

## FCC RF EXPOSURE REPORT

EUT	WIFI TR Duplex Receptacle						
Model No.	WF15RM2U, WF15R2U						
FCC ID:	ZZH-WF15RM2U						
Frequency band (Operating)	<ul> <li>WLAN: 2.412GHz ~ 2.462GHz</li> <li>WLAN: 2.422GHz ~ 2.452GHz</li> <li>WLAN: 5.180GHz ~ 5.240GHz</li> <li>WLAN: 5.260GHz ~ 5.320GHz</li> <li>WLAN: 5.500GHz ~ 5.700GHz</li> <li>BLE: 2.402GHz ~ 2.480GHz</li> <li>Bluetooth: 2.402GHz ~ 2.480GHz</li> </ul>						
Device category	<ul> <li>Portable (&lt;20cm separation)</li> <li>Mobile (&gt;20cm separation)</li> </ul>						
Exposure classification	<ul> <li>Occupational/Controlled exposure (S = 5mW/cm<sup>2</sup>)</li> <li>General Population/Uncontrolled exposure (S=1mW/cm<sup>2</sup>)</li> </ul>						
Antenna diversity	Single antenna Multiple antennas Tx diversity Rx diversity Tx/Rx diversity						
Max. output power	28.73dBm (746.4487584mW)						
Antenna gain (Max)	3.0dBi(Numeric gain:2)						
Evaluation applied	<ul> <li>MPE Evaluation*</li> <li>SAR Evaluation</li> <li>N/A</li> </ul>						



## TEST RESULTS

No non-compliance noted.

## **Calculation**

Given

$$E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{3770}$$

Where E = Field strength in Volts / meter P = Power in Watts G = Numeric antenna gain d = Distance in meters S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770d^2}$$

Changing to units of mW and cm, using:

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$

**Equation 1** 

Where d = Distance in cm P = Power in mW G = Numeric antenna gain S = Power density in mW / cm<sup>2</sup>



## Maximum Permissible Exposure

Modulation Mode	Frequency band (MHz)	Measured power(dBm)	Tuneuptoleran ce(dBm)	Max.TuneupP ower(dBm)	Peak output power(mW)	Antenna Gain (dBi)		Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
802.11b	2412-2462	24.55	24±1	25.00	316.227766	3	2.00	20	0.125560512	1
802.11g	2412-2462	28.73	28±1	29.00	794.3282347	3	2.00	20	0.315393745	1
802.11n HT20	2412-2462	28.60	28±1	29.00	794.3282347	3	2.00	20	0.315393745	1