Mike Kuo

From: Claire Hoque
Sent: November18 2003   Tuesday 2:53 PM
To: Mike Kuo
Cc: Chuck Cowden; Thu Chan
Subject: FW: WORTHDATA INC., FCC ID: JWSLT701, Assessment NO.: AN03T3307

Hi Mike,

Here are the answers.

Question #1: Due to the description in the user manual which allow this device to be used with body worn accessories, this hand held terminal is considered as potable device per section 2.1093 of FCC rules. When the transmitter is classified as portable device, MPE estimate can not be used to address RF exposure compliance.   Please delete the MPE estimate section in the RF test report.

revised 03U2162-2
FCC Report(T…

<Thu>MPE estimate has been delete, pls see revised report.

Question #2: Based upon TCB exclusion list dated July 2002, the low threshold to require SAR evaluation to qualify TCB review is :
With Separation distance between 0 - 2.5 cm : 60/0.915 GHz (mid band)=65mW.
With Separation distance between 2.5 - 20 cm : 120/0.915 GHz (mid band)=131mW.

The measured RF conducted output power is 106mW which is above 65mW with separation distance less than 2.5 cm to the body of user.

Please provide the photo to measure the separation distance between the transmitting antenna to the back of EUT to verify the actual separation distance to the body of user. If the separation distance is less than 2.5cm, then SAR evaluation is required. Please submit the SAR test report.

Since this device is Frequency hopping device and source-based time averaging may be employed by the device. If the duty cycle test data is submitted, you may use duty cycle to justify the output power and compare the result to the low threshold. If the corrected output power is below the low threshold, SAR evaluation may not be required.
<Claire>SAR is not required per your discussion with client.

Question #3: Please provide internal photos and external photos of AC/DC adapter.

Terminal Adapter   Terminal Adapter
External Phot…   Internal Phot…

<Claire>pls see attached photos.

Question #4: Per AC line conducted test data and spectrum plots, this device does not comply with 15.207 AC line conducted limits. As indicated in the test report, AC line conducted limits met 15.107 Class A limits for digital device. Please note that for intentional radiator, comply with 15.207 AC line conducted limits is required. Under section 15.207 of FCC rules, there is no Class A or Class B limits.
<Thu>test report has been revised.

Question #5: Please provide a example of Pseudo random frequency list.
<Worthdata>The radio has 25 channels numbered 0 to 24. Below is an example
      of a hop list.
    23, 8, 19, 12, 16, 17, 5, 20, 0, 11, 22, 14, 9, 7, 2, 4, 15, 6, 21, 1, 3,
    13, 10, 24, 18

Question #6: Please provide technical information to justify that this device comply with " The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequency in synchronization with the transmitted signals."

<Worthdata>The receiver IF bandwidth is set by the use of active filters in the IF
amplifier chain to match the downconverted bandwidth of the transmitted
FSK signal.
The system consists of a fixed acess point (BASE), and multiple mobile
users(TERMINALS).When a Terminal wants to establish communication with
a Base it will hop, transmit a "connect request" packet and then listen
at a hop rate that is much faster than the normal operational hop rate.
One inquiry per hop channel. The base will hear the Terminal's "connect
request"
packet and respond with an acknowledgment packet containing a time stamp
indicating the correct relative time. The Terminal will then set it's
internal time keeper to the correct time and proceed to hop at the normal
operation rate.
To maintain time sync ALL packets exchanged from a base to a a Terminal
have the correct time information imbedded in the data packet.The terminal
updates it's time keeper each packet. If there is a long period of time
that the terminal is NOT exchanging data with the base a housekeeping
packet will be sent and the base response will ensure the terminal has the
correct relative time, thus maintaining time sync.

Thanks,

Claire