| WCDMA Band 5 – Body SAR Test (Gap: 10mm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Plot No. | Mode | Test Position Body | Frequency | | Output Power (dBm) | Rated Limit (dBm) | Scaling Factor | SAR1g (W/kg) | Scaled SAR1g (W/kg) |
| | | | CH. | MHz | | | | | |
| 126. | RMC 12.2k | Back Side | 4132 | 826.4 | 23.57 | 24.0 | 1.104 | 0.232 | 0.256 |
| 127. | RMC 12.2k | Front Side | 4132 | 826.4 | 23.57 | 24.0 | 1.104 | 0.208 | 0.230 |
| 128. | RMC 12.2k | Right side | 4132 | 826.4 | 23.57 | 24.0 | 1.104 | 0.205 | 0.226 |
| 129. | RMC 12.2k | Left side | 4132 | 826.4 | 23.57 | 24.0 | 1.104 | 0.123 | 0.136 |
| 130. | RMC 12.2k | Bottom side | 4132 | 826.4 | 23.57 | 24.0 | 1.104 | 0.146 | 0.161 |

| LTE Band 2–Body SAR Test (Gap: 10mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Plot No. | Mode | Test Position Body | Frequency | Output Power (dBm) | Rated Limit (dBm) | Scaling Factor | SAR1g (W/kg) | Scaled SAR1g (W/kg) |
| | Modulation, Bandwidth, RB | | MHz | | | | | |
| 131. | QPSK 20MHz 1RB | Back Side | 1860 | 25.19 | 25.5 | 1.074 | 0.173 | 0.186 |
| 132. | QPSK 20MHz 1RB | Front Side | 1860 | 25.19 | 25.5 | 1.074 | 0.108 | 0.116 |
| 133. | QPSK 20MHz 1RB | Left side | 1860 | 25.19 | 25.5 | 1.074 | 0.022 | 0.024 |
| 134. | QPSK 20MHz 1RB | Top side | 1860 | 25.19 | 25.5 | 1.074 | 0.112 | 0.120 |
| 135. | QPSK 20MHz 50%RB | Back Side | 1900 | 24.05 | 24.5 | 1.109 | 0.136 | 0.151 |
| 136. | QPSK 20MHz 50%RB | Front Side | 1900 | 24.05 | 24.5 | 1.109 | 0.085 | 0.094 |
| 137. | QPSK 20MHz 50%RB | Left side | 1900 | 24.05 | 24.5 | 1.109 | 0.016 | 0.018 |
| 138. | QPSK 20MHz 50%RB | Top side | 1900 | 24.05 | 24.5 | 1.109 | 0.094 | 0.104 |

| LTE Band 4–Body SAR Test (Gap: 10mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Plot No. | Mode | Test Position Body | Frequency | Output Power (dBm) | Rated Limit (dBm) | Scaling Factor | SAR1g (W/kg) | Scaled SAR1g (W/kg) |
| | Modulation, Bandwidth, RB | | MHz | | | | | |
| 139. | QPSK 20MHz 1RB | Back Side | 1720 | 24.65 | 25.0 | 1.084 | 0.205 | 0.222 |
| 140. | QPSK 20MHz 1RB | Front Side | 1720 | 24.65 | 25.0 | 1.084 | 0.106 | 0.115 |
| 141. | QPSK 20MHz 1RB | Left side | 1720 | 24.65 | 25.0 | 1.084 | 0.121 | 0.131 |
| 142. | QPSK 20MHz 1RB | Top side | 1720 | 24.65 | 25.0 | 1.084 | 0.118 | 0.128 |
| 143. | QPSK 20MHz 50%RB | Back Side | 1720 | 23.46 | 23.5 | 1.009 | 0.158 | 0.159 |
| 144. | QPSK 20MHz 50%RB | Front Side | 1720 | 23.46 | 23.5 | 1.009 | 0.077 | 0.078 |
| 145. | QPSK 20MHz 50%RB | Left side | 1720 | 23.46 | 23.5 | 1.009 | 0.089 | 0.090 |
| 146. | QPSK 20MHz 50%RB | Top side | 1720 | 23.46 | 23.5 | 1.009 | 0.084 | 0.085 |

| LTE Band 5–Body SAR Test (Gap: 10mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Plot No. | Mode | Test Position Body | Frequency | Output Power (dBm) | Rated Limit (dBm) | Scaling Factor | SAR1g (W/kg) | Scaled SAR1g (W/kg) |
| | Modulation, Bandwidth, RB | | MHz | | | | | |
| 147. | QPSK 10MHz 1RB | Back Side | 836.5 | 24.79 | 25.0 | 1.050 | 0.282 | 0.296 |
| 148. | QPSK 10MHz 1RB | Front Side | 836.5 | 24.79 | 25.0 | 1.050 | 0.245 | 0.257 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 149. | QPSK 10MHz 1RB | Right side | 836.5 | 24.79 | 25.0 | 1.050 | 0.204 | 0.214 |
| 150. | QPSK 10MHz 1RB | Left side | 836.5 | 24.79 | 25.0 | 1.050 | 0.146 | 0.153 |
| 151. | QPSK 10MHz 1RB | Bottom side | 836.5 | 24.79 | 25.0 | 1.050 | 0.168 | 0.176 |
| 152. | QPSK 10MHz 50%RB | Back Side | 829.0 | 23.57 | 24.0 | 1.104 | 0.215 | 0.237 |
| 153. | QPSK 10MHz 50%RB | Front Side | 829.0 | 23.57 | 24.0 | 1.104 | 0.198 | 0.219 |
| 154. | QPSK 10MHz 50%RB | Right side | 829.0 | 23.57 | 24.0 | 1.104 | 0.151 | 0.167 |
| 155. | QPSK 10MHz 50%RB | Left side | 829.0 | 23.57 | 24.0 | 1.104 | 0.104 | 0.115 |
| 156. | QPSK 10MHz 50%RB | Bottom side | 829.0 | 23.57 | 24.0 | 1.104 | 0.116 | 0.128 |

| LTE Band 7–Body SAR Test (Gap: 10mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Plot No.** | **Mode** | **Test Position Body** | **Frequency** | **Output Power (dBm)** | **Rated Limit (dBm)** | **Scaling Factor** | **SAR1g (W/kg)** | **Scaled SAR1g (W/kg)** |
| | **Modulation, Bandwidth, RB** | | **MHz** | | | | | |
| 157. | QPSK 20MHz 1RB | Back Side | 2510 | 24.79 | 25.0 | 1.050 | 0.361 | 0.379 |
| 158. | QPSK 20MHz 1RB | Front Side | 2510 | 24.79 | 25.0 | 1.050 | 0.452 | 0.474 |
| 159. | QPSK 20MHz 1RB | Left side | 2510 | 24.79 | 25.0 | 1.050 | 0.090 | 0.094 |
| 160. | QPSK 20MHz 1RB | Bottom side | 2510 | 24.79 | 25.0 | 1.050 | 0.376 | 0.395 |
| 161. | QPSK 20MHz 50%RB | Back Side | 2510 | 23.61 | 24.0 | 1.094 | 0.304 | 0.333 |
| 162. | QPSK 20MHz 50%RB | Front Side | 2510 | 23.61 | 24.0 | 1.094 | 0.378 | 0.414 |
| 163. | QPSK 20MHz 50%RB | Left side | 2510 | 23.61 | 24.0 | 1.094 | 0.076 | 0.083 |
| 164. | QPSK 20MHz 50%RB | Bottom side | 2510 | 23.61 | 24.0 | 1.094 | 0.310 | 0.339 |

| LTE Band 17–Body SAR Test (Gap: 10mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Plot No.** | **Mode** | **Test Position Body** | **Frequency** | **Output Power (dBm)** | **Rated Limit (dBm)** | **Scaling Factor** | **SAR1g (W/kg)** | **Scaled SAR1g (W/kg)** |
| | **Modulation, Bandwidth, RB** | | **MHz** | | | | | |
| 165. | QPSK 10MHz 1RB | Back Side | 709 | 24.89 | 25.0 | 1.026 | 0.310 | 0.318 |
| 166. | QPSK 10MHz 1RB | Front Side | 709 | 24.89 | 25.0 | 1.026 | 0.335 | 0.344 |
| 167. | QPSK 10MHz 1RB | Right side | 709 | 24.89 | 25.0 | 1.026 | 0.078 | 0.080 |
| 168. | QPSK 10MHz 1RB | Left side | 709 | 24.89 | 25.0 | 1.026 | 0.067 | 0.069 |
| 169. | QPSK 10MHz 1RB | Bottom side | 709 | 24.89 | 25.0 | 1.026 | 0.117 | 0.120 |
| 170. | QPSK 10MHz 50%RB | Back Side | 709 | 23.82 | 24.0 | 1.042 | 0.271 | 0.282 |
| 171. | QPSK 10MHz 50%RB | Front Side | 709 | 23.82 | 24.0 | 1.042 | 0.285 | 0.297 |
| 172. | QPSK 10MHz 50%RB | Right side | 709 | 23.82 | 24.0 | 1.042 | 0.066 | 0.069 |
| 173. | QPSK 10MHz 50%RB | Left side | 709 | 23.82 | 24.0 | 1.042 | 0.051 | 0.053 |
| 174. | QPSK 10MHz 50%RB | Bottom side | 709 | 23.82 | 24.0 | 1.042 | 0.089 | 0.093 |

| WLAN 2.4GHz –Body SAR Test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Plot No. | Mode | Test Position Body | Frequency | | Output Power (dBm) | Rated Limit (dBm) | Scaling Factor | SAR1g (W/kg) | Scaled SAR1g (W/kg) |
| | | | CH. | MHz | | | | | |
| 175. | 802.11b | Back Side | 01 | 2412 | 15.61 | 16.0 | 1.094 | 0.230 | 0.252 |
| 176. | 802.11b | Front Side | 01 | 2412 | 15.61 | 16.0 | 1.094 | 0.125 | 0.137 |
| 177. | 802.11b | Right side | 01 | 2412 | 15.61 | 16.0 | 1.094 | 0.067 | 0.073 |
| 178. | 802.11b | Top side | 01 | 2412 | 15.61 | 16.0 | 1.094 | 0.197 | 0.216 |

| WLAN 5.2GHz –Body SAR Test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Plot No. | Mode | Test Position Body | Frequency | | Output Power (dBm) | Rated Limit (dBm) | Scaling Factor | SAR1g (W/kg) | Scaled SAR1g (W/kg) |
| | | | CH. | MHz | | | | | |
| 179. | 802.11a | Back Side | 48 | 5240 | 12.15 | 12.5 | 1.084 | 0.123 | 0.133 |
| 180. | 802.11a | Front Side | 48 | 5240 | 12.15 | 12.5 | 1.084 | 0.116 | 0.126 |
| 181. | 802.11a | Right side | 48 | 5240 | 12.15 | 12.5 | 1.084 | 0.132 | 0.143 |
| 182. | 802.11a | Top side | 48 | 5240 | 12.15 | 12.5 | 1.084 | 0.121 | 0.131 |

| WLAN 5.8GHz –Body SAR Test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Plot No. | Mode | Test Position Body | Frequency | | Output Power (dBm) | Rated Limit (dBm) | Scaling Factor | SAR1g (W/kg) | Scaled SAR1g (W/kg) |
| | | | CH. | MHz | | | | | |
| 183. | 802.11 n (HT40) | Back Side | 151 | 5755 | 10.21 | 10.5 | 1.069 | 0.145 | 0.155 |
| 184. | 802.11 n (HT40) | Front Side | 151 | 5755 | 10.21 | 10.5 | 1.069 | 0.150 | 0.160 |
| 185. | 802.11 n (HT40) | Right side | 151 | 5755 | 10.21 | 10.5 | 1.069 | 0.138 | 0.148 |
| 186. | 802.11 n (HT40) | Top side | 151 | 5755 | 10.21 | 10.5 | 1.069 | 0.141 | 0.151 |

**Remark:** Per KDB 447498 D01 v06, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

## 9.3 Simultaneous Multi-band Transmission SAR Analysis

**List of Mode for Simultaneous Multi-band Transmission**

| No. | Configurations | Head SAR | Body SAR |
|---|---|---|---|
| 1 | GSM(Voice/Data) + WLAN(2.4G)(Data) | Yes | Yes |
| 2 | WCDMA (Voice/Data)+ WLAN (2.4G)(Data) | Yes | Yes |
| 3 | LTE(Data) + WLAN (2.4G)(Data) | Yes | Yes |
| | GSM(Voice/Data) + Bluetooth(Data) | Yes | Yes |
| | WCDMA (Voice/Data) + Bluetooth(Data) | Yes | Yes |
| | LTE(Data) + Bluetooth(Data) | Yes | Yes |
| 7 | GSM(Voice/Data) + WLAN(5G)(Data) | Yes | Yes |
| 8 | WCDMA (Voice/Data)+ WLAN (5G)(Data) | Yes | Yes |
| 9 | LTE(Data) + WLAN (5G)(Data) | Yes | Yes |

**Remark:**

1. GSM ,WCDMA and LTE share the same antenna, and cannot transmit simultaneously.
2. WLAN and Bluetooth share the same antenna, and cannot transmit simultaneously.
3. According to the KDB 447498 D01 v06, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;

where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01 v06 as below:

Bluetooth:

| Tune-Up Power (dBm) | Max. Power (mW) | Distance (mm) | Frequency (GHz) | X | SAR(1g) 5mm | SAR(1g) 10mm |
|---|---|---|---|---|---|---|
| 8 | 6.31 | 5/10 | 2.480 | 7.5 | 0.265 | 0.133 |

4. The maximum SAR summation is calculated based on the same configuration and test position.

**Head SAR**

**WWAN and WLAN**

| | WWAN | | WLAN(2.4G) | Summed SAR (W/kg) |
|---|---|---|---|---|
| Position | Band | Scaled SAR (W/kg) | Scaled SAR (W/kg) | |
| Right Cheek | GSM | 0.290 | 0.200 | 0.490 |
| Right Tilted | GSM | 0.137 | 0.182 | 0.319 |
| Left Cheek | GSM | 0.256 | 0.337 | 0.593 |
| Left Tilted | GSM | 0.120 | 0.314 | 0.434 |
| | | | | |
| Right Cheek | WCDMA | 0.588 | 0.200 | 0.788 |
| Right Tilted | WCDMA | 0.438 | 0.182 | 0.620 |
| Left Cheek | WCDMA | 0.277 | 0.337 | 0.614 |
| Left Tilted | WCDMA | 0.167 | 0.314 | 0.481 |
| | | | | |
| Right Cheek | LTE | 0.516 | 0.200 | 0.716 |
| Right Tilted | LTE | 0.447 | 0.182 | 0.629 |
| Left Cheek | LTE | 0.346 | 0.337 | 0.683 |
| Left Tilted | LTE | 0.169 | 0.314 | 0.483 |

**WWAN and Bluetooth**

| | WWAN | | Bluetooth | Summed SAR (W/kg) |
|---|---|---|---|---|
| Position | Band | Scaled SAR (W/kg) | Scaled SAR (W/kg) | |
| Right Cheek | GSM | 0.290 | 0.265 | 0.555 |
| Right Tilted | GSM | 0.137 | 0.265 | 0.402 |
| Left Cheek | GSM | 0.256 | 0.265 | 0.521 |
| Left Tilted | GSM | 0.120 | 0.265 | 0.385 |
| | | | | |
| Right Cheek | WCDMA | 0.588 | 0.265 | 0.853 |
| Right Tilted | WCDMA | 0.438 | 0.265 | 0.703 |
| Left Cheek | WCDMA | 0.277 | 0.265 | 0.542 |
| Left Tilted | WCDMA | 0.167 | 0.265 | 0.432 |
| | | | | |
| Right Cheek | LTE | 0.516 | 0.265 | 0.781 |
| Right Tilted | LTE | 0.447 | 0.265 | 0.712 |
| Left Cheek | LTE | 0.346 | 0.265 | 0.611 |
| Left Tilted | LTE | 0.169 | 0.265 | 0.434 |

**WWAN and WLAN**

| | WWAN | | WLAN(5G) | Summed SAR (W/kg) |
|---|---|---|---|---|
| **Position** | **Band** | **Scaled SAR (W/kg)** | **Scaled SAR (W/kg)** | |
| Right Cheek | GSM | 0.290 | 0.152 | 0.442 |
| Right Tilted | GSM | 0.137 | 0.131 | 0.268 |
| Left Cheek | GSM | 0.256 | 0.151 | 0.407 |
| Left Tilted | GSM | 0.120 | 0.118 | 0.238 |
| | | | | |
| Right Cheek | WCDMA | 0.588 | 0.152 | 0.740 |
| Right Tilted | WCDMA | 0.438 | 0.131 | 0.569 |
| Left Cheek | WCDMA | 0.277 | 0.151 | 0.428 |
| Left Tilted | WCDMA | 0.167 | 0.118 | 0.285 |
| | | | | |
| Right Cheek | LTE | 0.516 | 0.152 | 0.668 |
| Right Tilted | LTE | 0.447 | 0.131 | 0.578 |
| Left Cheek | LTE | 0.346 | 0.151 | 0.497 |
| Left Tilted | LTE | 0.169 | 0.118 | 0.287 |

**Body-worn SAR**

**WWAN and WLAN**

| | WWAN | | WLAN(2.4G) | Summed SAR (W/kg) |
|---|---|---|---|---|
| **Position** | **Band** | **Scaled SAR (W/kg)** | **Scaled SAR (W/kg)** | |
| Back | GSM | 0.184 | 0.252 | 0.436 |
| Front | GSM | 0.187 | 0.137 | 0.324 |
| | | | | |
| Back | WCDMA | 0.256 | 0.252 | 0.508 |
| Front | WCDMA | 0.230 | 0.137 | 0.367 |
| | | | | |
| Back | LTE | 0.379 | 0.252 | **0.631** |
| Front | LTE | 0.474 | 0.137 | 0.611 |

**WWAN and Bluetooth**

| | WWAN | | Bluetooth | Summed SAR (W/kg) |
|---|---|---|---|---|
| **Position** | **Band** | **Scaled SAR (W/kg)** | **Scaled SAR (W/kg)** | |
| Back | GSM | 0.184 | 0.133 | 0.317 |
| Front | GSM | 0.187 | 0.133 | 0.320 |
| | | | | |
| Back | WCDMA | 0.256 | 0.133 | 0.389 |
| Front | WCDMA | 0.230 | 0.133 | 0.363 |
| | | | | |
| Back | LTE | 0.379 | 0.133 | 0.512 |
| Front | LTE | 0.474 | 0.133 | 0.607 |

**WWAN and WLAN**

| | WWAN | | WLAN(5G) | Summed SAR (W/kg) |
|---|---|---|---|---|
| **Position** | **Band** | **Scaled SAR (W/kg)** | **Scaled SAR (W/kg)** | |
| Back | GSM | 0.184 | 0.155 | 0.339 |
| Front | GSM | 0.187 | 0.160 | 0.347 |
| | | | | |
| Back | WCDMA | 0.256 | 0.155 | 0.411 |
| Front | WCDMA | 0.230 | 0.160 | 0.390 |
| | | | | |
| Back | LTE | 0.379 | 0.155 | 0.534 |
| Front | LTE | 0.474 | 0.160 | 0.634 |

**Hotspot SAR**

**WWAN and WLAN**

| | WWAN | | WLAN(2.4G) | Summed SAR (W/kg) |
|---|---|---|---|---|
| Position | Band | Scaled SAR (W/kg) | Scaled SAR (W/kg) | |
| Back | GSM | 0.349 | 0.252 | 0.601 |
| Front | GSM | 0.327 | 0.137 | 0.464 |
| Right side | GSM | 0.224 | 0.073 | 0.297 |
| Left side | GSM | 0.152 | / | 0.152 |
| Bottom side | GSM | 0.201 | / | 0.201 |
| Top side | GSM | 0.066 | 0.216 | 0.282 |
| | | | | |
| Back | WCDMA | 0.256 | 0.252 | 0.508 |
| Front | WCDMA | 0.230 | 0.137 | 0.367 |
| Right side | WCDMA | 0.226 | 0.073 | 0.299 |
| Left side | WCDMA | 0.136 | / | 0.136 |
| Bottom side | WCDMA | 0.161 | / | 0.161 |
| Top side | WCDMA | 0.119 | 0.216 | 0.335 |
| | | | | |
| Back | LTE | 0.379 | 0.252 | 0.631 |
| Front | LTE | 0.474 | 0.137 | 0.611 |
| Right side | LTE | 0.214 | 0.073 | 0.287 |
| Left side | LTE | 0.153 | / | 0.153 |
| Bottom side | LTE | 0.395 | / | 0.395 |
| Top side | LTE | 0.128 | 0.216 | 0.344 |

**WWAN and Bluetooth**

| | WWAN | | Bluetooth | Summed SAR (W/kg) |
|---|---|---|---|---|
| Position | Band | Scaled SAR (W/kg) | Scaled SAR (W/kg) | |
| Back | GSM | 0.349 | 0.133 | 0.482 |
| Front | GSM | 0.327 | 0.133 | 0.460 |
| Right side | GSM | 0.224 | 0.133 | 0.357 |
| Left side | GSM | 0.152 | / | 0.152 |
| Bottom side | GSM | 0.201 | / | 0.201 |
| Top side | GSM | 0.066 | 0.133 | 0.199 |
| | | | | |
| Back | WCDMA | 0.256 | 0.133 | 0.389 |
| Front | WCDMA | 0.230 | 0.133 | 0.363 |
| Right side | WCDMA | 0.226 | 0.133 | 0.359 |

| | | | | |
|---|---|---|---|---|
| Left side | WCDMA | 0.136 | / | 0.136 |
| Bottom side | WCDMA | 0.161 | / | 0.161 |
| Top side | WCDMA | 0.119 | 0.133 | 0.252 |
| | | | | |
| Back | LTE | 0.379 | 0.133 | 0.512 |
| Front | LTE | 0.474 | 0.133 | 0.607 |
| Right side | LTE | 0.214 | 0.133 | 0.347 |
| Left side | LTE | 0.153 | / | 0.153 |
| Bottom side | LTE | 0.395 | / | 0.395 |
| Top side | LTE | 0.128 | 0.133 | 0.261 |

**WWAN and WLAN**

| | **WWAN** | | **WLAN(5G)** | **Summed SAR (W/kg)** |
|---|---|---|---|---|
| **Position** | **Band** | **Scaled SAR (W/kg)** | **Scaled SAR (W/kg)** | |
| Back | GSM | 0.349 | 0.155 | 0.504 |
| Front | GSM | 0.327 | 0.160 | 0.487 |
| Right side | GSM | 0.224 | 0.148 | 0.372 |
| Left side | GSM | 0.152 | / | 0.152 |
| Bottom side | GSM | 0.201 | / | 0.201 |
| Top side | GSM | 0.066 | 0.151 | 0.217 |
| | | | | |
| Back | WCDMA | 0.256 | 0.155 | 0.411 |
| Front | WCDMA | 0.230 | 0.160 | 0.390 |
| Right side | WCDMA | 0.226 | 0.148 | 0.374 |
| Left side | WCDMA | 0.136 | / | 0.136 |
| Bottom side | WCDMA | 0.161 | / | 0.161 |
| Top side | WCDMA | 0.119 | 0.151 | 0.270 |
| | | | | |
| Back | LTE | 0.379 | 0.155 | 0.534 |
| Front | LTE | 0.474 | 0.160 | 0.634 |
| Right side | LTE | 0.214 | 0.148 | 0.362 |
| Left side | LTE | 0.153 | / | 0.153 |
| Bottom side | LTE | 0.395 | / | 0.395 |
| Top side | LTE | 0.128 | 0.151 | 0.279 |

