



## **Certification Exhibit**

**FCC ID: HSW-500M**

**FCC Rule Part: 47 CFR Part 2.1091**

**Project Number: 72170058**

Manufacturer: Murata Electronics North America  
Model: 500M

## **RF Exposure**

**General Information:**

Applicant: Murata Electronics North America.  
 Device Category: Mobile  
 Environment: General Population/Uncontrolled Exposure

**Technical Information (High Power Mode – FCC 15.247):**

Antenna Type: WP WPANT30182-R1A-OMNI Antenna  
 Antenna Gains: 2dBi  
 Maximum Transmitter Conducted Power: 27.53dBm, 566.24mW  
 Maximum System EIRP: 29.53dBm, 897.43mW  
 Exposure Conditions: 20 centimeters

**Technical Information (Low Power mode – FCC 15.249):**

Antenna Type: WP WPANT30182-R1A-OMNI Antenna  
 Antenna Gains: 2dBi  
 Maximum System EIRP: -0.03dBm, 0.99mW  
 Exposure Conditions: 20 centimeters

\*EIRP calculated from field strength using  $EIRP (\text{dBm}) = E (\text{dBuV/m}) + 20\log(D) - 104.8$ ; where D is the measurement distance (in the far field region) in m.

**MPE Calculation**

The Power Density (mW/cm<sup>2</sup>) is calculated as follows:

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

Where:

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

**Table 1: MPE Calculation (High Power Mode)**

Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/cm <sup>2</sup> )	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
915.2	27.53	0.61	566.24	2	1.585	20	0.179

**Table 2: MPE Calculation (Low Power Mode)**

Transmit Frequency (MHz)	Radio Power EIRP (dBm)	Power Density Limit (mW/cm <sup>2</sup> )	Radio Power EIRP (mW)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
903.0	-2.03	0.60	0.63	20	0.0001