| | | | | |
|---|---|---|---|---|
| **Prüfbericht-Nr.:** *Test Report No.:* | **50050527 004** | **Auftrags-Nr.:** *Order No.:* | 164067041 | Seite 1 von 36 *Page 1 of 36* |
| **Kunden-Referenz-Nr.:** *Client Reference No.:* | N/A | **Auftragsdatum:** *Order date:* | 23.06.2016 | |
| **Auftraggeber:** *Client:* | GIEC TECHNOLOGY (HONG KONG) CO., LTD.<br>Unit 7, 22/F., Billion Trade Centre, 31 Hung To Road, Kwun Tong, Hongkong | | | |
| **Prüfgegenstand:** *Test item:* | 11.6" windows tablet | | | |
| **Bezeichnung / Typ-Nr.:** *Identification / Type No.:* | NS-P11W7100, NS-P11W7100-C, NS-P11xxxxxxxxx (x=0-9, A-Z, a-z, -or blank, for market purpose only) | | | |
| **Auftrags-Inhalt:** *Order content:* | FCC/IC Certification | | | |
| **Prüfgrundlage:** *Test specification:* | CFR Title 47 Part 2 Subpart J Section 2.1093<br>ANSI/IEEE C95.1-1992<br>IEEE 1528-2003<br>KDB 447498 D01 v06<br>KDB 248227 D01 v02<br>RSS-102 Issue 5 March 2015 | | | |
| **Wareneingangsdatum:** *Date of receipt:* | 29.06.2016 | | | |
| **Prüfmuster-Nr.:** *Test sample No.:* | A000381248-009 | | | |
| **Prüfzeitraum:** *Testing period:* | 30.06.2016 - 04.07.2016 | | | |
| **Ort der Prüfung:** *Place of testing:* | Audix Technology (Shenzhen) Co., Ltd. | | | |
| **Prüflaboratorium:** *Testing laboratory:* | TÜV Rheinland (Shenzhen) Co., Ltd. | | | |
| **Prüfergebnis*:** *Test result*:* | Pass | | | |

**geprüft von** / *tested by*:

| 26.05.2015 | Owen Tian/Senior Project Manager | |
|---|---|---|
| **Datum** *Date* | **Name / Stellung** *Name / Position* | **Unterschrift** *Signature* |

**kontrolliert von** / *reviewed by*:

| 26.05.2015 | Winnie Hou/Technical Certifier | |
|---|---|---|
| **Datum** *Date* | **Name / Stellung** *Name / Position* | **Unterschrift** *Signature* |

**Sonstiges** / *Other*: FCC ID: 2AIB2-P11W7100
IC: 21456-P11W7100

**Zustand des Prüfgegenstandes bei Anlieferung:** Prüfmuster vollständig und unbeschädigt
*Condition of the test item at delivery:* *Test item complete and undamaged*

| | | | | | |
|---|---|---|---|---|---|
| * Legende: | 1 = sehr gut | 2 = gut | 3 = befriedigend | 4 = ausreichend | 5 = mangelhaft |
| | P(ass) = entspricht o.g. Prüfgrundlage(n) | | F(ail) = entspricht nicht o.g. Prüfgrundlage(n) | N/A = nicht anwendbar | N/T = nicht getestet |
| *Legend:* | *1 = very good* | *2 = good* | *3 = satisfactory* | *4 = sufficient* | *5 = poor* |
| | *P(ass) = passed a.m. test specification(s)* | | *F(ail) = failed a.m. test specification(s)* | *N/A = not applicable* | *N/T = not tested* |



v04

# STATEMENT OF COMPLIANCE

| TEST ITEM | SPECIFICATION | RESULT |
|---|---|---|
| Specific Absorption Rate - Wi-Fi 802.11 b/g/n - 2.4GHz Band | Exposure Rules 47 C.F.R 2.1093<br>Radiofrequency Radiation Exposure Evaluation: Portable Devices<br>KDB 447498 D01 General RF Exposure Guidance v06<br>KDB 248227 D01 802.11 Wi-Fi SAR v02r01<br>KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03<br>KDB 865664 D02 RF Exposure Reporting v01r01<br>KDB 616217 D04 SAR for laptop and tablets v01r01<br>KDB 941225 D06 Hotspot Mode v02 | PASS |
| Specific Absorption Rate - Wi-Fi 802.11 a/n/ac - 5GHz Band U-NII-1 | | PASS |
| Specific Absorption Rate - Wi-Fi 802.11 a/n/ac - 5GHz Band U-NII-2A | | PASS |
| Specific Absorption Rate - Wi-Fi 802.11 a/n/ac - 5GHz Band U-NII-2C | | PASS |
| Specific Absorption Rate - Wi-Fi 802.11 a/n/ac - 5GHz Band U-NII-3 | | PASS |
| Specific Absorption Rate – Bluetooth BDR/EDR/LE - 2.4GHz Band | | PASS |

This device complies with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg) specified in CFR Title 47 Part 2 Subpart J Section 2.1093 and ANSI/IEEE C95.1-1992.

This device has been testd in accordance with the measurement methods and procedure specified in IEEE 1528-2003 and Published RF exposure KDB procedures

Refer to the maximum results of Specific Absorption Rate (SAR) durning testing as below.

| FREQUENCY BAND | EXPOSURE POSITION | EQUIPMENT CLASS | HIGHEST REPORTED SAR VALUE (W/KG) |
|---|---|---|---|
| 802.11 b/g/n - 2.4GHz Band | Body | DTS | 0.686 |
| 802.11 a/n/ac - 5GHz Band U-NII-1 | Body | NII | 0.693 |
| 802.11 a/n/ac - 5GHz Band U-NII-2A | Body | | 0.721 |
| 802.11 a/n/ac - 5GHz Band U-NII-2C | Body | | 0.773 |
| 802.11 a/n/ac - 5GHz Band U-NII-3 | Body | | 0.753 |

# Contents

# 1. General Remarks

## 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: System Performance Check
Appendix B: Test Plots of SAR Measurement
Appendix C: Calibration Certificate

# 2. Test Sites

## 2.1 Test Facilities

Audix Technology (Shenzhen) Co., Ltd.

**FCC Registration No.: R-3552)**
**(Test site Industry Canada No.: 5183A-1)**

No.6, Ke Feng Road, Block 52, Shenzhen Science & Industy Park,
Nanshan, Shenzhen, Guangdong, China (518057)

The tests at the test site have been conducted under the supervision of a TÜV engineer.

## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal Date | Cal. Interval |
|---|---|---|---|---|---|
| DASY5 SAR Test System | Speag | TX60 L speag | F09/5B1H1/01 | NCR | NCR |
| Wireless Communication Test Set | Agilent | E5515C | GB44300243 | Apr.24,16 | 1Year |
| Power Meter | Anritsu | ML2487A | 6K00002472 | Oct.17,15 | 1 Year |
| Power Sensor | Anritsu | MA2491A | 0033005 | Oct.17,15 | 1 Year |
| Signal Generator | HP | 83732B | VS34490501 | Apr.23,16 | 1 Year |
| Amplifier | Milmega | ZHL-42W | C620601316 | NCR | NCR |
| Dipole Validation Kits | Speag | D900V2 | 1d088 | May.23,14 | 3Year |
| Dipole Validation Kits | Speag | D1800V2 | 2d186 | May.23,14 | 3Year |
| Dipole Validation Kits | Speag | D2000V2 | 1055 | May.23,14 | 3Year |
| Dipole Validation Kits | Speag | D2450V2 | 862 | May.29,14 | 3Year |
| Dipole Validation Kits | Speag | D5GHzV2 | 1102 | Jun.16,14 | 3Year |
| Attenuator | Mini-Circuits | VAT-10+ | NO.1 | Apr.23,16 | 1Year |
| Data Acquisition Electronics | Speag | DAE4 | 899 | Feb.02,16 | 2Year |
| E-Field Probe | Speag | ES3DV3 | 3139 | Aug.10,15 | 3Year |
| E-Field Probe | Speag | EX3DV4 | 3767 | Jan.30,15 | 3Year |
| Network Analyzer | Agilent | E5071B | MY42403549 | Apr.24,16 | 1Year |
| Test Software | Schmid&Partner Englinnering AG | DASY5 | 52.8.7.1137 | N/A | N/A |
| NCR means no calibration required (calibrated with system). | | | | | |

# 3. General Product Information

## 3.1 Product Function and Intended Use

The EUTs are 11.6'' windows tablet with Wi-Fi, Bluetooth function.
These models are identical except the model name.
The EUTs have two antennas, two antennas cannot transmitter simultaneously.
For details refer to the User Manual and Circuit Diagram.

## 3.2 Ratings and System Details

**Table 2: Technical Specification of Wi-Fi**

| Technical Specification | Value |
|---|---|
| Kind of Equipment | 11.6" windows tablet |
| Type Designation | NS-P11W7100, NS-P11W7100-C, NS-P11xxxxxxxxx (x=0-9, A-Z, a-z, -or blank, for market purpose only) |
| FCC ID | 2AIB2-P11W7100 |
| IC | 21456-P11W7100 |
| Operating Frequency band | 2400 – 2483.5MHz, 5150 – 5850MHz |
| Extreme Temperature Range | 0~+40℃ |
| Operation Voltage | DC 3.7V (via built in battery) |
| Hardware version: | NS-P11W7100 |
| Software version: | Windows10.0.10586 |
| Antenna Gain | 1.6dBi |

**Table 3: Technical Specification of 2.4GHz, 802.11b/g/n**

| Item | Description | | | |
|---|---|---|---|---|
| | IEEE 802.11b | IEEE 802.11g | IEEE 802.11n (HT20) | IEEE 802.11n (HT40) |
| Operating Frequency band (MHz) | 2412 ~ 2472 | 2412 ~ 2472 | 2412 ~ 2472 | 2422 ~ 2452 |
| Channel Number | 13 | 13 | 13 | 9 |
| Modulation | DSSS (DBPSK, DQPSK), CCK) | OFDM (DBPSK, DQPSK) | OFDM (BPSK, QPSK, 16-QAM, 64-QAM) | OFDM (BPSK, QPSK, 16-QAM, 64-QAM) |
| Data Rate (Mbps) | 1, 2, 5, 11 | 6, 9, 12, 18, 24, 36, 48, 54 | MCS0 ~ MCS7 | MCS0 ~ MCS7 |
| Transmitter Output Power (Typical) (dBm) | 16 | 15.5 | 15.5 | 15 |
| Media Access Protocol | CSMA/CA with ACK | CSMA/CA with ACK | CSMA/CA with ACK | CSMA/CA with ACK |

**Table 4: List of WLAN Channel of 802.11b/g/n**

| 802.11b | | 802.11g | | 802.11n (HT20) | | 802.11n (HT40) | |
|---|---|---|---|---|---|---|---|
| Channel Number | Frequency (MHz) | Channel Number | Frequency (MHz) | Channel Number | Frequency (MHz) | Channel Number | Frequency (MHz) |
| 1 | 2412 | 1 | 2412 | 1 | 2412 | 3 | 2422 |
| 2 | 2417 | 2 | 2417 | 2 | 2417 | 4 | 2427 |
| 3 | 2422 | 3 | 2422 | 3 | 2422 | 5 | 2432 |
| 4 | 2427 | 4 | 2427 | 4 | 2427 | 6 | 2437 |
| 5 | 2432 | 5 | 2432 | 5 | 2432 | 7 | 2442 |
| 6 | 2437 | 6 | 2437 | 6 | 2437 | 8 | 2447 |
| 7 | 2442 | 7 | 2442 | 7 | 2442 | 9 | 2452 |
| 8 | 2447 | 8 | 2447 | 8 | 2447 | | |
| 9 | 2452 | 9 | 2452 | 9 | 2452 | | |
| 10 | 2457 | 10 | 2457 | 10 | 2457 | | |
| 11 | 2462 | 11 | 2462 | 11 | 2462 | | |