# 10. Measurement Uncertainty

## 10.1 Uncertainty for EUT SAR Test

| a | b | c | d | e= f(d,k) | f | g | h= c*f/e | i= c*g/e | k |
|---|---|---|---|---|---|---|---|---|---|
| **Uncertainty Component** | **Sec.** | **Tol (+- %)** | **Prob. Dist.** | **Div.** | **Ci (1g)** | **Ci (10g)** | **1g Ui (+-%)** | **10g Ui (+-%)** | **Vi** |
| **Measurement System** | | | | | | | | | |
| Probe calibration | E.2.1 | 7.0 | N | 1 | 1 | 1 | 7.00 | 7.00 | ∝ |
| Axial Isotropy | E.2.2 | 2.5 | R | √3 | (1_Cp)^1/2 | (1_Cp)^1/2 | 1.02 | 1.02 | ∝ |
| Hemispherical Isotropy | E.2.2 | 4.0 | R | √3 | (Cp)^1/2 | (Cp)^1/2 | 1.63 | 1.63 | ∝ |
| Boundary effect | E.2.3 | 1.0 | R | √3 | 1 | 1 | 0.58 | 0.58 | ∝ |
| Linearity | E.2.4 | 5.0 | R | √3 | 1 | 1 | 2.89 | 2.89 | ∝ |
| System detection limits | E.2.5 | 1.0 | R | √3 | 1 | 1 | 0.58 | 0.58 | ∝ |
| Readout Electronics | E.2.6 | 0.02 | N | 1 | 1 | 1 | 0.02 | 0.02 | ∝ |
| Reponse Time | E.2.7 | 3.0 | R | √3 | 1 | 1 | 1.73 | 1.73 | ∝ |
| Integration Time | E.2.8 | 2.0 | R | √3 | 1 | 1 | 1.15 | 1.15 | ∝ |
| RF ambient Conditions – Noise | E.6.1 | 3.0 | R | √3 | 1 | 1 | 1.73 | 1.73 | ∝ |
| RF ambient Conditions - Reflections | E.6.1 | 3.0 | R | √3 | 1 | 1 | 1.73 | 1.73 | ∝ |
| Probe positioner Mechanical Tolerance | E.6.2 | 2.0 | R | √3 | 1 | 1 | 1.15 | 1.15 | ∝ |
| Probe positioning with respect to Phantom Shell | E.6.3 | 0.05 | R | √3 | 1 | 1 | 0.03 | 0.03 | ∝ |
| Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation | E.5 | 5.0 | R | √3 | 1 | 1 | 2.89 | 2.89 | ∝ |
| **Test Sample Related** | | | | | | | | | |
| Test sample positioning | E.4.2 | 0.03 | N | 1 | 1 | 1 | 0.03 | 0.03 | N–1 |
| Device Holder Uncertainty | E.4.1 | 5.00 | N | 1 | 1 | 1 | 5.00 | 5.00 | |
| Output power Variation - SAR drift measurement | E.2.9 | 12.02 | R | √3 | 1 | 1 | 6.94 | 6.94 | ∝ |
| SAR scaling | E6.5 | 0.0 | R | √3 | 1 | 1 | 0.0 | 0.0 | ∝ |
| **Phantom and Tissue Parameters** | | | | | | | | | |
| Phantom Uncertainty (Shape and thickness tolerances) | E.3.1 | 0.05 | R | √3 | 1 | 1 | 0.03 | 0.03 | ∝ |
| Uncertainty in SAR correction for deviations in permittivity and conductivity | E3.2 | 1.9 | R | √3 | 1 | 0.84 | 1.10 | 0.90 | ∝ |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Liquid conductivity - deviation from target value | E.3.2 | 5.00 | R | √3 | 0.64 | 0.43 | 1.85 | 1.24 | ∞ |
| Liquid conductivity - measurement uncertainty | E.3.3 | 5.00 | N | 1 | 0.64 | 0.43 | 3.20 | 2.15 | ∞ |
| Liquid permittivity - deviation from target value | E.3.2 | 0.37 | R | √3 | 0.6 | 0.49 | 0.13 | 0.10 | ∞ |
| Liquid permittivity - measurement uncertainty | E.3.3 | 10.00 | N | 1 | 0.6 | 0.49 | 6.00 | 4.90 | ∞ |
| Combined Standard Uncertainty | | | RSS | | | | 12.98 | 12.53 | |
| Expanded Uncertainty (95% Confidence interval) | | | K=2 | | | | 25.32 | 24.43 | |

## 10.2 Uncertainty for System Performance Check

| a | b | c | d | e= f(d,k) | f | g | h= c*f/e | i= c*g/e | k |
|---|---|---|---|---|---|---|---|---|---|
| **Uncertainty Component** | **Sec.** | **Tol (+- %)** | **Prob. Dist.** | **Div.** | **Ci (1g)** | **Ci (10g)** | **1g Ui (+-%)** | **10g Ui (+-%)** | **Vi** |
| **Measurement System** | | | | | | | | | |
| Probe calibration | E.2.1 | 7.0 | N | 1 | 1 | 1 | 7.00 | 7.00 | ∞ |
| Axial Isotropy | E.2.2 | 2.5 | R | √3 | (1_Cp)^1/2 | (1_Cp)^1/2 | 1.02 | 1.02 | ∞ |
| Hemispherical Isotropy | E.2.2 | 4.0 | R | √3 | (Cp)^1/2 | (Cp)^1/2 | 1.63 | 1.63 | ∞ |
| Boundary effect | E.2.3 | 1.0 | R | √3 | 1 | 1 | 0.58 | 0.58 | ∞ |
| Linearity | E.2.4 | 5.0 | R | √3 | 1 | 1 | 2.89 | 2.89 | ∞ |
| System detection limits | E.2.5 | 1.0 | R | √3 | 1 | 1 | 0.58 | 0.58 | ∞ |
| Modulation response | E.2.5 | 0 | R | √3 | 0 | 0 | 0.0 | 0.0 | ∞ |
| Readout Electronics | E.2.6 | 0.02 | N | 1 | 1 | 1 | 0.02 | 0.02 | ∞ |
| Reponse Time | E.2.7 | 3.0 | R | √3 | 1 | 1 | 1.73 | 1.73 | ∞ |
| Integration Time | E.2.8 | 2.0 | R | √3 | 1 | 1 | 1.15 | 1.15 | ∞ |
| RF ambient Conditions – Noise | E.6.1 | 3.0 | R | √3 | 1 | 1 | 1.73 | 1.73 | ∞ |
| RF ambient Conditions - Reflections | E.6.1 | 3.0 | R | √3 | 1 | 1 | 1.73 | 1.73 | ∞ |
| Probe positioner Mechanical Tolerance | E.6.2 | 2.0 | R | √3 | 1 | 1 | 1.15 | 1.15 | ∞ |
| Probe positioning with respect to Phantom Shell | E.6.3 | 0.05 | R | √3 | 1 | 1 | 0.03 | 0.03 | ∞ |
| Extrapolation, interpolation and | E.5.2 | 5.0 | R | √3 | 1 | 1 | 2.89 | 2.89 | ∞ |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| integration Algoritms for Max. SAR Evaluation | | | | | | | | | |
| **Dipole** | | | | | | | | | |
| Dipole axis to liquid Distance | 8,E.4.2 | 1.00 | N | √3 | 1 | 1 | 0.58 | 0.58 | N−1 |
| Input power and SAR drift measurement | 8,6.6.2 | 12.02 | R | √3 | 1 | 1 | 6.94 | 6.94 | ∝ |
| Deviation of experimental dipole from numerical dipole | E.6.4 | 5.5 | R | √3 | 1 | 1 | 3.20 | 3.20 | ∝ |
| **Phantom and Tissue Parameters** | | | | | | | | | |
| Phantom Uncertainty (Shape and thickness tolerances) | E.3.1 | 0.05 | R | √3 | 1 | 1 | 0.03 | 0.03 | ∝ |
| Uncertainty in SAR correction for deviations in permittivity and conductivity | E3.2 | 2.0 | R | √3 | 1 | 0.84 | 1.10 | 1.10 | ∝ |
| Liquid conductivity - deviation from target value | E.3.2 | 5.00 | R | √3 | 0.64 | 0.43 | 1.85 | 1.24 | |
| Liquid conductivity - measurement uncertainty | E.3.3 | 5.00 | N | 1 | 0.64 | 0.43 | 3.20 | 2.15 | |
| Liquid permittivity - deviation from target value | E.3.2 | 0.37 | R | √3 | 0.6 | 0.49 | 0.13 | 0.10 | |
| Liquid permittivity - measurement uncertainty | E.3.3 | 10.00 | N | 1 | 0.6 | 0.49 | 6.00 | 4.90 | M |
| Combined Standard Uncertainty | | | RSS | | | | 12.00 | 11.50 | |
| Expanded Uncertainty (95% Confidence interval) | | | K=2 | | | | 23.39 | 22.43 | |

# Annex A. Plots of System Performance Check

## MEASUREMENT 1

**For Head Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

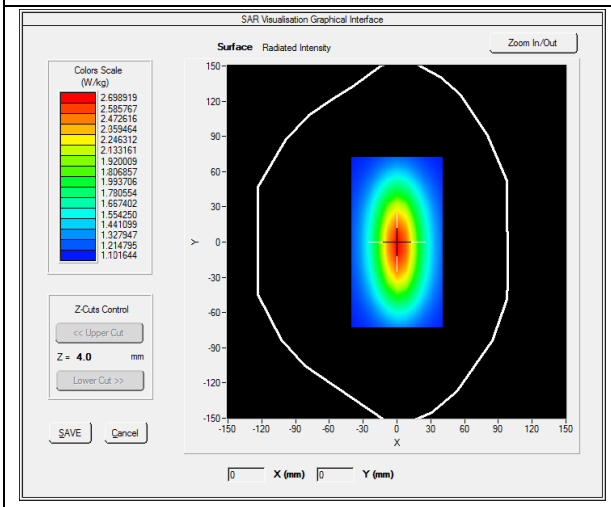
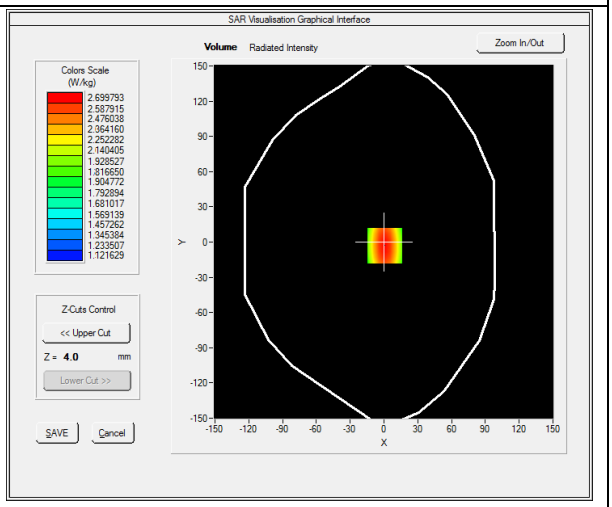
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

### A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW750 |
| **Signal** | Duty Cycle 1:1 |

### B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 750.000000 |
| **Relative Permittivity (real part)** | 41.020574 |
| **Conductivity (S/m)** | 0.860583 |
| **Power Variation (%)** | 0.038363 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

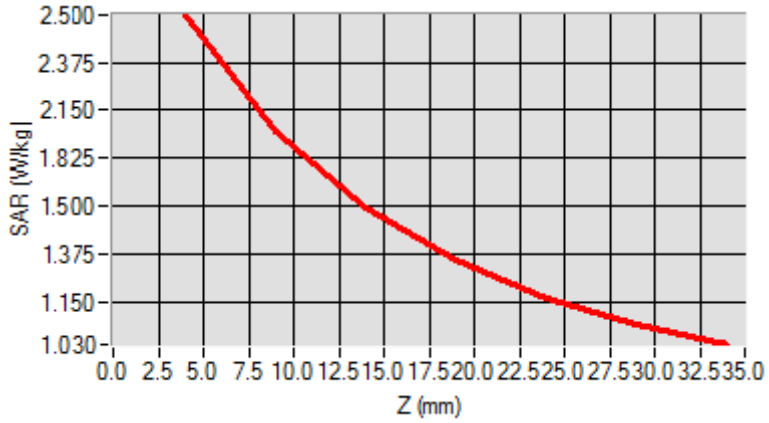
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

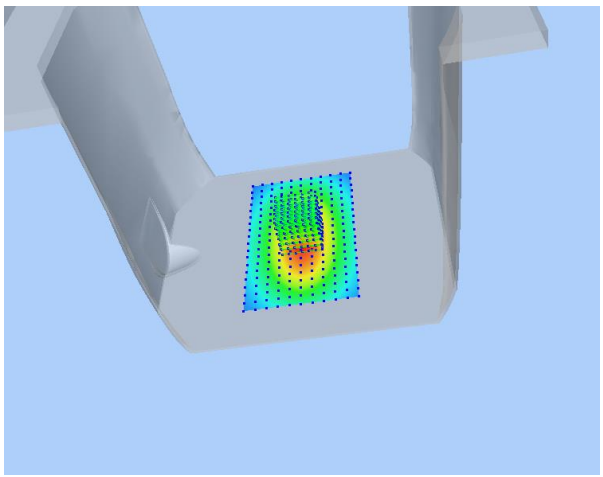
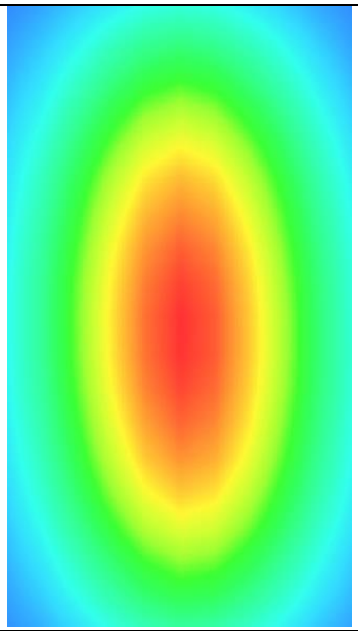
**Maximum location: X=0.00, Y=0.00**

| | |
|---|---|
| **SAR 10g (W/Kg)** | **1.042744** |
| **SAR 1g (W/Kg)** | **2.180534** |

**Z Axis Scan**

| **Z (mm)** | **0.00** | **4.00** | **9.00** | **14.00** | **19.00** | **24.00** | **29.00** |
|---|---|---|---|---|---|---|---|
| **SAR (W/Kg)** | **0.0000** | **2.3634** | **1.8023** | **1.4523** | **1.2514** | **1.1005** | **1.0245** |




| **3D screen shot** | **Hot spot position** |
|---|---|
|  |  |

# MEASUREMENT 2

**For Head Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 7 minutes 21 seconds

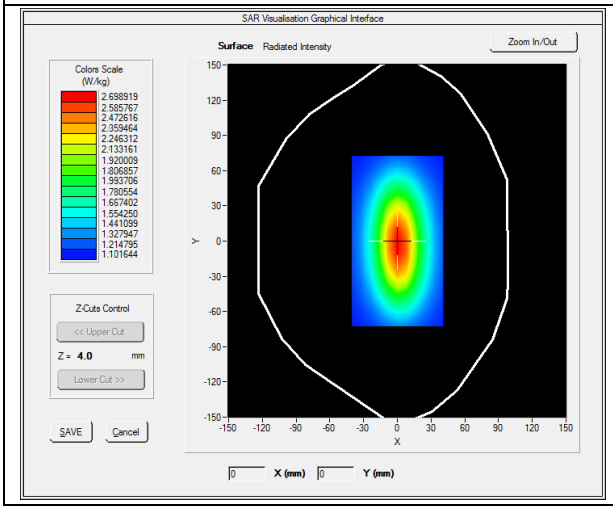
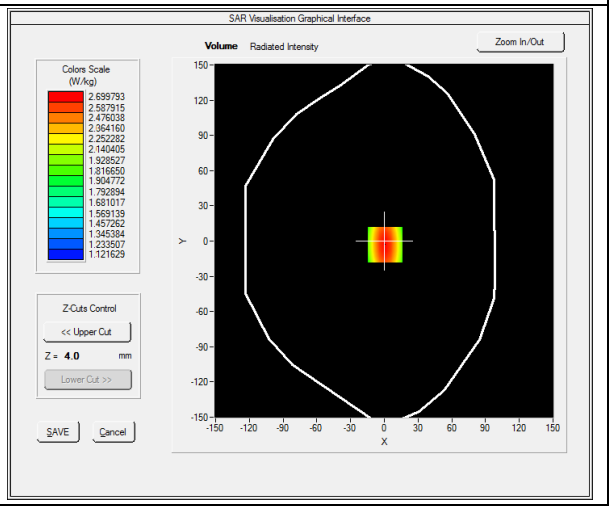
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW835 |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 835.000000 |
| **Relative Permittivity (real part)** | 40.750245 |
| **Conductivity (S/m)** | 0.881245 |
| **Power Variation (%)** | 0.428437 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

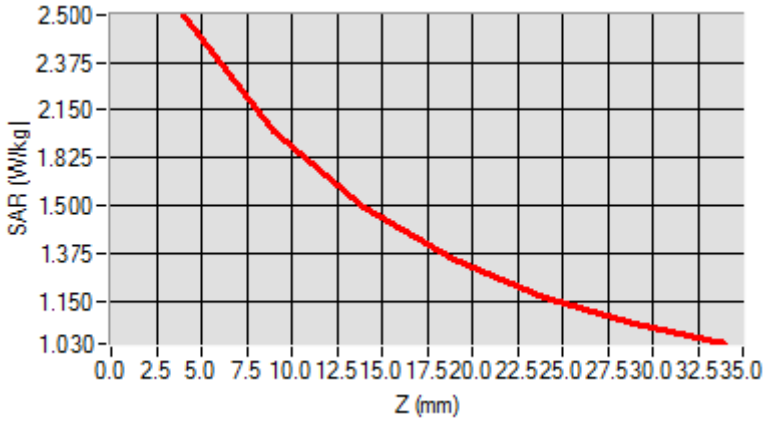
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

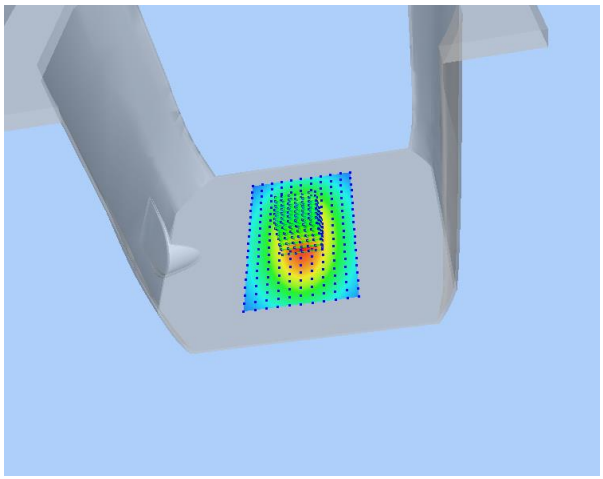
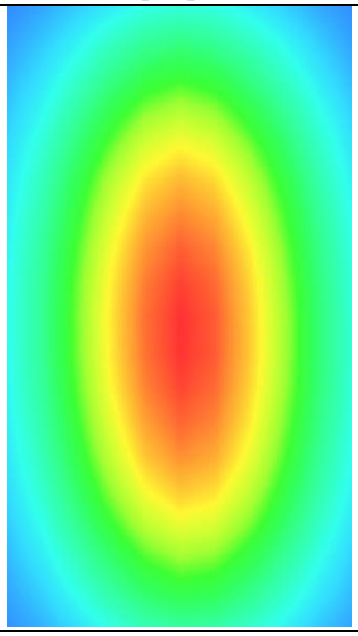
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 1.519489 |
|---|---|
| SAR 1g (W/Kg) | 2.511253 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 2.4900 | 1.8942 | 1.4811 | 1.3541 | 1.1123 | 1.0539 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 3

**For Head Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

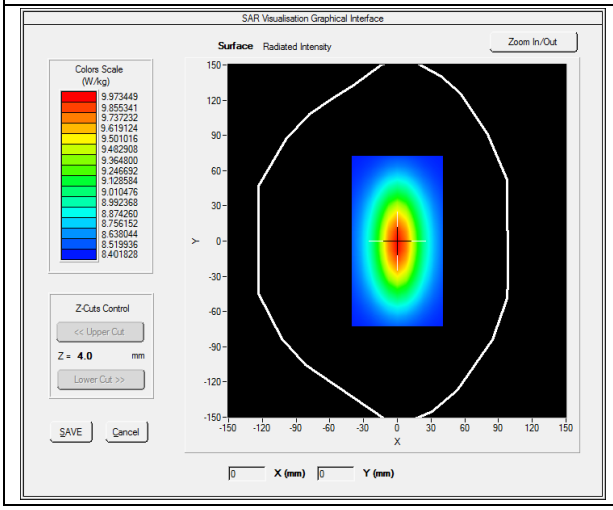
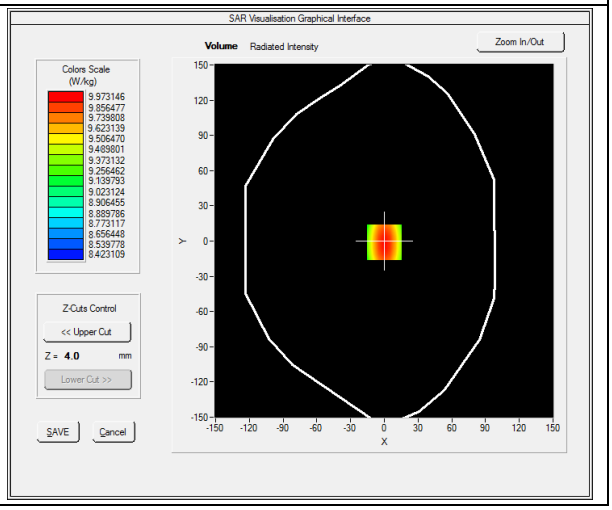
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1800 |
| **Signal** | CW (Crest factor: 1.0) |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1800.000000 |
| **Relative Permittivity (real part)** | 39.427090 |
| **Conductivity (S/m)** | 1.382510 |
| **Power Variation (%)** | 1.041232 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

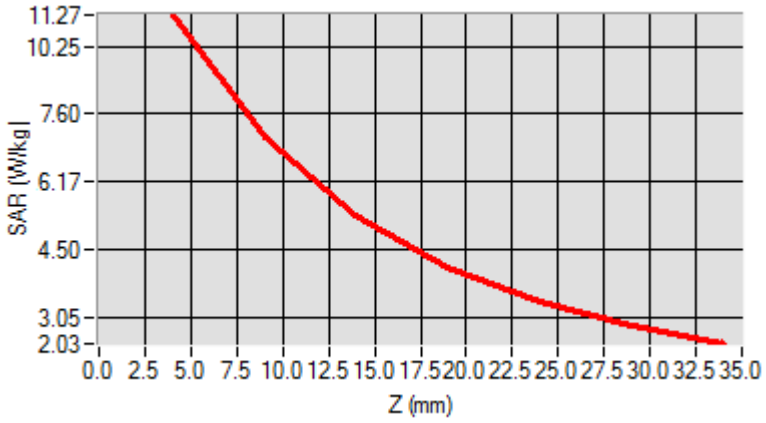
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

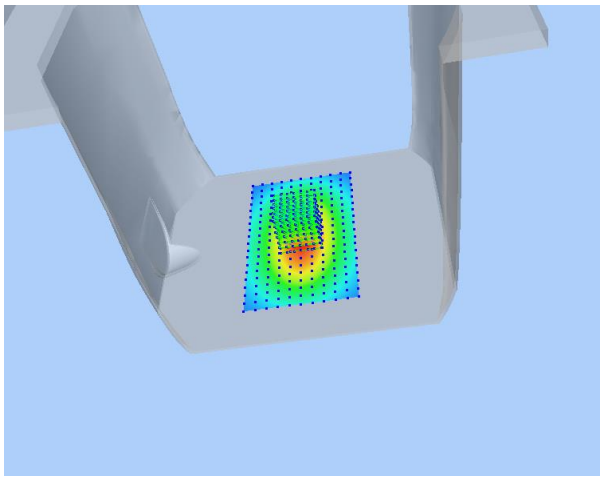
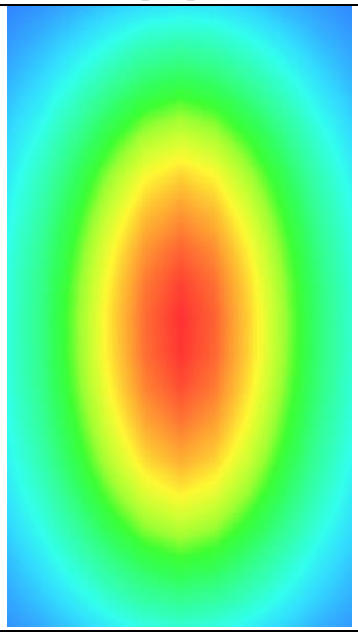
**Maximum location: X=0.00, Y=0.00**

| | |
|---|---|
| **SAR 10g (W/Kg)** | **5.081252** |
| **SAR 1g (W/Kg)** | **9.461217** |

**Z Axis Scan**

| **Z (mm)** | **0.00** | **4.00** | **9.00** | **14.00** | **19.00** | **24.00** | **29.00** |
|---|---|---|---|---|---|---|---|
| **SAR (W/Kg)** | **0.0000** | **10.3455** | **7.1125** | **5.1026** | **3.425** | **3.0242** | **2.1125** |




| **3D screen shot** | **Hot spot position** |
|---|---|
|  |  |

# MEASUREMENT 4

**For Head Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

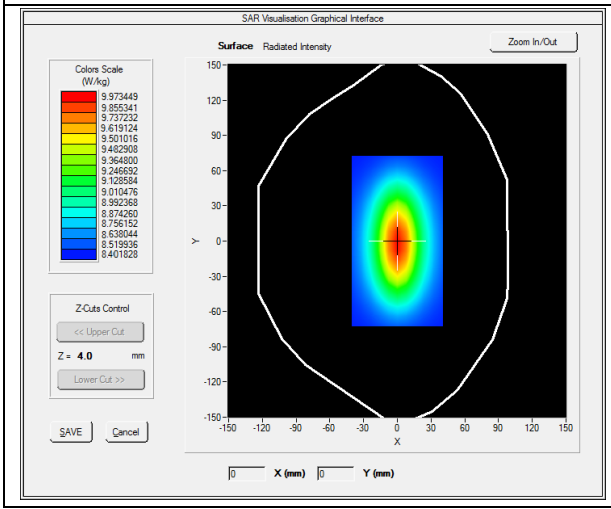
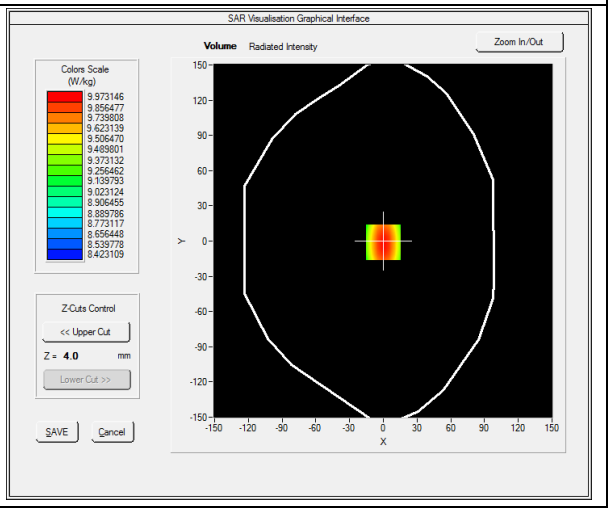
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1900 |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1900.000000 |
| **Relative Permittivity (real part)** | 39.060124 |
| **Conductivity (S/m)** | 1.393607 |
| **Power Variation (%)** | 1.022540 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

