

11.4 Wi-Fi and BT Measurement result

The maximum power of BT is 6dBm and the maximum tune up is 8dBm.

The average conducted power for Wi-Fi is as following:

Table 11-18 WLAN2450 #1

| | 1 | WLAN24 | | | - | T |
|-----------|----------|---------|-----------|--------------|---------|----------|
| Band | Mode | Channel | Frequence | Data Rate | Tune-up | Measured |
| | | 11 | 2462 MHz | | 20.00 | 19.70 |
| | | 6 | 2437 MHz | 5.5Mbps | 20.50 | 20.29 |
| | | 1 | 2412 MHz | | 20.00 | 19.60 |
| | | 11 | 2462 MHz | | / | / |
| | | 6 | 2437 MHz | 2Mbps | 20.50 | 19.93 |
| | 802.11b | 1 | 2412 MHz | | / | / |
| | | 11 | 2462 MHz | Variation of | 20.00 | 19.40 |
| | | 6 | 2437 MHz | 1Mbps | 20.50 | 19.91 |
| | | 1 | 2412 MHz | | 20.00 | 19.36 |
| | | 11 | 2462 MHz | | / | / |
| | | 6 | 2437 MHz | 11Mbps | 20.50 | 19.80 |
| | | 1 | 2412 MHz | | / | / |
| | | 11 | 2462 MHz | C) there | 19.50 | 18.72 |
| | | 6 | 2437 MHz | 6Mbps | 19.50 | 19.07 |
| | | 1 | 2412 MHz | | 19.50 | 18.78 |
| | | 11 | 2462 MHz | Olthon | 10.00 | 10.05 |
| | | 6 | 2437 MHz | 9Mbps | 19.00 | 18.85 |
| | | 1 | 2412 MHz | | / | 1 |
| | | 11 | 2462 MHz | 40111 | 10.00 | 1011 |
| | | 6 | 2437 MHz | 12Mbps | 19.00 | 18.14 |
| | | 1 | 2412 MHz | | / | / |
| | | 11 | 2462 MHz | 40111 | / | 10.00 |
| | 1301 | 6 | 2437 MHz | 18Mbps | 19.00 | 18.20 |
| | 802.11g | 1 | 2412 MHz | | / | / |
| | 18.50.00 | 11 | 2462 MHz | 0.41.0 | 10.00 | 10.00 |
| | | 6 | 2437 MHz | 24Mbps | 18.00 | 16.93 |
| | | 1 | 2412 MHz | | 1 | / |
| | | 11 | 2462 MHz | | / | / |
| | | 6 | 2437 MHz | 36Mbps | 18.00 | 16.90 |
| WLAN 2.4G | | 1 | 2412 MHz | | / | / |
| 20M | | 11 | 2462 MHz | 401.00 | / | / |
| | | 6 | 2437 MHz | 48Mbps | 18.00 | 16.92 |
| | | 1 | 2412 MHz | | / | / |
| | | 11 | 2462 MHz | 5445 | 10.00 | / |
| | | 6 | 2437 MHz | 54Mbps | 18.00 | 17.11 |
| | | 1 | 2412 MHz | | 10.50 | / |
| | | 11 | 2462 MHz | | 19.50 | 18.64 |
| | | 6 | 2437 MHz | MCS0 | 19.50 | 18.79 |
| | | 1 | 2412 MHz | | 19.50 | 18.51 |
| | | 11 | 2462 MHz | | / | / |
| | | 6 | 2437 MHz | MCS1 | 19.00 | 18.31 |
| | | 1 | 2412 MHz | | / | / |
| | | 11 | 2462 MHz | | / | 1 |
| | 1 | 6 | 2437 MHz | MCS2 | 19.00 | 18.45 |
| | | 1 | 2412 MHz | | / | / |
| | | 11 | 2462 MHz | | 1 | 1 |
| | | 6 | 2437 MHz | MCS3 | 18.00 | 16.97 |
| | 802.11n | 1 | 2412 MHz | | / | / |
| | 20M | 11 | 2462 MHz | | / | / |
| | | 6 | 2437 MHz | MCS4 | 18.00 | 16.94 |
| | | 1 | 2412 MHz | | / | 1 |
| | | 11 | 2462 MHz | | / | 1 |
| | | 6 | 2437 MHz | MCS5 | 18.00 | 16.93 |
| | | 1 | 2412 MHz | | / | 1 |
| | | 11 | 2462 MHz | | / | 1 |
| | 1 | 6 | 2437 MHz | MCS6 | 18.00 | 16.49 |
| | | 1 | 2412 MHz | l | 1 | 1 |
| | 1 | 11 | 2462 MHz | | / | 1 |
| | 1 | 6 | 2437 MHz | MCS7 | 17.00 | 15.89 |



