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Report No.: SZEM110600137102

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## RF Exposure Evaluation declaration

**Application No.:** SZEM1106001371RF  
**Applicant:** PDi Communication Systems, Inc.  
**Address of Applicant:** 40 Greenwood Lane, Springboro, OH 45066 USA  
**Manufacturer:** kaito enterprises corp  
**Address of Manufacturer:** 11/F, Electronics Science & Technology Building 2070 A Shennan  
Central Road, Shenzhen, China  
**Factory:** HUITAI (GUANGDONG) DIGITAL SCIENCE & TECHNOLOGY CO., LTD.  
**Address of Factory:** No.6th, Songbai Road, South Area, Huizhou Digital Industrial Park,  
Huiao Highway, Huizhou, Guangdong P.R.C  
**FCC ID:** WQ5PDI-TR100  
**Fundamental Carrier  
Frequency:** 2402MHz~2480MHz  
**Equipment Under Test (EUT):**  
Name: WIRELESS TABLE RADIO  
Model: PDI-TR100  
**Date of Receipt:** 2011-06-15  
**Date of Test:** 2011-06-15 to 2011-08-15  
**Date of Issue:** 2011-08-24

<b>Test Result :</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Jack Zhang  
EMC Laboratory Manager

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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 <sup>2</sup> )	Average Time (Minutes)
<b>(A) Limits for Occupational/ Control Exposures</b>				
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<sup>2</sup>

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 is the limit of MPE, 1 mW/cm<sup>2</sup>. 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 : Bluetooth hands-free system

Test Item : RF Exposure Evaluation

Test Site : No.3 OATS

Antenna Gain: -3.0dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0.5012 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 <sup>2</sup> )
Highest	2480	-3.86	0.411	0.000041

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