

# RF Exposure Evaluation declaration

Product Name	Wireless Mouse	
Model No.	StarMouse SW130	
FCC ID	I4LSTARMOUSESW130	

Applicant MICRO-STAR INT'L Co., LTD.	
Address	No. 69, Li-De St., Jung-He City, Taipei Hsien, Taiwan, R.O.C.

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The declaration results relate only to the samples calculated.

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## 1. RF Exposure Evaluation

#### 1.1. 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	Electric Field	Magnetic Field	Power Density	Average Time	
(MHz)	Strength (V/m)	Strength (A/m)	$(mW/cm^2)$	(Minutes)	
(A) Limits for Occupational/ Control Exposures					
300-1500			F/300	6	
1500-100,000			5	6	
(B) Limits for General Population/ Uncontrolled Exposures					
300-1500			F/1500	6	
1500-100,000			1	30	

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,  $1 \text{ mW/cm}^2$ . 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.

#### 1.2. 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:  $18^{\circ}$ C and  $78^{\circ}$ M RH.



# 1.3. Test Result of RF Exposure Evaluation

Product : Wireless Mouse

Test Item : RF Exposure Evaluation

Test Site : No.3 OATS

#### **Antenna Gain**

Antenna Gain: The maximum Gain measured in fully anechoic chamber is -0.85 dBi in logarithm scale.

### Output Power Into Antenna & RF Exposure Evaluation Distance (-0.85 dBi):

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
01	2404.00	0.7603	0.007960
39	2442.00	0.7943	0.008316
77	2480.00	0.8072	0.008451

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