| | | 1 | 2412 MHz | | 1 | 1 |
|-----------|---------|---|----------|------------|---|---|
| | | 9 | 2452 MHz | | 1 | / |
| | | 6 | 2437 MHz | MCS0 | 1 | 1 |
| | | 3 | 2422 MHz | | 1 | 1 |
| | 1 [| 9 | 2452 MHz | | 1 | 1 |
| | | 6 | 2437 MHz | MCS1 | 1 | 1 |
| | | 3 | 2422 MHz | | 1 | 1 |
| | 1 [| 9 | 2452 MHz | 1 | 1 | 1 |
| | | 6 | 2437 MHz | MCS2 | 1 | 1 |
| | | 3 | 2422 MHz | | 1 | 1 |
| | | 9 | 2452 MHz | | 1 | 1 |
| | | 6 | 2437 MHz | MCS3 | 1 | 1 |
| WLAN 2.4G | 802.11n | 3 | 2422 MHz | | 1 | 1 |
| 40M | 40M | 9 | 2452 MHz | | 1 | 1 |
| | | 6 | 2437 MHz | MCS4 | 1 | 1 |
| | | 3 | 2422 MHz | 1 11 11 11 | 1 | 1 |
| | 1 1 | 9 | 2452 MHz | | 1 | / |
| | 1 [| 6 | 2437 MHz | MCS5 | 1 | / |
| | | 3 | 2422 MHz | 1 11 11 11 | 1 | 1 |
| | | 9 | 2452 MHz | 1111111 | 1 | / |
| | | 6 | 2437 MHz | MCS6 | 1 | 1 |
| | 1 [| 3 | 2422 MHz | | 1 | 1 |
| | 1 [| 9 | 2452 MHz | | 1 | 1 |
| | | 6 | 2437 MHz | MCS7 | 1 | 1 |
| | l I | 3 | 2422 MHz | | 1 | 1 |

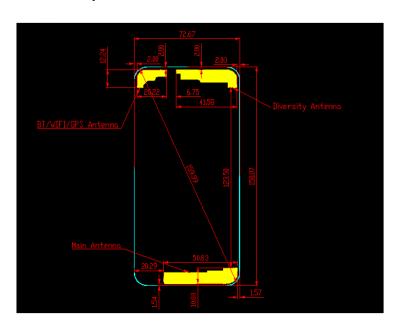


12 Simultaneous TX SAR Considerations

12.1 Introduction

The following procedures adopted from "FCC SAR Considerations for Cell Phones with Multiple Transmitters" are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter. For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances





Picture 12.1 Antenna Locations



12.3 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v02r01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

| SAR measurement positions | | | | | | | | |
|---|-----|-----|-----|-----|----|-----|--|--|
| Mode Front Rear Left edge Right edge Top edge Bottom edge | | | | | | | | |
| Main antenna | Yes | Yes | Yes | Yes | No | Yes | | |
| WiFi Yes Yes No Yes Yes No | | | | | | | | |

12.4 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] $\cdot [\sqrt{f(GHz)}] \le 3.0$ for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Table 12.1: Standalone SAR test exclusion considerations

| | | | SAR test | RF outpu | ut power | | |
|-----------------------|--------|----------|--------------------------------|----------|----------|--------------------|--|
| Band/Mode | F(GHz) | Position | exclusion threshold (mW) | dBm | mW | SAR test exclusion | |
| Dluotooth | 2.441 | Head | 9.6 | 8 | 6.31 | Yes | |
| Bluetooth | | Body | 19.2 | 8 | 6.31 | Yes | |
| 2.4GHz WLAN 802.11 b | 2.45 | Head | 9.58 | 20.5 | 112.20 | No | |
| 2.4GHZ WLAIN 602.11 D | 2.40 | Body | 19.17 | 20.5 | 112.20 | No | |



13 Evaluation of Simultaneous

Table 13.1: The sum of reported SAR values for main antenna and WiFi

| | Position | Main antenna | WLAN 2.4G | Sum | Distance (mm) | Ratio |
|--|---|-----------------|----------------|------|------------------|-------|
| Maximum reported SAR value for Head | Left hand, Touch cheek (WCDMA850) | 0.54 | 1.28 | 1.82 | 67.81 | 0.04 |
| | Left hand, Touch cheek (LTE Band5) | 0.36 | 1.28 | 1.64 | 73.56 | 0.03 |
| | Left hand, Touch cheek (LTE Band14) | 0.42 | 1.28 | 1.70 | 73.02 | 0.03 |
| Highest reported SAR value for Body 10mm | Rear (LTE Band4) | 1.17 | 0.34 | 1.51 | 1 | 1 |
| Highest reported SAR value for Body 10mm | SAR value for Body (LTE Band4) | | 0.34 (10mm) | 1.54 | 1 | 1 |

According to the KDB 447498 D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio. The ratio is determined by $(SAR1 + SAR2)^{1.5}/Ri$, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

Table 13.2: The sum of reported SAR values for main antenna and BT

| | Position | Main antenna | ВТ | Sum | |
|--------------------|------------------------|--------------|------|------|--|
| Maximum reported | Left hand, Touch cheek | 0.54 | 0.26 | 0.80 | |
| SAR value for Head | (WCDMA 850) | 0.54 | 0.20 | | |
| Maximum reported | Rear | 1.20 | 0.13 | 4 22 | |
| SAR value for Body | (LTE Band4) | 1.20 | 0.13 | 1.33 | |

[1] - Estimated SAR for Bluetooth (see the table 13.3)



Table 13.3: Estimated SAR for Bluetooth

| Mode/Band | E (CU-) | Position | Distance | Upper limit | Estimate d _{1g} | |
|-------------|---------|----------|----------|-------------|--------------------------|--------|
| Wiode/Barid | F (GHz) | Position | (mm) | dBm | mW | (W/kg) |
| Bluetooth | 2.441 | Head | 5 | 8 | 6.31 | 0.26 |
| Bluetooth | 2.441 | Body | 10 | 8 | 6.31 | 0.13 |

* - Maximum possible output power declared by manufacturer

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)]·[$\sqrt{f(GHz)/x}$] W/kg for test separation distances \leq 50 mm; where x = 7.5 for 1-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

Conclusion:

According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.



