Excellence in Compliance Testing

Certification Exhibit

FCC ID: U9O-SM220

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 16-0505

Manufacturer: Synapse Wireless, Inc.
Model: SM220

RF Exposure

General Information:

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

Technical Information:

Antenna Type/Gain: Dipole Antenna: Pulse RO2408NF, 8dBi
Stubby Antenna: Linx ANT-2.4-CW-RAH-RPS, 1.6dBi (Right Angle Connector)
Linx ANT-2.4-CW-RH-RPS, 1.6dBi (Strait Connector)
Maximum Transmitter Conducted Power: 19.93 dBm, 98.401 mW
Maximum System EIRP: 27.93 dBm, 620.87 mW
Exposure Conditions: 20 centimeters or greater

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)
2400	19.93	1.00	98.40	8	6.310	20	0.124