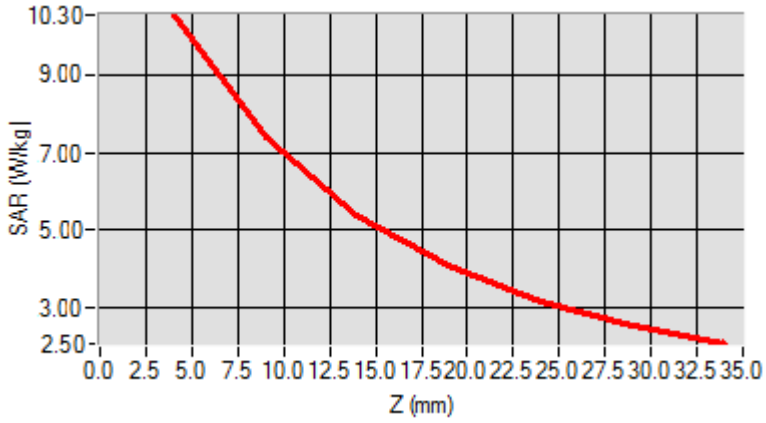
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

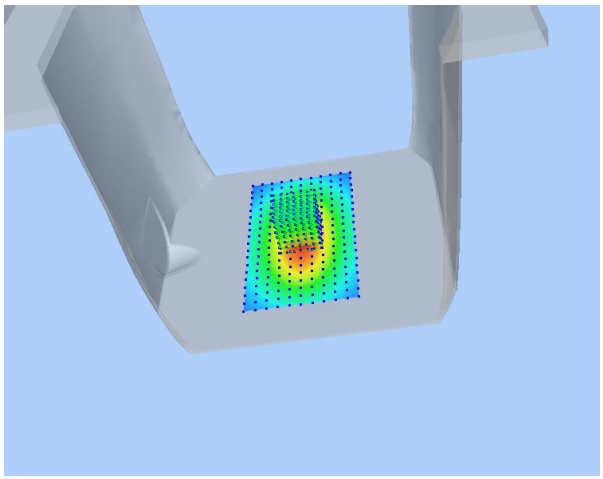
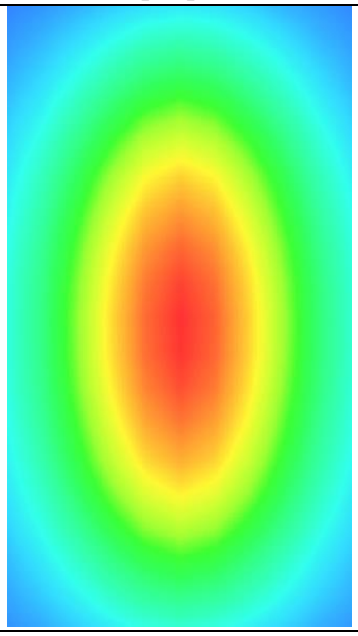
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 5.174526 |
|---|---|
| SAR 1g (W/Kg) | 9.913214 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 10.2354 | 6.8400 | 5.0121 | 4.1189 | 3.0522 | 2.8424 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 5

**For Head Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

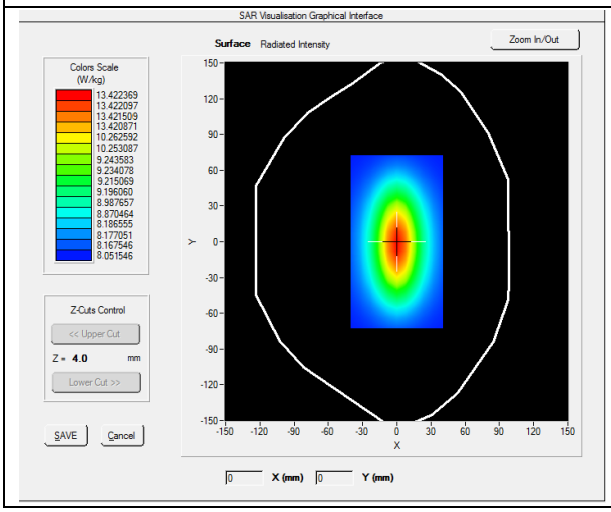
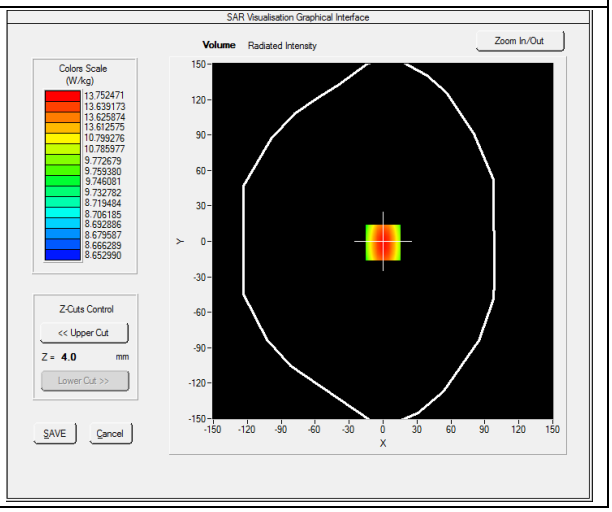
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2450 |
| **Signal** | Duty Cycle 1:1 |

**B. SAR Measurement Results**

| | |
|---|---|
| **Frequency (MHz)** | 2450.000000 |
| **Relative Permittivity (real part)** | 38.450860 |
| **Conductivity (S/m)** | 1.770236 |
| **Power Variation (%)** | 1.141452 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



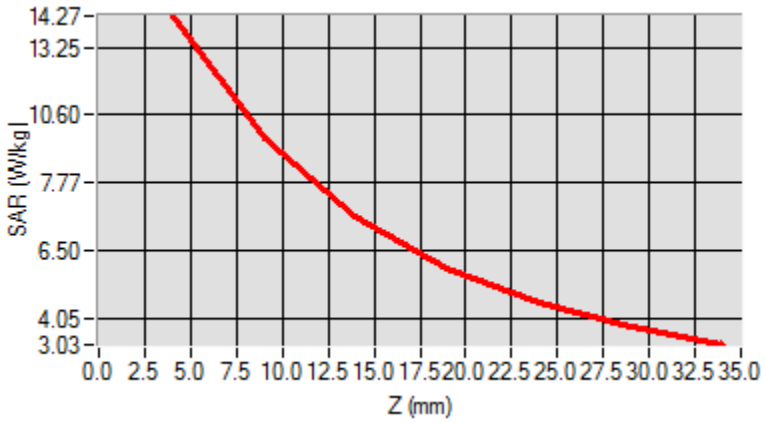


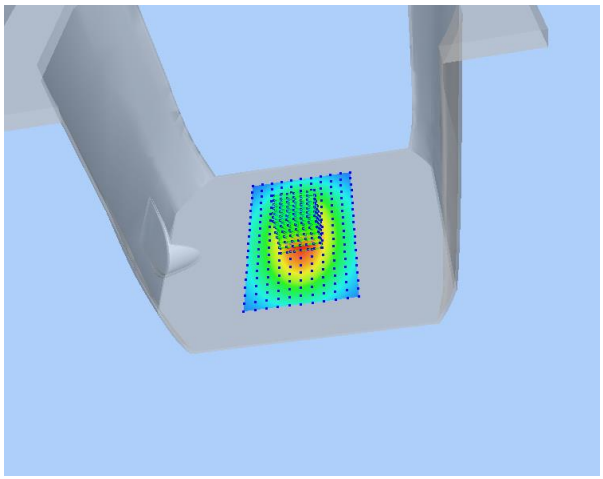
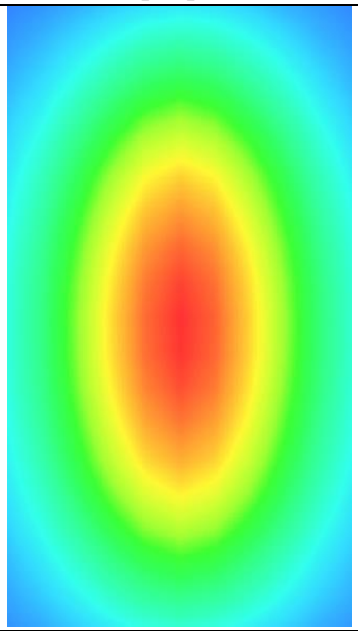
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 8.210711 |
|---|---|
| SAR 1g (W/Kg) | 13.752408 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 14.1034 | 12.0012 | 10.2624 | 7.4715 | 5.9022 | 4.5114 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 6

**For Head Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

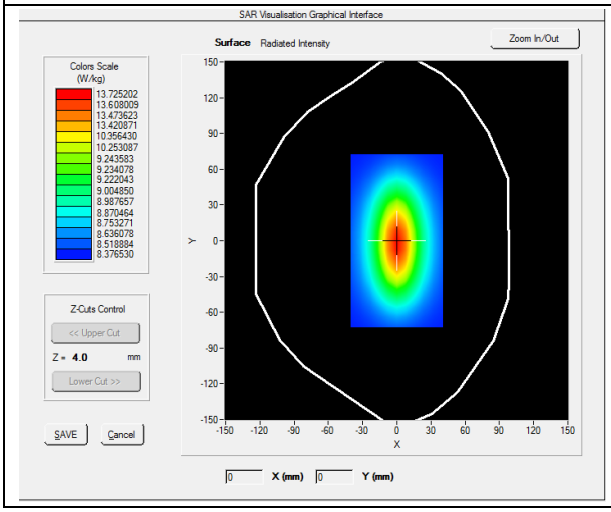
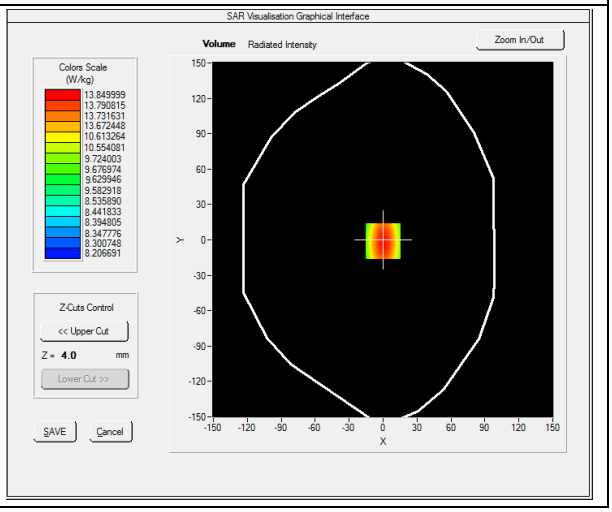
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2600 |
| **Signal** | Duty Cycle 1:1 |

**B. SAR Measurement Results**

| | |
|---|---|
| **Frequency (MHz)** | 2600.000000 |
| **Relative Permittivity (real part)** | 37.934092 |
| **Conductivity (S/m)** | 1.973182 |
| **Power Variation (%)** | 0.886021 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



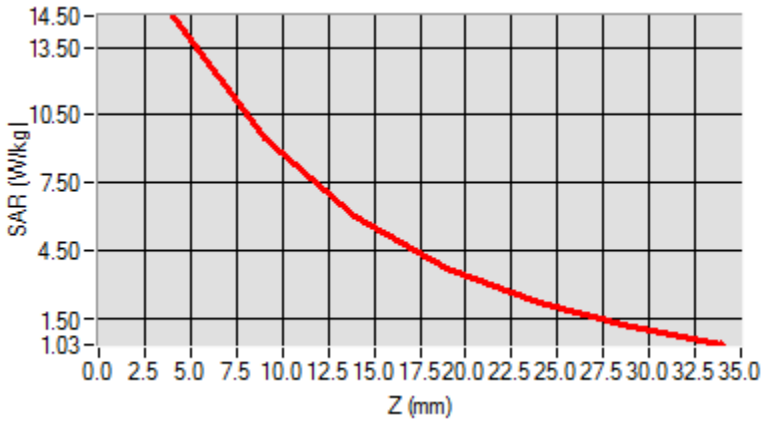


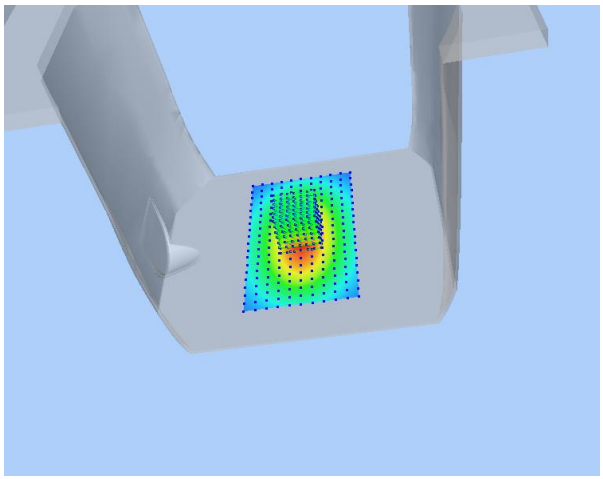
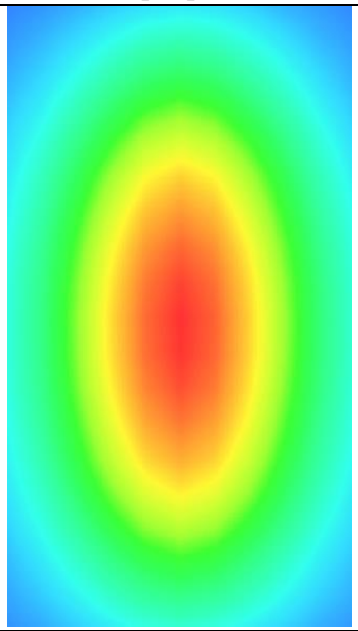
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 8.230801 |
|---|---|
| SAR 1g (W/Kg) | 13.539282 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 14.0426 | 12.1354 | 10.2965 | 7.4854 | 5.9354 | 4.5186 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 7

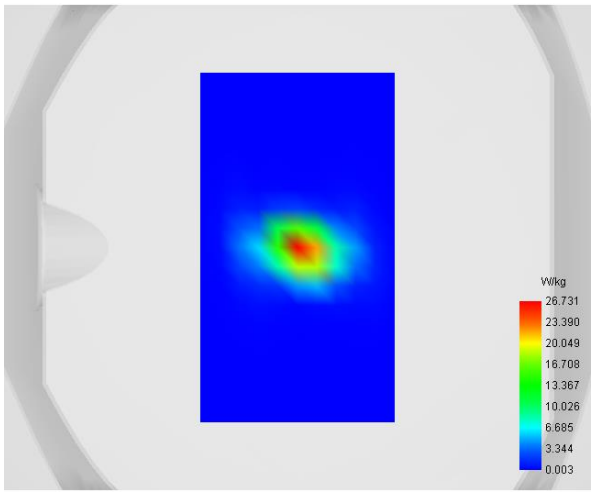
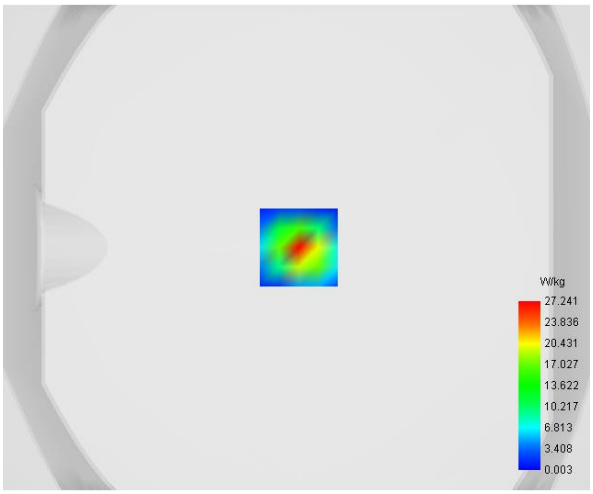
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SN 45/15 EPGO280; ConvF: 5.64; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Zoom Scan** | dx=4mm dy=4mm dz=2mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW5200 |
| **Signal** | CW (Crest factor: 1.0) |

**B. SAR Measurement Results**

| | |
|---|---|
| **Frequency (MHz)** | 5200.000000 |
| **Relative Permittivity (real part)** | 35.612911 |
| **Conductivity (S/m)** | 4.771483 |
| **Power Variation (%)** | 0.943782 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.3 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

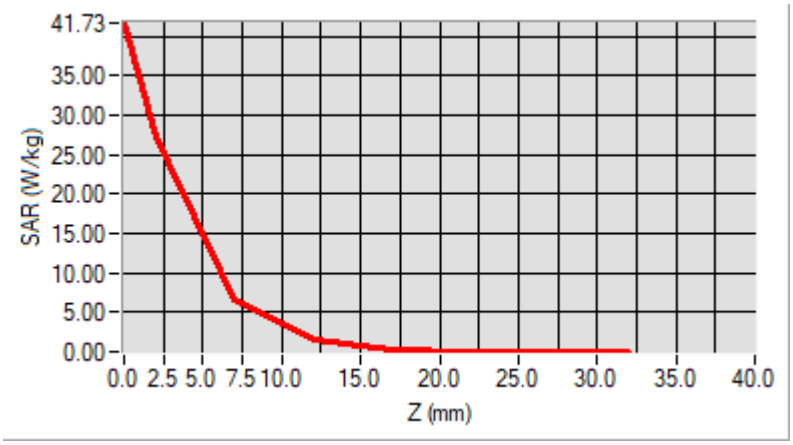


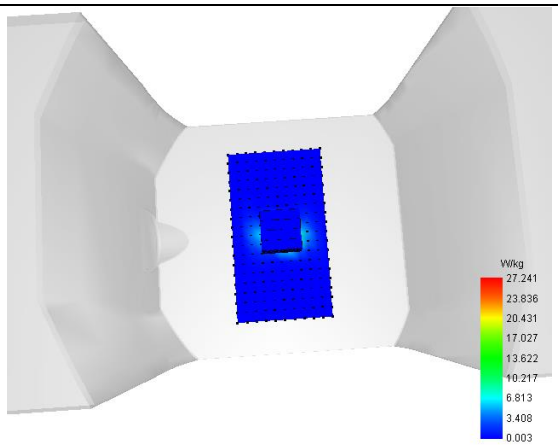
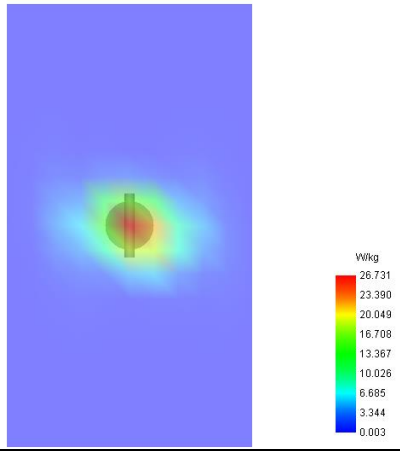


**Maximum location: X=1.00, Y=0.00**

| SAR 10g (W/Kg) | 5.310334 |
|---|---|
| SAR 1g (W/Kg) | 16.946226 |

| Z (mm) | 0.00 | 2.00 | 7.00 | 12.00 | 17.00 | 22.00 | 27.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 41.7264 | 27.2408 | 6.5746 | 1.6234 | 0.3765 | 0.0793 | 0.0129 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 8

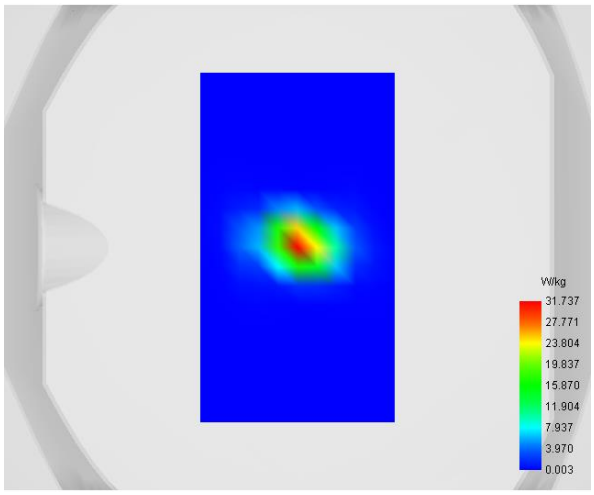
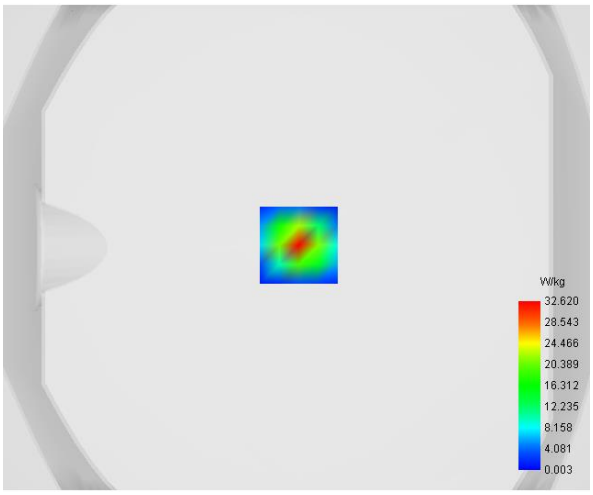
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SN 45/15 EPGO280; ConvF: 5.64; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Zoom Scan** | dx=4mm dy=4mm dz=2mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW5800 |
| **Signal** | CW (Crest factor: 1.0) |

**B. SAR Measurement Results**

| | |
|---|---|
| **Frequency (MHz)** | 5800.000000 |
| **Relative Permittivity (real part)** | 34.301254 |
| **Conductivity (S/m)** | 5.210512 |
| **Power Variation (%)** | 1.643281 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.3 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

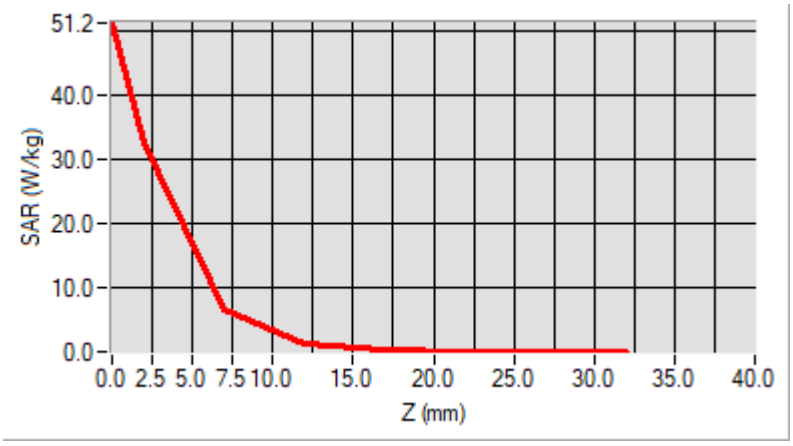


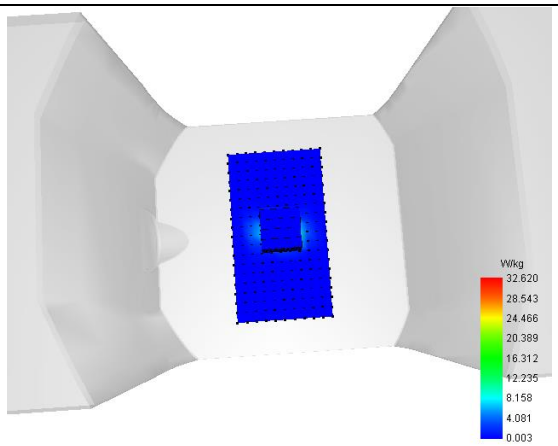
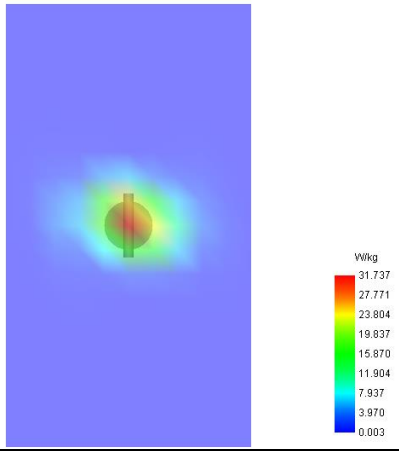


**Maximum location: X=1.00, Y=1.00**

| SAR 10g (W/Kg) | 5.922791 |
|---|---|
| SAR 1g (W/Kg) | 18.604052 |

| Z (mm) | 0.00 | 2.00 | 7.00 | 12.00 | 17.00 | 22.00 | 27.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 51.2061 | 32.6198 | 6.6166 | 1.3486 | 0.2638 | 0.0509 | 0.0050 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 9

