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RF Exposure Evaluation declaration

Application No.:	SZEM1110004453RF
Applicant:	Unifat Technology Ltd
Address of Applicant:	7/F, Sui Hong Ind. Bldg, 547-549 Castle Peak Rd, Kwai Chung, N.T, H.K.
Manufacturer/Factory:	New Spirit Electronic Technology Development (Shenzhen) Co., Ltd.
Address of Manufacturer/ Factory:	4/F., East Block, Shengtang Building, No. 1 Tairan Ninth Road, Chegongmiao, Futian District, Shenzhen, China
FCC ID:	RII24RFMDLV01
Fundamental Carrier Frequency:	2414.250MHz~2464.875MHz
Equipment Under Test (EUT):	
Name:	2.4GHz 15dBm GFSK Transceiver module
Model No.:	KMD7121-06
Date of Receipt:	2011-12-30
Date of Test:	2011-12-30 to 2012-03-16
Date of Issue:	2012-03-19
Test Result:	**PASS***

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

Authorized Signature:

Jack Zhang
EMC Laboratory Manager

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 in1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	**--**	**--**	**F/300**	**6**
1500-100,000	**--**	**--**	**5**	**6**
300-1500	**--**	**--**	**F/1500**	**6**
1500-100,000	**--**	**--**	**1**	**300**

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4* Pi * R^2)$

Where
Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd id 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.

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℃and 78％ RH.

2.3 Test Result of RF Exposure Evaluation

Product : Bluetooth hands-free system

Test Item : RF Exposure Evaluation

Test Site : No.3 OATS

Antenna Gain: 2.0dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.59 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm^2)
Lowest	2414.250	9.43	8.77	0.00277

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