**Table 5: Technical Specification of 5GHz, 802.11a/n**

| Operating mode(s) / WiFi: | IEEE 802.11a | IEEE 802.11n HT20 | IEEE 802.11n HT40 |
|---|---|---|---|
| Test modulation | OFDM (BPSK, QPSK, 16-QAM, 64-QAM) | OFDM (BPSK, QPSK, 16-QAM, 64-QAM) | OFDM (BPSK, QPSK, 16-QAM, 64-QAM) |
| Transmit Frequency Range (MHz): | 5180 - 5825 | 5180 - 5825 | 5180 - 5825 |
| Channel Number | 25 | 25 | 12 |
| Data Rate (Mbps) | 6, 9, 12, 18, 24, 36, 48, 54 | MCS0 ~ MCS7 | MCS0 ~ MCS7 |
| Maximum tune-up average output power (dBm): | 13.5 | 13.5 | 14.5 |
| Media Access Protocol | CSMA/CA with ACK | CSMA/CA with ACK | CSMA/CA with ACK |

### Table 6: Technical Specification of 5GHz, 802.11ac

| Operating mode(s) / WiFi: | IEEE 802.11ac VHT20 | IEEE 802.11ac VHT40 | IEEE 802.11ac VHT80 |
|---|---|---|---|
| Test modulation | OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM) | OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM) | OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM) |
| Transmit Frequency Range (MHz): | 5180 - 5825 | 5180 - 5825 | 5180 - 5825 |
| Channel Number | 25 | 12 | 6 |
| Data Rate (Mbps) | MCS0 ~ MCS8 | MCS0 ~ MCS9 | MCS0 ~ MCS9 |
| Maximum tune-up average output power (dBm): | 13.5 | 14 | 13.5 |
| Media Access Protocol | CSMA/CA with ACK | CSMA/CA with ACK | CSMA/CA with ACK |

### Table 7: List of WLAN Channel of 5GHz 802.11a/n

| 802.11a | | 802.11n HT20 | | 802.11n HT40 | |
|---|---|---|---|---|---|
| Channel Number | Frequency (MHz) | Channel Number | Frequency (MHz) | Channel Number | Frequency (MHz) |
| 36 | 5180 | 36 | 5180 | 38 | 5190 |
| 40 | 5200 | 40 | 5200 | 46 | 5230 |
| 44 | 5220 | 44 | 5220 | 54 | 5270 |
| 48 | 5240 | 48 | 5240 | 62 | 5310 |
| 52 | 5260 | 52 | 5260 | 102 | 5510 |
| 56 | 5280 | 56 | 5280 | 110 | 5550 |
| 60 | 5300 | 60 | 5300 | 118 | 5590 |
| 64 | 5320 | 64 | 5320 | 126 | 5630 (only for FCC) |
| 100 | 5500 | 100 | 5500 | 134 | 5670 |
| 104 | 5520 | 104 | 5520 | 142 | 5710 |
| 108 | 5540 | 108 | 5540 | 151 | 5755 |
| 112 | 5560 | 112 | 5560 | 159 | 5795 |
| 116 | 5580 | 116 | 5580 | | |
| 120 | 5600 (only for FCC) | 120 | 5600 (only for FCC) | | |
| 124 | 5620 (only for FCC) | 124 | 5620 (only for FCC) | | |
| 128 | 5640 (only for FCC) | 128 | 5640 (only for FCC) | | |
| 132 | 5660 | 132 | 5660 | | |
| 136 | 5680 | 136 | 5680 | | |
| 140 | 5700 | 140 | 5700 | | |
| 144 | 5720 | 144 | 5720 | | |
| 149 | 5745 | 149 | 5745 | | |
| 153 | 5765 | 153 | 5765 | | |
| 157 | 5785 | 157 | 5785 | | |
| 161 | 5805 | 161 | 5805 | | |
| 165 | 5825 | 165 | 5825 | | |

**Table 8: List of WLAN Channel of 5GHz 802.11ac**

| 802.11ac VHT20 | | 802.11ac VHT40 | | 802.11ac VHT80 | |
|---|---|---|---|---|---|
| Channel Number | Frequency (MHz) | Channel Number | Frequency (MHz) | Channel Number | Frequency (MHz) |
| 36 | 5180 | 38 | 5190 | 42 | 5210 |
| 40 | 5200 | 46 | 5230 | 58 | 5290 |
| 44 | 5220 | 54 | 5270 | 106 | 5530 |
| 48 | 5240 | 62 | 5310 | 122 | 5610 (only for FCC) |
| 52 | 5260 | 102 | 5510 | 138 | 5690 |
| 56 | 5280 | 110 | 5550 | 155 | 5775 |
| 60 | 5300 | 118 | 5590 | | |
| 64 | 5320 | 126 | 5630 (only for FCC) | | |
| 100 | 5500 | 134 | 5670 | | |
| 104 | 5520 | 142 | 5710 | | |
| 108 | 5540 | 151 | 5755 | | |
| 112 | 5560 | 159 | 5795 | | |
| 116 | 5580 | | | | |
| 120 | 5600 (only for FCC) | | | | |
| 124 | 5620 (only for FCC) | | | | |
| 128 | 5640 (only for FCC) | | | | |
| 132 | 5660 | | | | |
| 136 | 5680 | | | | |
| 140 | 5700 | | | | |
| 144 | 5720 | | | | |
| 149 | 5745 | | | | |
| 153 | 5765 | | | | |
| 157 | 5785 | | | | |
| 161 | 5805 | | | | |
| 165 | 5825 | | | | |

**Table 9: Technical Specification of Bluetooth (BDR & EDR mode)**

| **Technical Specification** | **Value** |
|---|---|
| Kind of Equipment | 11.6" windows tablet |
| Type Designation | NS-P11W7100, NS-P11W7100-C, NS-P11xxxxxxxxx (x=0-9, A-Z, a-z, -or blank, for market purpose only) |
| FCC ID | 2AIB2-P11W7100 |
| IC | 21456-P11W7100 |
| Operating Frequency band | 2400 – 2483.5MHz |
| Channel separation | 1MHz |
| Extreme Temperature Range | 0~+40℃ |
| Operation Voltage | DC 3.7V (via built in battery) |
| Modulation | FHSS, GFSK, 8DPSK, π/4DQPSK |
| Bluetooth version | 4.0, Dual Mode |
| Antenna Gain | 1.6dBi |

**Table 10: RF channel and frequency of Bluetooth (BDR & EDR mode)**

| RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) |
|---|---|---|---|---|---|---|---|
| 0 | 2402.00 | 21 | 2423.00 | 42 | 2444.00 | 63 | 2465.00 |
| 1 | 2403.00 | 22 | 2424.00 | 43 | 2445.00 | 64 | 2466.00 |
| 2 | 2404.00 | 23 | 2425.00 | 44 | 2446.00 | 65 | 2467.00 |
| 3 | 2405.00 | 24 | 2426.00 | 45 | 2447.00 | 66 | 2468.00 |
| 4 | 2406.00 | 25 | 2427.00 | 46 | 2448.00 | 67 | 2469.00 |
| 5 | 2407.00 | 26 | 2428.00 | 47 | 2449.00 | 68 | 2470.00 |
| 6 | 2408.00 | 27 | 2429.00 | 48 | 2450.00 | 69 | 2471.00 |
| 7 | 2409.00 | 28 | 2430.00 | 49 | 2451.00 | 70 | 2472.00 |
| 8 | 2410.00 | 29 | 2431.00 | 50 | 2452.00 | 71 | 2473.00 |
| 9 | 2411.00 | 30 | 2432.00 | 51 | 2453.00 | 72 | 2474.00 |
| 10 | 2412.00 | 31 | 2433.00 | 52 | 2454.00 | 73 | 2475.00 |
| 11 | 2413.00 | 32 | 2434.00 | 53 | 2455.00 | 74 | 2476.00 |
| 12 | 2414.00 | 33 | 2435.00 | 54 | 2456.00 | 75 | 2477.00 |
| 13 | 2415.00 | 34 | 2436.00 | 55 | 2457.00 | 76 | 2478.00 |
| 14 | 2416.00 | 35 | 2437.00 | 56 | 2458.00 | 77 | 2479.00 |
| 15 | 2417.00 | 36 | 2438.00 | 57 | 2459.00 | 78 | 2480.00 |
| 16 | 2418.00 | 37 | 2439.00 | 58 | 2460.00 | | |
| 17 | 2419.00 | 38 | 2440.00 | 59 | 2461.00 | | |
| 18 | 2420.00 | 39 | 2441.00 | 60 | 2462.00 | | |
| 19 | 2421.00 | 40 | 2442.00 | 61 | 2463.00 | | |
| 20 | 2422.00 | 41 | 2443.00 | 62 | 2464.00 | | |

**Table 11: Technical Specification of Bluetooth (Low Energy mode)**

| **Technical Specification** | **Value** |
|---|---|
| Kind of Equipment | 11.6" windows tablet |
| Type Designation | NS-P11W7100, NS-P11W7100-C, NS-P11xxxxxxxx (x=0-9, A-Z, a-z, -or blank, for market purpose only) |
| FCC ID | 2AIB2-P11W7100 |
| IC | 21456-P11W7100 |
| Operating Frequency band | 2400 – 2483.5MHz |
| Channel separation | 2MHz |
| Extreme Temperature Range | 0~+40℃ |
| Operation Voltage | DC 3.7V (via built in battery) |
| Modulation | GFSK |
| Bluetooth version | 4.0, Dual Mode |
| Antenna Gain | 1.6dBi |

**Table 12: RF channel and frequency of Bluetooth (Low Energy mode)**

| RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) | RF Channel | Frequency (MHz) |
|---|---|---|---|---|---|---|---|
| 0 | 2402.00 | 11 | 2424.00 | 22 | 2446.00 | 33 | 2468.00 |
| 1 | 2404.00 | 12 | 2426.00 | 23 | 2448.00 | 34 | 2470.00 |
| 2 | 2406.00 | 13 | 2428.00 | 24 | 2450.00 | 35 | 2472.00 |
| 3 | 2408.00 | 14 | 2430.00 | 25 | 2452.00 | 36 | 2474.00 |
| 4 | 2410.00 | 15 | 2432.00 | 26 | 2454.00 | 37 | 2476.00 |
| 5 | 2412.00 | 16 | 2434.00 | 27 | 2456.00 | 38 | 2478.00 |
| 6 | 2414.00 | 17 | 2436.00 | 28 | 2458.00 | 39 | 2480.00 |
| 7 | 2416.00 | 18 | 2438.00 | 29 | 2460.00 | | |
| 8 | 2418.00 | 19 | 2440.00 | 30 | 2462.00 | | |
| 9 | 2420.00 | 20 | 2442.00 | 31 | 2464.00 | | |
| 10 | 2422.00 | 21 | 2444.00 | 32 | 2466.00 | | |

