1.1310   Radio frequency radiation exposure limits

This is a portable device such that it is a hand held transmitter with the Low Duty Cycle SAR exclusion from KDB 447498 Appendix A being used as a reference before applying the formula from section 4.3.1.

Three frequencies were evaluated:

Exclusion Ratio:
Formula 1 from Section 4.3.1 of KDB 447498 D01
$(((\text{Conducted max power of channel in mW*duty cycle}) / (\text{test separation in mm})) * \sqrt{f(GHz)})$

Where the duty cycle is derived from the following 350mSec on / 10 sec off = 3.5%
Minimum test separation distance = 5mm
(Minimum test separation distance is less than 5mm, default value of 5mm is used per Formula 1)

1) Calculation for 151.82 MHz
Exclusion Ration = $(1140*0.035/5) * (\sqrt{.15182})$
Exclusion Ration = 7.980 * 0.3896
Exclusion Ration = 3.109
Exclusion Threshold = 7.5 for 10-g extremity SAR

Final ration of 3.109 is below the exclusion threshold of 7.5 therefore SAR testing is excluded.

2) Calculation for 151.88 MHz
Exclusion Ration = $(1140*0.035/5) * (\sqrt{.15188})$
Exclusion Ration = 7.980 * 0.3897
Exclusion Ration = 3.110
Exclusion Threshold = 7.5 for 10-g extremity SAR

Final ration of 3.110 is below the exclusion threshold of 7.5 therefore SAR testing is excluded.

3) Calculation for 151.94 MHz
Exclusion Ration = $(1140*0.035/5) * (\sqrt{.15194})$
Exclusion Ration = 7.980 * 0.3898
Exclusion Ration = 3.111
Exclusion Threshold = 7.5 for 10-g extremity SAR

Final ration of 3.111 is below the exclusion threshold of 7.5 therefore SAR testing is excluded.

Summary of Radio Frequency Radiation Exposure Limits

SAR Measurement Necessity Conclusions				
Tuned Frequency (MHz)	Conducted Output Power in dBm (mW)	Exemption Ratio "ER"	Exclusion Threshold "ET"	SAR Required ER >ET
151.820	30.57 (1140)	3.109	7.5	NO
151.880	30.57 (1140)	3.110	7.5	NO
151.940	30.57 (1140)	3.111	7.5	NO

Conclusion: SAR measurements are not required per the exclusion requirement of KDB 447498