**For Body Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

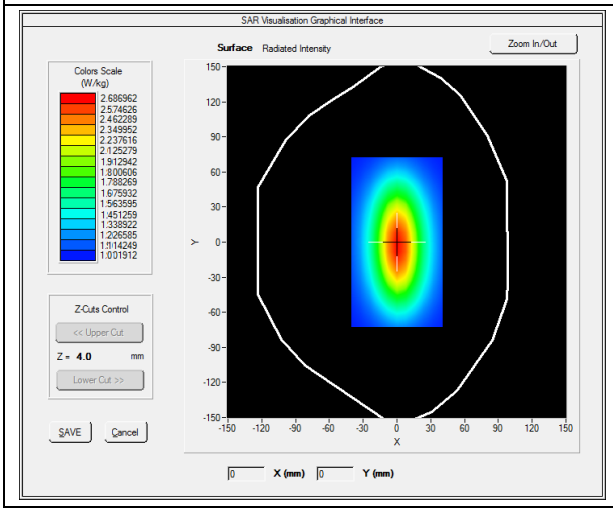
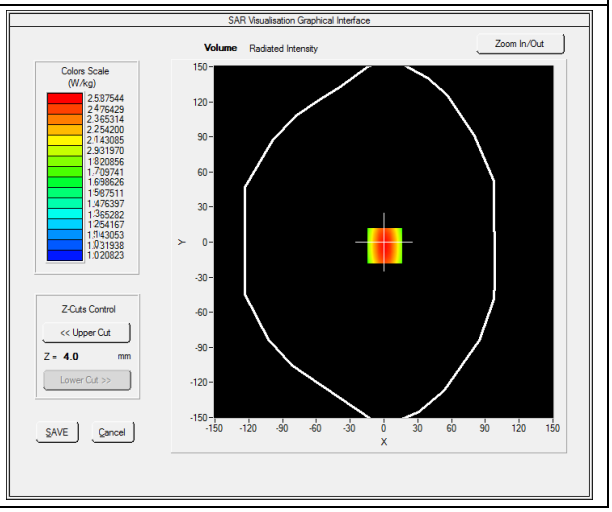
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW750 |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 750.000000 |
| **Relative Permittivity (real part)** | 56.164705 |
| **Conductivity (S/m)** | 0.943042 |
| **Power Variation (%)** | 1.034745 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

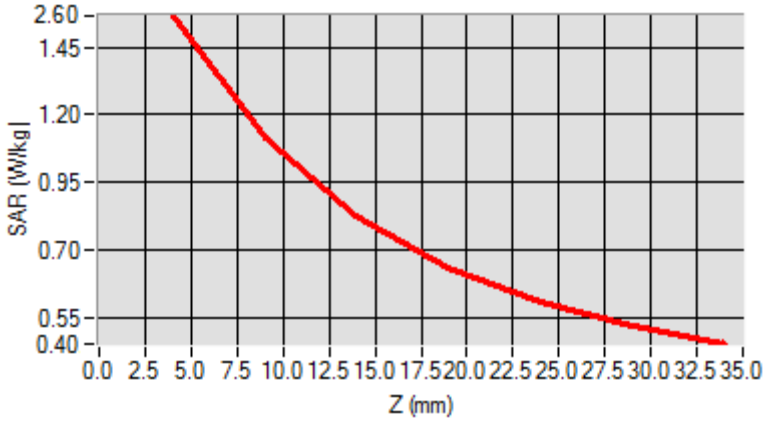
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

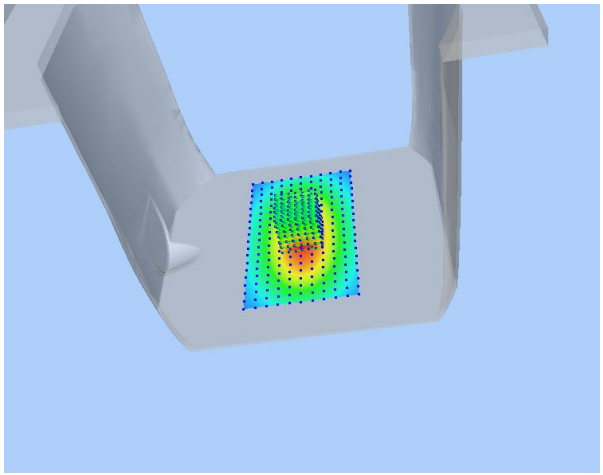
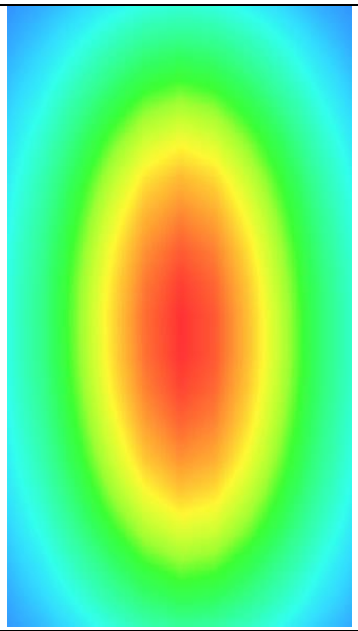
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 1.030865 |
|---|---|
| SAR 1g (W/Kg) | 2.174211 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 2.5132 | 1.1087 | 0.8214 | 0.5160 | 0.4875 | 0.4864 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 10

**For Body Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

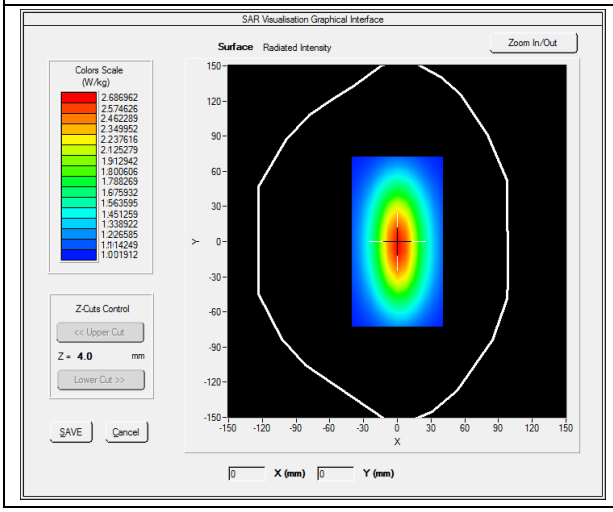
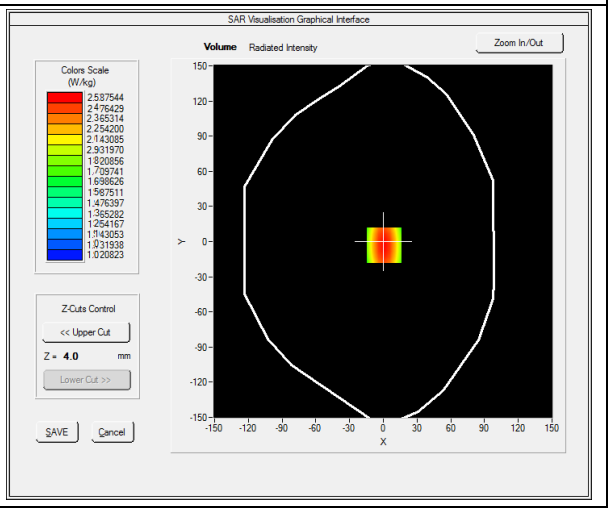
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW835 |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 835.000000 |
| **Relative Permittivity (real part)** | 55.681264 |
| **Conductivity (S/m)** | 0.966454 |
| **Power Variation (%)** | 0.908572 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

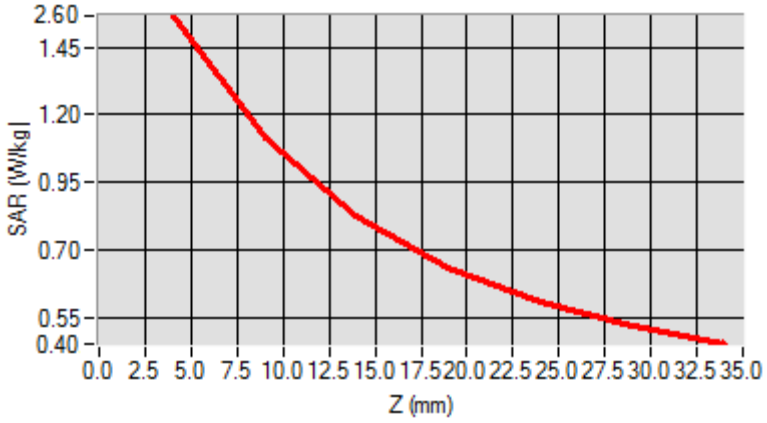
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

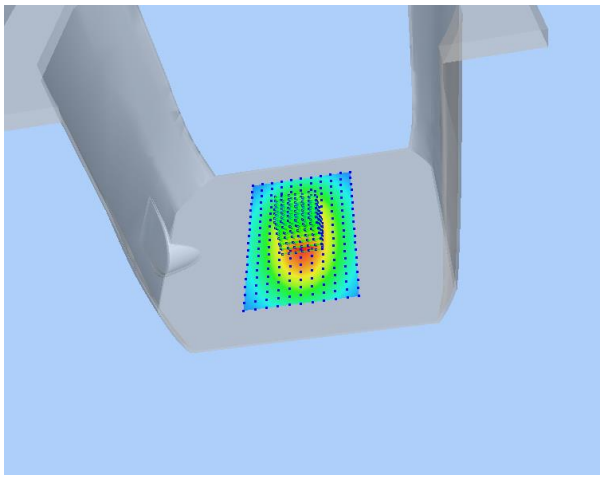
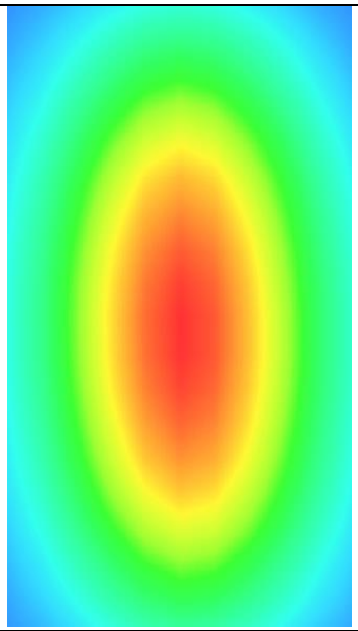
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 1.028956 |
|---|---|
| SAR 1g (W/Kg) | 2.354211 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 2.5789 | 1.1300 | 0.8795 | 0.5940 | 0.5011 | 0.5100 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 11

**For Body Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

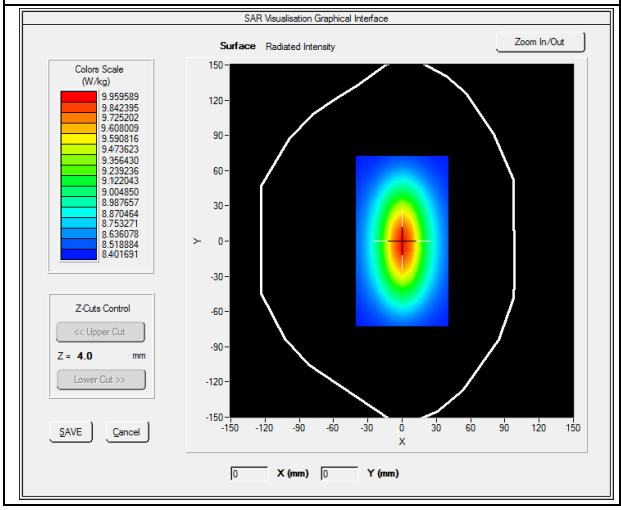
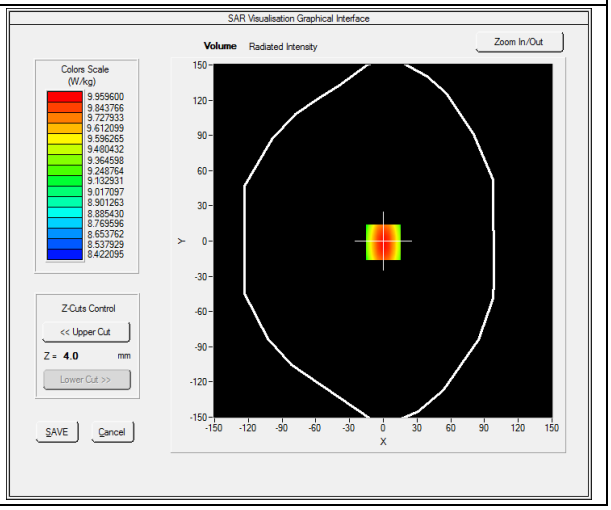
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1800 |
| **Signal** | CW (Crest factor: 1.0) |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1800.000000 |
| **Relative Permittivity (real part)** | 52.174510 |
| **Conductivity (S/m)** | 1.481261 |
| **Power Variation (%)** | 1.285610 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

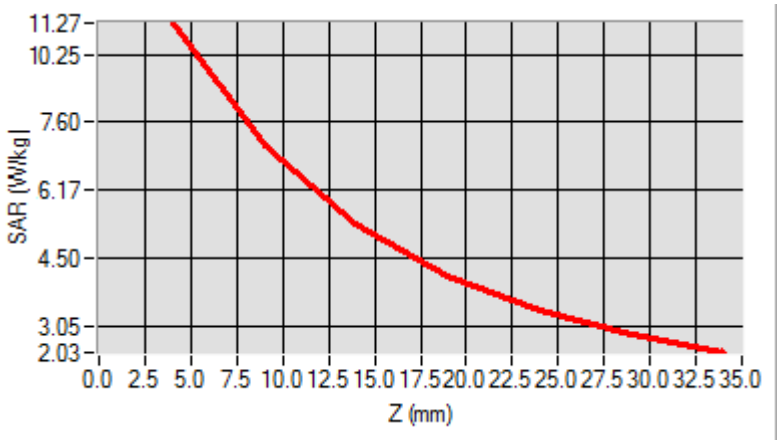
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

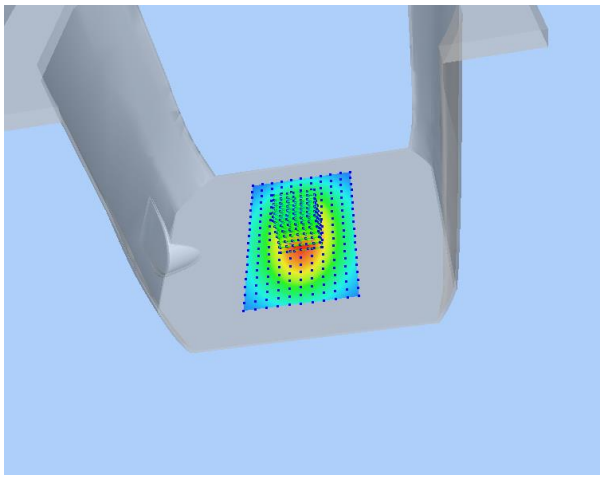
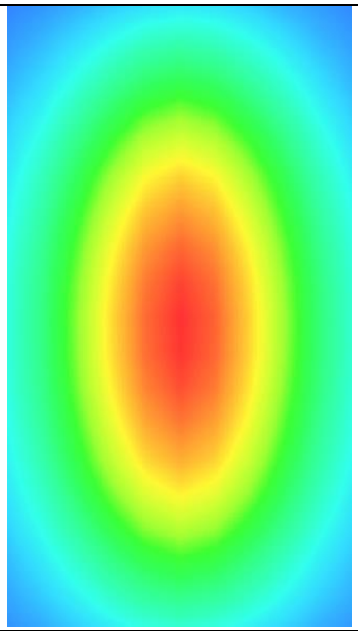
**Maximum location: X=0.00, Y=0.00**

| | |
|---|---|
| **SAR 10g (W/Kg)** | **5.221202** |
| **SAR 1g (W/Kg)** | **9.682560** |

**Z Axis Scan**

| **Z (mm)** | **0.00** | **4.00** | **9.00** | **14.00** | **19.00** | **24.00** | **29.00** |
|---|---|---|---|---|---|---|---|
| **SAR (W/Kg)** | **0.0000** | **11.2425** | **9.4123** | **8.0345** | **6.9125** | **6.3092** | **3.9460** |




| **3D screen shot** | **Hot spot position** |
|---|---|
|  |  |

# MEASUREMENT 12

**For Body Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

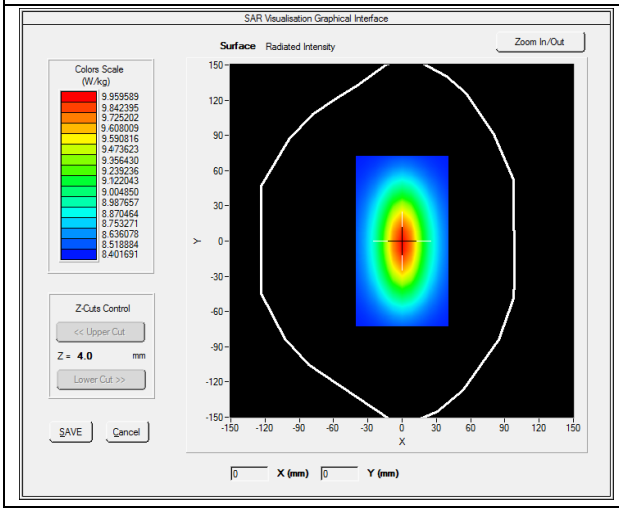
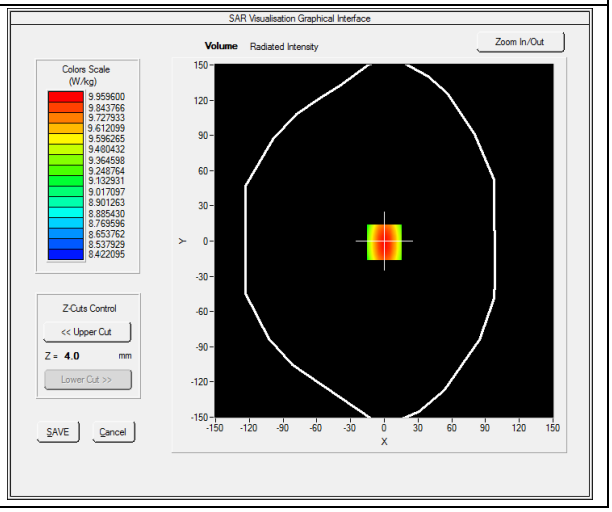
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW1900 |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1900.000000 |
| **Relative Permittivity (real part)** | 51.820415 |
| **Conductivity (S/m)** | 1.530966 |
| **Power Variation (%)** | 0.741802 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

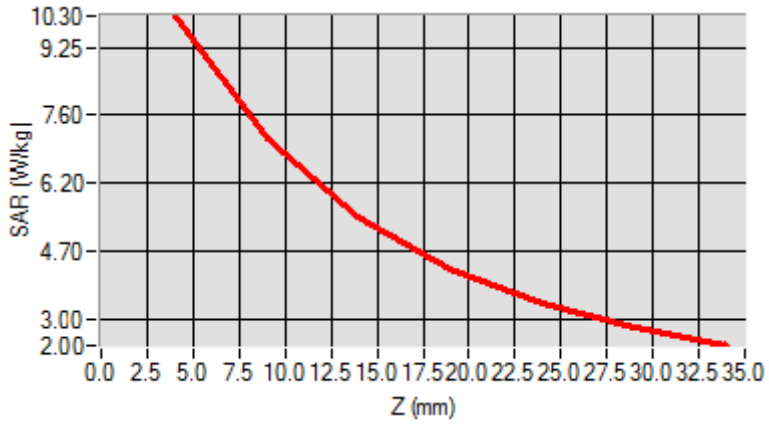
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

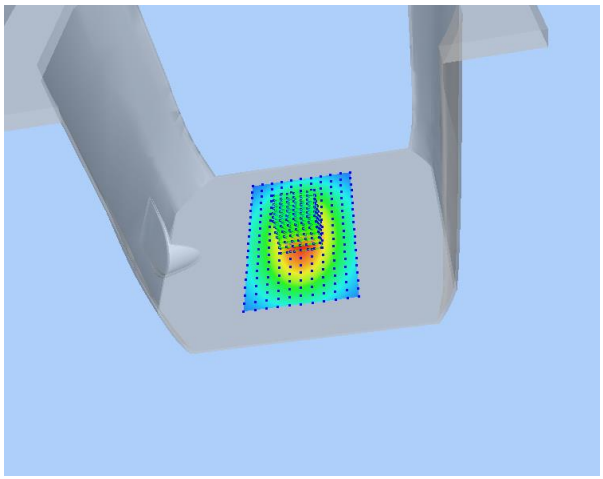
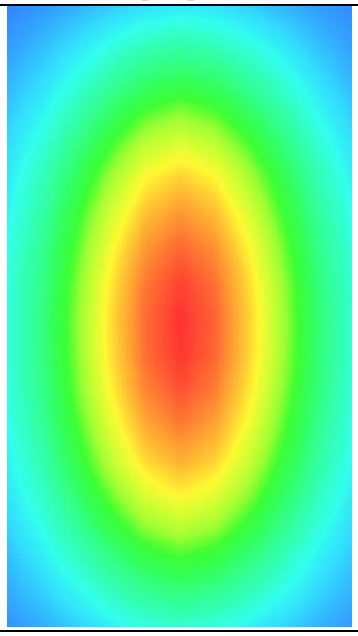
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 5.354652 |
|---|---|
| SAR 1g (W/Kg) | 10.021550 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 10.2031 | 6.43001 | 4.9011 | 4.5325 | 3.1201 | 2.5024 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 13

**For Body Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

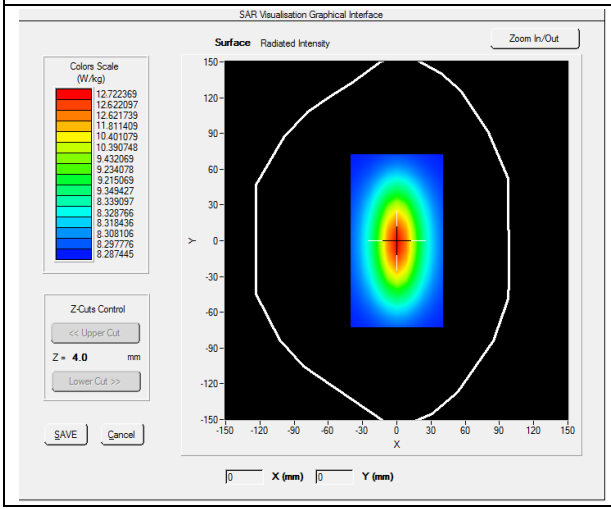
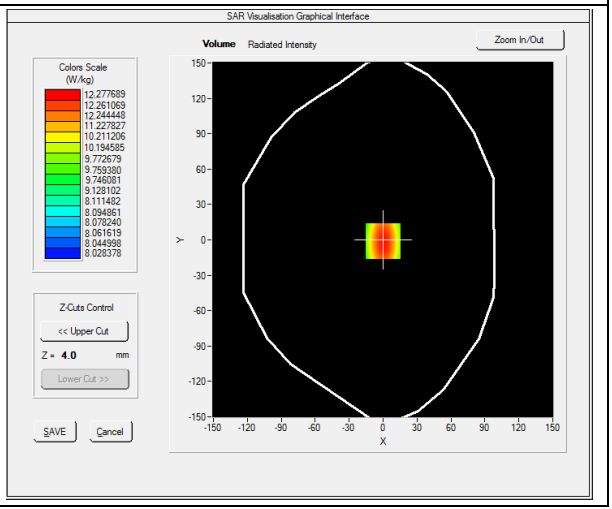
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2450 |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 2450.000000 |
| **Relative Permittivity (real part)** | 53.208212 |
| **Conductivity (S/m)** | 1.970285 |
| **Power Variation (%)** | 1.305745 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

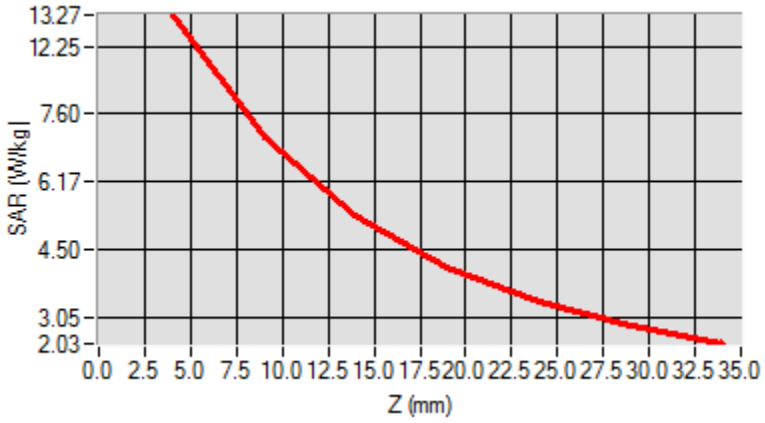
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

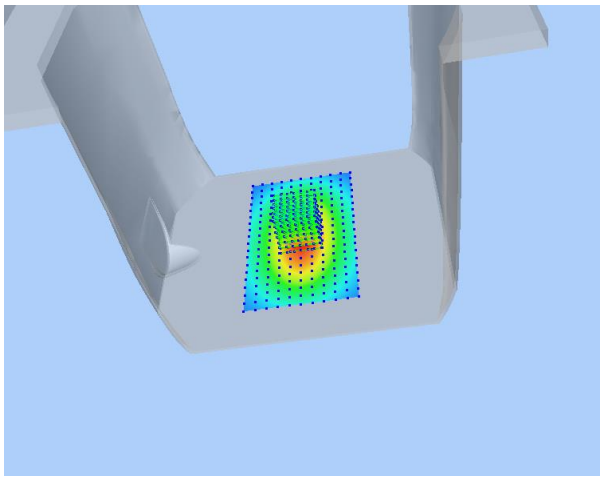
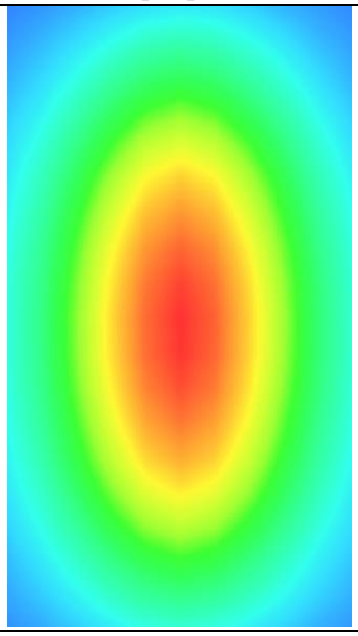
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 7.209571 |
|---|---|
| SAR 1g (W/Kg) | 12.782364 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 13.1911 | 11.7951 | 9.2945 | 8.5400 | 6.3712 | 4.6225 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 14