## 3.3 Independent Operation Modes

The basic operation modes are:

A. On, transmitting
   1. 802.11b
   2. 802.11g
   3. 802.11n (HT20)
   4. 802.11n (HT40)
   5. 802.11a
   6. 802.11ac (VHT20)
   7. 802.11ac (VHT40)
   8. 802.11ac (VHT80)
   9. Bluetooth BDR
   10. Bluetooth EDR
   11. Bluetooth Low Energy

B. Off

## 3.4 Submitted Documents

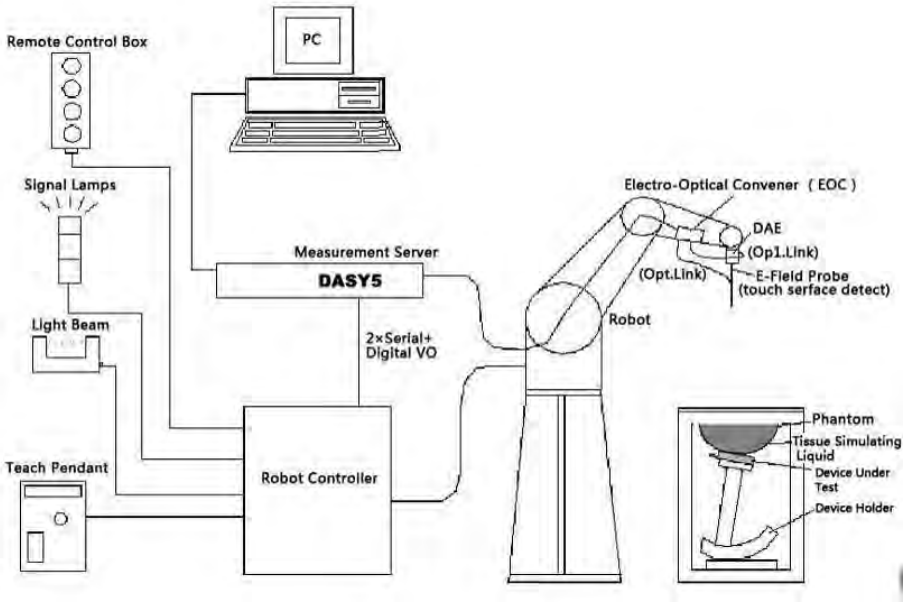
- Bill of Material
- Constructional Drawing
- PCB Layout
- Circuit Diagram
- Instruction Manual
- Rating Label

# 4. SAR Measurements System Configuration

## 4.1 SAR Measurements Set-up

The DASY5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- System validation dipoles allowing to validate the proper functioning of the system.




**Picture 1 SAR Lab Test Measurement Set-up**

## 4.2 DASY5 E-Fild Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 software reads the reflection turning a software approach and looks for the maximum using 2$^{nd}$ ord curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:
Model: EX3DV4
Frequency Range: 10MHz - 6.0GHz (EX3DV4)
Calibration: In head and body simulating tissue at
Frequencies from 835 up to 5800MHz
Linearity: ± 0.2 dB (30 MHz to 6 GHz) for EX3DV4
Dynamic Range: 10 mW/kg - 100W/kg
Probe Length: 330 mm
Probe Tip Length: 20 mm
Body Diameter: 12 mm
Tip Diameter: 2.5 mm
Tip-Center: 1 mm
Application: SAR Dosimetry Testing
Compliance tests of mobile phones
Dosimetry in strong gradient fields

**Picture 2 E-field Probe**

## 4.3 E-Filed Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm$^2$) using an RF Signal generator, TEM cell, and RF Power Meter.
The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and inn a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1 mw/ cm$^2$.
E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

Where:
$\Delta$t = Exposure time (30 seconds),
C = Heat capacity of tissue (brain or muscle),
$\Delta$T = Temperature increase due to RF exposure.

$$SAR = \frac{|E|^2 \cdot \sigma}{\rho}$$

Where:
σ = Simulated tissue conductivity,
ρ = Tissue density (kg/m$^3$).

## 4.4 Other Test Equipment

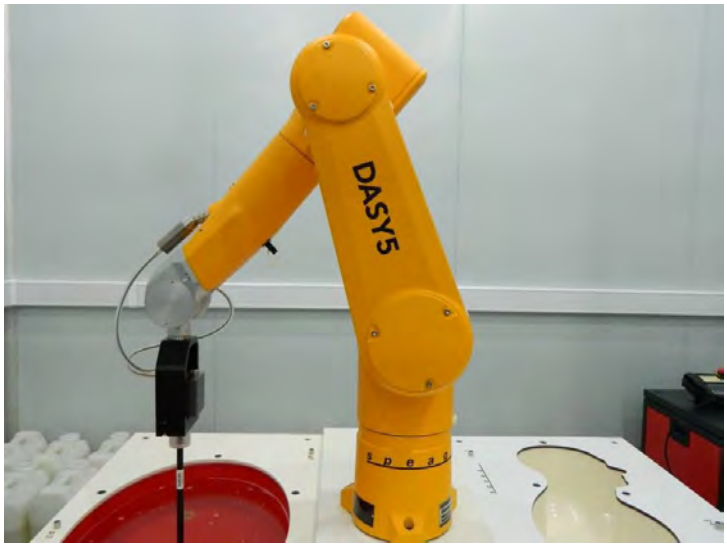
### 4.4.1 Data Acquisition Electronics (DAE)

The data acquisition electronics consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.
The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

## 4.4.2 Robot

The SPEAG DASY system uses the high precision robots (DASY5: TX60XL) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

High precision (repeatability 0.02mm)
High reliability (industrial design)
Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
Jerk-free straight movements (brushless synchron motors; no stepper motors)
Low ELF interference (motor control fields shielded via the closed metallic construction shields)




**Picture 3 DASY 5**

## 4.4.3 Measurement Server

The Measurement server is based on a PC/104 CPU broad with CPU (DASY5: 400 MHz, Intel Celeron), chip disk (DASY5: 128MB), RAM (DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O broad, which is directly connected to the PC/104 bus of the CPU broad.


**Picture 4 Server for DASY 5**

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a

watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

### 4.4.4 Device Holder for Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity $\varepsilon$ =3 and loss tangent $\delta$ =0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

<Laptop Extension Kit>

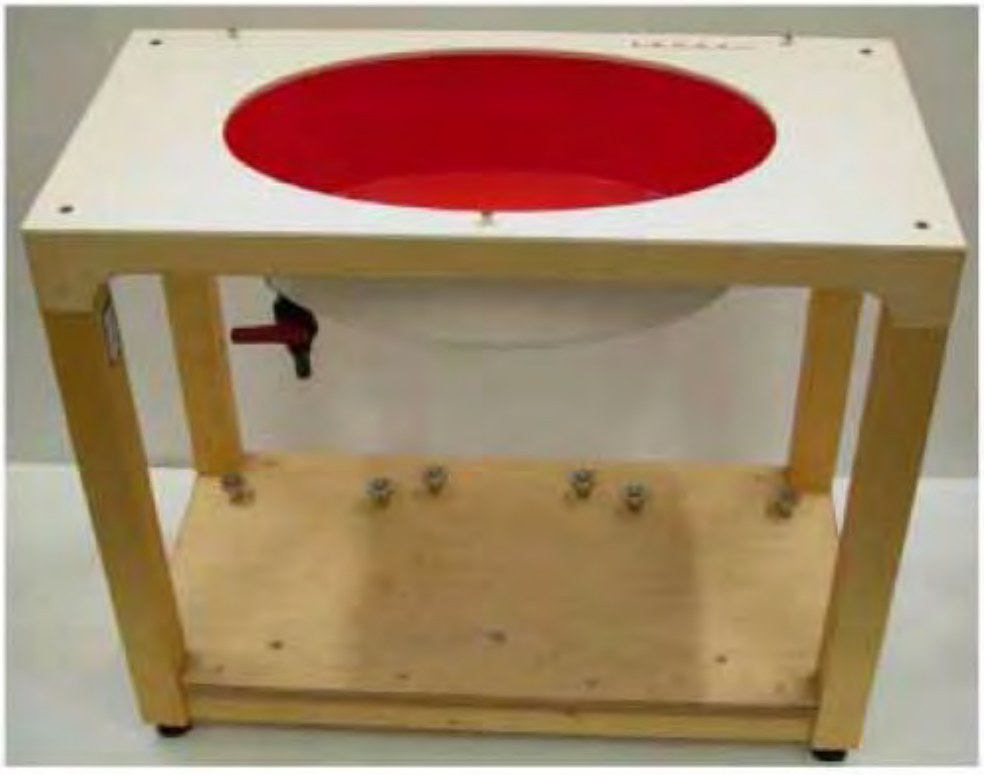
The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.

**Picture 5 Device Holder**

## 4.4.5 Phantom

Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.

| | |
|---|---|
| Material | Vinylester, glass fiber reinforced (VE-GF) |
| Liquid Compatibility | Compatible with all SPEAG tissue simulating liquids (incl. DGBE type) |
| Shell Thickness | 2.0 ± 0.2 mm (bottom plate) |
| Dimensions | Major axis: 600 mm<br>Minor axis: 400 mm |
| Filling Volume | approx. 30 liters |
| Wooden Support | SPEAG standard phantom table |



**Picture 8 ELI4 Phantom**

## 4.5 Scanning Procedure

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max. ± 5 %.

The “surface check” measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ± 0.1mm). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within ± 30°.)

Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot. Before starting the area scan a grid spacing is set according to FCC KDB Publication 865664. During scan the distance of the probe to the phantom remains unchanged. After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

Zoom Scan

After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm.

Spatial Peak Detection

The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses. The DASY5 system allows evaluations that combine measured data and robot positions, such as:

- maximum search
- extrapolation
- boundary correction
- peak search for averaged SAR

During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard’s method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are

necessary for the extrapolation. Extrapolation routines require at least 10 measurement points in 3-D space.

They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard's method for extrapolation.

A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01

| Frequency | Maximum Area Scan Resolution (mm) (Δxarea, Δyarea) | Maximum Zoom Scan Resolution (mm) (Δxzoom, Δyzoom) | Maximum Zoom Scan Spatial Resolution (mm) Δzzoom(n) | Minimum Zoom Scan Volume (mm) (x,y,z) |
|---|---|---|---|---|
| ≤2 GHz | ≤15 | ≤8 | ≤5 | ≥ 30 |
| 2-3 GHz | ≤12 | ≤5 | ≤5 | ≥30 |
| 3-4 GHz | ≤12 | ≤5 | ≤4 | ≥28 |
| 4-5 GHz | ≤10 | ≤4 | ≤3 | ≥25 |
| 5-6 GHz | ≤10 | ≤4 | ≤2 | ≥22 |

## 4.6 Data Storage and Evaluation

### 4.6.1 Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DAE4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device set up, the parameter can be corrected afterwards and the data can be re-evaluated.
The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a loss less media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

### 4.6.2 Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters: - Sensitivity $Norm_i$, $a_{i0}$, $a_{i1}$, $a_{i2}$

- Conversion factor ConvF$_i$

- Diode compression point Dcp$_i$

Device parameters: - Frequency f

- Crest factor cf

Media parameters: - Conductivity
- Density

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$\mathbf{V_i = U_i + U_i^2 \cdot c\,f / dcp_i}$

With $\mathbf{V_i}$ = compensated signal of channel i ( i = x, y, z )

$\mathbf{U_i}$ = input signal of channel i ( i = x, y, z )

**cf** = crest factor of exciting field (DASY parameter)

$\mathbf{dcp_i}$ = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $\mathbf{E_i = ( V_i / Norm_i \cdot ConvF )^{1/2}}$

H-field probes: $\mathbf{H_i = ( V_i )^{1/2} \cdot ( a_{i0} + a_{i1} f + a_{i2} f^2 ) / f}$

With $\mathbf{V_i}$ = compensated signal of channel i (i = x, y, z)

$\mathbf{Norm_i}$ = sensor sensitivity of channel i (i = x, y, z)

[mV/(V/m)2] for E-field Probes

**ConvF** = sensitivity enhancement in solution

$\mathbf{a_{ij}}$ = sensor sensitivity factors for H-field probes

**f** = carrier frequency [GHz]

$\mathbf{E_i}$ = electric field strength of channel i in V/m

$\mathbf{H_i}$ = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$\mathbf{E_{tot} = (E_x^2 + E_Y^2 + E_z^2)^{1/2}}$

The primary field data are used to calculate the derived field units.