14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom. The distance is 10/15 mm and just applied to the condition of body worn accessory. It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-g SAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2W/kg.

The calculated SAR is obtained by the following formula:

Reported SAR = Measured SAR
$$\times 10^{(P_{Target} - P_{Measured})/10}$$

Where P_{Target} is the power of manufacturing upper limit;

 P_{Measured} is the measured power in chapter 11.

| Mode | Duty Cycle |
|----------------------------|------------|
| Speech for GSM850/1900 | 1:8.3 |
| GPRS&EGPRS for GSM850/1900 | 1:2 |
| WCDMA<E | 1:1 |

14.1 SAR results

Table 14-1 GSM850 #1 Head

| | 13.55.5 11 1 2 3 3 4 4 5 5 5 4 4 5 5 5 6 6 6 6 6 6 6 6 6 6 | | | | | | | | | | |
|-----------|--|---------------|---------------------|--------------|-----------|------------|----------------|-----------|--|--|--|
| | | | GS | M850 #1 Head | d | | | | | | |
| Ambient T | emperature: | | 22. | 5 | | Liquid Ter | mperature: | 22.3 | | | |
| | Device | SAR | Measured SAR [W/kg] | | | | orted SAR [\ | | | | |
| Mode | orientation | measurement | CH251 | CH190 | CH128 | CH251 | CH190 | CH128 | | | |
| | Offeritation | measurement | 848.8 MHz | 836.6 MHz | 824.2 MHz | 848.8 MHz | 836.6 MHz | 824.2 MHz | | | |
| | Tur | ne-up | 33.20 | 33.20 | 33.20 | | Scaling factor | r* | | | |
| | Slot Average | e Power [dBm] | 32.04 | 32.09 | 32.03 | 1.31 | 1.29 | 1.31 | | | |
| | Left Cheek | 1g SAR | 0.11 | 0.133 | 0.131 | 0.14 | 0.17 | 0.17 | | | |
| | | 10g SAR | 0.084 | 0.101 | 0.099 | 0.11 | 0.13 | 0.13 | | | |
| | | Deviation | -0.04 | 0.08 | 0.06 | -0.04 | 0.08 | 0.06 | | | |
| | Left Tilt | 1g SAR | | 0.093 | | | 0.12 | | | | |
| GSM | | 10g SAR | | 0.072 | | | 0.09 | | | | |
| GSW | | Deviation | | 0.11 | | | 0.11 | | | | |
| | | 1g SAR | | 0.121 | | | 0.16 | | | | |
| | Right Cheek | 10g SAR | | 0.09 | | | 0.12 | | | | |
| | | Deviation | | 0.14 | | | 0.14 | | | | |
| | Right Tilt | 1g SAR | | 0.085 | | | 0.11 | | | | |
| | | 10g SAR | | 0.065 | | | 0.08 | | | | |
| | | Deviation | | 0.09 | | | 0.09 | | | | |



Table 14-2 GSM850 #1 Body

| | | | GS | SM850 #1 Bod | у | | | |
|-----------|--------------|---------------|-------|--------------|-------|---------------------|----------------|-------|
| Ambient T | emperature: | 22.5 | | | | Liquid Ter | mperature: | 22.3 |
| | Device | SAR | Meas | sured SAR [| N/kg] | Reported SAR [W/kg] | | |
| Mode | | measurement | CH251 | CH190 | CH128 | CH251 | CH190 | CH128 |
| | | | | | | | 836.6 MHz | |
| | | ne-up | 32.00 | 32.00 | 32.00 | | Scaling factor | |
| | Slot Average | e Power [dBm] | 30.81 | 30.89 | 30.87 | 1.32 | 1.29 | 1.30 |
| | Front | 1g SAR | | 0.281 | | | 0.36 | |
| | | 10g SAR | | 0.213 | | | 0.27 | |
| | | Deviation | | -0.11 | | | -0.11 | |
| | Rear | 1g SAR | 0.409 | 0.416 | 0.477 | 0.54 | 0.54 | 0.62 |
| | | 10g SAR | 0.318 | 0.322 | 0.375 | 0.42 | 0.42 | 0.49 |
| GPRS 2 | | Deviation | 0.08 | -0.01 | -0.01 | 0.08 | -0.01 | -0.01 |
| Txslots | Left edge | 1g SAR | | 0.24 | | | 0.31 | |
| LASIOLS | | 10g SAR | | 0.169 | | | 0.22 | |
| | | Deviation | | -0.06 | | | -0.06 | |
| | | 1g SAR | | 0.295 | | | 0.38 | |
| | Right edge | 10g SAR | | 0.206 | | | 0.27 | |
| | | Deviation | | 0.07 | | | 0.07 | |
| | | 1g SAR | | 0.109 | | | 0.14 | |
| | Bottom edge | 10g SAR | | 0.07 | | | 0.09 | |
| | | Deviation | | -0.07 | | | -0.07 | |
| | Tur | ne-up | 32.00 | 32.00 | 32.00 | | Scaling factor | |
| EGPRS | Slot Average | e Power [dBm] | 30.81 | 30.88 | 30.85 | 1.31 | 1.30 | 1.30 |
| GMSK 2 | | 1g SAR | | | 0.472 | | | 0.61 |
| Txslots | Rear | 10g SAR | | | 0.371 | | | 0.48 |
| | C200000000 | Deviation | | | 0.04 | | | 0.04 |

