

Company: Whirlpool Corporation Model Tested: XPWP and XPWC

Report Number: 18708 DLS Project: 5163

## FCC Code of Federal Regulations 47 Part 1.1307(b) (1)

# RF Exposure Statement of Compliance

### THE FOLLOWING MEETS THE ABOVE TEST SPECIFICATION

Formal Name: WIFI Processor Module & WIFI Core Module

Kind of Equipment: 802.11b/g/n Wi-Fi appliance module

Frequency Range: 2412-2462 MHz

Test Configuration: DC powered transceiver module

Model Number(s): XPWP (Processor) and XPWC (Core)

Model(s) Tested: XPWP (Processor) and XPWC (Core)

Serial Number(s): RF Conducted on Processor SN: NP109221

Radiated on Processor SN: NP109223 RF Conducted on Core SN: NP109413 Radiated on Core SN: NP109401

Date of Tests: 12-17-12 through 02-05-13

Test Conducted For: Whirlpool Corporation

750 Monte Rd

Benton Harbor, MI 49022, USA



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### **Transmitter Information:**

Maximum Conducted Output Power: 23.22 dBm

Maximum Effective Isotropic Radiated Power 27.42 dBm

Frequency: 2422 MHz

Antenna Type: PIFA

Antenna Gain: 4.2 dBi

### **Exposure Limit:**

Maximum Permissible Exposure (MPE) limit for <u>General Population / Uncontrolled Exposure</u> in the frequency range 1500 – 100,000 MHz (ref: 47 CFR Part 1.1310 Table 1(b))

Limit: (S)  $(mW/cm^2) = 1.0 \text{ mW/cm}^2$ 

### **MPE Calculation:**

Power Density (mW/cm<sup>2</sup>):

$$S = \frac{PG}{4\pi R^2}$$

 $S = Power Density (mW/cm^2)$ 

P = Power Input to the antenna (mW)

G = Numeric Power Gain of the antenna

R = Distance to the center of the radiation of the antenna (cm)



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#### **Results:**

P =	23.22	dBm						
G =	4.2	dBi						
<b>R</b> =	20	cm						
π	3.14159							
Transmit Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain	Distance (cm)	Power Density (mW/cm²)	Power Density Limit (mW/cm²)	Margin
2422	23.22	209.89399	4.2	2.63027	20	0.1098	1.0	0.890

### **Summary of Results:**

With a minimum separation distance of 20 centimeters as defined by FCC 2.1091(b), for a mobile device, the Whirlpool Inc WIFI Processor Module model XPWP and WIFI Core Module model XPWC **meets** the RF exposure evaluation requirements for maximum permissible exposure to any radiating structure and the general population / uncontrolled exposure.

### **Conclusion:**

The Whirlpool Inc WIFI Processor Module model XPWP and WIFI Core Module model XPWC operating under FCC part 15.247 complies with the requirements of FCC Part 1.1307(b)(1) for RF Exposure Evaluation.