SGS-CSTC Standards Technical Services Co., Ltd.

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FCC Test Report

Application No.:	SZEMO0801203634RF
Applicant:	BINATONE ELECTRONICS INTERNATIONAL LIMITED
Manufacturer:	Electronics Co.,Ltd
FCC ID:	WED-G62CT

Equipment Under Test (EUT):

EUT Name:	GPS
Item No.:	X350, Z350, A350, S350, G52C, G51C, G63C, G66C, G61C, G62C ♣
♣	Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.
Trade mark.:	Binatone
Standards:	FCC PART15 SUBPART B:2007
Date of Receipt:	18 January 2008
Date of Test:	18 January to 10 June 2008
Date of Issue:	15 June 2008

Test Result :	**PASS***

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

Authorized Signature:

Robinson Lo
Laboratory Manager

2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4:2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4:2003	Class B	PASS

Remark:

Item No.: X350, Z350, A350, S350, G52C, G51C, G63C, G66C, G61C, G62C

Only the Item in the picture 7.3 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above items.

3 Contents

4 General Information

4.1 Client Information

Applicant:	Binatone Electronics International Limited.
Address of Applicant:	Floor 23A 9Des Voeux Road West Sheung Wan Hong Kang.
Manufacturer:	Electronics Co.,Ltd
Address of Manufacturer :	New industrial Developing Zone,Xiao Bian, Chang An ,Dong Guan,Guangdong,China.

4.2 General Description of E.U.T.

EUT Name:	GPS
Item No.:	X350, Z350, A350, S350, G52C, G51C, G63C, G66C, G61C, G62C

4.3 Details of E.U.T.

Power Supply: DC 3.7V Rechargeable Battery

4.4 Description of Support Units

The EUT has been tested with a personal computer system for 'Web-Cam' mode.

Description	Manufacturer	Model No.
PC	IBM	2662
Printer	Canon	BJC-1000SP

4.5 Standards Applicable for Testing

The customer requested FCC tests for a digital camera.
The standard used was FCC PART 15, SUBPART B, CLASS B (2007)

4.6 Test Location

All tests were performed at: -

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory, No.198 Kezhu Road, Science Town Economic& Technology Development District Guangzhou, China 510663

Tel: +86 20 8215 5555 Fax: +86 20 8207 5059

No tests were sub-contracted.

4.7 Test Facility

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

- **NVLAP – Lab Code: 200611-0**
  SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.
- **ACA**
  SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **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, 2005. Valid until September 28, 2008.
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**
  Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAS L0167**
  SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.
- **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, Aug. 04, 2005
- **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.: 6002.

4.8 Deviation from Standards

None.

4.9 Abnormalities from Standard Conditions

None.

5 Equipments Used during Test

Conducted Emission						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	N/A	N/A
2	LISN	ETS-LINDGREN	3816/2	SEL0021	18-06-2008	17-06-2009
3	ISN	Rohde & Schwarz	ENY 22 1109	EMC0114	18-06-2008	17-06-2009
4	ISN	Rohde & Schwarz	ENY 41 1110	EMC0115	18-06-2008	17-06-2009
5	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	18-06-2008	17-06-2009
6	Coaxial Cable	SGS	N/A	SEL0024	18-06-2008	17-06-2009

RE in Chamber						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	16-06-2007	15-06-2009
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	12-12-2007	11-12-2008
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	18-06-2008	17-06-2009
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0014	12-08-2007	11-08-2008
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	18-06-2008	17-06-2009
7	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0005	12-08-2007	11-08-2008
8	Pre-amplifier (1-18GHz)	Rohde & Schwarz	AFS42-00101 800-25-S-42	SEL0081	18-06-2008	17-06-2009
9	Band filter	Amindeon	82346	SEL0094	18-06-2008	17-06-2009

General used equipment						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	Humidity/ Temperature Indicator	Shanghai	ZJ1-2B	SEL0101 to SEL0103	18-11-2007	17-11-2008
2	Barometer	ChangChun	DYM3	SEL0088	22-06-2006	21-06-2009

6 Test Results

6.1 Conducted Emissions Mains Terminals, 150kHz to 30MHz

Test Requirement:	FCC Part15 B
Test Method:	ANSI C63.4
Test Date:	28 March 2008
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

6.1.1 E.U.T. Operation

Operating Environment:

Temperature:	24.0 °C	Humidity:	52% RH	Atmospheric Pressure:	1012	Mbar

EUT Operation: Test in 'Web-Cam' mode with PC system.