Table 14-3 PCS1900 #1 Head

| | | | PCS19 | 00 #1 AP OFF | Head | | | |
|-----------|--------------|---------------|---------------------|--------------|--------|---------------------|----------------|--------|
| Ambient T | emperature: | | 22 | .5 | | Liquid Temperature: | | 22.3 |
| | Device | SAR | Measured SAR [W/kg] | | | | orted SAR [V | |
| Mode | | measurement | CH810 | CH661 | CH512 | CH810 | CH661 | CH512 |
| | Offeritation | measurement | 1909.8 | 1880 MHz | 1850.2 | 1909.8 | 1880 MHz | 1850.2 |
| | Tur | ne-up | 30.00 | 30.00 | 30.00 | : | Scaling factor | • |
| | Slot Average | e Power [dBm] | 28.38 | 28.37 | 28.21 | 1.45 | 1.45 | 1.51 |
| | Left Cheek | 1g SAR | | 0.069 | | | 0.10 | |
| | | 10g SAR | | 0.06 | | | 0.09 | |
| | | Deviation | | -0.03 | | | -0.03 | |
| | | 1g SAR | | <0.01 | | | <0.01 | |
| GSM | Left Tilt | 10g SAR | | <0.01 | | | <0.01 | |
| GSM | | Deviation | | 0.03 | | | 0.03 | |
| | | 1g SAR | 0.131 | 0.148 | 0.124 | 0.19 | 0.22 | 0.19 |
| | Right Cheek | 10g SAR | 0.091 | 0.095 | 0.086 | 0.13 | 0.14 | 0.13 |
| | | Deviation | -0.07 | 0.09 | 0.08 | -0.07 | 0.09 | 0.08 |
| | | 1g SAR | | <0.01 | | | <0.01 | |
| | Right Tilt | 10g SAR | | <0.01 | | | <0.01 | |
| | | Deviation | | 0.11 | | | 0.11 | |



Table 14-4 PCS1900 #1 AP OFF Body

| | | | PCS19 | 00 #1 AP OFF | Body | | | |
|-----------|--------------------------|---------------|---------------------|--------------|--------|-----------|----------------|--------|
| Ambient T | emperature: | 22.5 | | | | Liquid Te | mperature: | 22.3 |
| | Device | SAR | Measured SAR [W/kg] | | | | orted SAR [V | |
| Mode | orientation | measurement | CH810 | CH661 | CH512 | CH810 | CH661 | CH512 |
| | Offeritation | measurement | 1909.8 | 1880 MHz | 1850.2 | 1909.8 | 1880 MHz | 1850.2 |
| | Tu | ne-up | 28.00 | 28.00 | 28.00 | | Scaling factor | * |
| | Slot Average Power [dBm] | | 27.20 | 26.97 | 26.81 | 1.20 | 1.27 | 1.32 |
| | Front 15mm | 1g SAR | | 0.423 | | | 0.54 | |
| GPRS 2 | | 10g SAR | | 0.254 | | | 0.32 | |
| Txslots | | Deviation | | 0.03 | | | 0.03 | |
| | Rear 15mm | 1g SAR | 0.687 | 0.651 | 0.663 | 0.83 | 0.83 | 0.87 |
| | | 10g SAR | 0.391 | 0.384 | 0.378 | 0.47 | 0.49 | 0.50 |
| | | Deviation | 0.12 | 0.04 | 0.11 | 0.12 | 0.04 | 0.11 |
| | Tu | ne-up | 28.00 | 28.00 | 28.00 | | Scaling factor | * |
| EGPRS | Slot Averag | e Power [dBm] | 27.19 | 26.95 | 26.79 | 1.20 | 1.27 | 1.32 |
| GMSK 2 | | 1g SAR | 0.665 | | | 0.80 | | |
| Txslots | Rear 15mm | 10g SAR | 0.386 | | | 0.46 | | |
| | | Deviation | -0.01 | | | -0.01 | | |

