# SGS

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# **FCC REPORT**

Application No:	SZEMO100905834RF
Applicant/Manufacturer:	Altec Lansing, LLC
Factory:	Dong Guan Tai Sing Manufacturing Factory
Product Name:	Dongle iMW725
FCC ID:	VJS-A13998
Standards:	FCC CFR Title 47 Part 15 Subpart B: 2009
Date of Receipt:	2010-09-10
Date of Test:	2010-09-10 to 2010-09-29
Date of Issue:	2010-10-20
Test Result :	PASS *

\*In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Jack Zhang Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.



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# 3 Test Summary

Test Item	Section in CFR 47	Result
Radiated Emission (30MHz to 1GHz)	ANSI C63.4:2003	Pass
Conducted Emission (150KHz to 30MHz)	ANSI C63.4:2003	Pass

Remark: Pass: The EUT complies with the essential requirements in the standard.

Fail: The EUT does not comply with the essential requirements in the standard.



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# 4 General Information

# 4.1 Client Information

Applicant/Manufacturer:	Altec Lansing, LLC
Factory:	Dong Guan Tai Sing Manufacturing Factory
Address of Applicant:	535 Routes 6 & 209, Milford, PA 18337, USA
Address of Manufacturer:	535 Routes 6 & 209, Milford, PA 18337, USA
Address of Factory:	Tai Sing Industrial Road, Bai Zhou Bian Village, Dong Cheng, Dongguan City, Guangdong Province 523113, P.R. China

# 4.2 General Description of E.U.T.

Product Name:	Dongle iMW725
Item No.:	A13998
Trade mark:	ALTEC LANSING
Power Supply:	USB Voltage:5.0V d.c.

# 4.3 E.U.T Operation Environment and test mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	50 % RH
Atmospheric Pressure:	1010 mBar
Test mode:	
Play mode	Keep the EUT being connected with PC and playing the audio test signal.

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# 4.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations

#### • CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

#### • VCCI

The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively. Date of Registration: September 29, 2008. Valid until September 28, 2011.

#### • FCC – Registration No.: 556682

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 556682, June 27, 2008.

#### • Industry Canada (IC)

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

## 4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

## 4.6 Other Information Requested by the Customer

None.



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# 5 Equipments Used during Test

RE in Chamber									
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)			
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2010-06-17	2011-06-17			
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2010-03-19	2011-03-19			
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A			
4	Coaxial cable	SGS	N/A	SEL0028	2008-06-18	2011-06-18			
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2009-11-05	2010-11-05			
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2010-06-02	2011-06-02			
7	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2009-11-10	2010-11-10			
8	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2009-11-10	2010-11-10			
9	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	SEL0080	2010-06-04	2011-06-04			
10	Band filter	Amindeon	Asi 3314	SEL0094	2010-06-02	2011-06-01			
11	Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	2010-08-10	2011-08-10			

	Conducted Emission									
ltem	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)				
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	N/A	N/A				
2	LISN	ETS-LINDGREN	3816/2	SEL0021	2010-06-02	2011-06-02				
3	8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	EMC0120	2010-01-25	2011-01-25				
4	4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	EMC0121	2010-01-25	2011-01-25				
5	2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	EMC0122	2010-01-25	2011-01-25				
6	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2010-06-02	2011-06-02				
7	Coaxial Cable	SGS	N/A	SEL0024	2008-06-18	2011-06-18				



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# 6 Test results and Measurement Data

# 6.1 Conducted Emissions

Test Requirement:	FCC Part15 B		
Test Method:	ANSI C63.4: 2009		
Test Frequency Range:	150KHz to 30MHz		
Class / Severity:	Class B		
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)		
	Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit		
Test mode:	Play mode		
Test Instruments:	Refer to section 4.7 for details		
Test results:	Pass		

#### Measurement Data

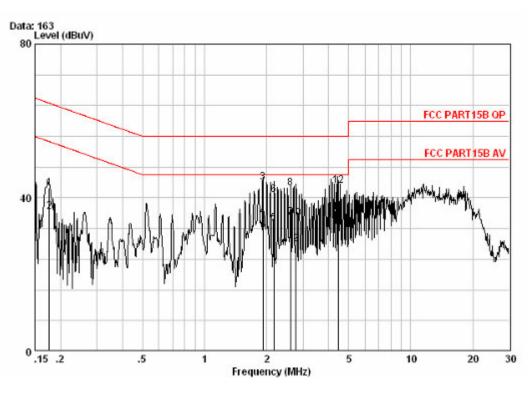
An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.



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#### Live line:



		Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
		MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1		0.17600	0.04	-0.05	42.60	42.59	64.67	-22.08	QP
2		0.17600	0.04	-0.05	36.40	36.39	54.67	-18.28	Average
3	0	1.915	0.12	-0.06	43.90	43.96	56.00	-12.04	QP
4	0	1.915	0.12	-0.06	35.10	35.16	46.00	-10.84	Average
5	0	2.170	0.12	-0.06	33.20	33.26	46.00	-12.74	Average
6		2.170	0.12	-0.06	40.60	40.66	56.00	-15.34	QP
7	0	2.616	0.13	-0.07	34.90	34.96	46.00	-11.04	Average
8	0	2.616	0.13	-0.07	42.50	42.56	56.00	-13.44	QP
9		2.780	0.14	-0.07	27.90	27.96	46.00	-18.04	Average
10		2.780	0.14	-0.07	34.50	34.56	56.00	-21.44	QP
11	0	4.440	0.16	-0.10	36.10	36.16	46.00	-9.84	Average
12	0	4.440	0.16	-0.10	43.20	43.26	56.00	-12.74	QP

