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Report No.: SZEMO09100616602

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RF Exposure Evaluation declaration

Application No.: SZEMO091006166RF
Applicant: Binatone Electronics International Limited
Address of Applicant: Floor 23A 9 Des Voeux Road West Sheung Wan Hong Kong
Manufacturer: Electronics Co., Ltd
Factory: Electronics Factory
Address of Manufacturer/ Factory: New industrial Developing Zone, Xiao Bian, Chang An Town, Dong Guan Guangdong China
FCC ID: VLJ-LS1000WB
Fundamental Carrier Frequency : 2.412GHz to 2.462GHz
Equipment Under Test (EUT):
Name: DPF
Model No.: LS1000Wb
Trade Mark: N/A
Date of Receipt: 31 October 2009
Date of Test: 04 November to 10 December 2009
Date of Issue: 11 December 2009

Test Result :	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Robinson Lo
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.

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2 RF Exposure Evaluation

2.1 Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	300

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

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2.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

2.3 Test Result of RF Exposure Evaluation

Product : Wireless Headphone

Test Item : RF Exposure Evaluation

Test Site : No.3 OATS

Antenna Gain: 0dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1 in linear scale.

802.11b

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)
1	2412	70.95	0.0141
6	2437	178.23	0.0354
11	2462	190.10	0.0378

The distance r (4th column) calculated from the Fries transmission formula is far shorter than 20 cm separation requirement.

802.11g

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)
1	2412	60.95	0.0121
6	2437	157.39	0.0313
11	2462	165.19	0.0328

The distance r (4th column) calculated from the Fries transmission formula is far shorter than 20 cm separation requirement.