

8th August 2003

Re: FCC ID EW780-5348-00
Applicant: VTech Telecommunications Ltd
Correspondence Reference Number: 25491
731 Confirmation Number: EA509979

Dear Joseph,

Please see my comments below regarding the above referenced CRN.

A Regarding your answer to question 1 the measured tissue dielectric parameters are not within 10% of target window as stated in the APREL procedure titled "Procedure for preparing 5.8 GHz Sugar-based Body tissue simulation liquid". Additionally, the target values stated on page 16 of 68 (36 and 6) do not agree with procedure target values. Measured values appear to agree better with head values. Please make appropriate changes and retest.

The ongoing research which APREL have been conducting in respect to tissue recipes has caused us to change certain parameters, along with the ingredients, and this is why it seems that the numbers documented reflect those for head tissues. We have been experimenting continuously in respect to the values for epsilon and sigma at the higher frequencies, and this has led to modifications to both the head and body tissues. Recently APREL have run a series of numerical analysis comparing the FCC numbers for body against the APREL numbers. The APREL models utilized the dipoles which have been developed for system validation for both head and body, at frequencies of 5.24GHz and 5.8GHz.

Attached is the interim report reflecting the results of the FDTD analysis.

APREL intend to release further data relating to tissue properties and recipe at a latter date, for use in the public domain.

It should also be noted that the current stance with IEC and draft extension of 1528 makes claims that a more conservative SAR value can be measured when using only head tissues. This is currently being investigated.

B Regarding your answer to question 2 tissue liquid recipes must be on file for each application. Please provide.

The following ingredients at specified percentage levels have been used for tissues at 5.8GHz.

Sugar = 42.6%
Di Water = 57%
Cellulose = 0.3%
Preventol = 0.1%

Epsilon = 36 Sigma= 6

Regarding your answer to question 5 the FCC does not understand the intent of the statement "1 g data is not relevant to the SAR report". The SAR report includes 1 g data. Please clarify. Typically, hand SAR is not necessary for these types of devices.

As discussed on the 7th of August 2003 with the FCC APREL have submitted a statement to V-Tech for inclusion into the user manual to resolve this issue.

As the device tested has an alpha numeric keypad, APREL Laboratories have tested the device for direct contact SAR, to provide evidence of compliance. In situations where a specific device can be maintained at a distance of over 20cm from a user, but has an alpha numeric keypad, APREL believe it is reasonable to exclude SAR values which are not indicative of a normal user situation.

Regarding your answer to question 6 please provide full details justifying system verification target value including referenced FDTD modeling details/analysis.

Please see attached FDTD report for details of peak target values.

Please note that the FDTD report has not been produced circulation or to be placed in the public domain. APREL wish to keep certain aspects of our current research activities a secrete and co-operation in this matter is greatly appreciated.

If you have any further questions regarding this application please let me know.

Regards,

Stuart Nicol.