**For Body Liquid**

Type: Validation measurement (Fast, 75.00 %)

Measurement duration: 12 minutes 21 seconds

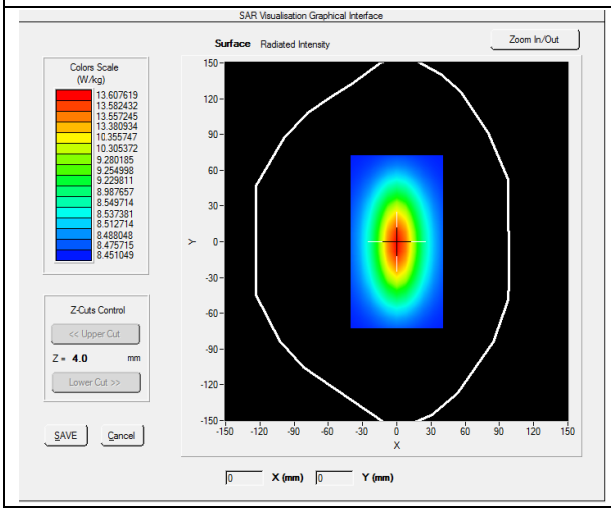
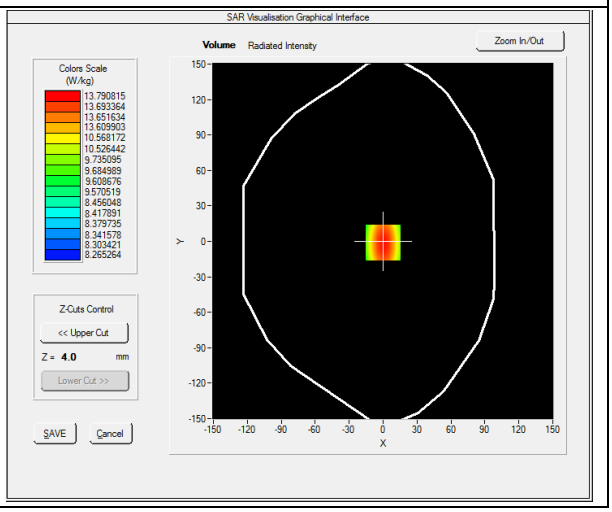
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW2600 |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 2600.000000 |
| **Relative Permittivity (real part)** | 52.431202 |
| **Conductivity (S/m)** | 2.200483 |
| **Power Variation (%)** | 1.208832 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

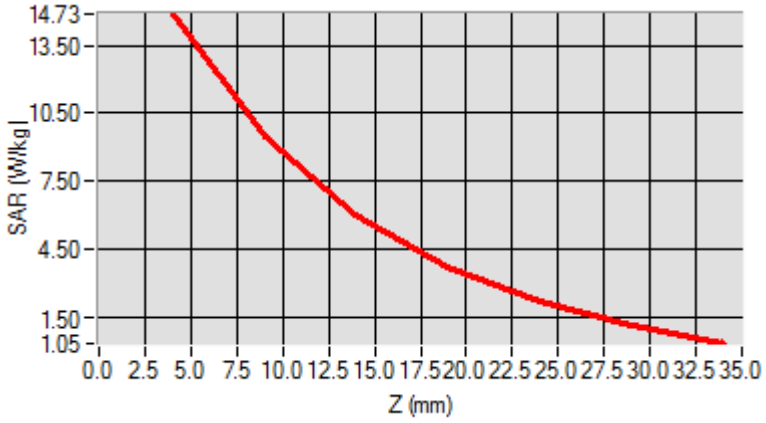
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

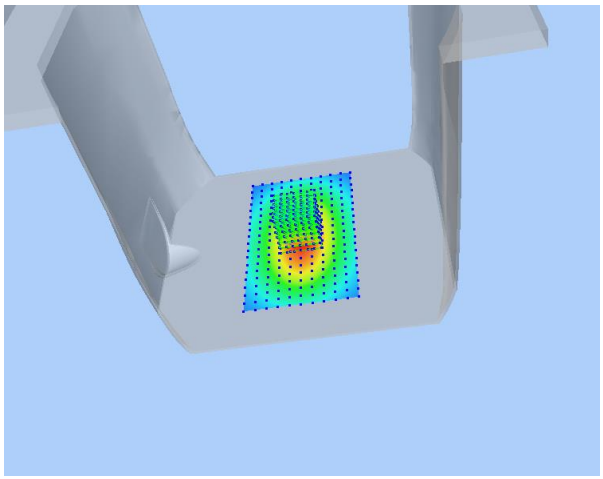
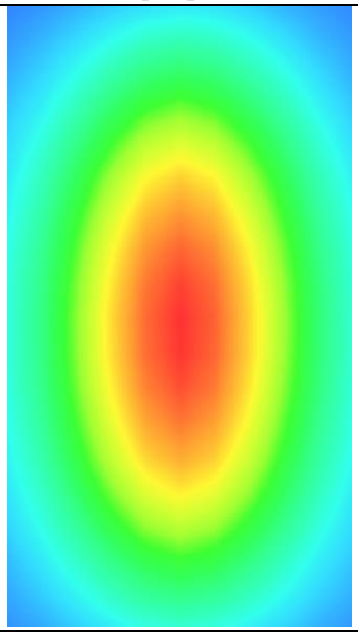
**Maximum location: X=0.00, Y=0.00**

| SAR 10g (W/Kg) | 5.963712 |
|---|---|
| SAR 1g (W/Kg) | 13.020481 |

**Z Axis Scan**

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0000 | 13.6473 | 11.8441 | 9.3627 | 8.5782 | 6.4357 | 4.6342 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 15

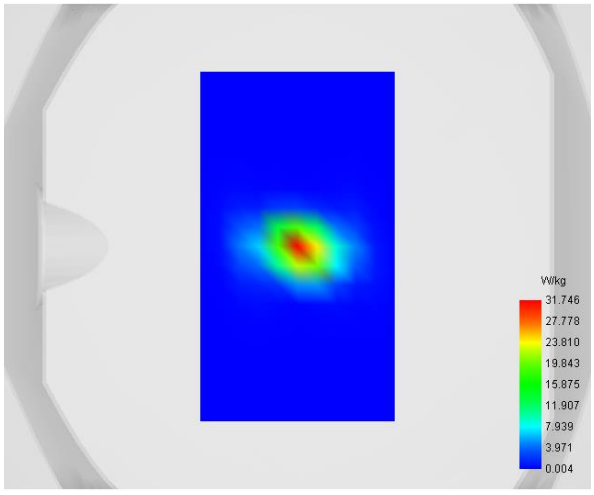
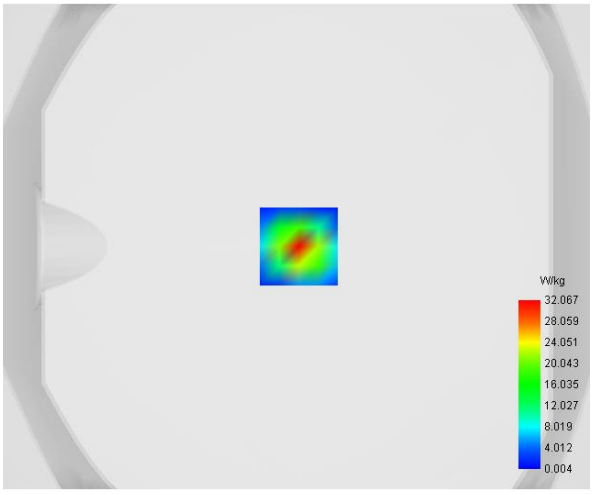
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW5200 |
| **Signal** | Duty Cycle 1:1 |

**B. SAR Measurement Results**

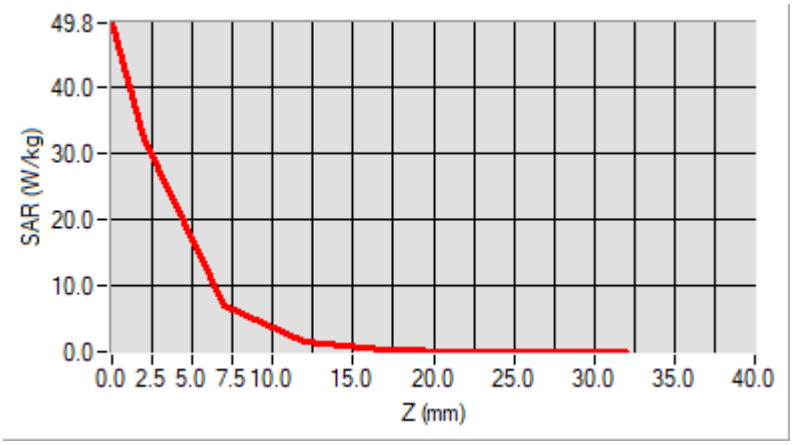
| | |
|---|---|
| **Frequency (MHz)** | 5200.000000 |
| **Relative Permittivity (real part)** | 50.051241 |
| **Conductivity (S/m)** | 5.210213 |
| **Power Variation (%)** | 1.149204 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.3 |

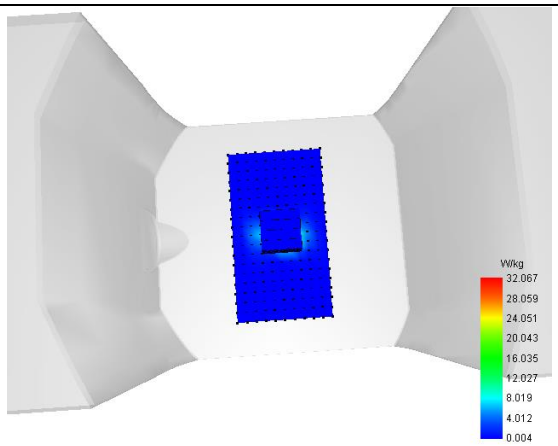
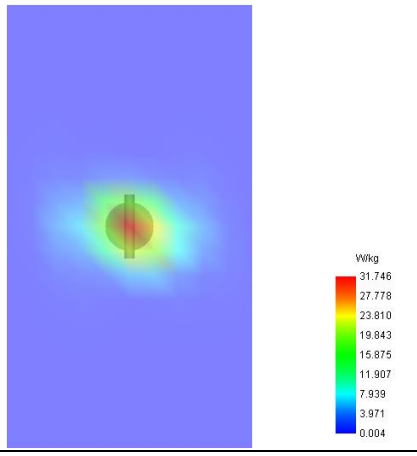
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

**Maximum location: X=1.00, Y=0.00**

| SAR 10g (W/Kg) | 6.034568 |
|---|---|
| SAR 1g (W/Kg) | 16.602175 |

| Z (mm) | 0.00 | 2.00 | 7.00 | 12.00 | 17.00 | 22.00 | 27.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 49.8193 | 32.0669 | 7.0244 | 1.5969 | 0.3410 | 0.0635 | 0.0070 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 16

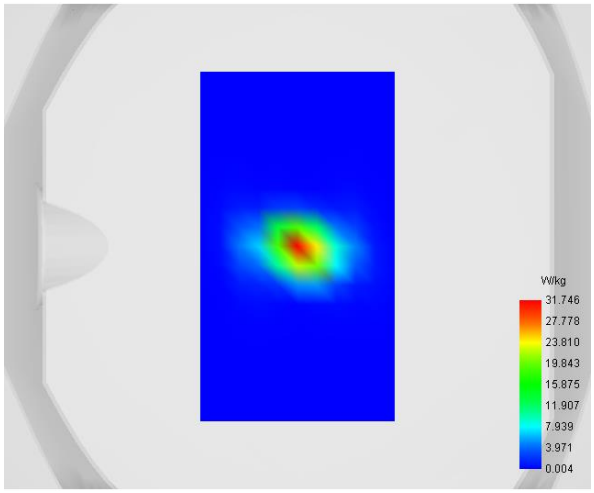
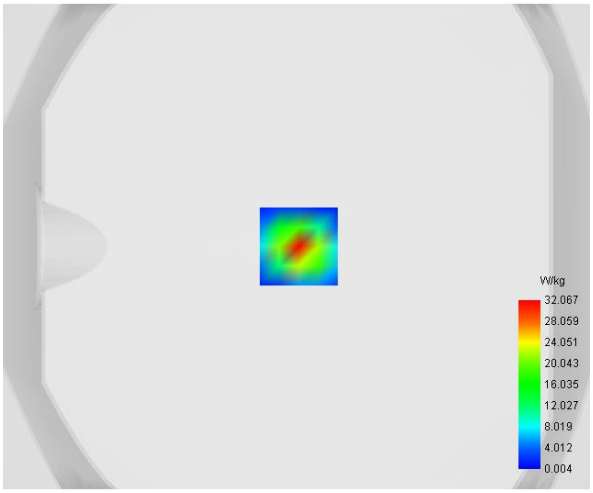
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | dx=8mm dy=8mm |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | CW5800 |
| **Signal** | Duty Cycle 1:1 |

**B. SAR Measurement Results**

| | |
|---|---|
| **Frequency (MHz)** | 5800.000000 |
| **Relative Permittivity (real part)** | 47.851939 |
| **Conductivity (S/m)** | 5.880487 |
| **Power Variation (%)** | 1.309201 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.3 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

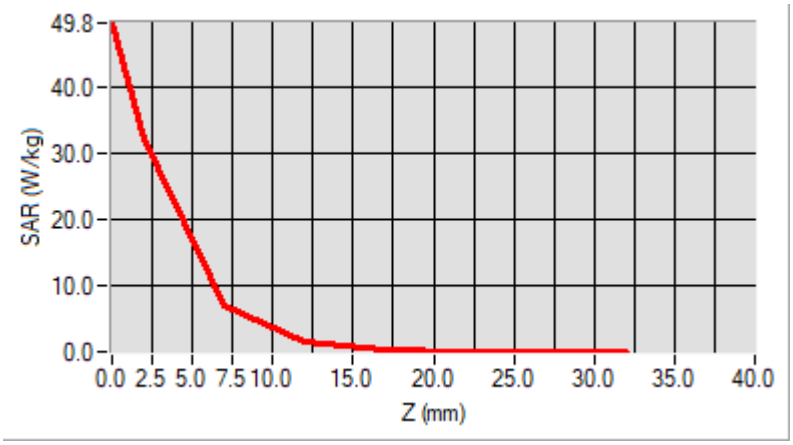


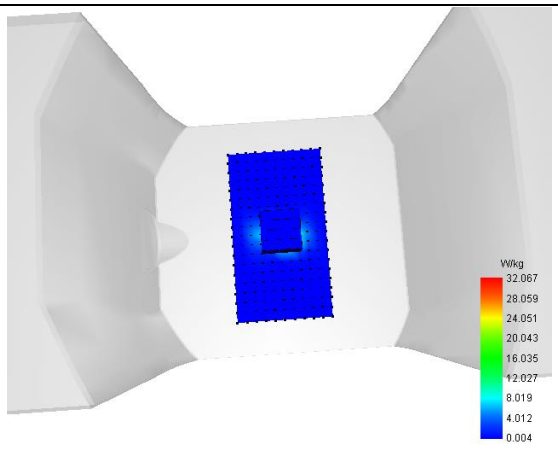
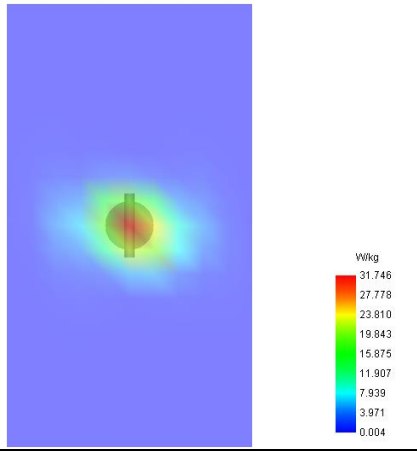


**Maximum location: X=1.00, Y=0.00**

| SAR 10g (W/Kg) | 6.014506 |
|---|---|
| SAR 1g (W/Kg) | 16.418175 |

| Z (mm) | 0.00 | 2.00 | 7.00 | 12.00 | 17.00 | 22.00 | 27.00 |
|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 49.8193 | 32.0669 | 7.0244 | 1.5969 | 0.3410 | 0.0635 | 0.0070 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# Annex B. Plots of SAR Measurement

| TYPE | BAND | PARAMETERS |
|---|---|---|
| **Phone** | **GSM850** | Measurement 1: Right Head with Cheek device position on Low Channel in GSM mode |
| **Phone** | **GSM1900** | Measurement 4: Right Head with Cheek device position on Low Channel in GSM mode |
| **Phone** | **WCDMA1900_RMC** | Measurement 9: Right Head with Cheek device position on High Channel in WCDMA mode |
| **Phone** | **WCDMA1700_RMC** | Measurement 13: Right Head with Cheek device position on Low Channel in WCDMA mode |
| **Phone** | **WCDMA850_RMC** | Measurement 17: Right Head with Cheek device position on Low Channel in WCDMA mode |
| **Phone** | **LTE Band 2_QPSK** | Measurement 21: Right Head with Cheek device position on Low Channel in LTE mode |
| **Phone** | **LTE Band 4_QPSK** | Measurement 29: Right Head with Cheek device position on Low Channel in LTE mode |
| **Phone** | **LTE Band 5_ QPSK** | Measurement 37: Right Head with Cheek device position on Middle Channel in LTE mode |
| **Phone** | **LTE Band 7_ QPSK** | Measurement 45: Right Head with Cheek device position on Low Channel in LTE mode |
| **Phone** | **LTE Band 17_ QPSK** | Measurement 53: Right Head with Cheek device position on Low Channel in LTE mode |
| **Phone** | **2.4GWiFi_802.11b** | Measurement 63: Left Head with Cheek device position on Low Channel in 802.11b mode |
| **Phone** | **5.2G WiFi_802.11a** | Measurement 65: Right Head with Cheek device position on High Channel in 802.11a mode |
| **Phone** | **5.8G WiFi_802.11 n (HT40)** | Measurement 71: Right Head with Cheek device position on Low Channel in 802.11n mode |
| **Phone** | **GSM850** | Measurement 74: Flat Plane with Front device position on Low Channel in GSM mode |
| **Phone** | **GSM1900** | Measurement 75: Flat Plane with Back device position on Low Channel in GSM mode |
| **Phone** | **GPRS850_3TX** | Measurement 109: Flat Plane with Back device position on Middle Channel in GPRS mode |
| **Phone** | **GPRS1900_3TX** | Measurement 114: Flat Plane with Back device position on High Channel in GPRS mode |
| **Phone** | **WCDMA1900_RMC** | Measurement 77/118: Flat Plane with Back side device position on High Channel in WCDMA mode |

| | | |
|---|---|---|
| **Phone** | **WCDMA1700_RMC** | Measurement 79/122: Flat Plane with Back side device position on Low Channel in WCDMA mode |
| **Phone** | **WCDMA850_RMC** | Measurement 81/126: Flat Plane with Back side device position on Low Channel in WCDMA mode |
| **Phone** | **LTE Band 2_QPSK** | Measurement 83/131: Flat Plane with Back device position on Low Channel in LTE mode |
| **Phone** | **LTE Band 4_QPSK** | Measurement 87/139: Flat Plane with Back device position on Low Channel in LTE mode |
| **Phone** | **LTE Band 5_ QPSK** | Measurement 91/147: Flat Plane with Back device position on Middle Channel in LTE mode |
| **Phone** | **LTE Band 7_ QPSK** | Measurement 96/158: Flat Plane with Front device position on Low Channel in LTE mode |
| **Phone** | **LTE Band 17_ QPSK** | Measurement 100/166: Flat Plane with Front device position on Low Channel in LTE mode |
| **Phone** | **2.4GWiFi_802.11b** | Measurement 103/175: Flat Plane with Back side device position on Low Channel in 802.11b mode |
| **Phone** | **5.2G WiFi_802.11a** | Measurement 105: Flat Plane with Back side device position on High Channel in 802.11a mode |
| **Phone** | **5.2G WiFi_802.11a** | Measurement 181: Flat Plane with Right side device position on High Channel in 802.11a mode |
| **Phone** | **5.8G WiFi_802.11 n (HT40)** | Measurement 108/184: Flat Plane with Front side device position on Low Channel in 802.11n mode |
| *Remark: SAR plot is showed the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.* | | |

# MEASUREMENT 1

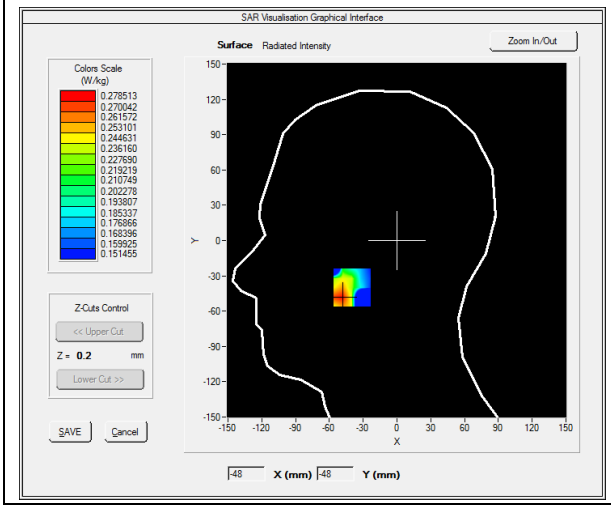
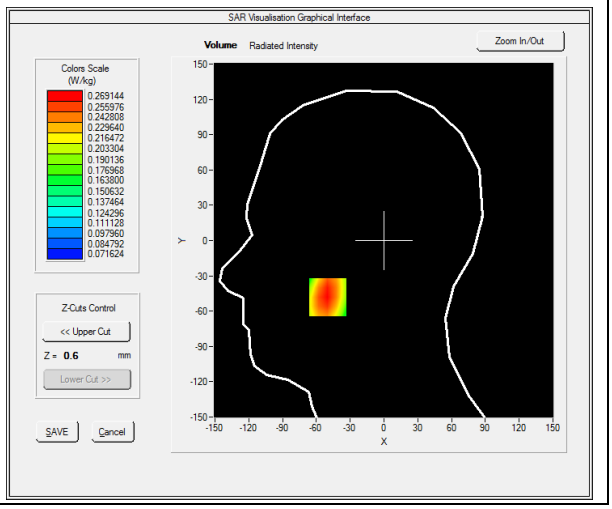
Type: Phone measurement (Complete)
Date of measurement: 2020-10-29
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | GSM850 |
| **Channels** | Low |
| **Signal** | TDMA (Crest factor: 8.0) |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 824.200000 |
| **Relative Permittivity (real part)** | 40.820245 |
| **Conductivity (S/m)** | 0.871245 |
| **Power Variation (%)** | 1.074536 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



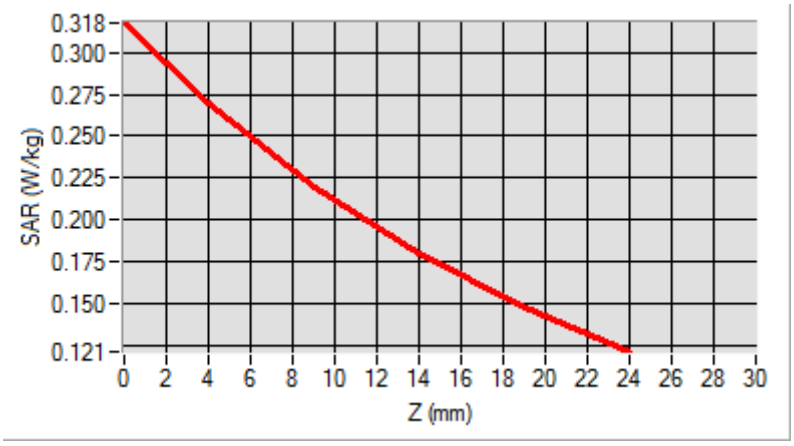


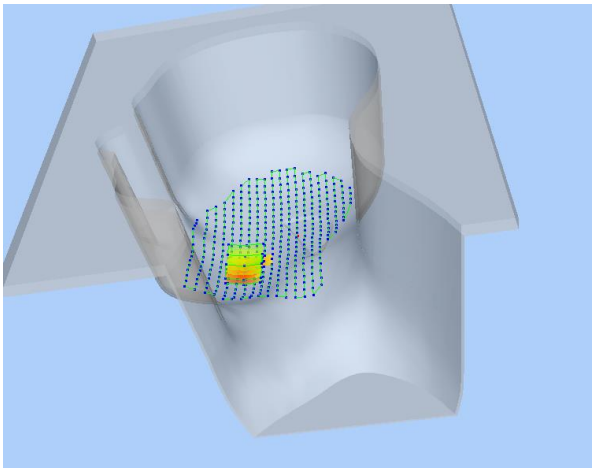
**Maximum location: X=-50.00, Y=-48.00**

**SAR Peak: 0.32 W/kg**

| SAR 10g (W/Kg) | 0.203528 |
|---|---|
| SAR 1g (W/Kg) | 0.261785 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.3176 | 0.2691 | 0.2192 | 0.1795 | 0.1478 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 5