**SAR = ($E_{tot}$) 2 · σ / (ρ· 1000)**

with **SAR** = local specific absorption rate in mW/g

$\mathbf{E_{tot}}$ = total field strength in V/m

= conductivity in [mho/m] or [Siemens/m]

= equivalent tissue density in g/cm$^3$

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

**$P_{pwe} = E_{tot}^2 / 3770$ or $P_{pwe} = H_{tot}^2 \cdot 37.7$**

with $\mathbf{P_{pwe}}$ = equivalent power density of a plane wave in mW/cm$^2$

$\mathbf{E_{tot}}$ = total electric field strength in V/m; $\mathbf{H_{tot}}$ = total magnetic field strength in A/m

# 5. Test Set-up and Operation Modes

## 5.1 Principle of Configuration Selection

The EUT is commanded to operate at maximum transmitting power. The EUT shall use its internal transmitter. The antenna, battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

**Table 13: Configuration of EUT**

| Operation mode | Frequency Range (MHz) | Modulation | Default Test Channel | | | Power Control Level |
|---|---|---|---|---|---|---|
| | | | Low | Middle | High | |
| 802.11b/g/n(HT20) | 2412-2462 | DSSS, OFDM | CH1 | CH6 | CH11 | Test software was used to configure the EUT to transmit at maximum output power |
| 802.11n(HT40) | 2422-2452 | OFDM | CH3 | CH6 | CH9 | |
| 802.11a/n(HT20)/ac(VHT20) (Band U-NII-1) | 5180-5240 | OFDM | CH36 | CH40 | CH48 | |
| 802.11a/n(HT20)/ac(VHT20) (Band U-NII-2A) | 5260-5320 | OFDM | CH52 | CH60 | CH64 | |
| 802.11a/n(HT20)/ac(VHT20) (Band U-NII-2C) | 5500-5720 | OFDM | CH100 | CH120 | CH144 | |
| 802.11a/n(HT20)/ac(VHT20) (Band U-NII-3) | 5745-5825 | OFDM | CH149 | CH157 | CH165 | |
| 802.11n(HT40)/ac(VHT40) (Band U-NII-1) | 5180-5240 | OFDM | CH38 | --- | CH46 | |
| 802.11n(HT40)/ac(VHT40) (Band U-NII-2A) | 5260-5320 | OFDM | CH54 | --- | CH62 | |
| 802.11n(HT40)/ac(VHT40) (Band U-NII-2C) | 5500-5720 | OFDM | CH101 | CH118 | CH142 | |
| 802.11n(HT40)/ac(VHT40) (Band U-NII-3) | 5745-5825 | OFDM | CH151 | --- | CH159 | |
| 802.11ac(VHT80) (Band U-NII-1) | 5180-5240 | OFDM | --- | CH42 | --- | |
| 802.11ac(VHT80) (Band U-NII-2A) | 5260-5320 | OFDM | --- | CH58 | --- | |
| 802.11ac(VHT80) (Band U-NII-2C) | 5500-5720 | OFDM | CH106 | CH122 | CH138 | |
| 802.11ac(VHT80) (Band U-NII-3) | 5745-5825 | OFDM | --- | CH155 | --- | |
| Bluetooth (BDR & EDR) | 2402-2480 | FHSS | CH0 | CH39 | CH78 | |
| Bluetooth (Low Energy) | 2402-2480 | GFSK | CH0 | CH19 | CH39 | |

## 5.2 Tissue Simulating Liquid Ingredients

The liquid is consisted of Water, Salt, Glycol and DGBE. The liquid has previously been proven to be suited for worst-case. The following table shows the detail solution.

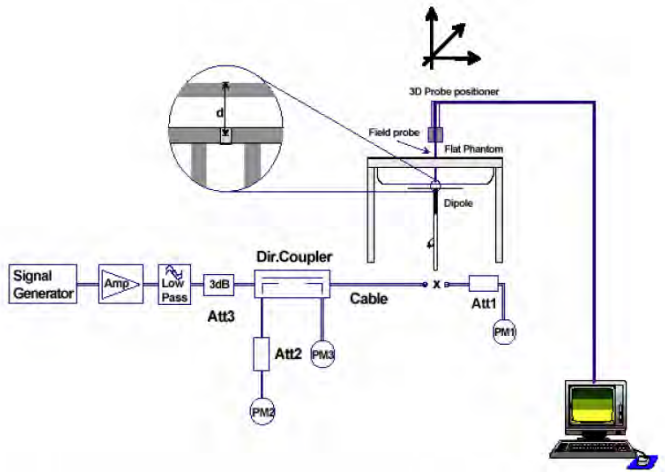
**Table 14: Composition of Tissue Simulating Liquid**

| MIXTURE%(Weight) | FREQUENCY (Body) 2450MHz |
|---|---|
| Water | 73.2 |
| Glycol | 26.7 |
| Salt | 0.1 |
| Dielectric Parameters Target Value | f=2450MHz ε=52.70 σ=1.95 |

| MIXTURE%(Weight) | FREQUENCY (Body) 5GHz |
|---|---|
| Water | 75.68 |
| DGBE | 4.42 |
| Triton X-100 | 19.47 |
| Salt | 0.43 |
| Dielectric Parameters Target Value | f=5200MHz ε=49.00 σ=5.30<br>f=5300MHz ε=48.90 σ=5.42<br>f=5500MHz ε=48.60 σ=5.65<br>f=5600MHz ε=48.50 σ=5.77<br>f=5800MHz ε=48.20 σ=6.00 |

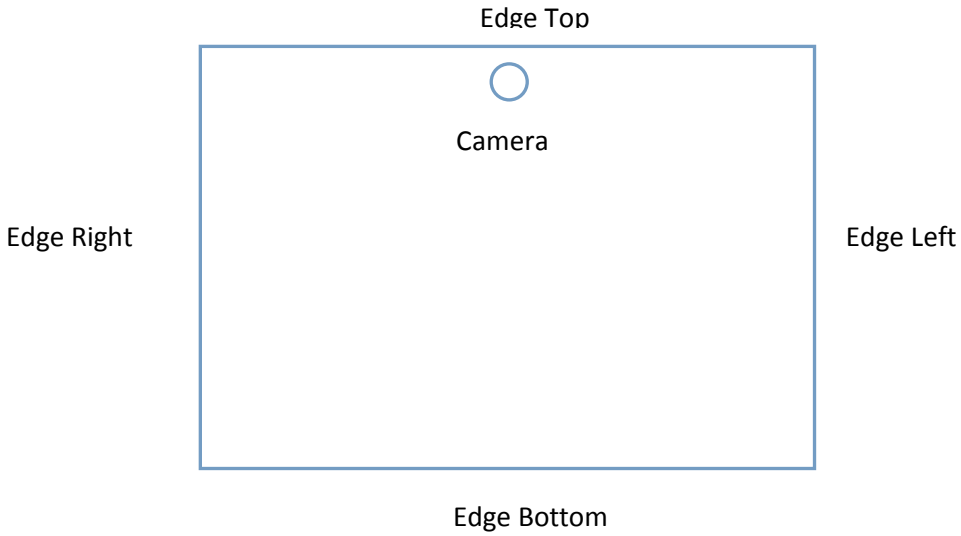
## 5.3 Specific Absorption Rate (SAR) System Check

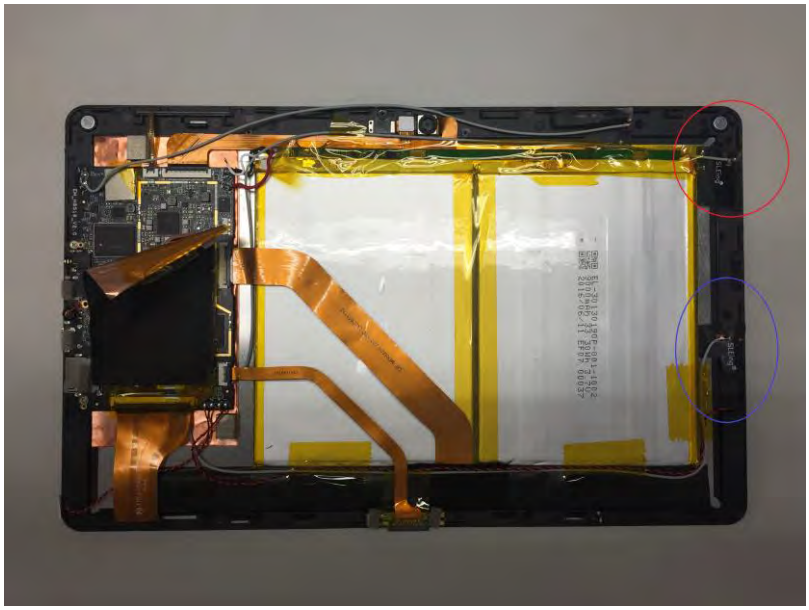
The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyzer. A system check measurement was made following the determination of the dielectric parameters of the simulant, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in Appendix A. System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system (±10 %). System check is performed regularly on all frequency bands where tests are performed with the DASY5 system.




**Picture 9 System Check Set-up**

## 5.4 Exposure Positions Consideration



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## 5.5 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

For WLAN SAR testing, WLAN engineering testing software installed on the EUT can provide continuous transmitting RF singal. This RF signal utilized in SAR measurement has almost 100% duty cycle and its crest factor is1.

For the 802.11a/b/g/n/ac SAR tests, a communication link is setup with the test mode software for WiFi mode test, during the test, each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate. Testing at higher data rates is not required when the maximum average output power is less than 0.25dB higher than those measured at the lowest data rate.

802.11a/b/g/n/ac operating modes are tested independentyly according to the service requirements in each frequency band. 802.11a/b/g/n/ac modes are tested on the maximum average output channel.

SAR is not required for 802.11g/n channels when the maximum average output power is lees than 0.25dB higher than that measured on the corresponding 802.11b channels.

For the 2.4GHz and 5GHz bands bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations, the lower order 802.11 mode is used for SAR measurement.

## 5.6 Special Accessories and Auxiliary Equipment

None.

