

Applicant: High Tech Computer Corp
Correspondence Reference Number: 7811
731 Confirmation Number: TC920783

Response to correspondence reference number: 7811

Spherical isotropy: The IndexSAR probes's spherical isotropy was only reported for 900 MHz. At other frequencies spherical isotropy was checked. At all frequencies the spherical isotropy was similar to the values reported for 900 MHz. Spherical isotropy values over frequency will follow a distribution similar to the distribution shown for axial isotropy.

DCP, test software & probe calibration : Calibration for probe S/N:0106, which was used for the testing in question, was performed on 07/10/2002. Therefore the "P1528comp" document dated 1/29/03 is not applicable to this calibration. As you mentioned IndexSAR has changed their software and calibration procedures. We use the latest versions of the software to perform SAR tests. In October 2002 we purchased another probe S/N:0123. Probe S/N:0106 was kept as a backup, but was never needed. Probe S/N: 0106 is now at IndexSAR being calibrated to their latest procedures. This demonstrates that we are using the current procedures. As further assurance we will list the software version in our reports and as always we will include the probe calibration documents in our reports.

Integration time: For an integration time of $t_{int} = 20$ milliseconds (the SAR probes sampling rate), if 1 pulse was missed, this induces the following uncertainty:

$$U = 2. \frac{4.6 * 10^{-3}}{t_{in}}$$

$$U = \pm 2.23\%$$

Only 1 pulse will be missed as a GSM standard TDMA signal has an idle frame of 1 in 26 over a period of 120 milliseconds. No other integration time figure is required as this is covered by the CW/TDMA investigation and linearity.

The IndexSAR probe amplifiers have the facility for increasing the integration time in multiples of 20 mSec (50Hz) or 16.67 mSec (60Hz). We perform SAR testing of GSM devices with the integration period set to 6 cycles. This reduces the uncertainty shown above as a better match with the frame rate is achieved. The uncertainty shown above is then reduced to $\pm 0.4\%$.

Linearity: 0.125 dB is the correct value. We will make sure we use the correct values according to P1528 uncertainty procedures.

Detection limits: According to the SAR equipment manufacturer this item is not applicable, providing that the measured SAR is within 0.1W/kg and 10W/kg.

Measurement device: According to the SAR equipment manufacturer this item is not applicable, uncertainties are taken into account in the probe calibration.

Response time: According to the SAR equipment manufacturer this item is not applicable, the probe is stationary for a time period greater than twice the response time before the measured SAR is logged.

Noise: The noise level is periodically measured and is less than 0.01 W/kg. With this level of noise, the uncertainty due to noise can be neglected.