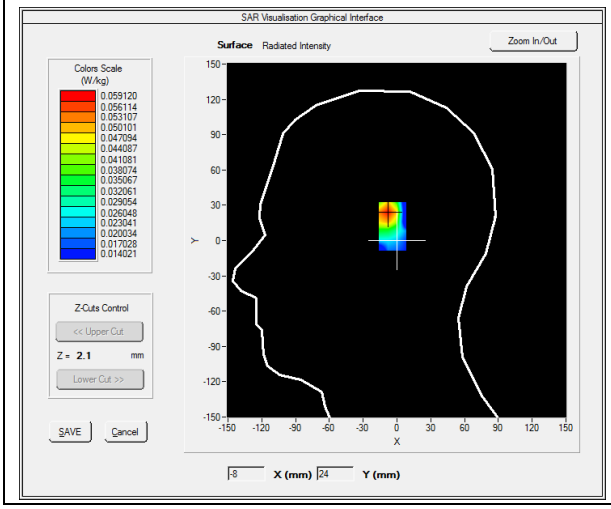
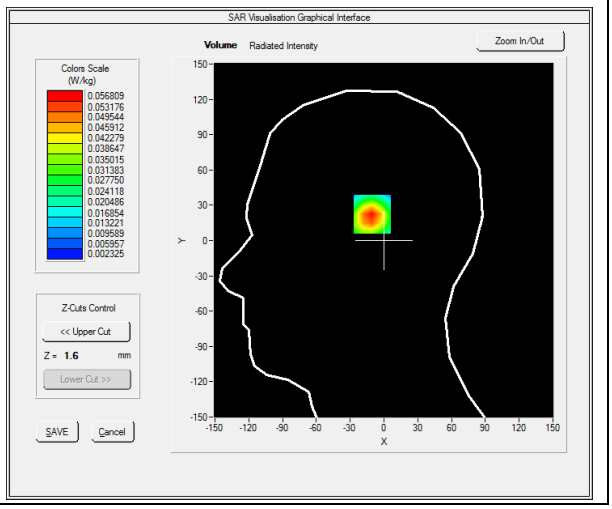
Type: Phone measurement (Complete)
Date of measurement: 2020-11-09
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | GSM1900 |
| **Channels** | Low |
| **Signal** | TDMA (Crest factor: 8.0) |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1850.200000 |
| **Relative Permittivity (real part)** | 39.260124 |
| **Conductivity (S/m)** | 1.385369 |
| **Power Variation (%)** | -0.150000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



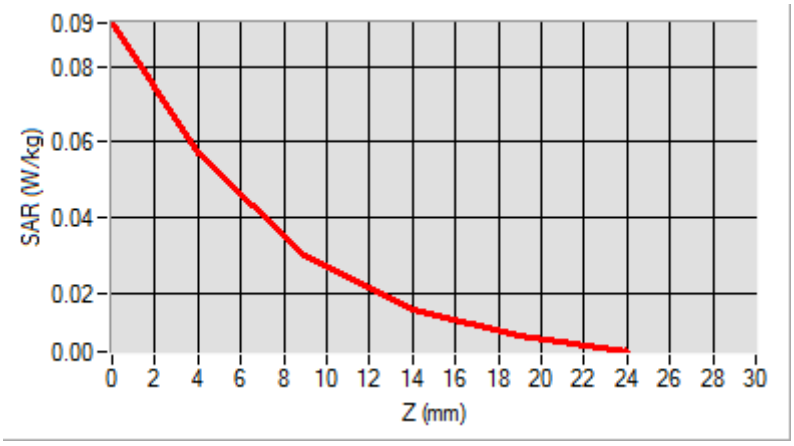


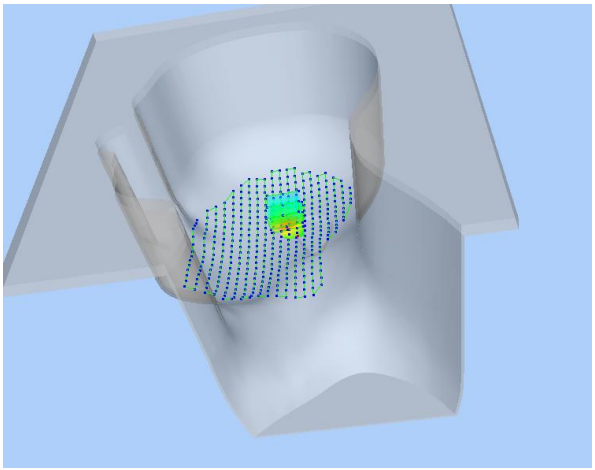
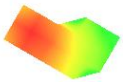
**Maximum location: X=-9.00, Y=24.00**

**SAR Peak: 0.09 W/kg**

| SAR 10g (W/Kg) | 0.028013 |
|---|---|
| SAR 1g (W/Kg) | 0.053326 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.0914 | 0.0568 | 0.0303 | 0.0160 | 0.0088 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 9

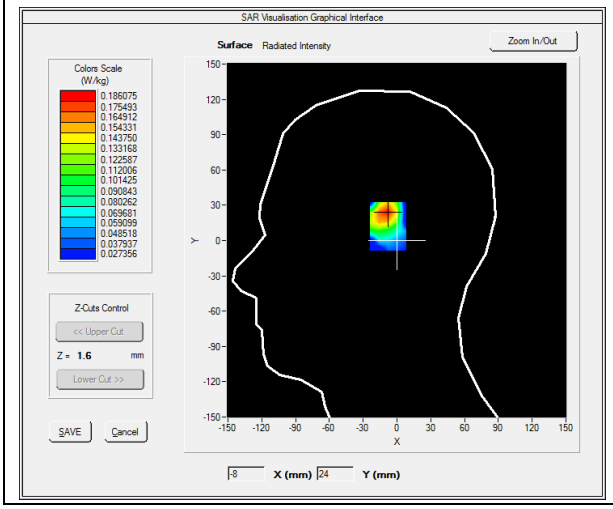
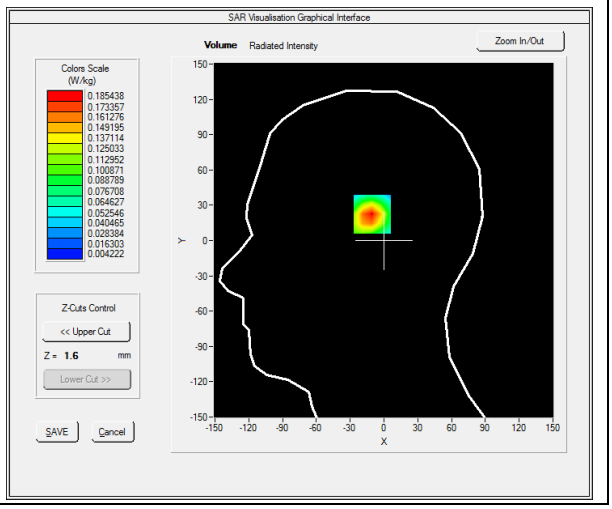
Type: Phone measurement (Complete)
Date of measurement: 2020-11-09
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | WCDMA1900_RMC |
| **Channels** | High |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1907.600000 |
| **Relative Permittivity (real part)** | 39.060124 |
| **Conductivity (S/m)** | 1.393607 |
| **Power Variation (%)** | 0.820000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

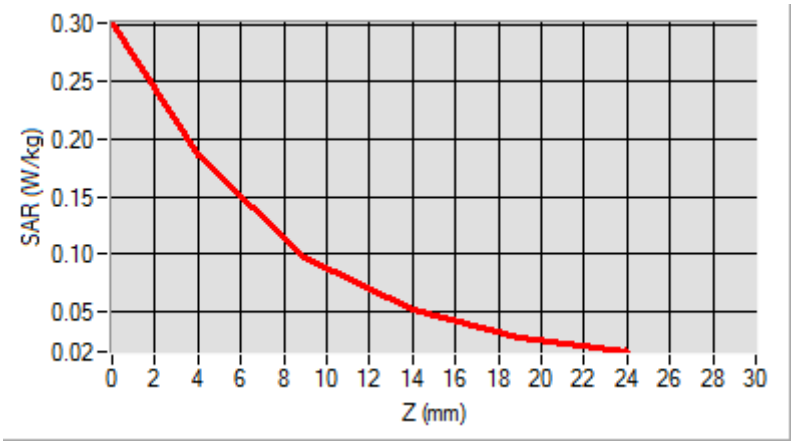
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

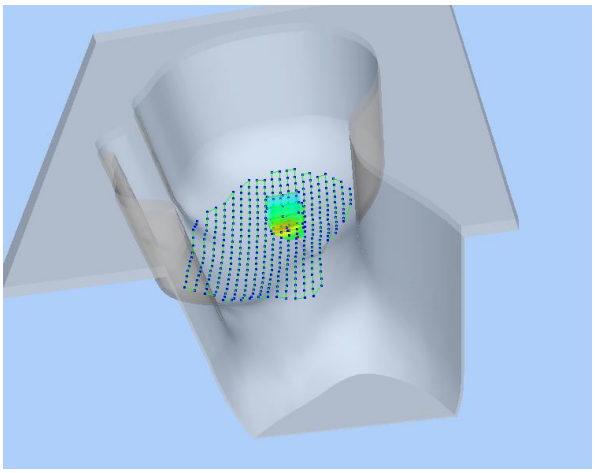
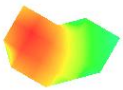
**Maximum location: X=-9.00, Y=24.00**

**SAR Peak: 0.30 W/kg**

| SAR 10g (W/Kg) | 0.089792 |
|---|---|
| SAR 1g (W/Kg) | 0.173494 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.3014 | 0.1854 | 0.0974 | 0.0511 | 0.0282 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 13

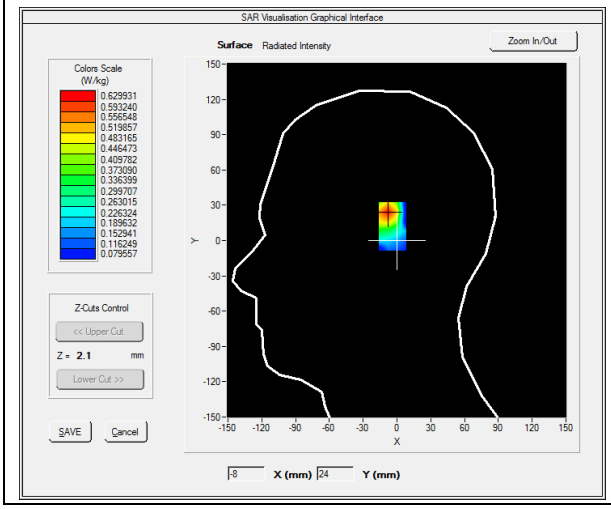
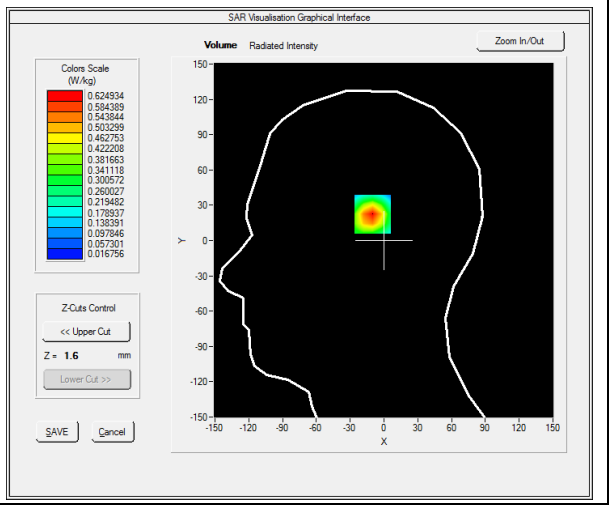
Type: Phone measurement (Complete)
Date of measurement: 2020-11-09
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | WCDMA1700_RMC |
| **Channels** | Low |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1712.400000 |
| **Relative Permittivity (real part)** | 40.132275 |
| **Conductivity (S/m)** | 1.350987 |
| **Power Variation (%)** | -1.200000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



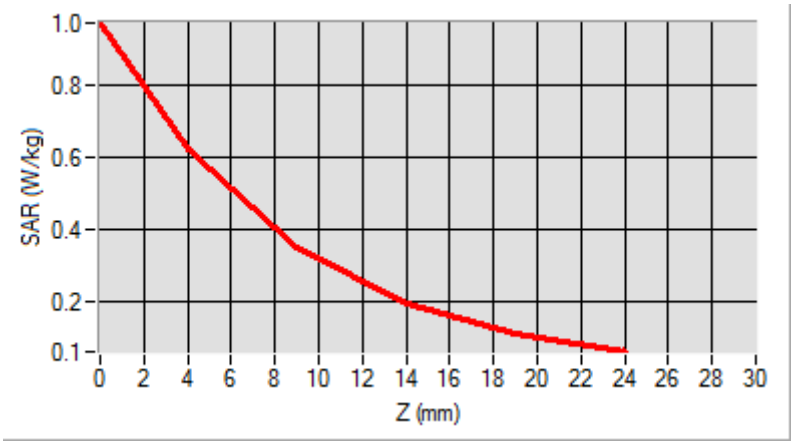


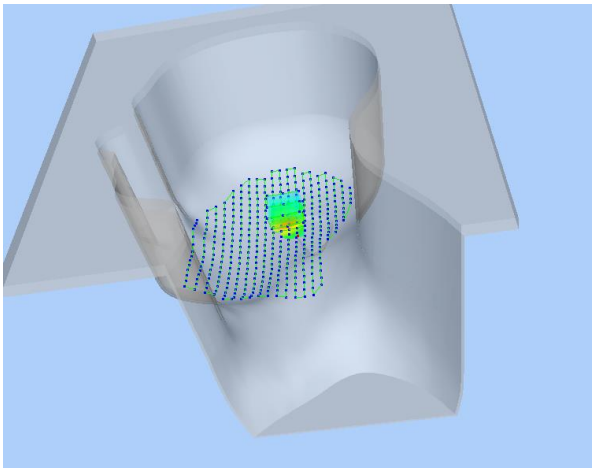
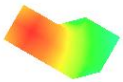
**Maximum location: X=-8.00, Y=24.00**

**SAR Peak: 0.98 W/kg**

| SAR 10g (W/Kg) | 0.305379 |
|---|---|
| SAR 1g (W/Kg) | 0.580103 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.9729 | 0.6249 | 0.3495 | 0.1951 | 0.1123 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 17

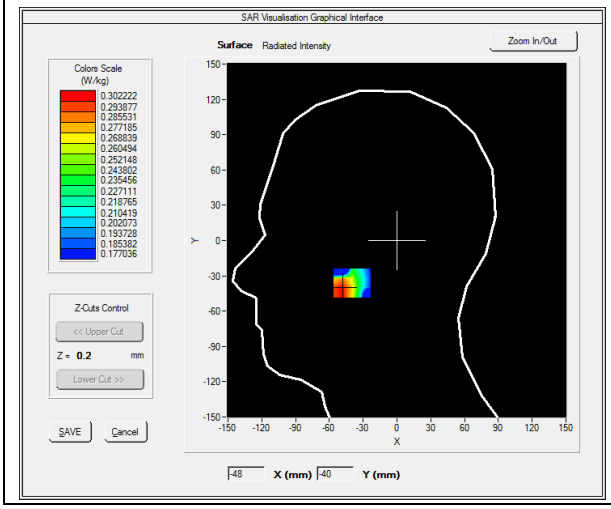
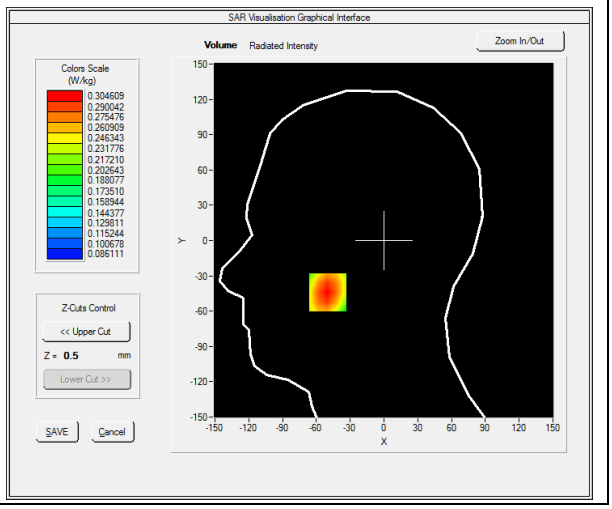
Type: Phone measurement (Complete)
Date of measurement: 2020-10-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | WCDMA850_RMC |
| **Channels** | Low |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 826.400000 |
| **Relative Permittivity (real part)** | 40.820245 |
| **Conductivity (S/m)** | 0.871245 |
| **Power Variation (%)** | -1.360000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



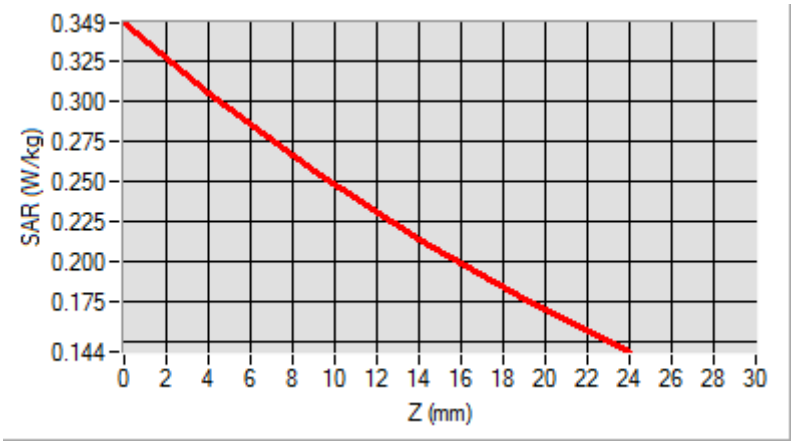


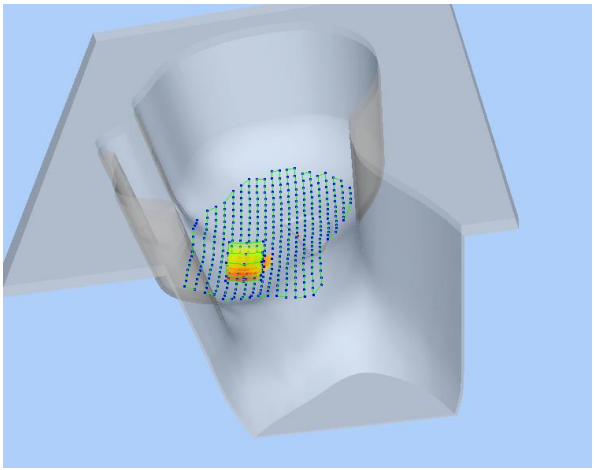
**Maximum location: X=-50.00, Y=-44.00**

**SAR Peak: 0.35 W/kg**

| SAR 10g (W/Kg) | 0.231397 |
|---|---|
| SAR 1g (W/Kg) | 0.294684 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.3486 | 0.3046 | 0.2559 | 0.2136 | 0.1768 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 21

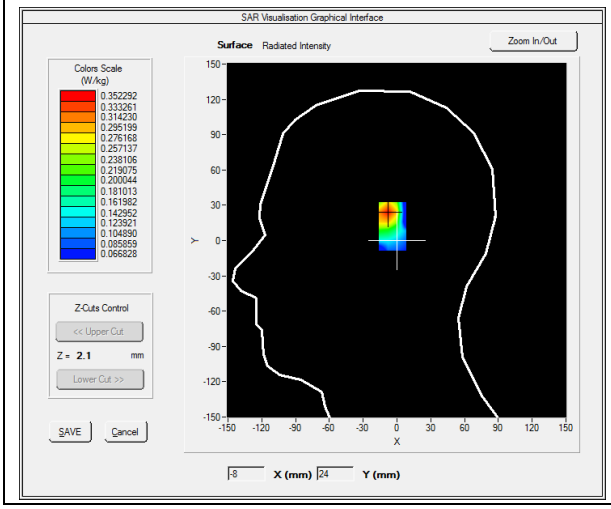
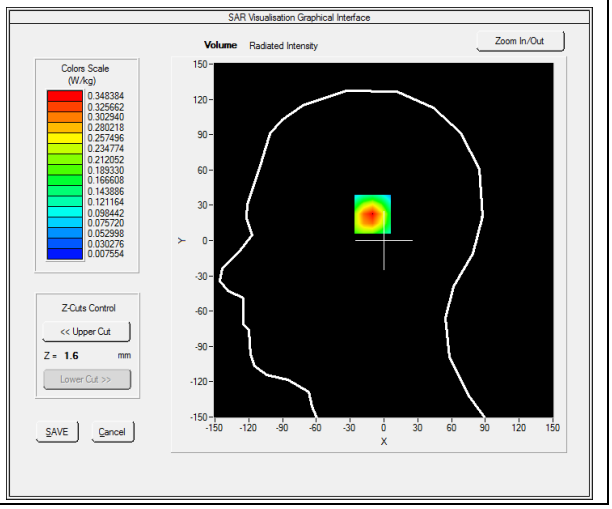
Type: Phone measurement (Complete)
Date of measurement: 2020-11-09
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | LTE Band 2 |
| **Channels** | QPSK, 20MHz, 1RB,Low |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1860.000000 |
| **Relative Permittivity (real part)** | 39.260124 |
| **Conductivity (S/m)** | 1.385369 |
| **Power Variation (%)** | -1.340000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



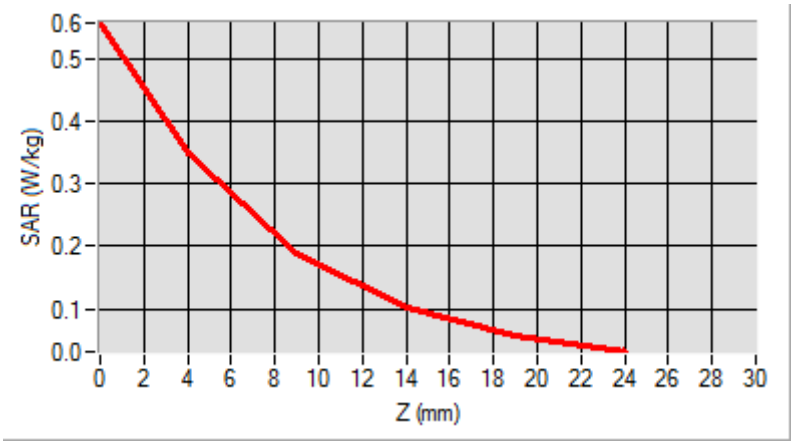


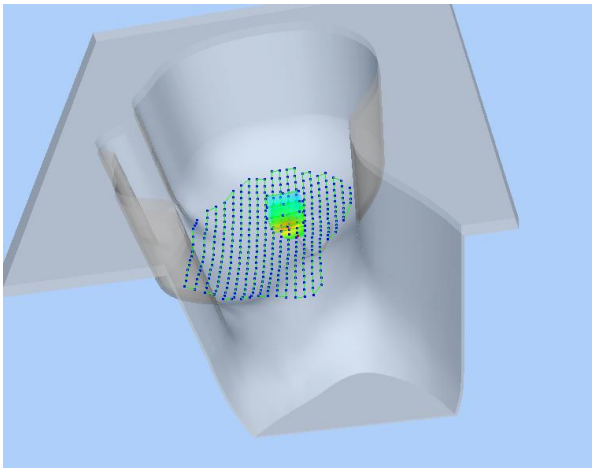
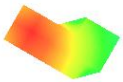
**Maximum location: X=-8.00, Y=24.00**

**SAR Peak: 0.56 W/kg**

| SAR 10g (W/Kg) | 0.172411 |
|---|---|
| SAR 1g (W/Kg) | 0.326874 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.5566 | 0.3484 | 0.1878 | 0.1014 | 0.0572 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 29

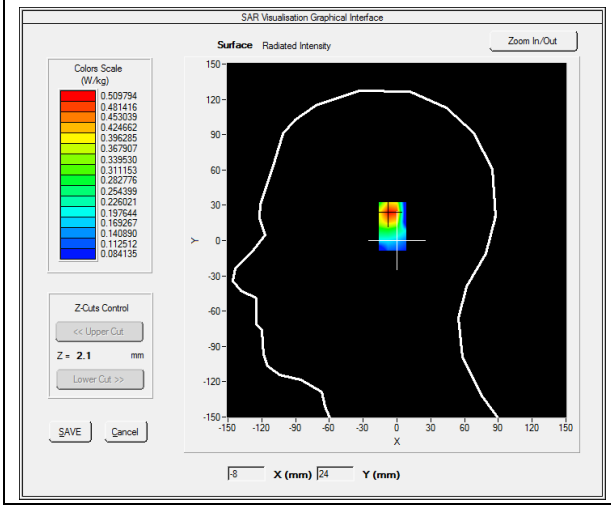
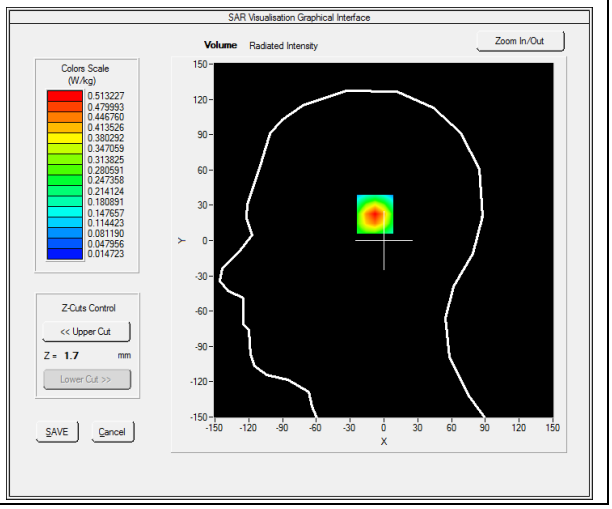
Type: Phone measurement (Complete)
Date of measurement: 2020-11-09
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | LTE Band 4 |
| **Channels** | QPSK, 20MHz, 1RB,Low |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1720.000000 |
| **Relative Permittivity (real part)** | 40.132275 |
| **Conductivity (S/m)** | 1.350987 |
| **Power Variation (%)** | 0.080000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