# 6. Test Results

## 6.1 Huaman Exposure to Radiofrequency Electromagnetic Fields

**RESULT:** **Passed**

| | | |
|---|---|---|
| Date of testing | : | 2016-07-04 |
| Test standard | : | CFR Title 47 Part 2 Subpart J Section 2.1093<br>ANSI/IEEE C95.1-1992<br>IEEE 1528-2003 |
| FCC KDB Publication | : | KDB 447498 D01 v06<br>KDB 248227 D01 v01r02<br>KDB 616217 D04 v01r01<br>KDB 865664 D01 v01r01 |
| Limits | : | 1.6W/kg |

**Test setup**

| | | |
|---|---|---|
| Operation mode | : | A |
| Ambient temperature | : | 23℃ |
| Relative humidity | : | 50% |
| Atmospheric pressure | : | 101.0kPa |

Note: Wi-Fi antenna and Bluetooth cannot transmitter simultaneously.
According to the position of antenna and dimension of product, the test was carried out on Back face, edge Top & Left for ANT 1, was carried out on Back face & edge Left for ANT 2.
For 2.4GHz 802.11g/n OFDM SAR test, according to clause 5.2.2 b) of KDB 248227 D01 v02r02: the highest report SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is <1.2W/kg, hence this requirement is exclusion.

## Table 15: Test result of SAR Values of 2.4GHz ANT 1

| Mode | Channel | Test Position | Output Power | | Measured Results | | Scaled-1 | | Scaled-Final | | Power Drift (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Max. Scaled AV Power (dBm) | Measured AV Power (dBm) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg) | SAR10g (W/kg ) | |
| 802.11b | CH11 | Back | 16.00 | 15.61 | 0.504 | 0.221 | 0.551 | 0.242 | 0.552 | 0.242 | 0.03 |
| | | Top | | | 0.079 | 0.045 | 0.086 | 0.049 | 0.087 | 0.049 | 0.08 |
| | | Left | | | 0.092 | 0.048 | 0.101 | 0.053 | 0.101 | 0.053 | 0.15 |
| 80211n40 | CH6 | Back | 15.00 | 14.92 | 0.418 | 0.203 | 0.426 | 0.207 | 0.430 | 0.209 | 0.17 |
| | | Top | | | 0.038 | 0.018 | 0.039 | 0.018 | 0.039 | 0.019 | 0.15 |
| | | Left | | | 0.441 | 0.145 | 0.449 | 0.148 | 0.454 | 0.149 | 0.08 |
| Conclusion: PASS | | | | | | | | | | | |
| Note :<br>Factor= Max. Scaled AV Power(W)/Measured Power(W)<br>Scaled SAR-1= Measured SAR*Factor<br>Scaled-Final= Scaled SAR-1*(1/Duty Cycle)<br>The Max.Reported SAR : 0.552**W/kg for 1g SAR** | | | | | | | | | | | |

## Table 16: Test result of SAR Values of 2.4GHz ANT 2

| Mode | Channel | Test Position | Output Power | | Measured Results | | Scaled-1 | | Scaled-Final | | Power Drift (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Max. Scaled AV Power (dBm) | Measured AV Power (dBm) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg) | SAR10g (W/kg ) | |
| 802.11b | CH11 | Back | 15.5 | 15.11 | 0.561 | 0.244 | 0.614 | 0.267 | 0.615 | 0.267 | 0.01 |
| | | Left | | | 0.101 | 0.041 | 0.110 | 0.045 | 0.111 | 0.045 | -0.16 |
| 802.11n40 | CH6 | Back | 15.00 | 14.66 | 0.628 | 0.315 | 0.679 | 0.341 | 0.686 | 0.344 | 0.17 |
| | | Left | | | 0.095 | 0.049 | 0.065 | 0.033 | 0.065 | 0.034 | 0.14 |
| Conclusion: PASS | | | | | | | | | | | |
| Note :<br>Factor= Max. Scaled AV Power(W)/Measured Power(W)<br>Scaled SAR-1= Measured SAR*Factor<br>Scaled-Final= Scaled SAR-1*(1/Duty Cycle)<br>The Max.Reported SAR : 0.686**W/kg for 1g SAR** | | | | | | | | | | | |

## Table 17: Test result of SAR Values of 5GHz ANT 1

| Mode | Channel | Test Position | Output Power | | Measured Results | | Scaled-1 | | Scaled-Final | | Power Drift (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Max. Scaled AV Power (dBm) | Measured AV Power (dBm) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg) | SAR10g (W/kg) | |
| 802.11a | CH40 | Back | 13.00 | 12.75 | 0.349 | 0.169 | 0.370 | 0.179 | 0.372 | 0.180 | -0.07 |
| | | Top | | | 0.054 | 0.035 | 0.057 | 0.037 | 0.058 | 0.037 | 0.17 |
| | | Left | | | 0.554 | 0.155 | 0.587 | 0.164 | 0.591 | 0.165 | 0.05 |
| | CH60 | Back | 13.50 | 13.20 | 0.594 | 0.188 | 0.636 | 0.201 | 0.641 | 0.203 | 0.10 |
| | | Top | | | 0.040 | 0.013 | 0.043 | 0.014 | 0.043 | 0.014 | 0.04 |
| | | Left | | | 0.668 | 0.211 | 0.716 | 0.226 | 0.721 | 0.228 | 0.04 |
| | CH112 | Back | 13.00 | 12.35 | 0.579 | 0.182 | 0.672 | 0.211 | 0.677 | 0.213 | -0.16 |
| | | Top | | | 0.069 | 0.025 | 0.080 | 0.029 | 0.081 | 0.029 | -0.08 |
| | | Left | | | 0.647 | 0.183 | 0.751 | 0.213 | 0.757 | 0.214 | -0.11 |
| | CH120 | Back | 12.50 | 12.09 | 0.599 | 0.196 | 0.658 | 0.215 | 0.663 | 0.217 | 0.05 |
| | | Top | | | 0.082 | 0.029 | 0.090 | 0.032 | 0.091 | 0.032 | 0.13 |
| | | Left | | | 0.698 | 0.193 | 0.767 | 0.212 | 0.773 | 0.214 | -0.09 |
| | CH165 | Back | 14.00 | 13.52 | 0.459 | 0.160 | 0.513 | 0.179 | 0.516 | 0.180 | -0.09 |
| | | Top | | | 0.075 | 0.028 | 0.084 | 0.031 | 0.084 | 0.031 | -0.12 |
| | | Left | | | 0.669 | 0.215 | 0.747 | 0.240 | 0.753 | 0.242 | -0.08 |
| 802.11ac40 | CH46 | Back | 14.00 | 13.94 | 0.467 | 0.209 | 0.473 | 0.212 | 0.479 | 0.215 | -0.10 |
| | | Top | | | 0.073 | 0.042 | 0.074 | 0.043 | 0.075 | 0.043 | -0.07 |
| | | Left | | | 0.532 | 0.152 | 0.539 | 0.154 | 0.546 | 0.156 | -0.08 |
| 802.11n40 | CH54 | Back | 13.50 | 13.26 | 0.473 | 0.214 | 0.500 | 0.226 | 0.503 | 0.228 | -0.12 |
| | | Top | | | 0.075 | 0.044 | 0.079 | 0.046 | 0.080 | 0.047 | 0.05 |
| | | Left | | | 0.550 | 0.153 | 0.581 | 0.162 | 0.585 | 0.163 | 0.04 |
| | CH118 | Back | 13.50 | 13.36 | 0.564 | 0.249 | 0.582 | 0.257 | 0.586 | 0.259 | -0.08 |
| | | Top | | | 0.092 | 0.052 | 0.095 | 0.054 | 0.096 | 0.054 | 0.18 |
| | | Left | | | 0.630 | 0.176 | 0.651 | 0.182 | 0.655 | 0.183 | 0.01 |
| | CH151 | Back | 13.50 | 13.40 | 0.605 | 0.271 | 0.619 | 0.277 | 0.623 | 0.279 | 0.14 |
| | | Top | | | 0.122 | 0.060 | 0.125 | 0.061 | 0.126 | 0.062 | 0.00 |
| | | Left | | | 0.683 | 0.190 | 0.699 | 0.194 | 0.703 | 0.196 | -0.04 |

Conclusion: PASS

Note :

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

The Max.Reported SAR : 0.773**W/kg for 1g SAR**

### Table 18: Test result of SAR Values of 5GHz ANT 2

| Mode | Channel | Test Position | Output Power | | Measured Results | | Scaled-1 | | Scaled-Final | | Power Drift (dBm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Max. Scaled AV Power (dBm) | Measured AV Power (dBm) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg ) | SAR10g (W/kg ) | SAR1g (W/kg) | SAR10g (W/kg ) | |
| 11a | CH40 | Back | 14.00 | 13.58 | 0.625 | 0.414 | 0.688 | 0.456 | 0.693 | 0.459 | -0.11 |
| | | Left | | | 0.555 | 0.168 | 0.611 | 0.185 | 0.616 | 0.186 | 0.14 |
| | CH60 | Back | 13.50 | 13.45 | 0.645 | 0.478 | 0.652 | 0.484 | 0.657 | 0.487 | -0.16 |
| | | Left | | | 0.570 | 0.181 | 0.577 | 0.183 | 0.581 | 0.184 | -0.19 |
| | CH112 | Back | 14.00 | 13.56 | 0.518 | 0.354 | 0.573 | 0.392 | 0.577 | 0.395 | -0.16 |
| | | Left | | | 0.480 | 0.153 | 0.531 | 0.169 | 0.535 | 0.171 | 0.04 |
| | CH120 | Back | 13.50 | 13.17 | 0.609 | 0.324 | 0.657 | 0.350 | 0.662 | 0.352 | -0.04 |
| | | Left | | | 0.449 | 0.144 | 0.484 | 0.155 | 0.488 | 0.156 | -0.18 |
| | CH165 | Back | 13.50 | 13.13 | 0.629 | 0.383 | 0.685 | 0.417 | 0.690 | 0.420 | -0.06 |
| | | Left | | | 0.533 | 0.164 | 0.580 | 0.179 | 0.585 | 0.180 | -0.02 |
| 11ac40 | CH151 | Back | 14.00 | 13.77 | 0.617 | 0.338 | 0.651 | 0.356 | 0.659 | 0.361 | -0.12 |
| | | Left | | | 0.462 | 0.147 | 0.487 | 0.155 | 0.493 | 0.157 | -0.11 |
| 11n40 | CH46 | Back | 14.50 | 14.21 | 0.592 | 0.257 | 0.633 | 0.275 | 0.637 | 0.277 | 0.09 |
| | | Left | | | 0.367 | 0.118 | 0.392 | 0.126 | 0.395 | 0.127 | -0.17 |
| | CH54 | Back | 14.00 | 13.67 | 0.546 | 0.277 | 0.589 | 0.299 | 0.593 | 0.301 | -0.03 |
| | | Left | | | 0.373 | 0.119 | 0.402 | 0.128 | 0.405 | 0.129 | 0.02 |
| | CH118 | Back | 14.00 | 13.75 | 0.612 | 0.328 | 0.648 | 0.347 | 0.652 | 0.350 | -0.10 |
| | | Left | | | 0.461 | 0.148 | 0.488 | 0.157 | 0.491 | 0.158 | -0.14 |
| Conclusion: PASS | | | | | | | | | | | |
| Note :<br>Factor= Max. Scaled AV Power(W)/Measured Power(W)<br>Scaled SAR-1= Measured SAR*Factor<br>Scaled-Final= 0.693Scaled SAR-1*(1/Duty Cycle)<br>The Max.Reported SAR : 0.693 **W/kg for 1g SAR** | | | | | | | | | | | |

Refer to attached Appendix B for details of test results.

