

## Mike Kuo

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**From:** Ying Wang [ywang@SierraWireless.com]  
**Sent:** Friday, August 04, 2006 4:35 PM  
**To:** Mike Kuo; Danielle Zhan  
**Cc:** Christine Vu  
**Subject:** RE: Sierra Wireless Inc., FCC ID: N7NMC8775, Assessment NO.: AN06T6024, Notice#1

**Importance:** High

**Attachments:** MC8775 FCC parts 22 24 test report REVB.pdf



MC8775 FCC parts  
22 24 test r...

-----Original Message-----

From: Mike Kuo  
Sent: Friday, August 04, 2006 3:17 PM  
To: Mike Kuo  
Subject: Sierra Wireless Inc., FCC ID: N7NMC8775, Assessment NO.: AN06T6024, Notice#1

Based upon Radio System Description, this device has the following radio capabilities:

GSM/GPRS/EDGE/UMTS/HSDPA operate in 850 /1900 MHz band.  
Support WCDMA ( UMTS ) Release 99  
HSDPA up to 3.6 Mbps  
GSM Release 4  
GPRS/EDGE Multislot Class 12. Release 4

Part 22/24 RF conducted test report portion :

Question #1: Please provide output power verification on low, middle and high channel in accordance to the general description in section 5.2 of 2GPP TS 34.121, using the appropriate RMC ( Reference measurement channel ) or AMR with TPC ( transmit power control ) set to all "1's" .

Results for all applicable physical channel configuration ( DPCCH, DPDCH and spreading codes ) should be tabulated in the test report. If there is any configurations that this device does not support or cannot be measured due to technical or equipment limitations should be clearly identified.

SIERRA: The report does show a table on pg. 6, under section "4.4 Test Results UMTS". Results for low, mid and high channel are tabulated for both bands, UMTS1900B and UMTS800. The only piece of information missing on the setup description, is related to settings on the CMU200. Here they are:

Node B Settings

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Primary Scrambling Code = 9  
Output Channel Power = -51.7 dBm  
OCNS = Off  
Total Output Power (Ior+Ioc) = -51.7 dBm

RMC Settings

-----  
Reference Channel Type: 12.2 kbps Downlink/Uplink DL DTCH Transport  
Format: 12.2 kbps DL Resources in Use: 100 % UL CRC (Sym. Loop Mode 2):  
Off Test Mode: Loop Mode 2 Channel Data Source DTCH: PRBS9

Voice Settings

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Voice Source: Echo  
Loopback Type: Off

Adaptive Multirate Settings

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Active Code Set: Selection A  
Codec Mode: 12.2 kbps

Signaling RAB Settings

-----  
SRB Cell DCH: 3.4 kbps

BS Down Link Physical Channels Settings

-----  
Ior = -51.7 dBm  
P-CPICH = -3.3 dB  
P-SCH = -8.3 dB  
S-SCH = -8.3 dB  
P-CCPCH = -5.3 dB  
S-CCPCH = -5.3 dB  
S-CCPCH Channel Code = 2  
PICH = -8.3 dB  
PICH Channel Code = 3  
AICH = -8.3 dB  
AICH Channel Code = 6  
DPDCH = -10.3 dB  
DPDCH Channel Code = 96  
Power Offset (DPCCH/DPDCH) = 0.0 dB  
DL DPCH Timing Offset = 0  
Secondary Scrambling Code = 0  
Secondary Scrambling Code (HSDPA) = 0  
HSDPA Channels = Off

TPC Settings

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Algorithm = 2  
TPC Step Size = 1dB  
TPC Pattern Setup = Set 1 (All 1, after linked to get maximum power)

Question #2 : Please clearly identify the CMU 200 setting that were used during the final compliance measurement. CMU 200 setting information can be presented in text description or screen shots from CMU 200. If screen shots are provided, please make sure to include multiple screen settings if applicable.

SIERRA: This is actually answered by the list above, on answer #1.

Question #3: In the test report, the 3G portion of measurement is identified as UMTS. Please clearly documented in the test report on the mode of operation for UMTS operation.

SIERRA: UMTS presents the highest TX power, however HSDPA may back off the power for different gain factors. In terms of in band and out of band HSDPA is "quieter" so it makes sense for us to only preset the normal UMTS.

Question #4: Please provide strong justification or test data for not providing measurement on HSDPA modulation.

SIERRA: This is also answered in Question #3.

Question #5: GSM/EDGE measurement: GSM and GPRS are 2 G and EDGE is 2.5G. Which modulation was actually tested ? What is multislot Class used ? The output power measurement for GSM, GPRS, and EDGE are required.

SIERRA: Both GMSK and 8PSK were tested and reported in the document. The device is multislot class-12. The highest GMSK GSM/GPRS power is for one timeslot, increasing the

number of timeslots the TX power is reduced accordingly. The output power for EDGE is the same for one to four timeslots. The relevant power levels were given in our test document.

Question #6: As indicated in this test report, not all operational modes are tested. Please provide strong justification or explain the procedures were used during preliminary tests to identify the worse case. Please provide the description of tests been made during the preliminary tests to address band edge and occupied bandwidth.

SIERRA: UMTS presents the highest TX power, however HSDPA may back off the power for different gain factors. In terms of in band and out of band HSDPA is "quieter" so it makes sense for us to only preset the normal UMTS. In terms of occupied bandwidth, they are the same.

Best Regards

Mike Kuo

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.