

1 provide detailed in the Probe Calibration procedures and show that System Verification Application Note (AP) are followed and specific items/issued identified in the AP are properly addressed in the test report.

We have followed KDB 450824 System Verification Application Note requirement procedure as well as IEEE 1528 standard version 2006 to carry out probe calibration provided by APREL and system validation with standard dipole calibrated by APREL.

Calibration certificates are attached to the SAR report.

2. Which calibration point is used for the SAR measurements?

835MHz and 1900MHz are used for both probe and dipole calibration.

And also the system validation used for both frequencies are within 5%.

This same calibration point should be used with the required tissue dielectric medium according to alternative system verification method B for system verification with the 835 MHz reference dipole.

Yes, we are.

The tissue dielectric medium property used during the dipole and device measurements should be examined according to those illustrated to attachments 1-3 in the Application Note to ensure both probe calibration and tissue medium are adequate within the device test frequency range.

Yes, they are.

If not, both calibration points (650 & 750 MHz) would need to be used and two dipole measurements according to method B would be necessary, according to the tissue medium dielectric parameters dictated by the probe calibrations and routine measurements. It appears the 650 MHz calibration point might be able to cover all three test frequencies; and you will have to check the actual probe calibration and tissue parameters to be sure.

Not Applicable.

3. Does this product only operates at the 3 tested frequencies using the 3 antennas shown, one for each frequency? This may influence the test configurations. Please clarify.

Yes, this product only operates at the 3 tested channels 824,836, 848MHz for 850MHz band and 1850.2, 1880, 1909.8MHz for 1900MHz band, which were covered by 835MHz and 1900MHz calibration certificates

4. Analysis of ConvF of probe at dipole and probe calibration (device freq.) must show SAR variation <5% (e.g. SAR system manual) _OK_ (dipole ConvF=6.47, probe 750MHz ConvF=6.4, probe 650MHz ConvF=6.7)

Yes, ConvF at 835MHz and 1900MHz with SAR validation is < 5% compared to the calibration data.

5. SAR measurement: need further clarification on what was tested; these appear to some incorrect measurements ?

This product is GSM devices working at 835MHz and 1900MHz bands, so the SAR values for these two bands were tested.

6. Scan resolution: the area and zoom scan resolutions described may not be sufficient to provide antenna positions and hot spots info; need further clarification on impact to measurement uncertainty budget and impact on the interpolation and extrapolation algorithms used by the SAR system.

Area scan is 6x6x1, step size 12mm, the scan area is 72x72 mm.

Room scan is 5x5x1, step size 8mm, the scan area is 40x40 mm.

Antenna position and antenna size information are added to the SAR test report.

7. There is no antenna info to determine why the SAR should be significantly lower in specific frequency band .

Antenna is a dimension of 10x31 mm located on the bottom part of the EUT(see attached two photos below). So when the phone is at the tilt position, the antenna is away from human head at least 40 mm. This is the reason why the tilt position of SAR value is significantly smaller than normal position.



8. From your report probe calibration data: conductivity for 900 & 835 MHz body tissue is 1.05 and 0.97 respectively. The difference is $1.05/0.97=8.25\%$. The liquid used by the lab is within 5% for both 835 & 900 MHz. The probe calibration could be invalid if the same type of liquid is not used during probe calibration and routine measurements. Please explain

For the GSM 835MHz band, the same type tissue liquid has been used for both probe and dipole calibration as well as EUT SAR test.

900MHz is not applicable for this device.

9. Are the extrapolated peak SAR at the phantom surface above the dipole feed-point within 15% of the required values?

Yes.

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 pursuant to Section 2.917(c).

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