# 6.2 Measurement Uncertainty

## 6.2.1 Measurement uncertainty evaluation

This measurement uncertainty budget is suggested by IEEE P1528. The breakdown of the individual uncertainties is as follows:

**Table 19: Measurement Uncertainties**

AUDIX Technology (Shenzhen) Co., Ltd.

| Source | Type | Uncertainly Value (%) | Probability Distribution | K | C1(1g) | C1(10g) | Standard uncertainty ul(%)1g | Standard uncertainty ul(%)10g | Degree of freedom Veff or Vi |
|---|---|---|---|---|---|---|---|---|---|
| **Measurement system repetivity** | A | 0.5 | N | 1 | | 1 | 0.5 | 0.5 | 9 |
| Probe calibration | B | 5.9 | N | 1 | 1 | 1 | 5.9 | 5.9 | ∞ |
| Isotropy | B | 4.7 | R | √3 | 1 | 1 | 2.7 | 2.7 | ∞ |
| Linearity | B | 4.7 | R | √3 | 1 | 1 | 2.7 | 2.7 | ∞ |
| Probe modulation response | B | 0 | R | √3 | 1 | 1 | 0 | 0 | ∞ |
| Detection limits | B | 1.0 | R | √3 | 1 | 1 | 0.6 | 0.6 | ∞ |
| Boundary effect | B | 1.9 | R | √3 | 1 | 1 | 1.1 | 1.1 | ∞ |
| Readout electronics | B | 1.0 | N | 1 | 1 | 1 | 1.0 | 1.0 | ∞ |
| Response time | B | 0 | R | √3 | 1 | 1 | 0 | 0 | ∞ |
| Integration time | B | 4.32 | R | √3 | 1 | 1 | 2.5 | 2.5 | ∞ |
| RF ambient conditions – noise | B | 0 | R | √3 | 1 | 1 | 0 | 0 | ∞ |
| RF ambient conditions – reflections | B | 3 | R | √3 | 1 | 1 | 1.73 | 1.73 | ∞ |
| Probe positioner mech. restrictions | B | 0.4 | R | √3 | 1 | 1 | 0.2 | 0.2 | ∞ |
| Probe positioning with respect to phantom shell | B | 2.9 | R | √3 | 1 | 1 | 1.7 | 1.7 | ∞ |
| Post-processing | B | 0 | R | √3 | 1 | 1 | 0 | 0 | ∞ |
| **Test sample related** | | | | | | | | | |
| Device holder uncertainty | A | 2.94 | N | 1 | 1 | 1 | 2.94 | 2.94 | M-1 |
| Test sample positioning | A | 4.1 | N | 1 | 1 | 1 | 4.1 | 4.1 | M-1 |
| Power scaling | B | 5.0 | R | √3 | 1 | 1 | 2.9 | 2.9 | ∞ |
| Drift of output power (measured SAR drift) | B | 5.0 | R | √3 | 1 | 1 | 2.9 | 2.9 | ∞ |
| **Phantom and set-up** | | | | | | | | | |
| Phantom uncertainty (shape and thickness tolerances) | B | 4.0 | R | √3 | 1 | 1 | 2.3 | 2.1 | ∞ |
| Algorithm for correcting SAR for deviations in permittivity and conductivity | B | 1.9 | N | 1 | 1 | 0,84 | 1,9 | 1,6 | ∞ |
| Liquid conductivity (meas.) | A | 0.55 | N | 1 | 0.78 | 0.71 | 0.24 | 0.21 | M-1 |
| Liquid permittivity (meas.) | A | 0.19 | N | 1 | 0.23 | 0.26 | 0.09 | 0.06 | M |
| Liquid permittivity – temperature uncertainty | A | 5.0 | R | √3 | 0,78 | 0,71 | 1.4 | 1.1 | ∞ |
| Liquid conductivity – temperature uncertainty | A | 5.0 | R | √3 | 0.23 | 0,26 | 1.2 | 0.8 | ∞ |
| **Combined standard uncertainty** | $u_c' = \sqrt{\sum_{i=1}^{23} c_i^2 u_i^2}$ | | | | | | **10.57** | **10.32** | |
| **Expanded uncertainty (95 % conf. interval)** | $u_e = 2u_c$ | | N | | K=2 | | **21.14** | **20.64** | |

# 8. List of Tables



# 9. List of Photographs

**Test Laboratory: Audix SAR Lab** Date: 30/06/2016

## CW 2450

**DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:862**

Communication System: UID 0, CW ; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma$ = 1.982 S/m; $\varepsilon_r$ = 52.819; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

### Configuration/CW 2450/Area Scan (41x61x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 15.21 W/kg

### Configuration/ CW 2450/Zoom Scan (7x7x7)/Cube 0:

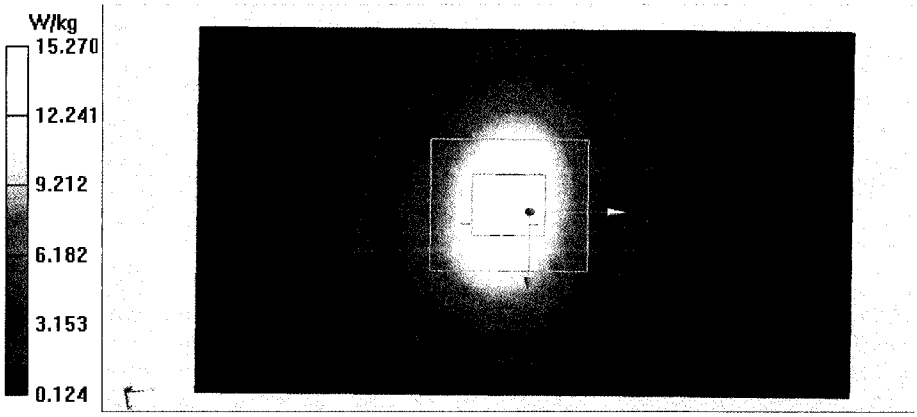
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.66 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 20.5 W/kg

**SAR(1 g) = 13.11 W/kg; SAR(10 g) = 6.01 W/kg**

Maximum value of SAR (measured) = 15.86 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/06/2016

## CW 5200

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB

Medium parameters used: f = 5200 MHz; $\sigma$ = 5.3 S/m; $\varepsilon_r$ = 49.73; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CW 5200/Area Scan (51x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 21.44 W/kg

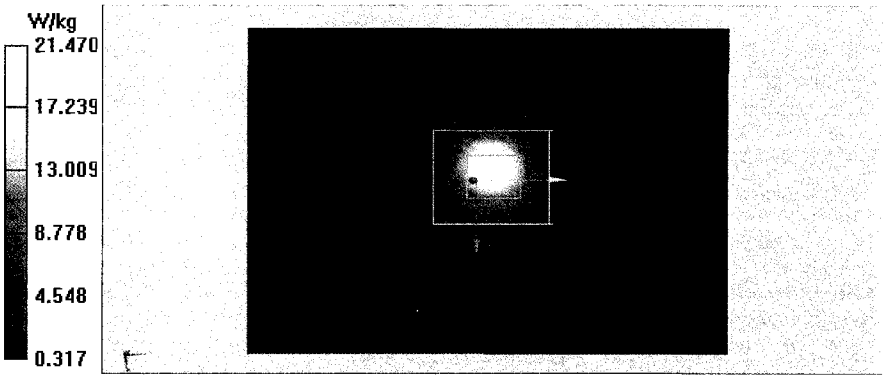
**Configuration/CW 5200/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 67.19 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 25.60 W/kg

**SAR(1 g) = 8.01 W/kg; SAR(10 g) = 2.39 W/kg**

Maximum value of SAR (measured) = 21.47 W/kg



**Test Laboratory: Audix SAR Lab** Date: 01/07/2016

**CW 5300**

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5300 MHz;Communication System PAR: 0 dB

Medium parameters used: f = 5300 MHz; $\sigma$ = 5.48 S/m; $\varepsilon_r$ = 49.83; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CW 5300/Area Scan (51x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 21.86 W/kg

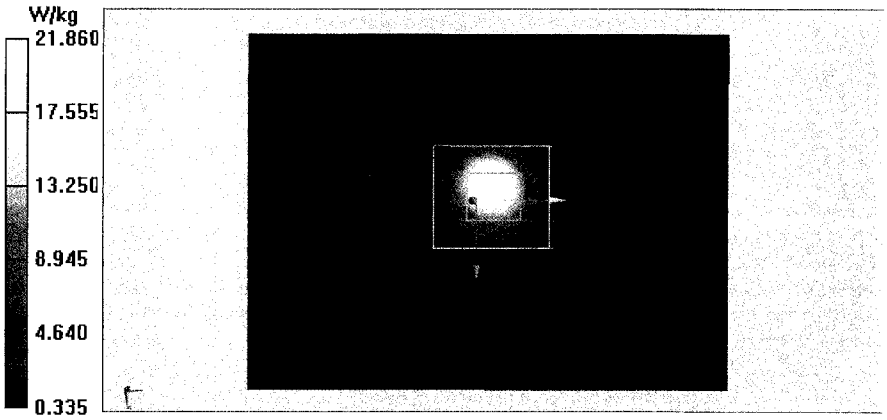
**Configuration/CW 5300/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 78.33 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 36.70 W/kg

**SAR(1 g) = 9.21 W/kg; SAR(10 g) = 5.39 W/kg**

Maximum value of SAR (measured) = 21.97 W/kg



**Test Laboratory: Audix SAR Lab** Date: 01/07/2016

**CW 5500**

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5500 MHz;Communication System PAR: 0 dB

Medium parameters used: f = 5500 MHz; $\sigma$ = 5.471 S/m; $\varepsilon_r$ = 49.29; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.35, 4.35, 4.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CW 5500/Area Scan (41x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 23.55 W/kg

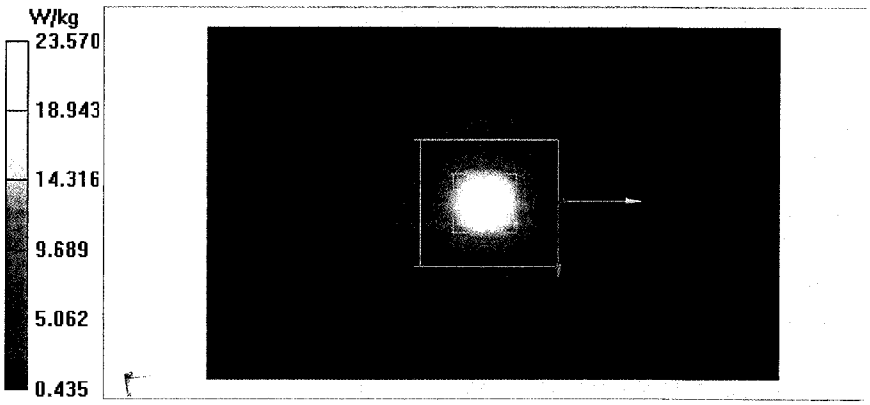
**Configuration/CW 5500/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 63.20 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 34.88 W/kg

