



Company:  
Model Tested:  
DLS Project:

Whirlpool Corporation  
Indigo WiFi Module, WICHIN01  
7619

166 South Carter, Genoa City, WI 53128

## **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:	Indigo WiFi 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):	WICHIN01
Model(s) Tested:	WICHIN01
Serial Number(s):	RF Conducted SN: 18101F2700135460034BM000 Radiated (on-board antennas) SN: 18101F2700135460034BM000 Radiated (external antennas) SN: 18101F27001354600349M000
Date of Tests:	December 10 <sup>th</sup> , 2015
Test Conducted For:	Whirlpool Corporation 750 Monte Rd Benton Harbor, MI 49022, USA



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### Transmitter Information:

Maximum Conducted Output Power:	24.25 dBm
Maximum Effective Isotropic Radiated Power	28.45 dBm
Frequency:	2462 MHz
Antenna Type:	external PIFA
Antenna Gain:	4.2 dBi

### Exposure Limit:

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

Limit: (S) (mW/cm<sup>2</sup>) = 1.0 mW/cm<sup>2</sup>

### MPE Calculation:

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

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

S = Power Density (mW/cm<sup>2</sup>)

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:

RF Exposure Calculation								
	Input							
Frequency =	2462	MHz						
P =	24.25	dBm						
G =	4.2	dBi						
R =	20	cm						
$\pi$	3.14159							
Transmit Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Power Density Limit (mW/cm <sup>2</sup> )	Margin
2462	24.25	266.07251	4.2	2.63027	20	0.1392	1.0	0.861

## Summary of Results:

With a minimum separation distance of 20 centimeters as defined by FCC 2.1091(b), for a mobile device, the Whirlpool Corporation Indigo WiFi Module model WICHIN01 **meets** the RF exposure evaluation requirements for maximum permissible exposure to any radiating structure and the general population / uncontrolled exposure.

## Conclusion:

The Whirlpool Corporation Indigo WiFi Module model WICHIN01 operating under FCC part 15.247 complies with the requirements of FCC Part 1.1307(b)(1) for RF Exposure Evaluation.