

# Radio Frequency Exposure Information

For Vtech 2651 & 2656  
2.4GHz Cordless Telephones

## **Handset :**

Readings from test report :

- (1) Max. Output Power – 86.5mW
- (2) Duty cycle –  $833\mu\text{s} \times 10 / 100\text{ms} = 8.33\%$  (measured in single slot transmission)

Under the worst environment with interference, dual slot diversity (ie. enhance mode) gives the max. duty cycle on the handset Tx (ie.  $8.33\% \times 2$  or 16.66%)

Hence, taking the max. power output & max. duty cycle, the average effective output power is :  
 $86.5\text{mW} \times 16.66\% = 14.4\text{mW}$

Conclusion : The average effective output power is much lower than 25mW (60/f GHz) – the low threshold for general population of the exposure category. Hence, SAR evaluation on the handset is not required.

## **Base :**

Readings from test report :

- (1) Max. Output Power – 57mW
- (2) Duty Cycle –  $833\mu\text{s} \times 10 / 100\text{ms} = 8.33\%$  (with single handset, single slot transmission)

The phone is a TDD, FHSS. So, the worst case is actually operating with 4 transmission slots with either 4 handsets or 2 handsets under enhance mode (i.e.  $8.33\% \times 4$  or 33.32%).

Hence, taking the worst case, the average effective output power is :  
 $57\text{mW} \times 33.32\% = 19.0\text{mW}$

Conclusion : The base of a cordless phone system is not normally operated close to the users as that of the handset (distance  $>2.5\text{cm}$ ). Together with the low average effective output power (much lower than 50mW -- the low threshold for general population exposure category), SAR evaluation is also not required for the base.

Joseph Poon  
Regulatory Compliance Manager  
VTech Engineering Canada Ltd.