

16. RF Exposure Info._20120201_v1 - 2012SAR00007_LTE_SAR_FCC_Rev1.pdf

a. Details have not been provided related to how test modes and positions were selected and how test reductions were applied. I have done a time consuming check, and it appears that mostly the correct decisions were made, but details especially for test reduction should be documented. There are a few questions & comments as follow.

TMC: add the section 6.3 on page 15 to address the test selection and reduction

b. Tables on page 14 should include dielectric values in 1700 MHz measurement range

TMC: add the dielectric values for 1750 MHz in table 2 on page 14

c. Table 6.3 Page 15 and 16, Position 5 was not tested. Please explain.

TMC: add the section 5.1.2 on page 10 to explain why position 5 is not tested.

d. Lab has applied KDB941225 D05 Footnote 6 only to QPSK 1RB-Low measurement. The footnote applies to both 1RB-High and 1RB-Low measurements, so for Band 4 1RB-High and 1RB-Low measurements should both have been performed on the High Channel. Because the band 4 mid and high channel powers are very close, we are going to ask FCC to accept the measurements. For all reports after this one, please apply footnote 6 to both 1RB-High and 1RB-Low measurements.

TMC: according to the KDB941225 D05 Footnote 6, "If the maximum average conducted output power for a 1 RB allocation is $> 1/2$ dB higher than the 50%RB allocation, measure SAR on the highest output power channel for the 1 RB allocation". The highest output power of band4 1RB-High is 22.21 on the Middle channel, band4 1RB-Low is 21.92 on the High channel, so it is tested on Middle channel for 1RB-High and High channel for 1RB-Low.

e. While it appears that the lab made the correct decision of not needing to perform 10MHz BW testing, it should be explained in the test report. Lack of such detail in the reports increases review times significantly.

TMC: add the section 6.3 on page 15 to explain the test selection for bandwidth

f. Previous comment by FCC (AC330U) has not been addressed in this application: <FCC> "FYI in future applications, test lab should ensure that submitted SAR plot resolution /size are zoomed out and bid and not small size and hard to read plots that are often provided."

TMC: replace the SAR plots that have zoomed out (please check the annex C)

17. RF Exposure Info._20120201_v1 - 2011EEB00779-SAR_revision01.pdf

a. Similar to previous item, the report does not include information about how test positions and channels were selected and justifying test reduction. (see item g. also)

According to KDB 941225 D06, SAR must be measured for all sides and surfaces with a transmitting antenna located within 25 mm from that surface or edge, for the data modes,

wireless technologies and frequency bands supporting hotspot mode.”

The left edge of the hotspot (position 5 to the phantom) is 77mm from the main antenna location, so position 5 was not evaluated for main antenna.

The right edge and the bottom edge of the hotspot (position 4&6 to the phantom) are more than 25mm from the WiFi antenna, so position 4&6 were not evaluated for WiFi antenna.

according to the KDB447498 D01 e),”when the SAR procedures require multiple channels to be tested and 1-g SAR for the highest output channel is less than 0.8W/Kg, testing for the other channels is not required.”

b. In Section 6.3 Table 4 why was only high frequency tested? Why was test position 5 not evaluated? . (see item g. also)

According to KDB447498 D01 e),”when the SAR procedures require multiple channels to be tested and 1-g SAR for the highest output channel is less than 0.8W/Kg, testing for the other channels is not required.”

For GSM850 the highest output channel is High channel (see page 9),and only the SAR results of position 5 are more than 0.8 W/Kg.

According to KDB 941225 D06, SAR must be measured for all sides and surfaces with a transmitting antenna located within 25 mm from that surface or edge, for the data modes, wireless technologies and frequency bands supporting hotspot mode.”

The left edge of the hotspot (position 5 to the phantom) is 77mm from the main antenna location, so position 5 was not evaluated for main antenna.

The right edge and the bottom edge of the hotspot (position 4&6 to the phantom) are more than 25mm from the WiFi antenna, so position 4&6 were not evaluated for WiFi antenna.

c. Table 5, why was only test position 1 evaluated? . (see item g. also)

According to public notice,DA-02-1438A1,” When multiple operating modes exist within the same frequency band, test the device in the highest output mode according to the normal Supplement C requirements.”

” Test each lower output modes in the configuration that resulted in the highest 1-g SAR in the mode with the highest output.”

GPRS850 and EGPRS850 are in the same frequency band, and the output power of GPRS is more than 2dB higher than the output power of EGPRS.

In Table 4, the highest 1-g SAR in GPRS850 mode is at position 1, so EGPRS850(Table 5) are only test at position1.

d. Table 6 appears to be ok as no test reduction appears to have been taken . However why was test position 5 not evaluated? . (see item g. also)

According to KDB 941225 D06, SAR must be measured for all sides and surfaces with a transmitting antenna located within 25 mm from that surface or edge, for the data modes, wireless technologies and frequency bands supporting hotspot mode.

The left edge of the hotspot (position 5 to the phantom) is 77mm from the main antenna location, so position 5 was not evaluated for main antenna.

e. Previous comment by FCC (AC330U) has not been addressed in this application: "FYI in future applications, test lab should ensure that submitted SAR plot resolution /size are zoomed out and big and not small size and hard to read plots that are often provided."

We zoom out the plots, and it is easy to read now.

f. Table 5.1.1 lists Test Position 5 two times.

It's a typo. The second 5 should be 6. Report has been corrected.

g. Note below section 5.1.1 page 7 needs to provide more detail as to why the selected test positions are valid. Generic reference to KDB 941225 D06 is not enough. Section similar to 5.1.1 should be added to the LTE SAR report in the previous item.

More detail has been added to the report.

According to KDB 941225 D06 and the antenna placement of EUT, "SAR must be measured for all sides and surfaces with a transmitting antenna located within 25 mm from that surface or edge, for the data modes, wireless technologies and frequency bands supporting hotspot mode."

The left edge of the hotspot (position 5 to the phantom) is 77mm from the main antenna location, so position 5 does not need to evaluate for main antenna.

The right edge and the bottom edge of the hotspot (position 4&6 to the phantom) are more than 25mm from the WiFi antenna, so position 4&6 do not need to evaluate for WiFi antenna.

SAR must be measured for test position 1,2,3,4 and 6 for GSM/WCDMA/LTE frequency band, and test position 1, 2, 3 and 5 for 802.11b/g/n frequency band.