6.1.2 Measurement Data

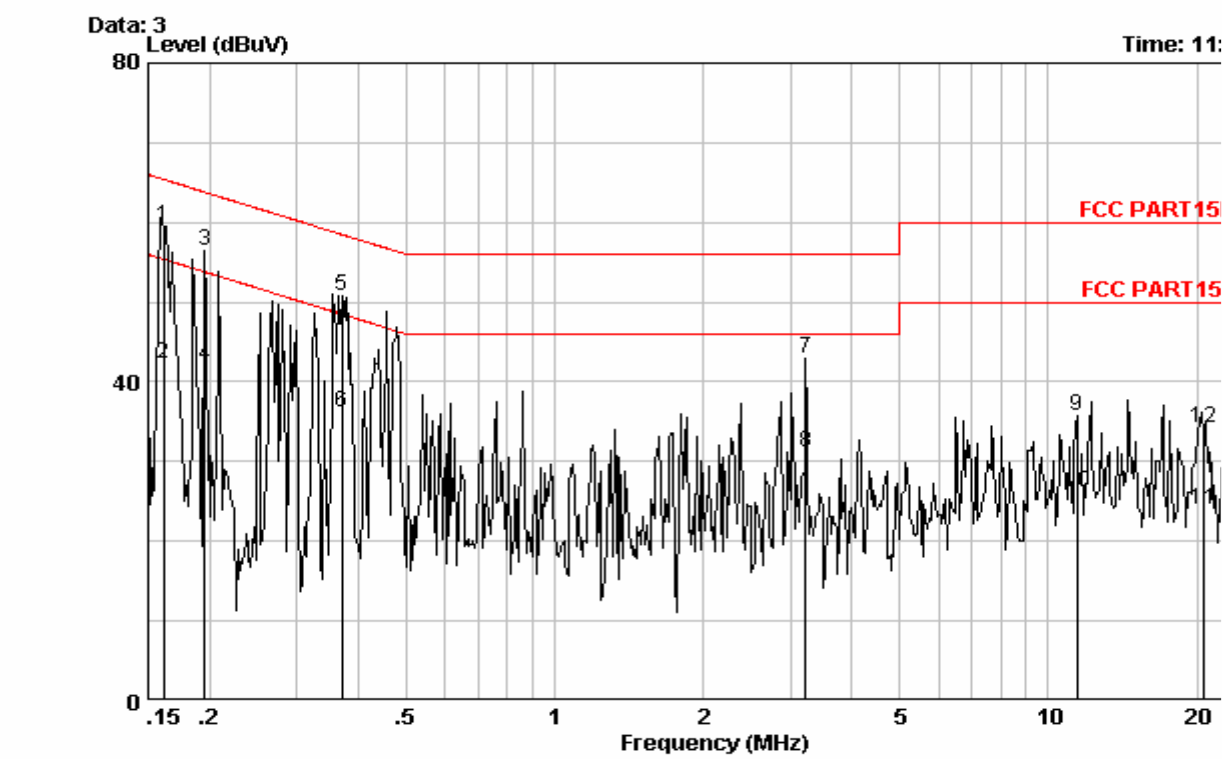
An initial pre-scan was performed on the live and neutral lines with peak detector.

