Briggs, Mark

From: Briggs, Mark
Sent: Thursday, April 11, 2013 6:58 AM
To: Samuel.Uganzenwoko@fcc.gov
Cc:
Subject: Panasonic KDB xxxxxx

Importance: High

Dear Samuel

I'll respond through the KDB system as soon as I can but here are the responses to the questions you raised. I think everything is addressed in the documents already filed, please let me know asap if I am wrong:

1) What is the measured separation distance from the outer housing of the device to the phantom, it is not indicated anywhere in the report . Confirm that all tests to justify simultaneous transmission SAR exclusion test per new KDB447498 stipulated separation distance from the outer cover to the phantom is applied. If more conservative separation distance is used, that should be explained in the SAR report.

Answer: The separation distance for outer-housing to phantom for testing was 0mm and, for the edges that trigger power reduction repeated with the separation distance based on proximity sensor trigger distance (6mm for the rear surface and 20mm for Edge 1). These distances are all reflected in the SAR measurement tables and test set up photographs.

For test exclusion calculations and estimated SAR calculations the separation distance is based on the housing to person separation distance (0mm or trigger distance, as appropriate) for the antenna edge and the antenna-to-person separation distance for edges where the antenna is more than 5cm from the edge. Note that for a 0mm separation the formulas use a 5mm value to determine estimated SAR and exclusion. This is stated in the test report as follows:

> If the antenna to DUT adjacent edge or bottom separation distance is < 50mm a distance of 5mm is used to determine SAR exclusion and estimated SAR value
> If the antenna to DUT adjacent edge or bottom separation distance is >50mm the actual antenna to user separation distance is used to determine SAR exclusion and estimated SAR value

The above are exactly the same as reported in the previous two WWAN module reports.

2) On page 55 of the SAR report, the output power results seem to indicate power reduction is according to the maximum output established for WCDMA. When MPR is applied to HSDPA and HSUPA, the specified power reduction are not based on the maximum output with MPR. Please confirm this in the SAR report and verify that the worst case conditions have already been tested.

ANSWER In power reduction mode, MPR is disabled and this is reflected in the tune-up procedure. In both full power and power reduction modes the HSDPA and HSUPA output power do not exceed the WCDMA output power and so the test results for WCDMA represent the worst case. Measured power values are consistent with the powers listed in the tune-up procedure.

3) List all the SAR probes cal for each wireless mode. . Please review the probe calibration requirements in KDB 450824 and explain in the SAR report how the requirements have been satisfied especially for 835 and 1900 MHz

ANSWER Calibration certificates for probes were provided. In all cases the calibration points are within 50MHz of the measured frequencies. These are the same probes used for the previous filings. Please further note that with the release of KDB 865664 D01 the older KDB 450824 are now superseded. I believe the information has been transferred to the newer KDBs.

4) Please cross check all GPRS/EDGE SAR results to confirm proper test configuration for 1 slot vs. 2 slots. A few of the results where the same power level were used for 1 and 2 slots but the SAR results do not seem to reflect that

ANSWER SAR was only measured for GPRS 2 slot since this represented the highest frame average power mode for GPRS and EDGE 1- and 2-slot cases. Page 44 and 45 of the SAR report states:

> The worst-case configuration and mode for SAR testing is determined to be as follows:
> - Body: GMSK (GPRS) mode with 2 time slots, based on the output power measurements above
> - SAR is not required for EGPRS (8PSK) Mode at full power or reduced power because its output power is less than that of GPRS Mode at either full power or reduced power

5) While there is an attestation from the tablet manufacturer, a similar attestation from the module transmitter is also needed. Please ensure this other attestation letter is in Form 731

ANSWER The module grantee is the same as the tablet manufacturer (Panasonic)

6) Please clarify whether this is an original filing for the entire host containing all transmitters or a permissive change for the module. Please also review the October TCB slides regarding issues relating to proximity sensor and power reduction for modules where certain power control functions for the modules are controlled by the host; therefore, outside of the module or its full control and introducing approval issues

ANSWER This is a C2PC for the module and was filed as such. This C2PC is performed after a change in ID and will limit use of this module, under this FCC ID, to installation in this host due to the proximity sensor,

7) Please provide device photo label showing both the ID for this module and the collocated WLAN module.

ANSWER The label exhibit on file shows the FCC IDs for both WWAN and WLAN modules.

8) Please confirm if testing was done on a system containing the WLAN module and antenna or on a system without the WLAN module and antenna. It is noted that the separation distance between WWAN and WLAN transmitting antennas is close to the FCC threshold of 5cm. Please explain if the device will always contain both transmitters or if the device may be sold with WWAN but without WLAN transmitter.

ANSWER Tested with WLAN module in place. There is no version with just WWAN module.

9) Please provide separate SAR to peak location ratio analysis for the 3 conditions. If the peak locations are the same, it should be indicated in the SAR report. However, the 3 conditions are for different frequency bands, therefore, the peaks may vary somewhat.

ANSWER There are a total of 24 plots showing the different SAR peak locations and measurements and these cover the different combinations of technology and frequency band.