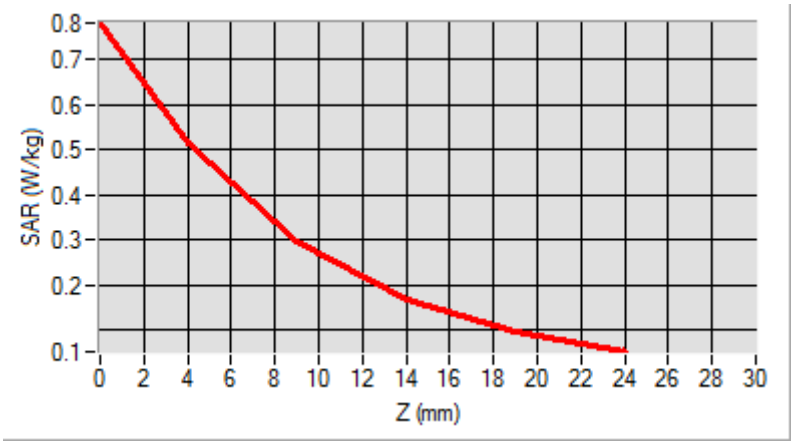


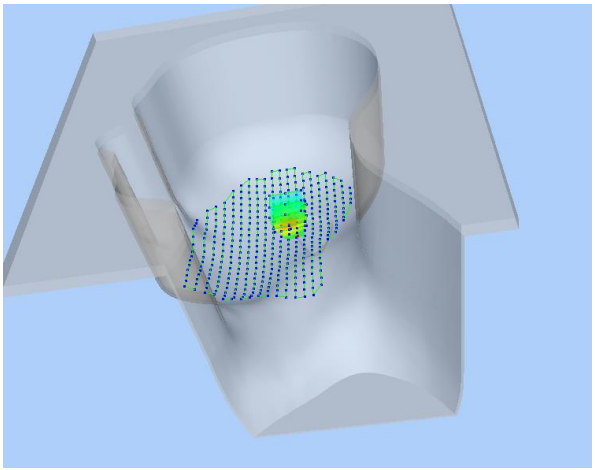
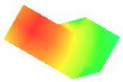
**Maximum location: X=-6.00, Y=24.00**

**SAR Peak: 0.78 W/kg**

| SAR 10g (W/Kg) | 0.255568 |
|---|---|
| SAR 1g (W/Kg) | 0.476148 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.7813 | 0.5132 | 0.2954 | 0.1686 | 0.0973 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 37

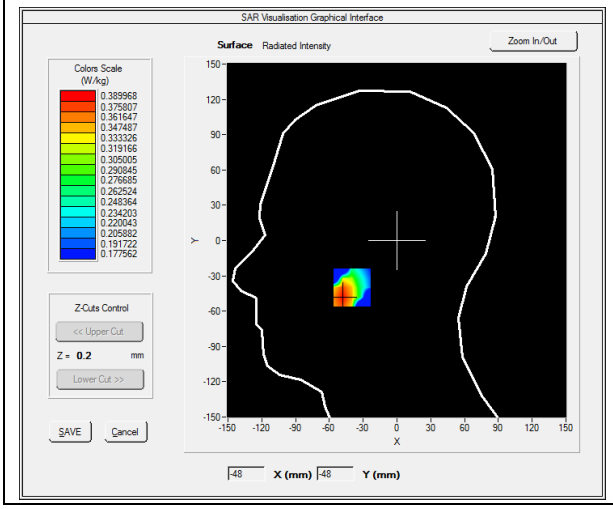
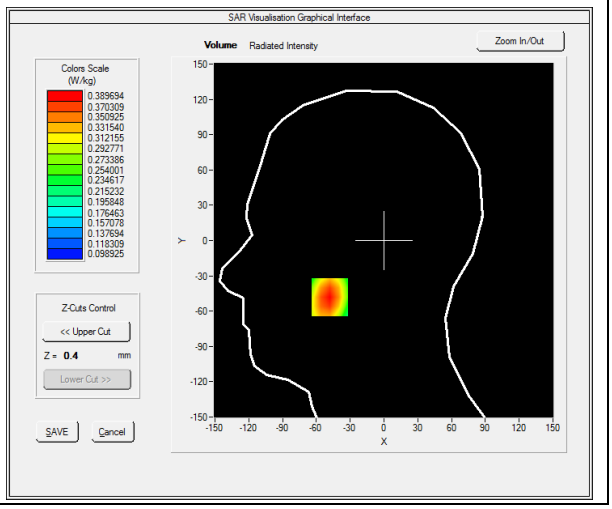
Type: Phone measurement (Complete)
Date of measurement: 2020-10-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | LTE Band 5 |
| **Channels** | QPSK, 10MHz, 1RB, Middle |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 836.500000 |
| **Relative Permittivity (real part)** | 40.750245 |
| **Conductivity (S/m)** | 0.881245 |
| **Power Variation (%)** | -0.870000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

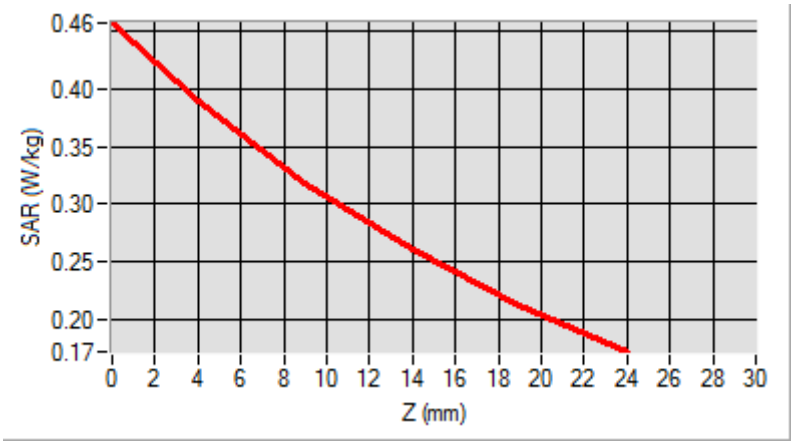
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

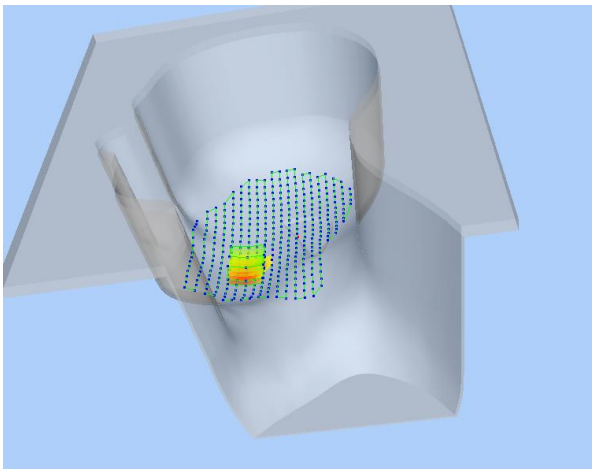
**Maximum location: X=-48.00, Y=-48.00**

**SAR Peak: 0.46 W/kg**

| SAR 10g (W/Kg) | 0.286708 |
|---|---|
| SAR 1g (W/Kg) | 0.375628 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.4571 | 0.3897 | 0.3187 | 0.2606 | 0.2129 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 45

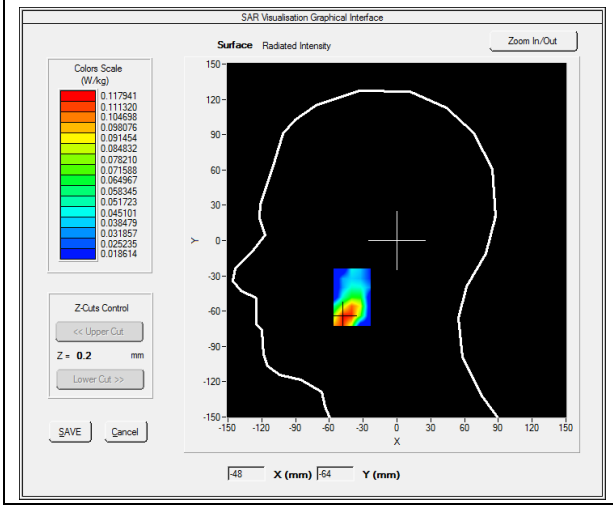
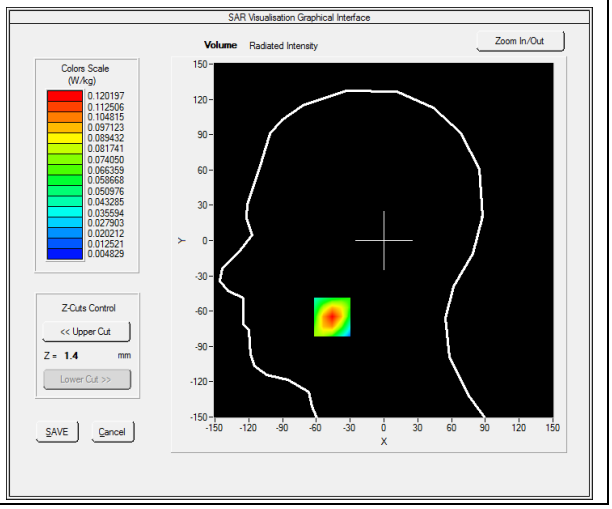
Type: Phone measurement (Complete)
Date of measurement: 2020-11-10
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | LTE Band 7 |
| **Channels** | QPSK, 20MHz, 1RB, Low |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 2510.000000 |
| **Relative Permittivity (real part)** | 38.256667 |
| **Conductivity (S/m)** | 1.920182 |
| **Power Variation (%)** | -0.700000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

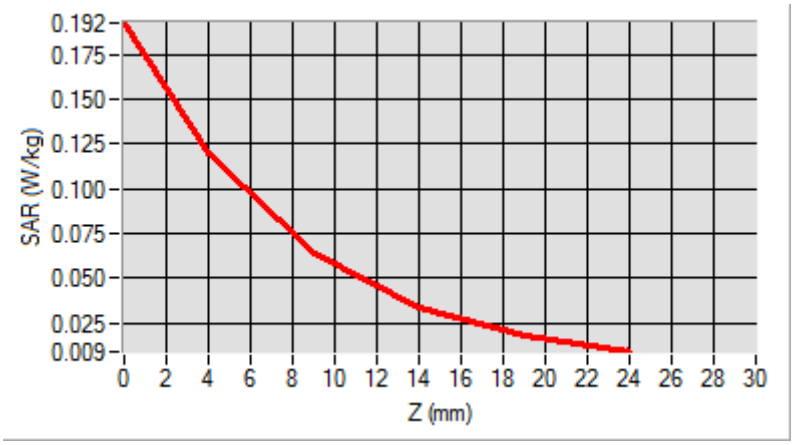
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

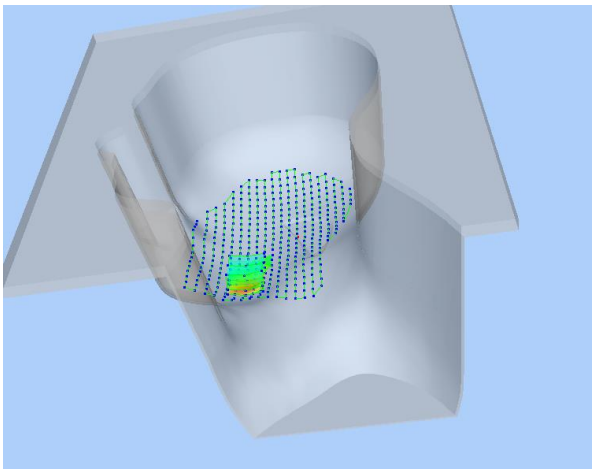
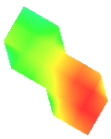
**Maximum location: X=-46.00, Y=-65.00**

**SAR Peak: 0.19 W/kg**

| SAR 10g (W/Kg) | 0.057301 |
|---|---|
| SAR 1g (W/Kg) | 0.111457 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.1923 | 0.1202 | 0.0643 | 0.0339 | 0.0182 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 53

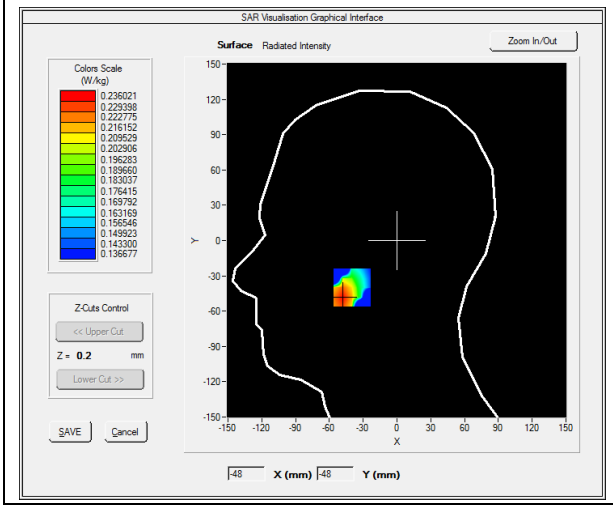
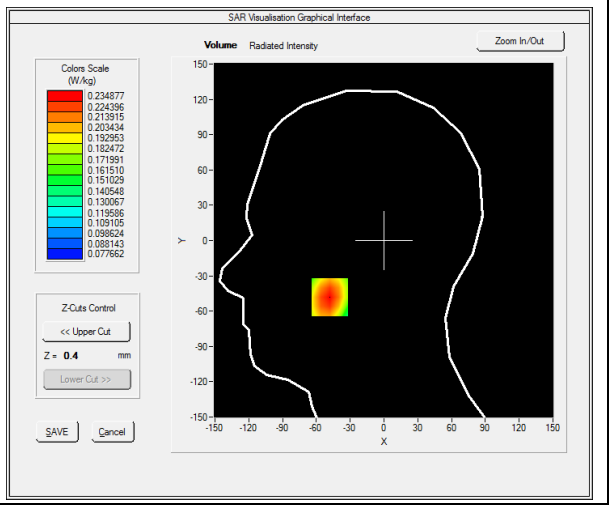
Type: Phone measurement (Complete)
Date of measurement: 2020-10-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | LTE Band 17 |
| **Channels** | QPSK, 10MHz, 1RB, Low |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 709.000000 |
| **Relative Permittivity (real part)** | 41.218668 |
| **Conductivity (S/m)** | 0.853696 |
| **Power Variation (%)** | -1.050000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

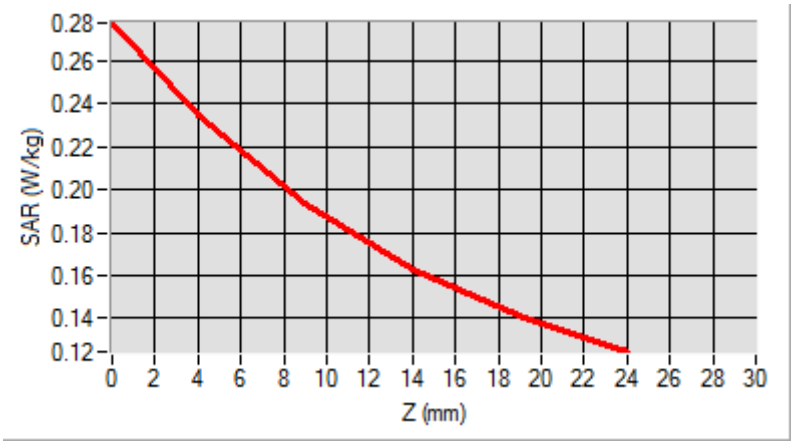
| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

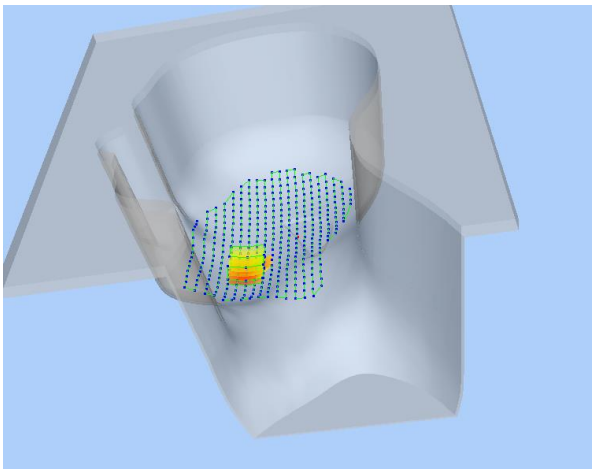
**Maximum location: X=-48.00, Y=-48.00**

**SAR Peak: 0.28 W/kg**

| SAR 10g (W/Kg) | 0.183020 |
|---|---|
| SAR 1g (W/Kg) | 0.232187 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.2778 | 0.2349 | 0.1933 | 0.1632 | 0.1417 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 63

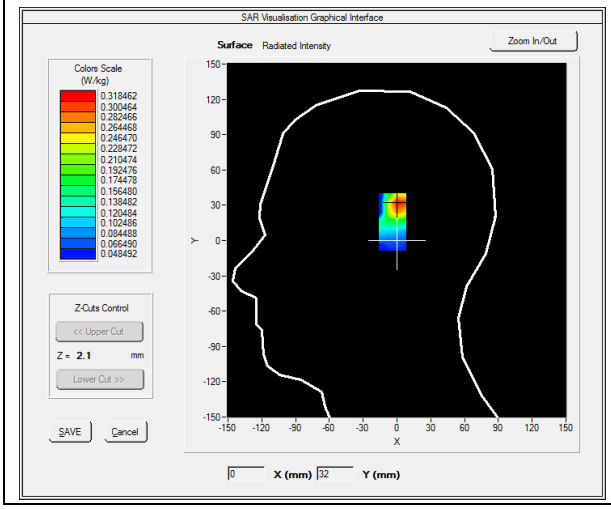
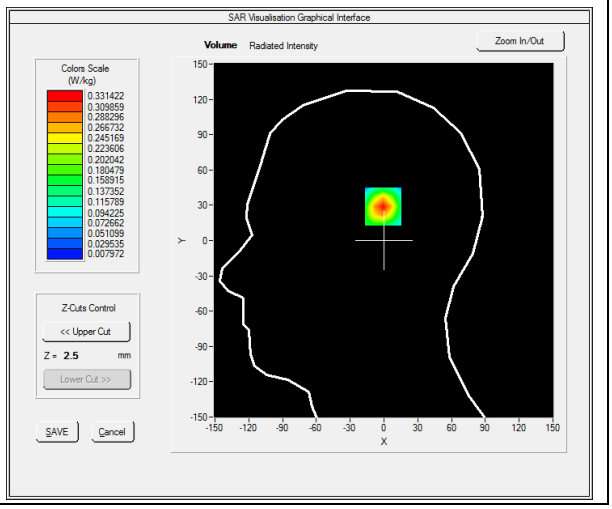
Type: Phone measurement (Complete)
Date of measurement: 2020-11-10
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Left head |
| **Device Position** | Cheek |
| **Band** | WiFi_802.11b |
| **Channels** | Low |
| **Signal** | Duty Cycle 1:1 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 2412.000000 |
| **Relative Permittivity (real part)** | 38.726001 |
| **Conductivity (S/m)** | 1.756388 |
| **Power Variation (%)** | -0.960000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.0 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



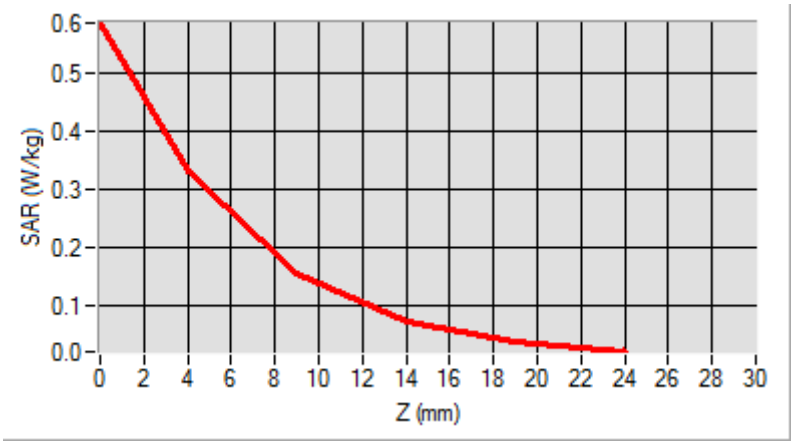


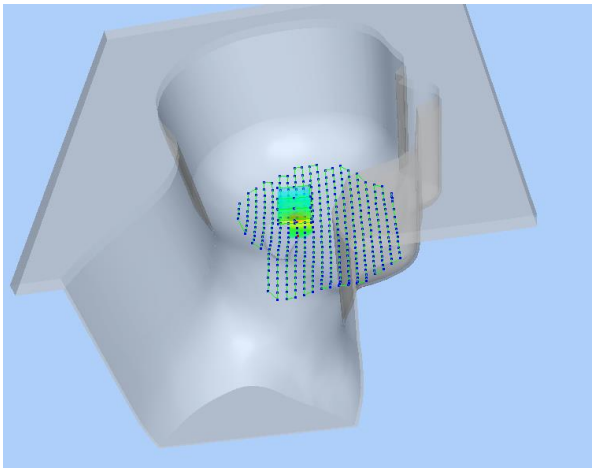
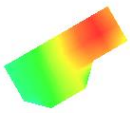
**Maximum location: X=2.00, Y=31.00**

**SAR Peak: 0.58 W/kg**

| SAR 10g (W/Kg) | 0.146641 |
|---|---|
| SAR 1g (W/Kg) | 0.307968 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.5846 | 0.3314 | 0.1537 | 0.0713 | 0.0368 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 65

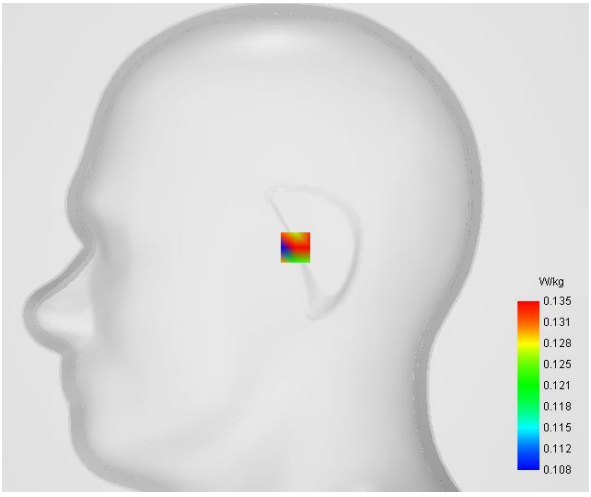
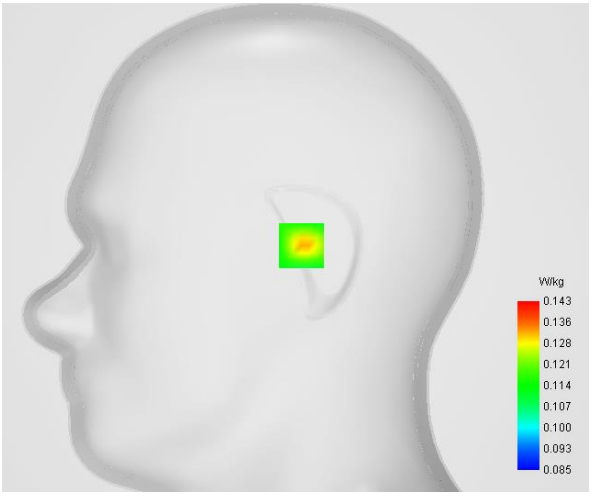
Type: Phone measurement (Complete)
Date of measurement: 2020-11-13
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Right head |
| **Device Position** | Cheek |
| **Band** | 5.2GWiFi_802.11a |
| **Channels** | High |
| **Signal** | Duty Cycle 1:1 |

**B. SAR Measurement Results**

| | |
|---|---|
| **Frequency (MHz)** | 5240.000000 |
| **Relative Permittivity (real part)** | 35.559999 |
| **Conductivity (S/m)** | 4.792698 |
| **Power Variation (%)** | -1.240000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.0 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