Table 14-5 PCS1900 #2 AP ON Body

| | | | PCS19 | 900 #2 AP ON | Body | - | | |
|-----------|--------------|---------------|--------|--------------|--------|-----------|----------------|--------|
| Ambient T | emperature: | 22.5 | | | | Liquid Te | mperature: | 22.3 |
| | Device | SAR | | sured SAR [\ | | | orted SAR [W | |
| Mode | orientation | measurement | CH810 | CH661 | CH512 | CH810 | CH661 | CH512 |
| | | | 1909.8 | 1880 MHz | 1850.2 | 1909.8 | 1880 MHz | 1850.2 |
| | | ne-up | 22.50 | 22.50 | 22.50 | | Scaling factor | |
| | Slot Average | e Power [dBm] | 21.80 | 21.50 | 21.41 | 1.17 | 1.26 | 1.29 |
| | | 1g SAR | | 0.373 | | | 0.47 | |
| | Front | 10g SAR | | 0.197 | | | 0.25 | |
| | | Deviation | | 0.08 | | | 80.0 | |
| | Rear | 1g SAR | | 0.603 | | | 0.76 | |
| | | 10g SAR | | 0.303 | | | 0.38 | |
| GPRS 2 | | Deviation | | 0.04 | | | 0.04 | |
| Txslots | Left edge | 1g SAR | | 0.035 | | | 0.04 | |
| TASIOIS | | 10g SAR | | 0.019 | | | 0.02 | |
| | | Deviation | | 0.06 | | | 0.06 | |
| | Right edge | 1g SAR | | 0.063 | | | 0.08 | |
| | | 10g SAR | | 0.039 | | | 0.05 | |
| | | Deviation | | 0.03 | | | 0.03 | |
| | | 1g SAR | 0.695 | 0.671 | 0.619 | 0.82 | 0.84 | 0.80 |
| | Bottom edge | 10g SAR | 0.364 | 0.35 | 0.325 | 0.43 | 0.44 | 0.42 |
| | | Deviation | 0.09 | 0.07 | 0.13 | 0.09 | 0.07 | 0.13 |
| | Tur | ne-up | 22.50 | 22.50 | 22.50 | | Scaling factor | * |
| EGPRS | Slot Average | e Power [dBm] | 21.81 | 21.70 | 21.52 | 1.17 | 1.20 | 1.25 |
| GMSK 2 | | 1g SAR | 0.689 | | | 0.81 | | |
| Txslots | Bottom edge | 10g SAR | 0.368 | | | 0.43 | | |
| | | Deviation | 0.04 | | | 0.04 | | |



Table 14-6 WCDMA1900-BII #1 Head

| | | | WCDMA1 | 900-BII #1 AP | OFFHead | | | |
|------------|--------------|-------------|------------|---------------|---------|------------|----------------|------------|
| Ambient Te | emperature: | 22.5 | | | | Liquid Ten | 22.3 | |
| | Device | SAR | | sured SAR [V | | | orted SAR [V | |
| Mode | orientation | measurement | CH9538 | CH9400 | CH9262 | CH9538 | CH9400 | CH9262 |
| | | e-up | 1907.6 MHz | | | 1907.6 MHz | | 1852.4 MHz |
| | | | 23.20 | 23.20 | 23.20 | | Scaling factor | |
| | Slot Average | Power [dBm] | 22.04 | 22.06 | 22.02 | 1.31 | 1.30 | 1.31 |
| | l | 1g SAR | | 0.099 | | | 0.13 | |
| | Left Cheek | 10g SAR | | 0.069 | | | 0.09 | |
| | | Deviation | | 0.11 | | | 0.11 | |
| | Left Tilt | 1g SAR | | 0.051 | | | 0.07 | |
| RMC | | 10g SAR | | 0.033 | | | 0.04 | |
| KWIC | | Deviation | | 0.04 | | | 0.04 | |
| | | 1g SAR | 0.172 | 0.142 | 0.162 | 0.22 | 0.18 | 0.21 |
| | Right Cheek | 10g SAR | 0.106 | 0.086 | 0.1 | 0.14 | 0.11 | 0.13 |
| | | Deviation | 0.08 | -0.01 | -0.03 | 0.08 | -0.01 | -0.03 |
| | Right Tilt | 1g SAR | | 0.048 | | | 0.06 | |
| | | 10g SAR | | 0.03 | | | 0.04 | |
| | | Deviation | | -0.02 | | | -0.02 | |

Table 14-7 WCDMA1900-BII #1 AP OFF Body

| | | | WCDMA1 | 900-BII #1 AP | OFFBody | | | |
|------------------|--------------|--------------------------|------------|---------------|------------|-----------------|--------------|------------|
| Ambient T | emperature: | 22.5 | | | 11 | Liquid Ten | nperature: | 22.3 |
| and and the same | Device | SAR | | sured SAR [V | | | orted SAR [W | |
| Mode | orientation | measurement | CH9538 | CH9400 | CH9262 | CH9538 | CH9400 | CH9262 |
| | onentation | measurement | 1907.6 MHz | 1880 MHz | 1852.4 MHz | 1907.6 MHz | 1880 MHz | 1852.4 MHz |
| | Tune-up | | 23.20 | 23.20 | 23.20 | Scaling factor* | | |
| | Slot Average | Slot Average Power [dBm] | | 22.06 | 22.02 | 1.31 | 1.30 | 1.31 |
| | | 1g SAR | | 0.348 | | | 0.45 | |
| RMC | Front 15mm | 10g SAR | | 0.204 | | | 0.27 | |
| RIVIC | | Deviation | | 0.08 | | | 0.08 | |
| | | 1g SAR | 0.521 | 0.602 | 0.719 | 0.68 | 0.78 | 0.94 |
| | Rear 15mm | 10g SAR | 0.298 | 0.342 | 0.407 | 0.39 | 0.44 | 0.53 |
| | | Deviation | 0.12 | 0.02 | 0.1 | 0.12 | 0.02 | 0.10 |

