



Excellence in Compliance Testing

Certification Exhibit

**FCC ID: YWZ-S3I0005
IC: 3356F-S3I0005**

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

ACS Project Number: 14-0227

Manufacturer: Alpha - High Theft Solutions, A Division of Checkpoint
Solutions Inc.
Model: S3I-0005

RF Exposure

General Information:

Applicant: Alpha – High Theft Solutions, A Division of Checkpoint Systems Inc.

Device Category: Portable

Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type: PCB Wiggle

Antenna Gain: 2.15dBi

Maximum Transmitter Conducted Power: 3.78 dBm, 2.39 mW

Maximum Transmitter Calculated EIRP: 5.93 dBm, 3.92 mW*

* Meets the thresholds of draft IC RSS-102 Issue 5, section 2.5.1 Table 1. Linear interpolated threshold is 3.94 mW at 2480 MHz.

Justification for SAR Test Exclusion:

The battery powered, 802.15.4 based 2.4 GHz radio transceiver S3I-0005 HB Hard Tag provides article surveillance for retail environments. This device can be attached to articles in direct contact with the body.

Minimum Test Separation Distance: 5 mm

Highest Operating Frequency: 2480 MHz

Maximum Measured Conducted Power: 3.78 dBm, 2.39 mW

Per KDB 447498 D01 General RF Exposure Guidance v05r02, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances \leq 50 mm are determined by:

$$\begin{aligned} &[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot \\ &[\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR} \\ &= (2.39 / 5) \cdot (\sqrt{2.48}) \\ &= 0.48 \cdot 1.57 \\ &= 0.8 \end{aligned}$$

Based on the results above, the unit meets SAR test exclusion requirements.