**SAR(1 g) = 8.33 W/kg; SAR(10 g) = 1.99 W/kg**

Maximum value of SAR (measured) = 23.6 W/kg



**Test Laboratory: Audix SAR Lab** Date: 04/07/2016

**CW 5800**

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz;Communication System PAR: 0 dB

Medium parameters used: f = 5800 MHz; $\sigma$ = 5.971 S/m; $\varepsilon_r$ = 48.50; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CW 5800/Area Scan (41x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 22.84 W/kg

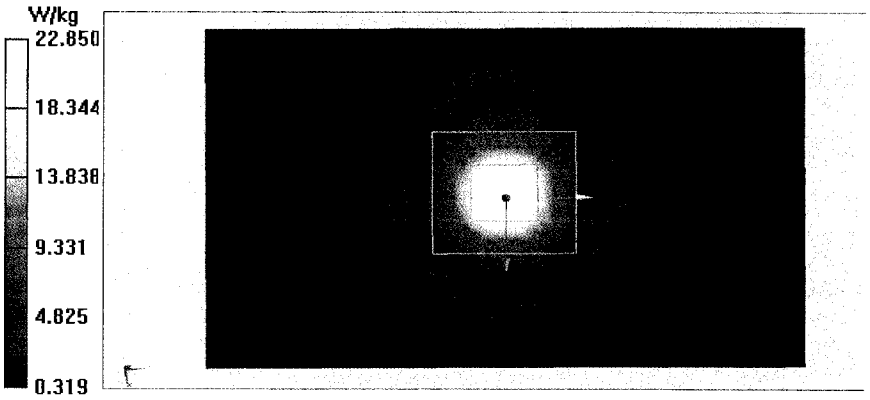
**Configuration/CW 5800/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 64.77 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 33.00 W/kg

**SAR(1 g) = 7.50 W/kg; SAR(10 g) = 2.46 W/kg**

Maximum value of SAR (measured) = 22.9 W/kg



Test result of 2.4GHz, ANT 1:

**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11b CH11(2462MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0); Communication System Band: ISM 2.4GHz Band (2400.0-2483.5MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB.Medium parameters used f = 2462 MHz; $\sigma$ = 2.01 S/m; $\varepsilon_r$ = 51.306; $\rho$ = 1000 kg/m$^3$.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH11(2462MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.417 W/kg

**Configuration/CH11(2462MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

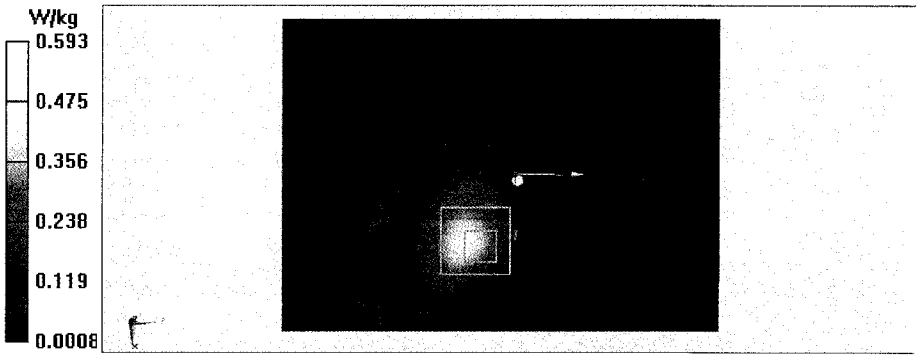
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.020 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.13 W/kg

**SAR(1 g) = 0.504 W/kg; SAR(10 g) = 0.221 W/kg**

Maximum value of SAR (measured) = 0.593 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11b CH11(2462MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0); Communication System Band: ISM 2.4GHz Band (2400.0-2483.5MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 2462 MHz; $\sigma$ = 2.01 S/m; $\varepsilon_r$ = 51.306; $\rho$ = 1000 kg/m$^3$.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH11(2462MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0966 W/kg

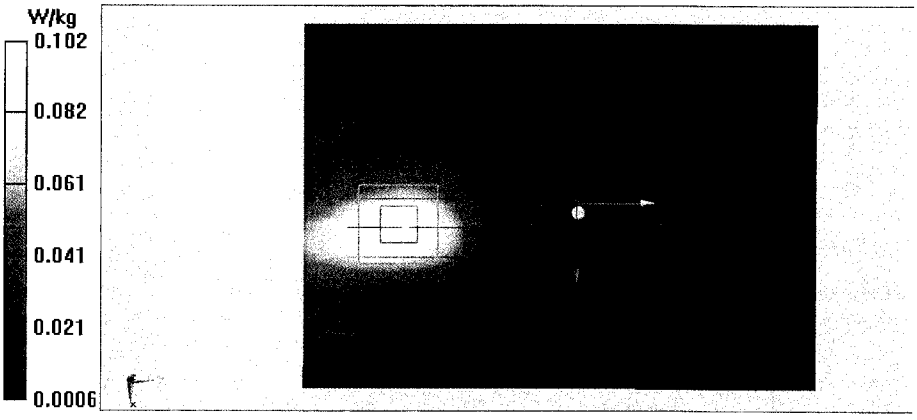
**Configuration/CH11(2462MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.374 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.166 W/kg

**SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.048 W/kg**

Maximum value of SAR (measured) = 0.102 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11b CH11(2462MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0); Communication System Band: ISM 2.4GHz Band (2400.0-2483.5MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 2462 MHz; $\sigma$ = 2.01 S/m; $\varepsilon_r$ = 51.306; $\rho$ = 1000 kg/m$^3$ .Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH11(2462MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0984 W/kg

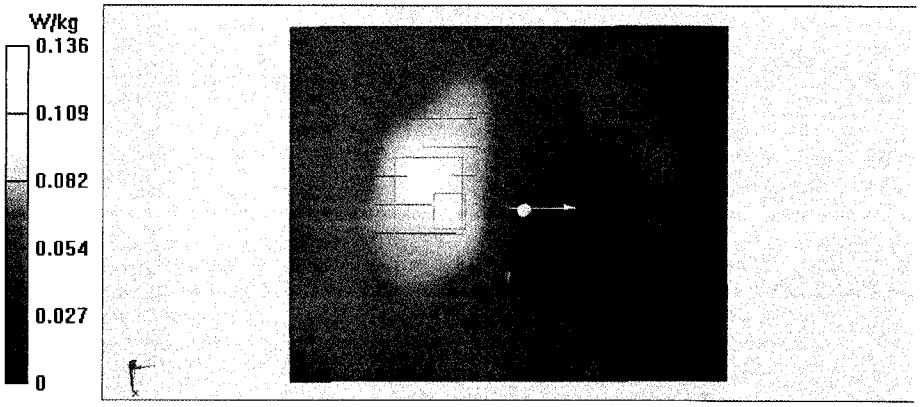
**Configuration/CH11(2462MHz Top)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.7990 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.120 W/kg

**SAR(1 g) = 0.079 W/kg; SAR(10 g) = 0.045 W/kg**

Maximum value of SAR (measured) = 0.136 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11n40 CH6(2437MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11nHT40 WiFi 2.4 GHz (OFDM, 13 Mbps) (0); Communication System Band: ISM 2.4GHz Band(2400-2483.5MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB.Medium parameters used (interpolated f = 2437 MHz; $\sigma$ = 1.968 S/m; $\varepsilon_r$ = 52.372; $\rho$ = 1000 kg/m$^3$ Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH6(2437MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.444 W/kg

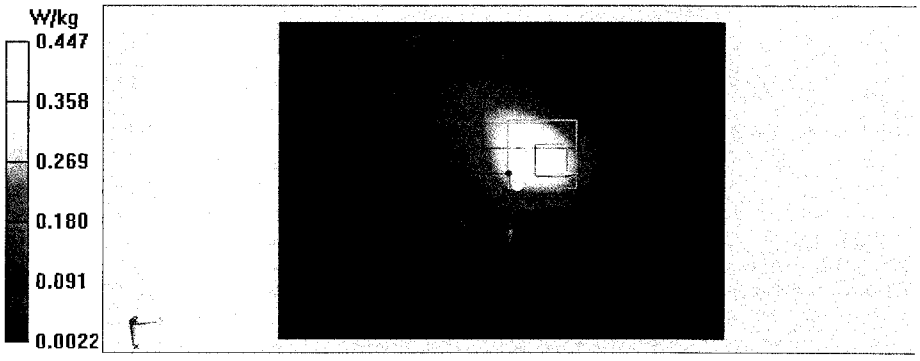
**Configuration/CH6(2437MHz Back)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.51 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.891 W/kg

**SAR(1 g) = 0.418 W/kg; SAR(10 g) = 0.203 W/kg**

Maximum value of SAR (measured) = 0.447 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11n40 CH6(2437MHz Left)**

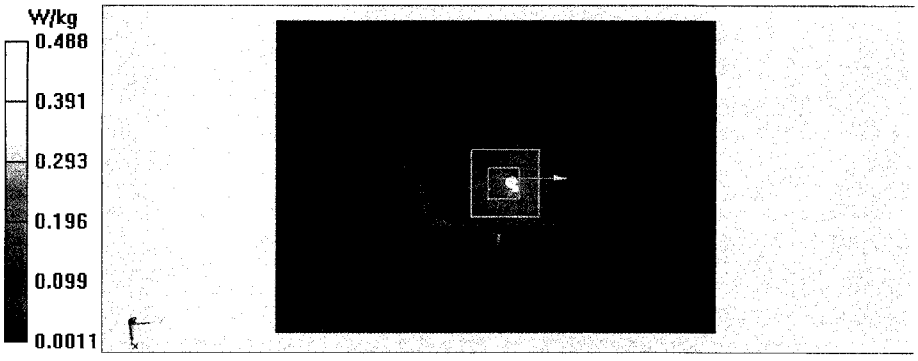
**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11nHT40 WiFi 2.4 GHz (OFDM, 13 Mbps) (0); Communication System Band: ISM 2.4GHz Band(2400-2483.5MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB.Medium parameters used (interpolated): f = 2437 MHz; $\sigma$ = 1.968 S/m; $\varepsilon_r$ = 52.372; $\rho$ = 1000 kg/m$^3$ Phantom section: Flat Section
DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH6(2437MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm
Maximum value of SAR (interpolated) = 0.274 W/kg

**Configuration/CH6(2437MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.43 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.06 W/kg
**SAR(1 g) = 0.441 W/kg; SAR(10 g) = 0.175 W/kg**
Maximum value of SAR (measured) = 0.488 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11n40 CH6(2437MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11nHT40 WiFi 2.4 GHz (OFDM, 13 Mbps) (0); Communication System Band: ISM 2.4GHz Band(2400-2483.5MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB.Medium parameters used (interpolated): f = 2437 MHz; $\sigma$ = 1.968 S/m; $\varepsilon_r$ = 52.372; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH6(2437MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0461 W/kg

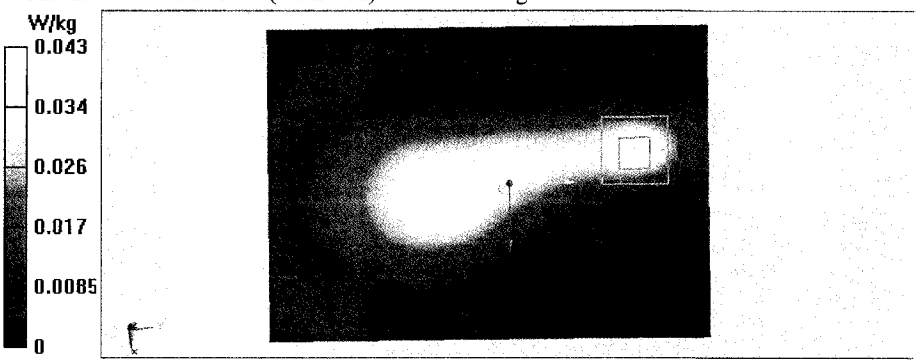
**Configuration/CH6(2437MHz Top)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.220 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.0790 W/kg