Table 14-8 WCDMA1900-BII #2 AP ON Body

| | | | WCDMA | 1900-BII #2 AP | ONBody | | | |
|------------|--------------|-------------|------------|----------------|--------|------------|----------------|------------|
| Ambient To | emperature: | 22.5 | | | | Liquid Ter | nperature: | 22.3 |
| | Device | SAR | | sured SAR [\ | | | orted SAR [W | |
| Mode | | measurement | CH9538 | CH9400 | CH9262 | CH9538 | CH9400 | CH9262 |
| | | | 1907.6 MHz | | | 1907.6 MHz | | 1852.4 MHz |
| | | e-up | 20.20 | 20.20 | 20.20 | | Scaling factor | |
| | Slot Average | Power [dBm] | 18.93 | 18.95 | 18.92 | 1.34 | 1.33 | 1.34 |
| | I . | 1g SAR | | 0.346 | | | 0.46 | |
| | Front | 10g SAR | | 0.193 | | | 0.26 | |
| | l . | Deviation | | 0.06 | | | 0.06 | |
| | | 1g SAR | 0.621 | 0.634 | 0.676 | 0.83 | 0.85 | 0.91 |
| | Rear | 10g SAR | 0.311 | 0.334 | 0.365 | 0.42 | 0.45 | 0.49 |
| | | Deviation | -0.09 | 0.09 | 0.08 | -0.09 | 0.09 | 0.08 |
| RMC | | 1g SAR | | 0.028 | | | 0.04 | |
| | Left edge | 10g SAR | | 0.019 | | | 0.03 | |
| | | Deviation | | 0.13 | | | 0.13 | |
| | | 1g SAR | | 0.052 | | | 0.07 | |
| | Right edge | 10g SAR | | 0.033 | | | 0.04 | |
| | | Deviation | | 0.1 | | | 0.10 | |
| | | 1g SAR | 0.707 | 0.802 | 0.933 | 0.95 | 1.07 | 1.25 |
| | Bottom edge | 10g SAR | 0.385 | 0.432 | 0.496 | 0.52 | 0.58 | 0.67 |
| | | Deviation | 0.03 | -0.09 | -0.17 | 0.03 | -0.09 | -0.17 |



Table 14-9 WCDMA1700-BIV #1 Head

| | | | WCDMA1 | 700-BIV #1 AP | OFFHead | | | |
|------------|--------------|-------------|--------|---------------|------------|------------|----------------|--------|
| Ambient Te | emperature: | 22.5 | | | | Liquid Ter | 22.3 | |
| | Device | SAR | | sured SAR [V | | | orted SAR [V | |
| Mode | orientation | measurement | CH1513 | CH1412 | CH1312 | CH1513 | CH1412 | CH1312 |
| | | | | | 1712.4 MHz | | | |
| | Tun | ie-up | 22.50 | 22.50 | 22.50 | | Scaling factor | • |
| | Slot Average | Power [dBm] | 21.39 | 21.40 | 21.43 | 1.29 | 1.29 | 1.28 |
| | Left Cheek | 1g SAR | | 0.091 | | | 0.12 | |
| | | 10g SAR | | 0.058 | | | 0.07 | |
| | | Deviation | | 0.03 | | | 0.03 | |
| | Left Tilt | 1g SAR | | <0.01 | | | <0.01 | |
| RMC | | 10g SAR | | <0.01 | | | <0.01 | |
| RIVIC | | Deviation | | 0.07 | | | 0.07 | |
| | | 1g SAR | 0.135 | 0.125 | 0.121 | 0.17 | 0.16 | 0.15 |
| | Right Cheek | 10g SAR | 0.086 | 0.08 | 0.078 | 0.11 | 0.10 | 0.10 |
| | | Deviation | 0 | 0.12 | 0.11 | 0.00 | 0.12 | 0.11 |
| | Right Tilt | 1g SAR | | <0.01 | | | <0.01 | |
| | | 10g SAR | | <0.01 | | | <0.01 | |
| | | Deviation | | 0.12 | | | 0.12 | |

