4740 Discovery Drive | Lincoln, NE 68521
tel- 402.323.6233 | tel -888.657.6860 | fax - 402.323.6238
info@nceelabs.com | http://nceelabs.com

MPE Evaluation

FCC ID: CCKPC0248
IC: 5251A-PC0248

FCC

Maximum exposure limits from CFR 47, FCC Part 1.1310:

Table 1—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

4740 Discovery Drive | Lincoln, NE 68521
tel- 402.323.6233 | tel -888.657.6860 | fax - 402.323.6238
info@nceelabs.com | http://nceelabs.com

Occupational/Controlled	☐
General Population/uncontrolled	☒

PC0248								
Frequency	**Conducted Power**	**Antenna Gain**	**Peak Power EIRP**	**Peak Power EIRP +10% for tolerance**	**Power Density**	**Limit at specified distance**	**% of limit**	**Result**
MHz	**mW**	**numerical**	**mW**	**mW**	**mW/cm^2**	**mW/cm^2**		
902.4	6.15	1.254	7.71	8.48	0.00169	0.601600	0.281	PASS
914.8	6.26	1.254	7.85	8.64	0.00172	0.609867	0.282	PASS
927.6	6.38	1.254	8.00	8.80	0.00175	0.618400	0.283	PASS

Distance (d)	20	**cm**

Note: The user's manual will stipulate that a 20cm distance from the user is to be maintained.

EIRP values in mW were multiplied by 1.1 to account for a 10% tolerance.

The power density is calculated as shown below:

S = (P x G)/(4 x π x d^2) – used to calculate exposure at 20 cm

EIRP = P x G, measured as field strength

d = √(S/(P x G) x 4 X π) – used to calculate minimum distance to meet limits

S= power density
P = transmitter conducted power (in mW)
G = antenna numeric gain
D = distance to radiation center (20 cm)

4740 Discovery Drive | Lincoln, NE 68521
tel- 402.323.6233 | tel -888.657.6860 | fax - 402.323.6238
info@nceelabs.com | http://nceelabs.com

IC / ISED

Using RSS-102, Issue 5, Section 2.5.2

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

• below 20 MHz6 and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);

• at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 4.49/ƒ0.5 W (adjusted for tune-up tolerance), where ƒ is in MHz;

• at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);

• at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1.31 x 10-2 ƒ^(0.6834) W (adjusted for tune-up tolerance), where ƒ is in MHz;

• at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance). In these cases, the information contained in the RF exposure

4740 Discovery Drive | Lincoln, NE 68521
tel- 402.323.6233 | tel -888.657.6860 | fax - 402.323.6238
info@nceelabs.com | http://nceelabs.com

Table 1 - Power Density Calculations, IC/ISED

PC0248						
Frequency	**Conducted Power**	**Antenna Gain**	**Peak EIRP**	**EIRP +10% for tolerance**	**Exemption Limit**	**Compliant**
MHz	**mW**	**dBi**	**mW**	**mW**	**mW**	
902.4	6.15	1.254	7.71	8.48	1370.853	YES
914.8	6.26	1.254	7.85	8.64	1383.689	YES
927.6	6.38	1.254	8.00	8.80	1396.901	YES