

## **Certification Exhibit**

**FCC ID: YWZ-S3I0004  
IC: 3356F-S3I0004**

**FCC Rule Part: 15.247  
IC Radio Standards Specification: RSS-210**

**ACS Project Number: 14-2070**

**Manufacturer: Alpha - High Theft Solutions  
Model: S3I-0004**

## **RF Exposure**

**General Information:**

Applicant: Alpha - High Theft Solutions  
ACS Project: 14-2070  
Device Category: Mobile/Portable  
Environment: General Population/Uncontrolled Exposure

**Technical Information:**

Antenna Type: PCB Wiggle Trace Antenna  
Antenna Gain: 2.15 dBi  
Maximum Transmitter Conducted Power: 3.92dBm, 2.466mW  
Maximum System EIRP: 6.07 dBm, 4.0458 mW

**Exemption from Routine Evaluation Limits**

1. Per KDB 447498 D01 General RF Exposure Guidance v05r02 the equipment qualifies for exemption to the routine evaluation if the thresholds of 3.0 for 1-g SAR and 7.5 for 10-g extremity SAR are not exceeded. The 1-g and 10-g SAR test exclusion thresholds for 100 MHz – 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$

Minimum Test Distance: 5mm  
Highest Operating Frequency: 2480 MHz  
Maximum Conducted Power: 2.466 mW

$$(2.466/5) \cdot (\sqrt{2.48})$$
$$0.4932 \cdot 1.575$$
$$0.8$$

2. Per IC Radio Standards Specification RSS-102 Issue 4, March 2010, SAR evaluation is required except when the device operates above 2.2 GHz and up to 3 GHz inclusively, and with output power (i.e. the higher of the conducted or radiated (e.i.r.p.) source-based, time-averaged output power) that is less than or equal to 20 mW for general public use.

In addition, an MPE calculation is provided below.

**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)

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
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)
2480	3.92	1.00	2.47	2.15	1.641	20	0.001

**Conclusion**

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.