

## David Waitt

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**From:** Shawn McMillen [SMcMillen@metlabs.com]  
**Sent:** Wednesday, October 04, 2006 9:49 AM  
**To:** Eric  
**Cc:** Delavar, Shawn; David Waitt (ATCB); Timothy R. Johnson; Jason Anderson  
**Subject:** RE: Initial NEC SAR report comments

**Attachments:** 5805 top antenna AC pwr back side.pdf



5805 top antenna  
AC pwr back s...

Hi all. Actually the back of the EUT was tested but as documented in my details of evaluation and with the included pictures and layout of the antenna relative to the form factor, the back side evaluation was not included since the measured values were at or near the noise floor of the DASY. Please see attached plot of the back of the EUT. The SAR measured on the rear of the EUT relative to the position which produced the greatest exposure on the face of the EUT was on the order of 20dB less. The reason the SAR was so low was due to the fact that antennas are mounted on the face of the EUT and the distance from the antenna to the rear of the EUT was substantially greater. This also applies to the edge of the EUT. This particular EUT has rubber bumpers on each corner which prevent the edge of the EUT from being placed at 0cm separation from the phantom. In addition, it can be seen from the SAR distribution plots that there are no currents residing on the EUT other than the antenna itself. A large enough scan was carried out to demonstrate this. It has to be understood that the FCC guidelines are just that, guidelines. There has to be engineering judgment applied to all devices since most EUTs do not fall into a generic category.

Shawn McMillen  
Regulatory Compliance  
408-919-0587

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

From: Eric [mailto:elifsey@ptititest.com]  
Sent: Wednesday, October 04, 2006 4:41 AM  
To: Shawn McMillen  
Cc: 'Delavar, Shawn'; 'David Waitt (ATCB)'; 'Timothy R. Johnson'; 'Jason Anderson'  
Subject: FW: Initial NEC SAR report comments

Shawn M,

Please see ATCB comments below and attachments provided.

It is urgent that NEC is advised on how soon you can do the additional tests required and deliver a report so the grant is delayed as little as possible

Thanks,  
Eric

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

From: David Waitt (ATCB) [mailto:davidwaitt@atcb.com]  
Sent: Wednesday, October 04, 2006 5:09 AM  
To: 'Eric'; sdelavar@necinfrontia.com  
Cc: 'Timothy R. Johnson'  
Subject: Initial NEC SAR report comments

Hello Eric & Shawn,

This is David Waitt, I am still in Baltimore at the TCB Council meeting with the FCC. Starting yesterday, TCBs were allowed to issue grants on equipment operating above 3 GHz that require SAR, that , of course includes the NEC tablet computer.

I had a discussion with Tim Johnson (ATCB) last evening and we did a VERY brief cursory review of the SAR report provided by MET and we both had some concerns.

1: It appears that SAR was measured ONLY on the display side ("face") of the unit, not from the back of the unit. FCC policy has long been to measure SAR from the BACK of a tablet. This is of course due to the fact that the FCCs main concern with tablet computers is the unit being used on a lap, thus, measuring SAR at the back of the unit is in line with their concerns.

Please

see the attached document, KDB447498 RFX procedures, paragraph 7(d)(ii).

It

is our opinion that SAR will have to be evaluated from the back of the unit on this device.

2: In addition to 1) above there was some additional guidance given out by the FCC yesterday regarding tablets. Please see the attached PowerPoint slides TH RFX update.ppt.

Note slide 15, see text below.

{7)d)ii) rev} cont.

- SAR is tested with edges of the tablet computer in direct contact

against a flat phantom (display face perpendicular to phantom) for:

. Each edge containing antenna(s), unless final-product firmware prevents radio transmissions for position having antenna-edge in contact with phantom and 0deg relative-to-phantom display orientation

. Each edge not containing antenna(s) that is adjacent to an edge containing antenna(s), where adjacent-edge antenna(s) are within 10 cm from the phantom. The FCC is now requiring SAR to be tested along the edges of the device that include an antenna. ADDITIONALLY, they are requiring SAR to be tested along edges that do not contain an antenna if that edge is adjacent to an edge that does contain an antenna and the antennas is within 10 cm of the phantom. Given this guidance, SAR will have to be tested along at least two edges of the device and possibly more depending on the dimensions of the device.

3: Additionally, please refer to the attached slides KC SAR procedures.

These slides contain some additional information on required SAR test parameters ( probe dimensions, zoom scan resolutions, and so on.). All the parameter outlined in these slides will have to be met as well.

ATCB will continue its review of the provided SAR report, and in doing so there may be additional comments, but Tim and I felt that it was important to raise these issues now so they can start to be resolved as soon as possible.