuth:5	Height:101	Vert	Margin [dB]		-14.93	-	-	-	-	-
Vertical 8000 - 12000MHz -----											
3	10193.097	29.2 pk	-28	38.8	40	54	-	-	-	-	-
	Azimuth:331	Height:201	Vert	Margin [dB]		-14	-	-	-	-	-

LIMIT 1: FCC Part 15 Class B  
 LIMIT 2: NONE  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

Figure 23 Radiated Emissions Graph





**Table 29 Radiated Emissions Data Points**

Altec Lansing Rcv Mode  
 Model: M812 Wireless Speaker  
 Wireless Speaker System  
 Job: 740133  
 Tested By: MA

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
Horizontal 2500 - 5000MHz -----											
1	3285.524	42.55 pk	-32	30.7	41.25	54	-	-	-	-	-
	Azimuth:279	Height:100	Horz	Margin [dB]		-12.75	-	-	-	-	-
Horizontal 5000 - 8000MHz -----											
4	6571.047	40.33 pk	-28.6	34.7	46.43	54	-	-	-	-	-
	Azimuth:357	Height:199	Horz	Margin [dB]		-7.57	-	-	-	-	-
6	5378.252	35.83 pk	-29.9	34.1	40.03	54	-	-	-	-	-
	Azimuth:353	Height:199	Horz	Margin [dB]		-13.97	-	-	-	-	-
Horizontal 8000 - 12000MHz -----											
5	10479.24	29.9 pk	-27.1	38.7	41.5	54	-	-	-	-	-
	Azimuth:248	Height:101	Horz	Margin [dB]		-12.5	-	-	-	-	-
Vertical 2500 - 5000MHz -----											
2	3285.524	41.33 pk	-32	30.7	40.03	54	-	-	-	-	-
	Azimuth:312	Height:101	Vert	Margin [dB]		-13.97	-	-	-	-	-
Vertical 5000 - 8000MHz -----											
3	6571.047	44 pk	-28.6	34.7	50.1	54	-	-	-	-	-
	Azimuth:331	Height:199	Vert	Margin [dB]		-3.9	-	-	-	-	-

LIMIT 1: FCC Part 15 Class B  
 LIMIT 2: NONE  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE

Job Number: 740133

File Number: MC8319

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Model Number: M812

FCC ID: VJS-M812

Client Name: Altec Lansing Technologies

Altec Lansing Rcv Mode  
Model: M812 Wireless Speaker  
Wireless Speaker System  
Job: 740133  
Tested By: MA

Test	Meter	Gain/Loss	Transducer	Level	Limit:1	2	3	4	5	6
Frequency	Reading	Factor	Factor	dB[uVolts/meter]						
[MHz]	[dB(uV)]	[dB]	[dB]							
=====										
Vertical 5000 - 8000MHz										
6570.6207	46.71	ave	-28.6	34.7	52.81	54	-	-	-	-
Azimuth: 340	Height:160	Vert		Margin [dB]:	-1.19		-	-	-	-

LIMIT 1: FCC Part 15 Class B  
LIMIT 2: NONE  
LIMIT 3: NONE  
LIMIT 4: NONE  
LIMIT 5: NONE  
LIMIT 6: NONE

pk - Peak detector  
qp - Quasi-Peak detector  
av - Average detector  
avlg - Average log detector  
ave - Average detector