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

The following Quasi-Peak and Average measurements were performed on the EUT on 28 March 2008:

Test the EUT on charging USB mode:

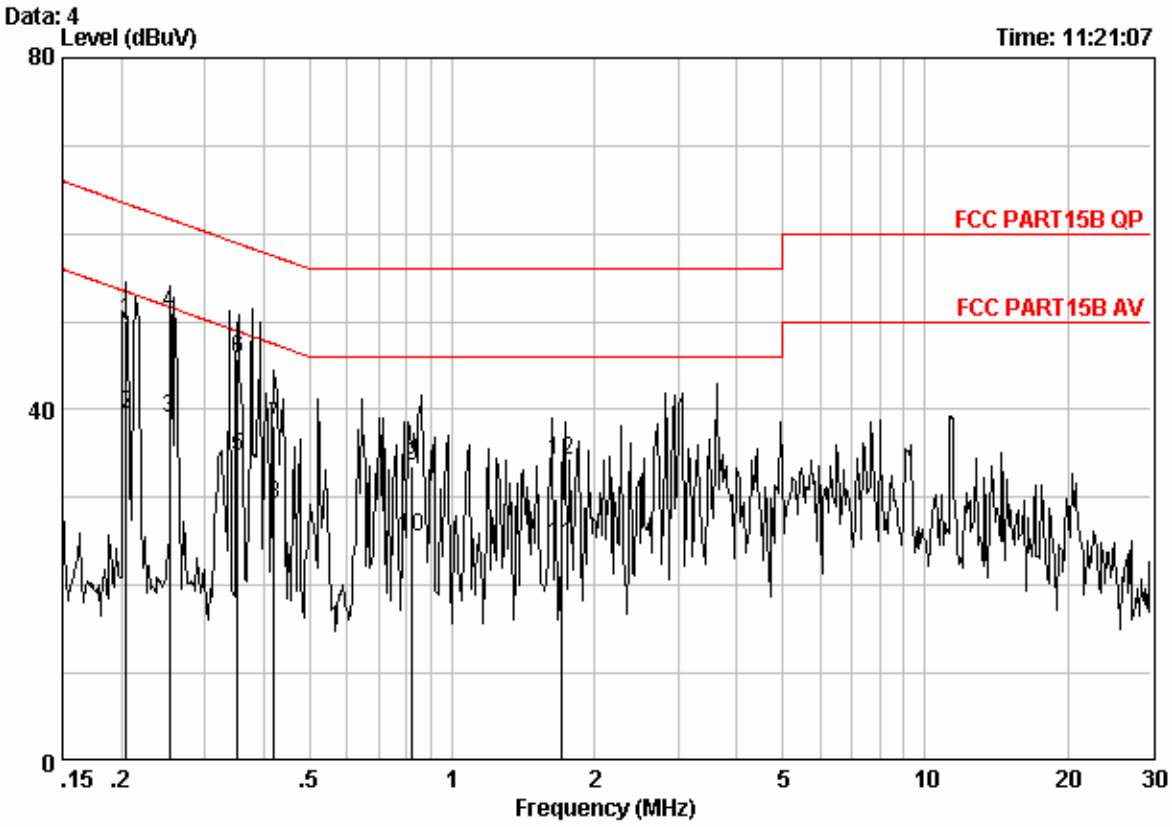
Line:



Site : Shielding Room
Condition : FCC PART15B QP CE LINE
EUT : GPS
NO : 3634RF

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1 @	0.16155	-0.03	-0.05	59.69	59.62	65.38	-5.77	QP
2	0.16155	-0.03	-0.05	42.30	42.23	55.38	-13.16	Average
3	0.19550	-0.09	-0.05	56.53	56.39	63.80	-7.41	QP
4	0.19550	-0.09	-0.05	42.31	42.17	53.80	-11.63	Average
5	0.37117	0.00	-0.04	50.79	50.74	58.47	-7.73	QP
6	0.37117	0.00	-0.04	36.30	36.26	48.47	-12.22	Average
7	3.224	0.10	-0.08	42.98	43.00	56.00	-13.00	QP
8	3.224	0.10	-0.08	31.20	31.22	46.00	-14.78	Average
9	11.438	0.22	-0.36	35.91	35.77	60.00	-24.23	QP
10	11.438	0.22	-0.36	26.35	26.22	50.00	-23.78	Average
11	20.594	0.33	-0.66	24.37	24.04	50.00	-25.96	Average
12	20.594	0.33	-0.66	34.58	34.26	60.00	-25.74	QP

Neutral :



Site : Shielding Room
Condition : FCC PART15B QP CE NEUTRAL
EUT : GPS
NO : 3634RF