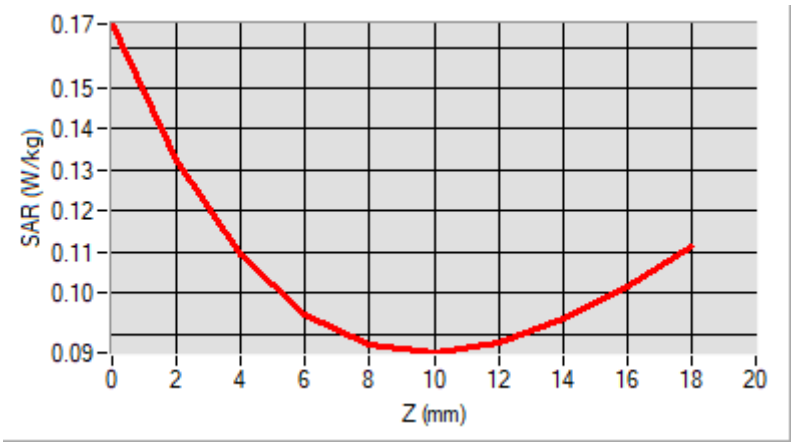


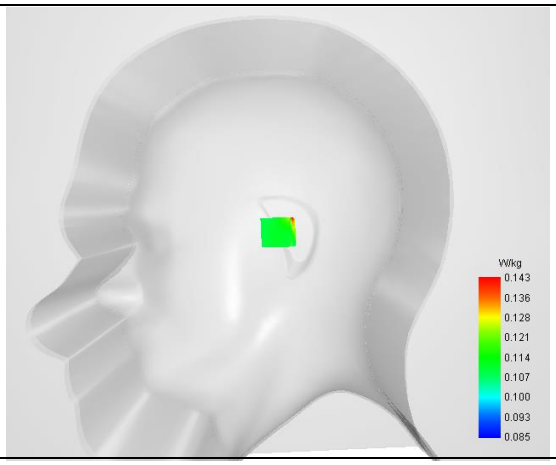
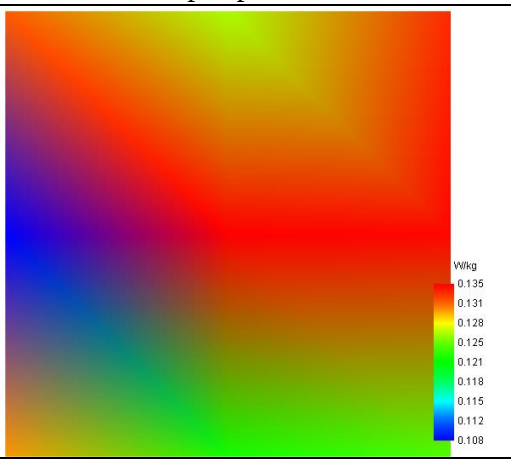


Maximum location: X=3.00, Y=1.00

| | |
|---|---|
| SAR 10g (W/Kg) | 0.116475 |
| SAR 1g (W/Kg) | 0.139835 |

| Z (mm) | 0.00 | 2.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 | 14.00 | 16.00 |
|---|---|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.1657 | 0.1322 | 0.1092 | 0.0945 | 0.0872 | 0.0854 | 0.0878 | 0.0935 | 0.1016 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 71

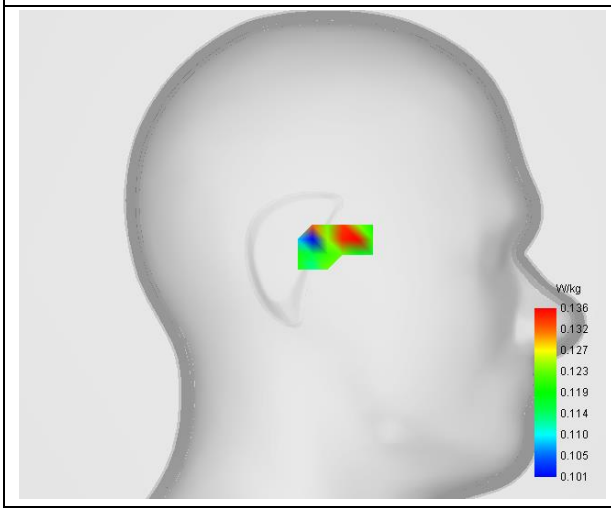
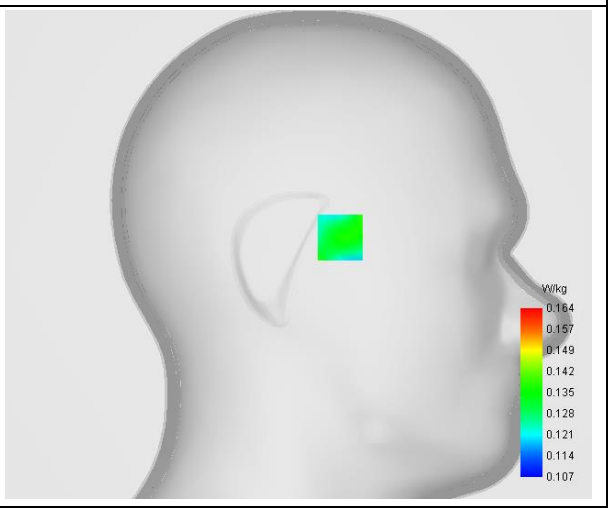
Type: Phone measurement (Complete)
Date of measurement: 2020-11-13
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

**A. Experimental conditions**

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Left head |
| **Device Position** | Cheek |
| **Band** | 5.2GWiFi_802.11 n (HT40) |
| **Channels** | Low |
| **Signal** | Duty Cycle 1:1 |

**B. SAR Measurement Results**

| | |
|---|---|
| **Frequency (MHz)** | 5755.000000 |
| **Relative Permittivity (real part)** | 34.725002 |
| **Conductivity (S/m)** | 5.167514 |
| **Power Variation (%)** | -1.400000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.0 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |

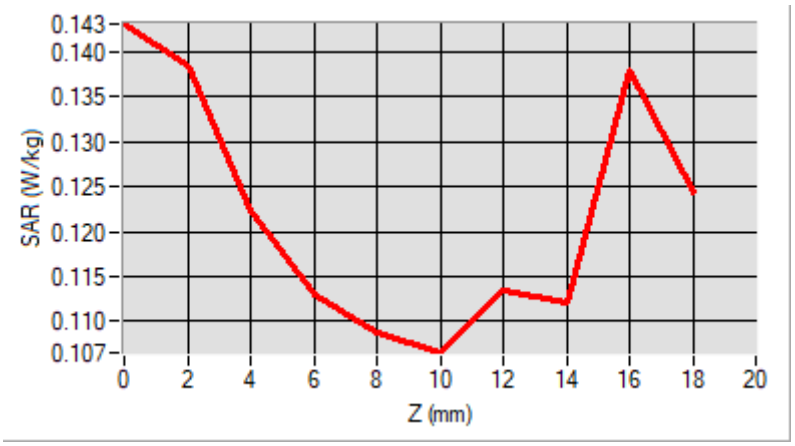


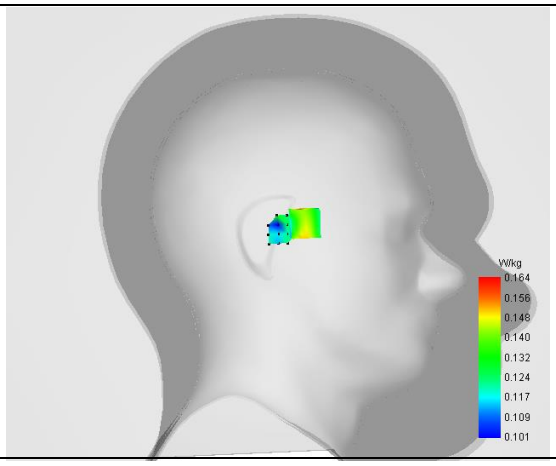
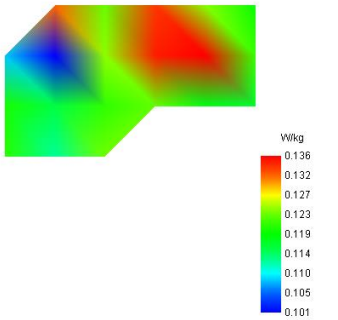


Maximum location: X=-22.00, Y=9.00

| | |
|---|---|
| SAR 10g (W/Kg) | 0.137196 |
| SAR 1g (W/Kg) | 0.141387 |

| Z (mm) | 0.00 | 2.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 | 14.00 | 16.00 |
|---|---|---|---|---|---|---|---|---|---|
| SAR (W/Kg) | 0.1430 | 0.1383 | 0.1224 | 0.1130 | 0.1088 | 0.1065 | 0.1135 | 0.1121 | 0.1379 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 74

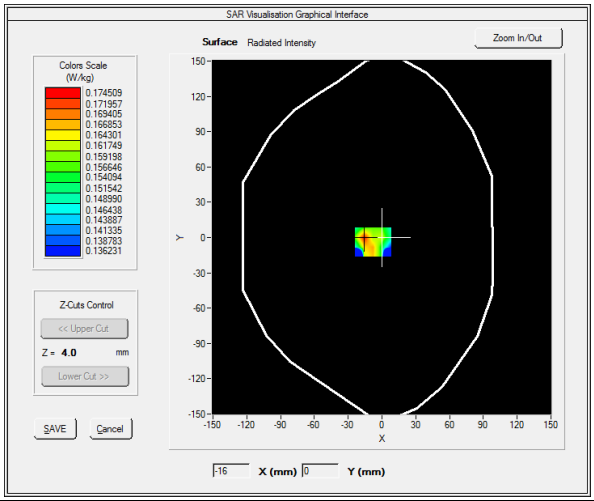
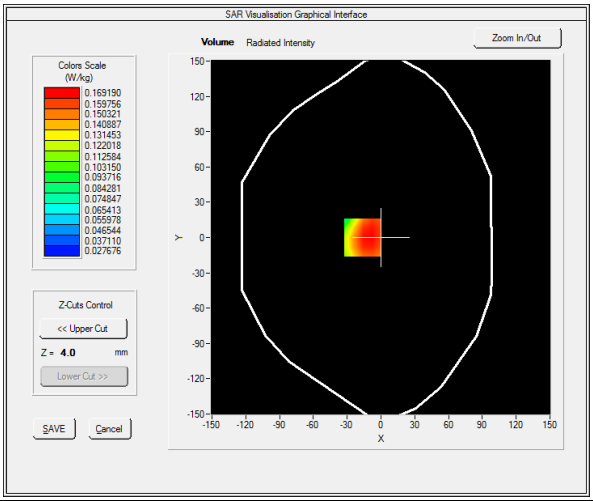
Type: Phone measurement (Complete)
Date of measurement: 2020-10-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Flat Plane |
| **Device Position** | Front |
| **Band** | GSM850 |
| **Channels** | Low |
| **Signal** | TDMA (Crest factor: 8.0) |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 824.200000 |
| **Relative Permittivity (real part)** | 55.751214 |
| **Conductivity (S/m)** | 0.962454 |
| **Power Variation (%)** | 0.721472 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



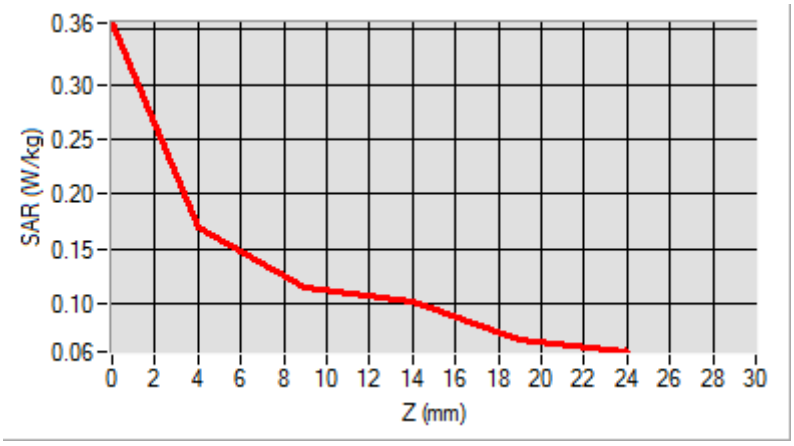


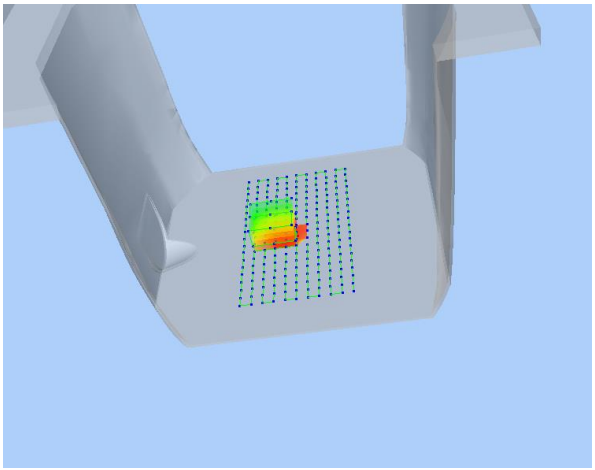
**Maximum location: X=-16.00, Y=0.00**

**SAR Peak: 0.23 W/kg**

| SAR 10g (W/Kg) | 0.126511 |
|---|---|
| SAR 1g (W/Kg) | 0.168708 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.3560 | 0.1692 | 0.1151 | 0.1021 | 0.0668 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 75

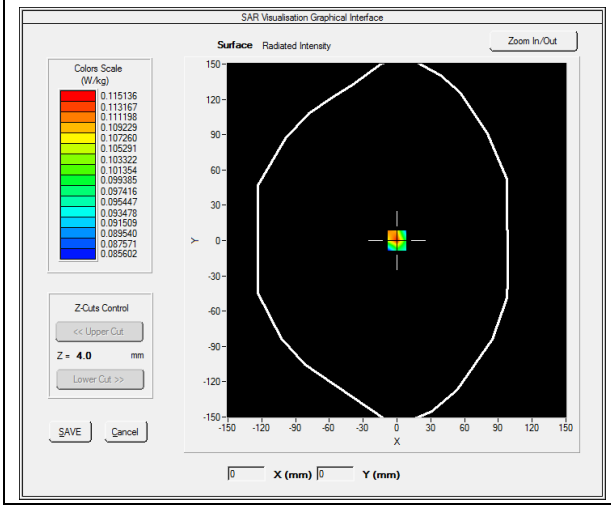
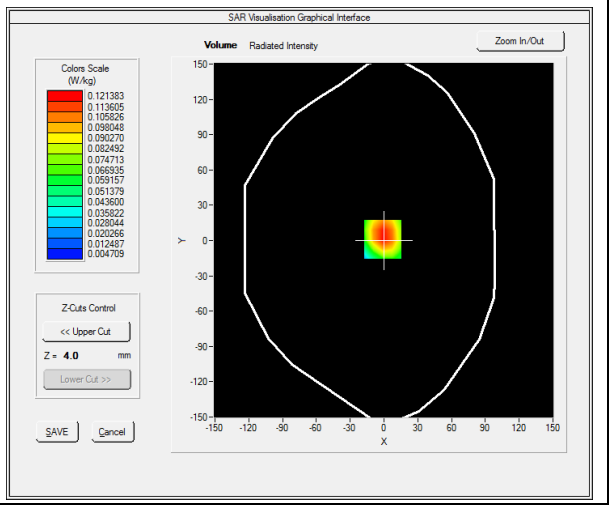
Type: Phone measurement (Complete)
Date of measurement: 2020-11-09
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Flat Plane |
| **Device Position** | Back |
| **Band** | GSM1900 |
| **Channels** | Low |
| **Signal** | TDMA (Crest factor: 8.0) |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1850.200000 |
| **Relative Permittivity (real part)** | 53.402415 |
| **Conductivity (S/m)** | 1.501966 |
| **Power Variation (%)** | -1.100000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



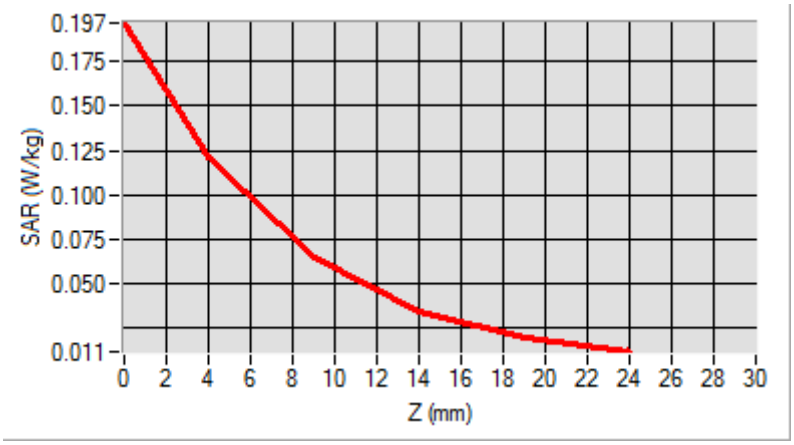


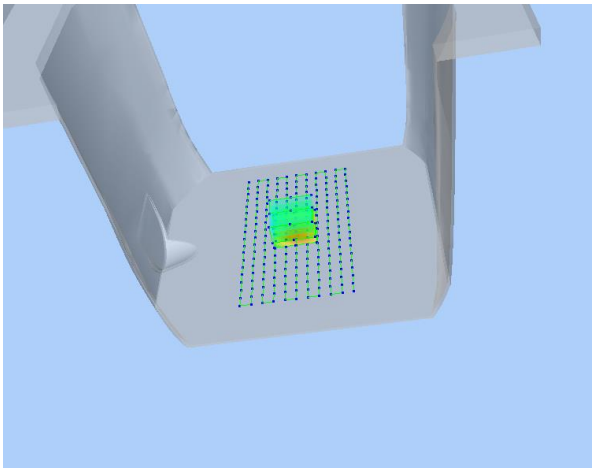
**Maximum location: X=-1.00, Y=1.00**

**SAR Peak: 0.20 W/kg**

| SAR 10g (W/Kg) | 0.064140 |
|---|---|
| SAR 1g (W/Kg) | 0.116271 |

| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 |
|---|---|---|---|---|---|
| SAR (W/Kg) | 0.1969 | 0.1214 | 0.0643 | 0.0344 | 0.0197 |




| 3D screen shot | Hot spot position |
|---|---|
|  |  |

# MEASUREMENT 109

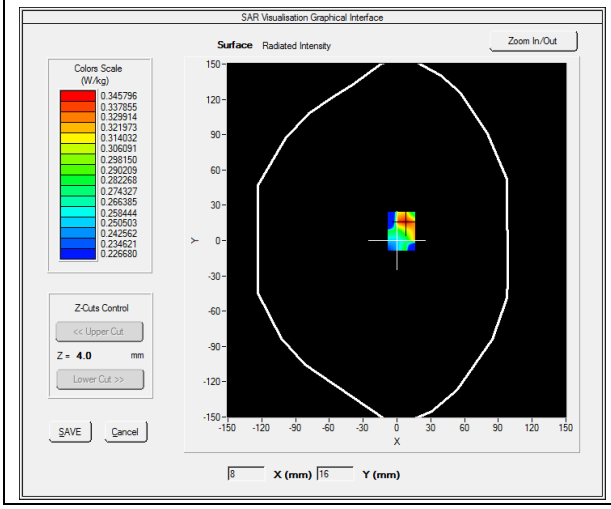
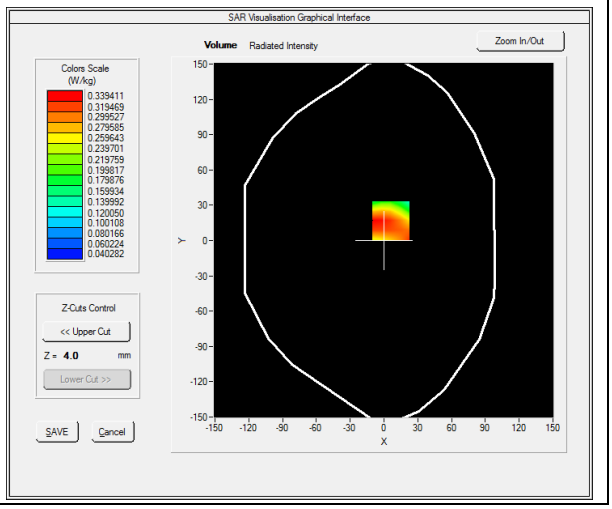
Type: Phone measurement (Complete)
Date of measurement: 2020-10-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Flat plane |
| **Device Position** | Back |
| **Band** | GPRS850_3TX |
| **Channels** | Middle |
| **Signal** | Duty Cycle: 1:4 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 836.600000 |
| **Relative Permittivity (real part)** | 55.681264 |
| **Conductivity (S/m)** | 0.966454 |
| **Power Variation (%)** | 1.108572 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |



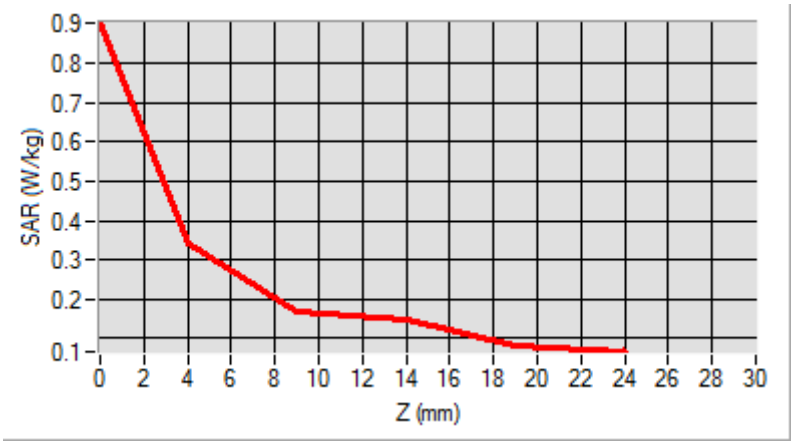


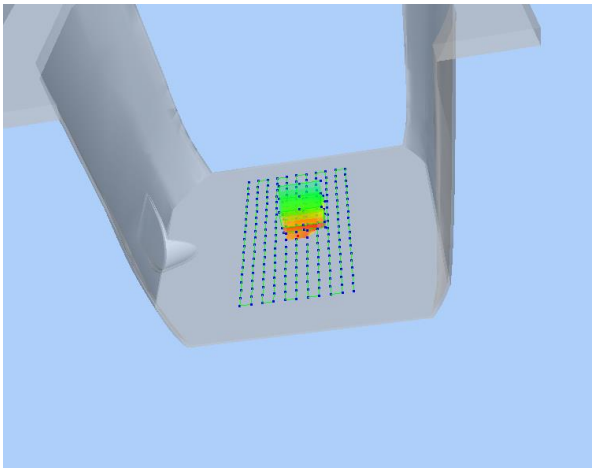
**Maximum location: X=6.00, Y=17.00**

**SAR Peak: 0.48 W/kg**

| | |
|---|---|
| **SAR 10g (W/Kg)** | **0.206900** |
| **SAR 1g (W/Kg)** | **0.326440** |

| **Z (mm)** | **0.00** | **4.00** | **9.00** | **14.00** | **19.00** |
|---|---|---|---|---|---|
| **SAR (W/Kg)** | **0.9023** | **0.3394** | **0.1704** | **0.1493** | **0.0807** |




| **3D screen shot** | **Hot spot position** |
|---|---|
|  |  |

# MEASUREMENT 114

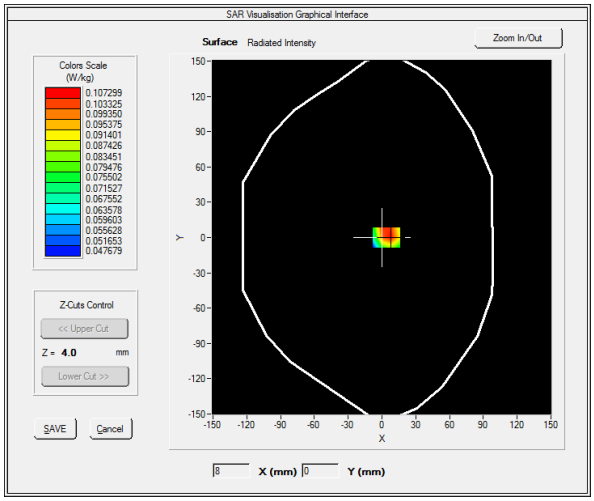
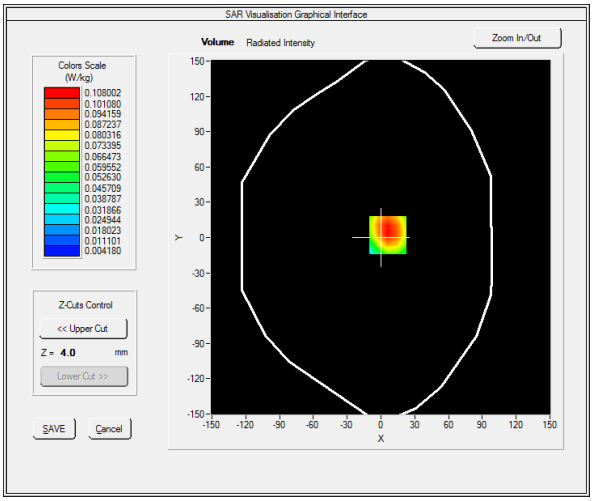
Type: Phone measurement (Complete)
Date of measurement: 2020-11-09
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - SN 45/15 EPGO280; ConvF: Refer to the Calibration Certificate; Calibrated: 2020-07-03

## A. Experimental conditions

| | |
|---|---|
| **Area Scan** | sam_direct_droit2_surf8mm.txt |
| **Phantom** | Flat plane |
| **Device Position** | Back |
| **Band** | GPRS1900_3TX |
| **Channels** | High |
| **Signal** | Duty Cycle: 1:4 |

## B. SAR Measurement Results

| | |
|---|---|
| **Frequency (MHz)** | 1910.800000 |
| **Relative Permittivity (real part)** | 51.820415 |
| **Conductivity (S/m)** | 1.530966 |
| **Power Variation (%)** | -0.730000 |
| **Ambient Temperature** | 22.0 |
| **Liquid Temperature** | 22.2 |

| SURFACE SAR | VOLUME SAR |
|---|---|
|  |  |





**Maximum location: X=6.00, Y=2.00**