



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.