#### Notes:

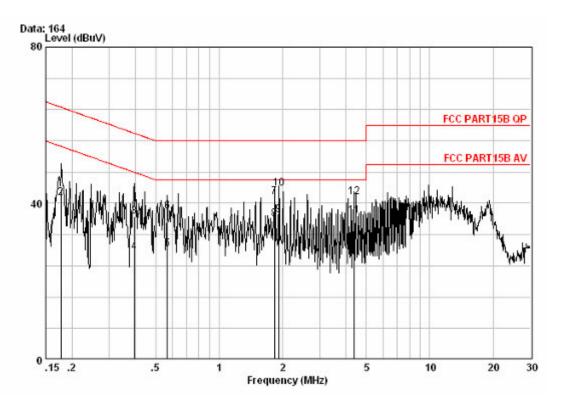
1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.



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#### Neutral line:



	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.17700	0.04	-0.04	43.60	43.60	64.63	-21.03	QP
20	0.17700	0.04	-0.04	41.50	41.50	54.63	-13.13	Average
3	0.39500	0.06	-0.04	36.60	36.62	57.96	-21.34	QP
4	0.39500	0.06	-0.04	27.40	27.42	47.96	-20.54	Average
5	0.56700	0.06	-0.04	28.30	28.32	46.00	-17.68	Average
6	0.56700	0.06	-0.04	37.90	37.92	56.00	-18.08	QP
7	1.830	0.11	-0.06	41.50	41.55	56.00	-14.45	QP
80	1.830	0.11	-0.06	35.90	35.95	46.00	-10.05	Average
90	1.920	0.12	-0.06	37.10	37.16	46.00	-8.84	Average
10 0	1.920	0.12	-0.06	43.80	43.86	56.00	-12.14	QP
11 0	4.360	0.16	-0.11	36.70	36.76	46.00	-9.24	Average
12	4.360	0.16	-0.11	41.50	41.56	56.00	-14.44	QP

#### Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.



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Test Requirement:	FCC Part15 B			
Test Method:	ANSI C63.4: 2009			
Test Frequency Range:	30MHz to 1000MHz			
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)			
Limit:	40.0 dBµV/m between 30MHz & 88MHz			
	43.5 dBµV/m between 88MHz & 216MHz			
	46.0 dBµV/m between 216MHz & 960MHz			
	54.0 dBµV/m above 960MHz			
Detector:	Peak for pre-scan (120kHz resolution bandwidth)			
	Quasi-Peak if maximised peak within 6dB of limit			
Test mode:	Play mode			
Test Instruments:	Refer to section 4.7 for details			
Test results:	Pass			

# 6.2 Radiated Emission

Note:

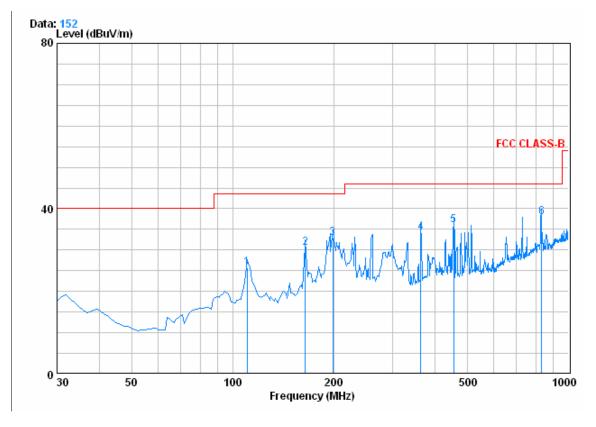
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor



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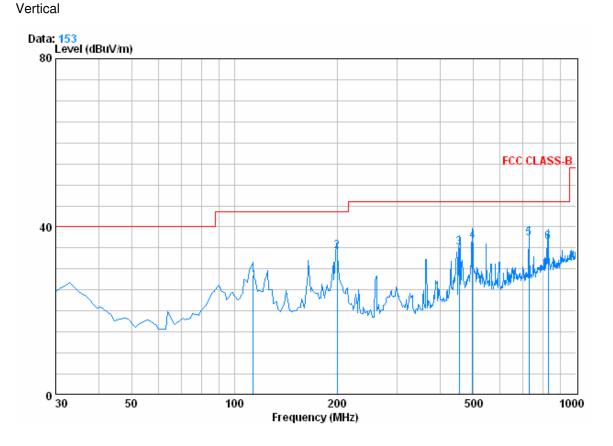
Horizontal



		Cableàntenna		Preamp Read		Limit		Over
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	110.510	1.23	8.57	27.77	43.76	25.79	43.50	-17.71
2	164.830	1.35	9.55	27.36	46.94	30.48	43.50	-13.02
3	198.780	1.40	10.19	27.16	48.46	32.89	43.50	-10.61
4	362.710	2.10	15.72	27.18	43.62	34.26	46.00	-11.74
5	455.830	2.43	17.09	27.58	43.98	35.92	46.00	-10.08
60	831.220	3.34	22.40	26.77	38.88	37.85	46.00	-8.15



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	Freq		intenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 2 3 4 5 0 6	113.420 199.750 455.830 497.540 727.430 828.310	1.24 1.40 2.43 2.59 2.98 3.32	8.36 10.19 17.09 17.80 21.61 22.40	27.74 27.15 27.58 27.70 27.18 26.79	49.80 43.05 43.93 39.79	36.61 37.20	43.50 46.00 46.00 46.00	-14.92 -9.26 -11.01 -9.39 -8.80 -9.50