



## RF Exposure Evaluation Declaration

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**FCC ID:** QB8LT5G

**APPLICANT:** DragonWave Inc.

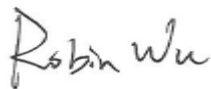
**Application Type:** Certification

**Product:** Microwave Outdoor Unit

**Model No.:** Harmony Lite 5GHz

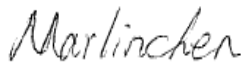
**FCC Classification:** Digital Transmission System (DTS)  
Unlicensed National Information Infrastructure (UNII)

Reviewed By :



( Robin Wu )

Approved By :



( Marlin Chen )

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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## Revision History

Report No.	Version	Description	Issue Date
1401RSU00704	Rev. 01	Initial report	04-24-2014
1401RSU00704	Rev. 02	Revised the test mode description	07-07-2014

## 1. RF Exposure Evaluation

### 1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

r = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

## 1.2. Test Result of RF Exposure Evaluation

Product	Microwave Outdoor Unit
Test Item	RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 23.5dBi for 5GHz in logarithm scale.

### For 5G ISM Band:

Test Mode	Frequency Band (MHz)	Maximum Average output power (dBm)	Limit of Power Density S(mW/cm <sup>2</sup> )	Safety Distance (cm)
20MHz	5745 ~ 5825	19.32	1	39.03
40MHz	5755 ~ 5795	19.11	1	38.10

### For 5G UNII Band:

Test Mode	Frequency Band (MHz)	Maximum Average output power (dBm)	Limit of Power Density S(mW/cm <sup>2</sup> )	Safety Distance (cm)
20MHz	5260 ~ 5320	3.67	1	6.44
	5500 ~ 5580	3.68	1	6.45
	5660 ~ 5700	3.38	1	6.23
40MHz	5270 ~ 5310	5.32	1	7.79
	5510 ~ 5550	5.43	1	7.89
	5670	5.63	1	8.07

### CONCLUSION:

*The Safety Distance of this equipment was 39.03 cm.*