Maximum Permissible Exposure Statement

REPORT NO.: FC05-015-R

Calculations prepared for:

Calculations prepared by:

Randal Clark
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Wilson Electronics
3301 East Deseret Drive
St. George, UT 84790

Model Number:	801201
Fundamental Operating Frequency:	869-894
	1930-1990
Maximum Rated Output Power:	15 mWatts

Power Output and Operating Frequency Information used for these calculations were from CKC Laboratories, Test Reports FC05-015 (FCC Part 22) and FC05-017 (FCC Part 24).

Purpose:
The purpose of these calculations is to demonstrate RF Exposure compliance for mobile devices for the interior antenna(s) used with this device.

Device and Antenna Operating Configuration:
Input CDMA signal (representative of worst case) is provided via support signal generator. Signal generator output is fed to the input of the EUT through a preamplifier when necessary to obtain the maximum output. Antenna is an in-vehicle mobile antenna for downlink frequencies.

Test Procedure:
This equipment is evaluated in accordance with the guidelines set forth in OET Guide 65.

Other Considerations:
The antenna sold with this device includes a length of cable. The calculations provided here exclude the cable loss for this antenna in order to provide the maximum estimated exposure levels. Manufacturer's stated cable loss is -2.7dB (869-894) and -3.9 dB (1930-1990)

MPE Calculations for the 869-894 MHz Range:

Maximum EIRP Calculation:

Measured Output Power: 12.58 mWatts
Maximum Antenna Gain: 2.2 dBi
Maximum EIRP: 13.2 dBm EIRP

MPE Limit in accordance with 1.1310:

Occupational / Controlled Exposure
X   General Population / Uncontrolled Exposure

MPE Limit = f/1500 (mW/cm^2)
= 0.549 (mW/cm^2)

Note: Limit is calculated based on the lowest frequency used in the operating frequency range.

$$PowerDensity(mW/cm^2) = \frac{EIRP}{4\pi d^2}$$ Given: **EIRP** in *mW* and **d** in *cm*

EIRP (mW)	Distance (cm)	Power Density (mW/cm^2)	Result
20.89	1.74	0.550	**Pass**

MPE Calculations for the 1930-1990 MHz Range:

Maximum EIRP Calculation:

Measured Output Power:	9.77 mWatts
Maximum Antenna Gain:	2.2 dBi
Maximum EIRP:	13.1 dBm EIRP

MPE Limit in accordance with 1.1310:

      Occupational / Controlled Exposure

X   General Population / Uncontrolled Exposure

MPE Limit = 1 (mW/cm^2)

Note: Limit is calculated based on the lowest frequency used in the operating frequency range.

$$PowerDensity(mW/cm^2) = \frac{EIRP}{4\pi d^2}$$

Given: **EIRP** in *mW* and **d** in *cm*

EIRP (mW)	Distance (cm)	Power Density (mW/cm^2)	Result
20.41	**1.27**	**1.000**	**Pass**

Statement of Compliance:

This device demonstrates compliance under the operating conditions specified in this document. Under normal operating conditions, the antenna is designed to be installed in accordance with the manufacturer's instructions in such a manor to maintain the minimum separation distance. The MPE calculations shown above demonstrate compliance to the provisions of 1.1310 in accordance with the guidelines of OET 65.

As can be seen from the MPE results, this device passes the limits specified in 1.1310 at a distance of less than 20cm and at maximum output power under normal operating conditions for both frequency bands.