Table 14-10 WCDMA1700-BIV #1 AP OFF Body

| | | | WCDMA1 | 700-BIV #1 AP | OFFBody | | | |
|------------|--------------------------|-------------|------------|---------------|------------|-----------------|--------------|------------|
| Ambient To | emperature: | 22.5 | 1111 | | | Liquid Ter | mperature: | 22.3 |
| 1227 2 | Device | SAR | | sured SAR [V | | | orted SAR [W | |
| Mode | orientation | measurement | CH1513 | CH1412 | CH1312 | CH1513 | CH1412 | CH1312 |
| 111111111 | Offeritation | measurement | 1752.6 MHz | 1732.4 MHz | 1712.4 MHz | 1752.6 MHz | 1732.4 MHz | 1712.4 MHz |
| | Tune-up | | 22.50 | 22.50 | 22.50 | Scaling factor* | | |
| | Slot Average Power [dBm] | | 21.39 | 21.40 | 21.43 | 1.29 | 1.29 | 1.28 |
| | | 1g SAR | | 0.41 | | | 0.53 | |
| RMC | Front 15mm | 10g SAR | | 0.243 | | | 0.31 | |
| RIVIC | | Deviation | | 0.05 | | | 0.05 | |
| | | 1g SAR | 0.775 | 0.748 | 0.667 | 1.00 | 0.96 | 0.85 |
| | Rear 15mm | 10g SAR | 0.443 | 0.426 | 0.379 | 0.57 | 0.55 | 0.48 |
| | | Deviation | 0.02 | 0.07 | 0.12 | 0.02 | 0.07 | 0.12 |

Table 14-11 WCDMA1700-BIV #2 AP ON Body

| | | | MODMA | 1700 DN / 110 AD | OND- 4 | | | |
|-----------|--------------|-------------|--------|------------------|---------|--------|----------------|--------|
| | | | WCDMA1 | 1700-BIV #2 AP | UNBOOGY | | | |
| Ambient I | emperature: | 22.5 | | | | | mperature: | 22.3 |
| | Device | SAR | | sured SAR [V | | | orted SAR [W | |
| Mode | orientation | measurement | CH1513 | CH1412 | CH1312 | CH1513 | CH1412 | CH1312 |
| | | | | | | | 1732.4 MHz | |
| | | ie-up | 20.00 | 20.00 | 20.00 | | Scaling factor | |
| | Slot Average | Power [dBm] | 19.28 | 19.28 | 19.31 | 1.18 | 1.18 | 1.17 |
| | | 1g SAR | | 0.491 | | | 0.58 | |
| | Front | 10g SAR | | 0.275 | | | 0.32 | |
| | | Deviation | | 0.03 | | | 0.03 | |
| | Rear | 1g SAR | 0.878 | 0.844 | 0.712 | 1.04 | 1.00 | 0.83 |
| | | 10g SAR | 0.463 | 0.452 | 0.387 | 0.55 | 0.53 | 0.45 |
| | | Deviation | -0.01 | 0.09 | -0.04 | -0.01 | 0.09 | -0.04 |
| RMC | | 1g SAR | | 0.049 | | | 0.06 | |
| | Left edge | 10g SAR | | 0.033 | | | 0.04 | |
| | | Deviation | | 0.05 | | | 0.05 | |
| | | 1g SAR | | 0.039 | | | 0.05 | |
| | Right edge | 10g SAR | | 0.025 | | | 0.03 | |
| | | Deviation | | 0.04 | | | 0.04 | |
| | | 1g SAR | 0.946 | 0.876 | 0.758 | 1.12 | 1.03 | 0.89 |
| | Bottom edge | 10g SAR | 0.5 | 0.46 | 0.399 | 0.59 | 0.54 | 0.47 |
| | | Deviation | -0.13 | 0.05 | 0.01 | -0.13 | 0.05 | 0.01 |



Table 14-12 WCDMA850-BV #1 Head

| | | | WCD | MA850-BV #1F | lead | | | |
|------------|--------------|-------------|-----------|--------------|--------|------------|----------------|-----------|
| Ambient Te | emperature: | 22.5 | | | | Liquid Ter | 22.3 | |
| | Device | SAR | | sured SAR [V | | | orted SAR [V | |
| Mode | orientation | measurement | CH4233 | CH4183 | CH4132 | CH4233 | CH4183 | CH4132 |
| | | | 846.6 MHz | | | | | 826.4 MHz |
| | Tun | ie-up | 25.50 | 25.50 | 25.50 | | Scaling factor | - |
| | Slot Average | Power [dBm] | 24.32 | 24.34 | 24.28 | 1.31 | 1.31 | 1.32 |
| | | 1g SAR | 0.409 | 0.416 | 0.402 | 0.54 | 0.54 | 0.53 |
| | Left Cheek | 10g SAR | 0.317 | 0.323 | 0.311 | 0.42 | 0.42 | 0.41 |
| | | Deviation | 0.03 | 0.02 | 0.06 | 0.03 | 0.02 | 0.06 |
| | Left Tilt | 1g SAR | | 0.238 | | | 0.31 | |
| RMC | | 10g SAR | | 0.186 | | | 0.24 | |
| RIVIC | | Deviation | | 0.11 | | | 0.11 | |
| | | 1g SAR | | 0.332 | | | 0.43 | |
| | Right Cheek | 10g SAR | | 0.25 | | | 0.33 | |
| | | Deviation | | -0.03 | | | -0.03 | |
| | Right Tilt | 1g SAR | | 0.21 | | | 0.27 | |
| | | 10g SAR | | 0.163 | | | 0.21 | |
| | | Deviation | | 0.04 | | | 0.04 | |

