

April 06, 2009

To: Timco Engineering

Subject: Cover letter for FCC application for FCCID: Q9YSMC800M

The purpose of this application is to obtain a Grant of Equipment Authorization for a RFID transmitter used as part of a contactless card reader included within a handheld device. This transmitter operates at (13.56) MHz and is subject to rules stated in FCC part 15.225.

The applicant's product is a handheld mobile biometric device that includes a finger print scanner, two cameras and a bar code scanner for the purpose of mobile identification. It also includes (3) additional FCC approved RF transmitters for a wireless LAN, a Bluetooth and a GSM cellular radio. As a result, this transmitter will be co-located and operating in conjunction with these three other transmitters and their associated antennas.

This co-location can be justified is the sum of the individual ratios of each transmitter's applicable power density is less than (1.0). The table below shows that the sum of all (4) transmitter's power density level is (0.7438) and therefore less than (1.0)

**Maximum Permissible Exposure
Colocation calculation**

Freq MHz	Device	FCCID	ERP Max mW	Ant. Gain Numeric	Power Density mW/cm ²	Limit mW/cm ²	Ratio of allowed power density
2,400	Wireless LAN	LUBSDWLAN-2	19.5	0.80	0.00312	1.0	0.00312
2,400	Bluetooth	PVH092102	3.55	1.072	0.00076	1.0	0.00076
850	GSM	O9EQ24PL001	1,515	1.4	0.422	0.57	0.7404
1,900	GSM	O9EQ24PL001	978	2.0	0.389	1.0	*0.38
13.56	RFID	Q9YSMC800M	0.005	1.0	0.0000009	0.978	0.0000009
						Total	0.7438

* Discarded because only one GSM frequency can be operational at a time

Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies

4) SAR test positions and requirements for specific host platforms and exposure conditions

c) Extremity and body SAR evaluation considerations

iii) Contact the FCC Laboratory to determine whether:

(1) Hand SAR is required for hand-held and hand-operated devices with output power $> 1000 \cdot [f_{\text{(GHz)}}]^{-0.5}$ mW that are designed with the hand operating closer than 5 cm from the antenna during normal use.

Freq (GHz)	Device	Output power mW	$1000 \cdot [f_{\text{GHz}}]^{-0.5}$ mW	SAR Testing Required
2.4	LAN	19.5	645.5	No
2.4	Bluetooth	3.55	645.5	No
0.85	GSM	$1,515/8=190^*$	1,085	No
1.9	GSM	$978/8=123^*$	726	No
0.013	RFID	0.005	8,771	No

* Per KDB 447498 D01 Mobile Portable RF Exposure v03r03, "... Unless otherwise specified, the power thresholds in this document are applied with respect to the source-based time-averaged output power defined in §§ 2.1091(d)(2) and 2.1093(d)(5) of the rules. GSM qualifies for a source-based time-averaged factor of 1/8.

(2) Extremity SAR is required for wrist, feet or ankle worn devices.

Not Applicable

(3) Body SAR is required for hand-held and hand-operated or wrist, feet and ankle worn devices that operate closer than 5 cm to the body and the output power is $> 300 \cdot [f_{\text{(GHz)}}]^{-0.5}$ mW.

Not Applicable - not used closer than 5 cm from the body.

Should you have any questions or concerns, please feel free to contact me directly.

Regards,



Steven Hoke
EMC Site Manager