



Company:
Model Tested:
DLS Project:

Whirlpool Corporation
Amber WiFi Module, WICHAM01
7620

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:	Amber 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):	WICHAM01
Model(s) Tested:	WICHAM01
Serial Number(s):	RF Conducted SN: 15501X01D01160800025AK01 Radiated (on-board antennas) SN: 15501X01D01160800070AK01 Radiated (external antennas) SN: 15501X01D01160800025AK01
Date of Tests:	March 14 th , 2016
Test Conducted For:	Whirlpool Corporation 750 Monte Rd Benton Harbor, MI 49022, USA



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Transmitter Information:

Maximum Conducted Output Power:	24.61 dBm
Maximum Effective Isotropic Radiated Power	28.81 dBm
Frequency:	2437 MHz
Antenna Type:	External PIFA antenna
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: $(S) \text{ (mW/cm}^2\text{)} = 1.0 \text{ mW/cm}^2$

MPE Calculation:

Power Density (mW/cm^2):

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

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:

RF Exposure Calculation								
	Input							
Frequency =	2437	MHz						
P =	24.61	dBm						
G =	4.2	dBi						
R =	20	cm						
π	3.14159							
Transmit Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Power Density (mW/cm ²)	Power Density Limit (mW/cm ²)	Margin
2437	24.61	289.06799	4.2	2.63027	20	0.1513	1.0	0.849

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 Amber WiFi Module model WICHAM01 **meets** the RF exposure evaluation requirements for maximum permissible exposure to any radiating structure and the general population / uncontrolled exposure.

Conclusion:

The Whirlpool Corporation Amber WiFi Module model WICHAM01 operating under FCC part 15.247 complies with the requirements of FCC Part 1.1307(b)(1) for RF Exposure Evaluation.