Table 14-13 WCDMA850-BV #1 Body

| | | | WCD | MA850-BV #1E | Body | | | |
|------------|-------------|-------------|--------------------|--------------------|--------------------|------------|----------------------|--------|
| Ambient Te | emperature: | 22.5 | | | | Liquid Ter | mperature: | 22.3 |
| | Device | SAR | | sured SAR [V | | | orted SAR [W | |
| Mode | | measurement | CH4233 | CH4183 | CH4132 | CH4233 | CH4183 | CH4132 |
| | | e-up | 846.6 MHz 25.50 | 836.6 MHz 25.50 | 826.4 MHz 25.50 | 846.6 MHz | | |
| | | Power [dBm] | 24.32 | 24.34 | 24.28 | 1.31 | Scaling factor 1.31 | 1.32 |
| | | 1g SAR | | 0.378 | | | 0.49 | |
| | Front | 10g SAR | | 0.3 | | | 0.39 | |
| | | Deviation | | -0.04 | | | -0.04 | |
| | Rear | 1g SAR | 0.456 | 0.5 | 0.528 | 0.60 | 0.65 | 0.70 |
| | | 10g SAR | 0.363 | 0.393 | 0.416 | 0.48 | 0.51 | 0.55 |
| | | Deviation | 0 | -0.01 | -0.03 | 0.00 | -0.01 | -0.03 |
| RMC | Left edge | 1g SAR | | 0.37 | | | 0.48 | |
| | | 10g SAR | | 0.262 | | | 0.34 | |
| | | Deviation | | -0.06 | | | -0.06 | |
| | | 1g SAR | | 0.356 | | | 0.46 | |
| | Right edge | 10g SAR | | 0.253 | | | 0.33 | |
| | | Deviation | | 0.08 | | | 0.08 | |
| | | 1g SAR | | 0.176 | | | 0.23 | |
| | Bottom edge | 10g SAR | | 0.113 | | | 0.15 | |
| | | Deviation | | 0.03 | | | 0.03 | |



Table 14-14 LTE1900-FDD2 #1 Head

| | | | LTE1 | 1900-FDD2 #1 | Head | | | | |
|------------|--------------------|-------------|---------------------|--------------|-------|---------------------|----------------|-------|--|
| Ambient Te | emperature: | 22.5 | | | | Liquid Ter | mperature: | 22.3 | |
| | Device orientation | SAR | Mea | sured SAR [| W/kg] | Reported SAR [W/kg] | | | |
| Mode | | measureme | 19100 | 18900 | 18700 | 19100 | 18900 | 18700 | |
| | | nt | М | М | М | M | М | М | |
| | Tune-up | | 24.00 | 24.00 | 24.00 | | Scaling factor | | |
| | Measured F | Power [dBm] | 23.61 | 23.60 | 23.60 | 1.09 | 1.10 | 1.10 | |
| | | 1g SAR | 0.108 | | | 0.12 | | | |
| | Left Cheek | 10g SAR | 0.074 | | | 0.08 | | | |
| | | Deviation | 0.12 | | | 0.12 | | | |
| | | 1g SAR | 0.049 | | | 0.05 | | | |
| 20MHz | Left Tilt | 10g SAR | 0.033 | | | 0.04 | | | |
| QPSK1RB | | Deviation | -0.09 | | | -0.09 | | | |
| | | 1g SAR | 0.209 | | | 0.23 | | | |
| | Right Cheek | 10g SAR | 0.129 | | | 0.14 | | | |
| | 100 | Deviation | 0.07 | | | 0.07 | | | |
| | Right Tilt | 1g SAR | 0.056 | | | 0.06 | | | |
| | | 10g SAR | 0.039 | | | 0.04 | | | |
| | | Deviation | 0.1 | | | 0.10 | | | |
| | | SAR | Measured SAR [W/kg] | | | Reported SAR [W/kg] | | | |
| TRUE | Device orientation | measureme | 19100 | 18900 | 18700 | 19100 | 18900 | 18700 | |
| | | nt | L | Н | М | L | Н | М | |
| | Tun | e-up | 23.00 | 23.00 | 23.00 | 9 | Scaling factor | • | |
| | Measured F | Power [dBm] | 22.67 | 22.70 | 22.64 | 1.08 | 1.07 | 1.09 | |
| | | 1g SAR | | 0.08 | | | 0.09 | | |
| | Left Cheek | 10g SAR | | 0.058 | | | 0.06 | | |
| | | Deviation | | -0.08 | | | -0.08 | | |
| | | 1g SAR | | 0.05 | | | 0.05 | | |
| 20MHz | Left Tilt | 10g SAR | | 0.035 | | | 0.04 | | |
| QPSK50% | | Deviation | | 0.11 | | | 0.11 | | |
| RB | | 1g SAR | | 0.133 | | | 0.14 | | |
| | Right Cheek | | | 0.089 | | | 0.10 | | |
| | | Deviation | | 0.08 | | | 0.08 | | |
| | | 1g SAR | | 0.046 | | | 0.05 | | |
| | Right Tilt | 10g SAR | | 0.031 | | | 0.03 | | |
| | ragni nit | Deviation | | 0.01 | | | 0.01 | | |