Excellence in Compliance Testing

Certification Exhibit

FCC ID: U9O-RF220SU

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 15-0531

Manufacturer: Synapse Wireless Inc.
Model: RF220

RF Exposure

General Information:

Applicant: Synapse Wireless Inc.
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

Technical Information:

Max Antenna Gain: 5.5 dBi
Maximum Transmitter Conducted Power: 24.15 dBm, 260.02 mW
Maximum System EIRP: 29.65 dBm, 922.57 mW
Exposure Conditions: 20 centimeters or greater

Antenna Information:

Antenna Type / Gain: Dipole: 3.2dBi
Dipole: 5.5dBi

MPE Calculation

The Power Density (mW/cm^2) is calculated as follows:

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

Where:
S = power density (in appropriate units, e.g. mW/cm2)
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

Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)
2440	24.15	1.00	260.02	5.5	3.548	20	0.184