

Radio Frequency Exposure Information

For AT&T 2230 LC (low cost)
2.4GHz Cordless Telephone

Handset :

Readings from test report :

- (1) Max. Output Power – Ant. A = 0.1W ; Ant. B = 0.08W
- (2) Duty cycle – $750\text{us} \times 10 / 100\text{ms} = 7.5\%$ (measured in single slot transmission)

Under the worst environment with interference, dual slot diversity gives the max. duty cycle on the handset Tx (ie. $7.5\% \times 2$ or 15%)

Hence, taking the max. power output & max. duty cycle, the average effective output power is :
 $0.1\text{W} \times 15\% = 0.015\text{W}$ or 15mW

Conclusion : The average effective output power is much lower than the 50mW level (Supplement C, Table 1) which starts to require SAR testing. Hence, there is no RF exposure concerns on handset.

Base :

Readings from test report :

- (1) Max. Output Power – 0.15W
- (2) Duty Cycle – $750\text{us} \times 15 / 100\text{ms} = 11.25\%$ (with single handset & dummy carriers)

The phone is a TDD, FHSS. So, the worst case is actually operating with 4 handsets ($750\text{us} \times 40 / 100\text{ms}$, or 30%).

Hence, taking the worst case, the average effective output power is :
 $0.15\text{W} \times 30\% = 0.045\text{W}$ or 45mW

Conclusion : The base of a cordless phone system is not normally operated close to the users as that of the handset. Together with the low average effective output power, the base is also with no concerns on RF exposure.

Joseph Poon
Regulatory Compliance Manager
VTech Engineering Canada Ltd.