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.20500	-0.09	-0.04	50.26	50.12	63.41	-13.28	QP
2	0.20500	-0.09	-0.04	39.62	39.48	53.41	-13.92	Average
3	0.25300	-0.04	-0.04	39.16	39.08	51.66	-12.58	Average
4	0.25300	-0.04	-0.04	51.20	51.12	61.66	-10.54	QP
5	0.35200	0.00	-0.04	34.62	34.58	48.92	-14.33	Average
6	0.35200	0.00	-0.04	45.82	45.78	58.92	-13.13	QP
7	0.42100	0.00	-0.04	38.26	38.22	57.43	-19.21	QP
8	0.42100	0.00	-0.04	29.26	29.22	47.43	-18.21	Average
9	0.82500	0.05	-0.04	33.46	33.46	56.00	-22.54	QP
10	0.82500	0.05	-0.04	25.52	25.52	46.00	-20.48	Average
11	1.710	0.10	-0.06	24.62	24.66	46.00	-21.34	Average
12	1.710	0.10	-0.06	34.26	34.30	56.00	-21.70	QP

6.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	FCC Part15 B
Test Method:	ANSI C63.4
Test Date:	31 March 2008
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
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 zbove 960MHz
Detector:	Peak for pre-scan (120kHz resolution bandwidth)
	Quasi-Peak if maximised peak within 6dB of limit

6.2.1 E.U.T. Operation

Operating Environment:

Temperature:	24.0 °C	Humidity:	52% RH	Atmospheric Pressure:	1012	mbar	

EUT Operation: Test the EUT in 'Take Photo' mode and 'Web-Cam' mode.

6.2.2 Measurement Data

An initial pre-scan was performed in the 3m chamber using the spectrum analyser in peak detection mode. The EUT was measured by Bilog antenna with 2 orthogonal polarities and peak emissions from the EUT were detected within 6dB of the class B limit line.

The following quasi-peak measurements were performed on the EUT on 31 March 2008:

Test mode: charging mode.

Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
56.190	0.80	7.48	28.07	42.32	22.53	40.00	-17.47
78.500	1.05	7.59	28.00	43.63	24.27	40.00	-15.73
152.220	1.32	9.14	27.44	39.04	22.06	43.50	-21.44
198.780	1.40	10.19	27.16	45.33	29.76	43.50	-13.74
299.660	1.90	13.85	26.72	43.20	32.23	46.00	-13.77
349.130	2.06	15.40	27.08	32.44	22.82	46.00	-23.18

Horizontal:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
78.500	1.05	7.59	28.00	45.72	26.36	40.00	-13.64
144.460	1.31	8.53	27.49	50.39	32.74	43.50	-10.76
183.260	1.38	9.97	27.24	47.01	31.12	43.50	-12.38
198.780	1.40	10.19	27.16	53.12	37.55	43.50	-5.95
299.660	1.90	13.85	26.72	53.49	42.52	46.00	-3.48
350.100	2.06	15.40	27.09	39.12	29.49	46.00	-16.51

Test Mode: USB mode.

Vertical:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
164.830	1.35	9.55	27.36	48.65	32.19	43.50	-11.31
198.780	1.40	10.19	27.16	48.66	33.09	43.50	-10.41
265.710	1.75	12.63	26.85	37.42	24.95	46.00	-21.05
365.620	2.11	15.78	27.20	40.67	31.36	46.00	-14.64
455.830	2.43	17.09	27.58	47.79	39.73	46.00	-6.27
832.190	3.34	22.40	26.77	39.83	38.80	46.00	-7.20

Horizontal:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
109.540	1.23	8.62	27.78	47.93	30.00	43.50	-13.50
175.500	1.36	9.71	27.29	53.41	37.19	43.50	-6.31
199.890	1.40	10.20	27.15	53.57	38.02	43.50	-5.48
299.660	1.90	13.85	26.72	48.24	37.27	46.00	-8.73
453.890	2.43	17.03	27.58	42.71	34.59	46.00	-11.41
730.340	2.99	21.62	27.17	40.41	37.85	46.00	-8.15