Certification Exhibit

FCC ID: YWZ-HBCLB
IC: 3356F-HBCLB

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

ACS Project Number: 13-0211

Manufacturer: Alpha - High Theft Solutions
Model: HBCLOK

RF Exposure

General Information:
Applicant: Alpha – High Theft Solutions, A Division of Checkpoint Systems, Inc.
Product Description: The HBCLOK provides article surveillance for retail environments. It
                        attaches to the product by looping the cable through a fixed opening on
                        the product and securing each end of the cable with a spring at each end
                        of the cable.
Exposure Conditions: Portable/Mobile. There is potential for the article under surveillance to
                        be in direct contact with the body (e.g. apparel).
Environment: General Population/Uncontrolled Exposure
Evaluation Result: Compliant

Technical Information:
Band of Operation: 2405 – 2480 MHz
Number of Channels: 16
Modulation Format: O-QPSK
Antenna Type/Gain: Printed circuit board wiggle antenna; 2.15dBi (0dBd)
Operating Voltage: 3V CR2477 Lithium Battery
Maximum Transmitter
Conducted Power: 3.87 dBm, 2.44 mW
Maximum System EIRP:6.02 dBm, 3.99 mW

Reference Documents:
447498 D01 General RF Exposure Guidance v05r01

SAR Test Exclusion Justification (Portable Exposure Conditions):
Per KDB 447498 D01 General RF Exposure Guidance v05r01 section 4.3.1 1), the 1-g and 10-g
SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are
determined by:

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

Note: The minimum test separation distance used is 5 mm per KDB 447498 D01 General RF
Exposure Guidance v05r01 according to 1) of section 4.3.1.

= [2.44 / 5]*[$\sqrt{2.480}$]
= 0.488 * 1.575
= 0.769

Conclusion: Based on the results above, the unit meets both body and extremities SAR test
exclusion requirements.

MPE Calculation (Mobile Exposure Conditions):
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)

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	3.87	1.00	2.44	2.15	1.641	20	0.0008

Conclusion: Based on the results above, this device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.