

RF EXPOSURE EVALUATION DECLARATION

1.0 APPLICANT:

DATE: 12, 23, 2009

NAME OF APPLICANT: HONEYWELL INTERNATIONAL INC.

FCC ID: CFS8DLLYNXPLUS

2.0 FCC RULES CONCERNING MAXIMUM PERMISSIBLE RF EXPOSURE:

47 CFR §1.1310 Radiofrequency Radiation Exposure Limits.

The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter. Further information on evaluating compliance with these limits can be found in the FCC's OST/OET Bulletin Number 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation."

NOTE TO INTRODUCTORY PARAGRAPH: These limits are generally based on recommended exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3. Copyright NCRP, 1986, Bethesda, Maryland 20814. In the frequency range from 100 MHz to 1500 MHz, exposure limits for field strength and power density are also generally based on guidelines recommended by the American National Standards Institute (ANSI) in Section 4.1 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1-1992. Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017.

(A) Limits for Occupational/Controlled Exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3-1.34	614	1.63	*(100)	6
1.34-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1	6
300-1500	-----	-----	f/300	6
1500-100,000	-----	-----	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	-----	-----	f/1500	30
1500-100,000	-----	-----	1	30

f = frequency in MHz * = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

3.0 MPE CALCULATIONS:

EQUATIONS:
 $P = 20 \times \log E - 95.2289$
 THE FRIIS TRANSMISSION EQUATION $S = ((EIRP \times DUTY \text{ CYCLE}) / (4 \times \pi \times R^2 \times 20 \text{ cm}^2)) \text{ mW/cm}^2$
 NOTE: The Cellular Duty Cycle used was 28% This is from the data sheet for the Cinterion MC55i.
 This Duty Cycle was averaged into the EIRP provided in the Report Test_Results_72470_11.PDF by the FRIIS Equation.
 Specification for the RF interface is on Table 38, page 86 GPRS Class 10 definition page 34
 Frame duration = 4.615 msec, Slot duration = 577 usec, 2 time slots max, GPRS Class 10, Duty cycle = $100 / (577 \times 10^{-6} \times 2) = 86.6\%$

FCC GENERAL POPULATION / UNCONTROLLED EXPOSURE LIMIT FOR 300MHz to 1,500 MHz = F / 1500 mW/cm ² :									
BAND	CHANNEL	FREQ	E in uV/M @ 3M:	MAXIMUM EIRP (dbm):	MAXIMUM EIRP (mW):	FRIIS mW/cm ² :	EXP LIMIT mW/cm ² :	% OF LIMIT:	
N/A	N/A	344.94	43,601.40	-2.44	0.570	0.000017	0.229960	0.0074	

FCC GENERAL POPULATION / UNCONTROLLED EXPOSURE LIMIT IN mW/cm ² USE 300MHz to 1.5 GHz = F / 1500:									
BAND	CHANNEL	FREQ		MAXIMUM EIRP (dbm):	MAXIMUM EIRP (mW):	FRIIS mW/cm ² :	EXP LIMIT mW/cm ² :	% OF LIMIT:	CO-MPE %:
GSM 850	128	824.2		28.40	691.83	0.038538	0.549467	7.0137	7.0211
GSM 850	190	836.6		28.89	774.46	0.043141	0.557733	7.7350	7.7424
GSM 850	251	848.8		29.59	909.91	0.050686	0.565867	8.9572	8.9646

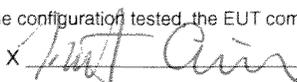
FCC GENERAL POPULATION / UNCONTROLLED EXPOSURE LIMIT IN mW/cm ² USE 1,500-100,000 MHz = 1mW/cm ² :									
BAND	CHANNEL	FREQ		MAXIMUM EIRP (dbm):	MAXIMUM EIRP (mW):	FRIIS mW/cm ² :	EXP LIMIT mW/cm ² :	% OF LIMIT:	CO-MPE:
GSM 1900	512	1850.2		28.26	669.89	0.037315	1.000000	3.7315	3.7389
GSM 1900	661	1880.0		28.60	724.44	0.040354	1.000000	4.0354	4.0428
GSM 1900	810	1909.8		28.48	704.69	0.039254	1.000000	3.9254	3.9328

MAXIMUM CO-LOCATION MPE % OF LIMIT: 8.965 %

4.0 RESULTS:

TEST RESULT: PASS

In the configuration tested, the EUT complied with the standards specified above.

X  Kenneth Eskildsen, Engineering Manager DATE: 1/4/10