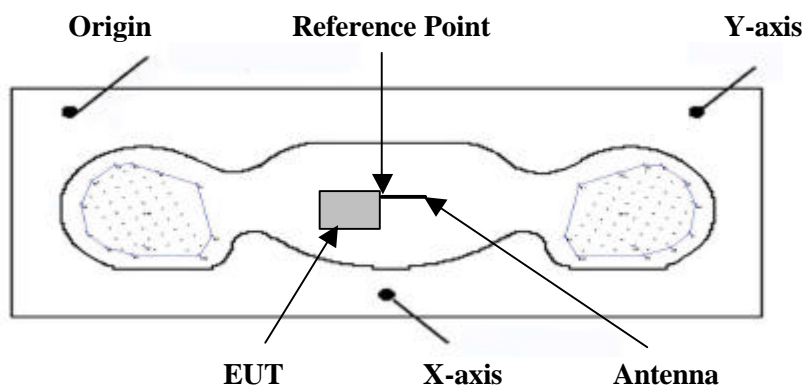


## 6.0 EVALUATION PROCEDURES

The Specific Absorption Rate (SAR) evaluation was performed in the following manner:

- a. (i) The evaluation was performed in the applicable area of the phantom depending on the type of device being tested. For devices held to the ear during normal operation both the left and right ear positions were evaluated at the low, middle, and high frequencies of the band at maximum power, and with the device antenna in both the extended and extracted positions as applicable. The positioning of the ear-held device relative to the phantom was performed in accordance with FCC OET Bulletin 65, Supplement C (Edition 01-01) using the SAM phantom.
- (ii) For face-held and body-worn devices a planar phantom was used.
- b. The SAR was determined by a pre-defined procedure within the DASY3 software. Upon completion of a reference and optical surface check, the exposed region of the phantom was scanned near the inner surface using a uniform grid spacing.
- c. A 5x5x7 matrix was performed around the greatest spatial SAR distribution found during the area scan of the applicable exposed region. SAR values were then calculated using a 3-D spline interpolation algorithm and averaged over spatial volumes of 1 and 10 grams.
- d. The depth of the simulating tissue in the phantom used for the system validation and SAR evaluation was no less than 15cm.
- e. The E-field probe conversion factors were determined as follows:
  - In brain and muscle tissue between 750MHz and 1GHz, the conversion factor decreases approximately 1.3% per 100MHz frequency increase.
  - In brain and muscle tissue between 1.6GHz and 2GHz, the conversion factor decreases approximately 1% per 100MHz frequency increase.
- f. The 835MHz probe conversion factors used for the SAR evaluation were 6.91 for head and 6.70 for body. The manufacturer's specified probe conversion factors at 900MHz are 6.83 for head and 6.61 for body. An evaluation of the highest SAR values for the EUT using 900MHz probe conversion factors increased the overall SAR for the head by approximately 3.4%, and the body by approximately 1.5%, which is less than the uncertainty of the probe conversion factors and considerably less than the overall uncertainty of the entire system.
- g. The 1800MHz probe conversion factors used for the SAR evaluation were 5.78 for head and 5.36 for body. The manufacturers specified probe conversion factors at 1900MHz are 5.66 for head and 5.25 for body. An evaluation of the highest SAR values for the EUT using 1900MHz probe conversion factors increases the overall SAR for head and body by approximately 2%, which is less than the uncertainty of the probe conversion factors and considerably less than the overall uncertainty of the entire system.



**Device Positioning & Reference Point (Body SAR)**