**SAR(1 g) = 0.038 W/kg; SAR(10 g) = 0.018 W/kg**

Maximum value of SAR (measured) = 0.0427 W/kg



Test result of 2.4GHz, ANT 2:

**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11b CH11(2462MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0); Communication System Band: ISM 2.4GHz Band (2400.0-2483.5MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 2462 MHz; $\sigma$ = 2.01 S/m; $\varepsilon_r$ = 51.306; $\rho$ = 1000 kg/m$^3$.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH11(2462MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.535 W/kg

**Configuration/CH11(2462MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

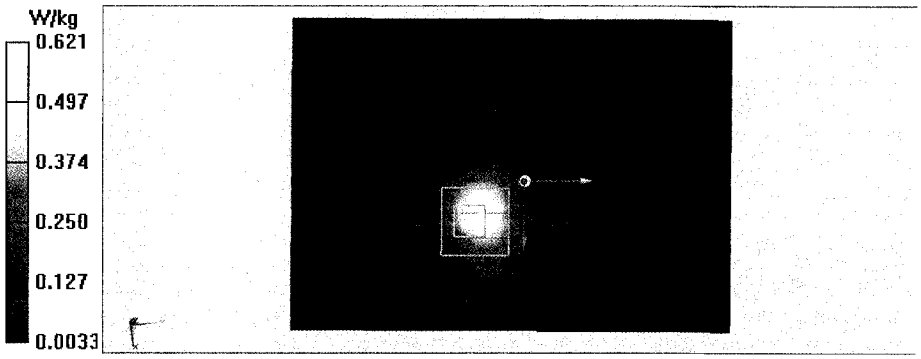
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.808 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.21 W/kg

**SAR(1 g) = 0.561 W/kg; SAR(10 g) = 0.244 W/kg**

Maximum value of SAR (measured) = 0.621 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11b CH11(2462MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0); Communication System Band: ISM 2.4GHz Band (2400.0-2483.5MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 2462 MHz; $\sigma$ = 2.01 S/m; $\varepsilon_r$ = 51.306; $\rho$ = 1000 kg/m$^3$.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH11(2462MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.106 W/kg

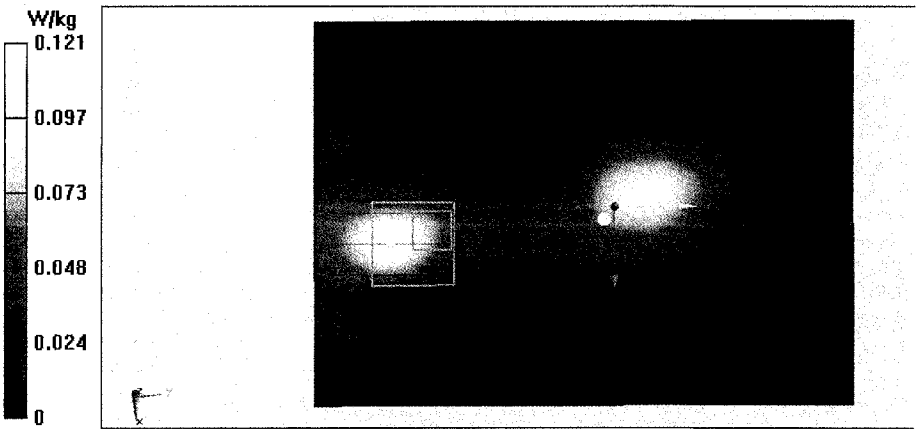
**Configuration/CH11(2462MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.182 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.188 W/kg

**SAR(1 g) = 0.101 W/kg; SAR(10 g) = 0.041 W/kg**

Maximum value of SAR (measured) = 0.121 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11n40 CH6(2437MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11nHT40 WiFi 2.4 GHz (OFDM, 13 Mbps) (0); Communication System Band: ISM 2.4GHz Band(2400-2483.5MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB.Medium parameters used (interpolated): f = 2437 MHz; $\sigma$ = 1.968 S/m; $\varepsilon_r$ = 52.372; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH6(2437MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.589 W/kg

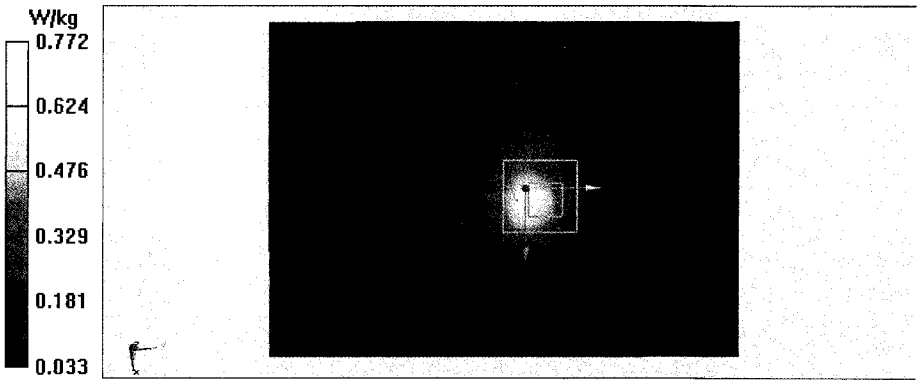
**Configuration/CH6(2437MHz Back)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.26 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 2.55 W/kg

**SAR(1 g) = 0.628 W/kg; SAR(10 g) = 0.315 W/kg**

Maximum value of SAR (measured) = 0.772 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11n40 CH6(2437MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11nHT40 WiFi 2.4 GHz (OFDM, 13 Mbps) (0); Communication System Band: ISM 2.4GHz Band(2400-2483.5MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB.Medium parameters used (interpolated): f = 2437 MHz; $\sigma$ = 1.968 S/m; $\varepsilon_r$ = 52.372; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(7.35, 7.35, 7.35); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH6(2437MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.103 W/kg

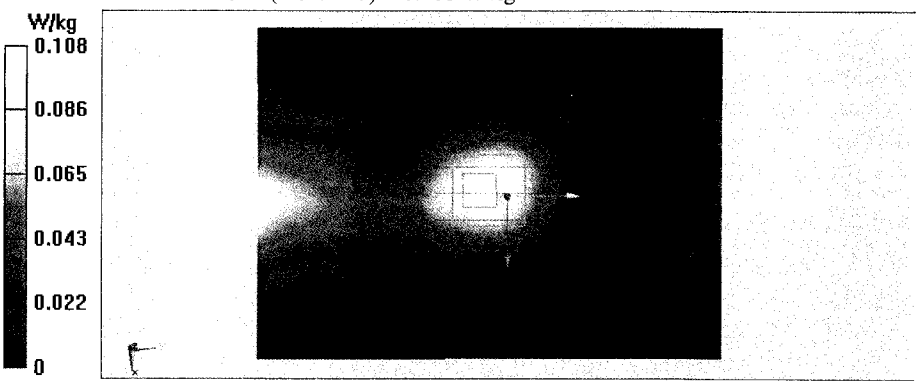
**Configuration/CH6(2437MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.097 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.183 W/kg

**SAR(1 g) = 0.095 W/kg; SAR(10 g) = 0.049 W/kg**

Maximum value of SAR (measured) = 0.108 W/kg



Test result of 5GHz, ANT 1:

**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11a CH40(5200MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.2GHz (0); Communication System Band: IEEE 802.11a WiFi 5.2GHz; Frequency: 5200 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5200 MHz; $\sigma$ = 5.3 S/m; $\varepsilon_r$ = 49.73; $\rho$ = 1000 kg/$m^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH40(5200MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.273 W/kg

**Configuration/CH40(5200MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

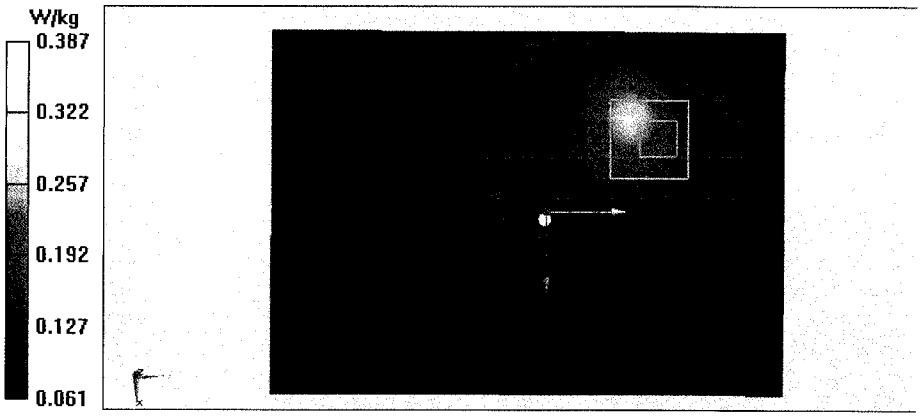
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.663 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.869 W/kg

**SAR(1 g) = 0.349 W/kg; SAR(10 g) = 0.169 W/kg**

Maximum value of SAR (measured) = 0.387 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11a CH40(5200MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.2GHz (0); Communication System Band: IEEE 802.11a WiFi 5.2GHz; Frequency: 5200 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5200 MHz; $\sigma$ = 5.3 S/m; $\varepsilon_r$ = 49.73; $\rho$ = 1000 kg/m$^3$ Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH40(5200MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.407 W/kg

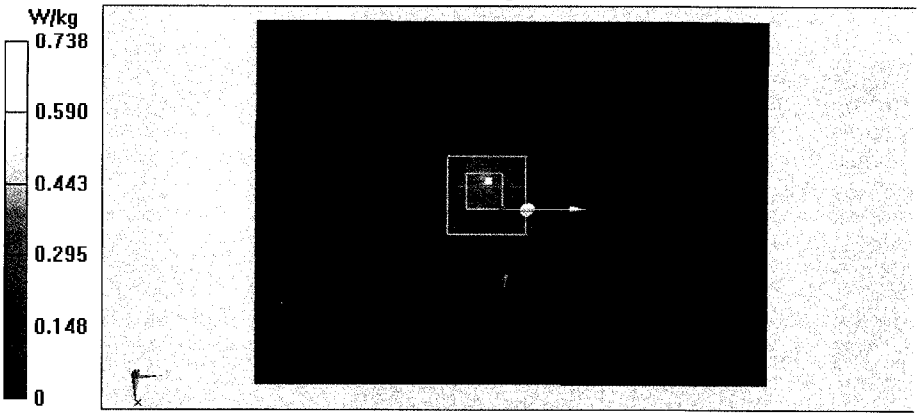
**Configuration/CH40(5200MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.425 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.71 W/kg

**SAR(1 g) = 0.554 W/kg; SAR(10 g) = 0.155 W/kg**

Maximum value of SAR (measured) = 0.738 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11a CH40(5200MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.2GHz (0); Communication System Band: IEEE 802.11a WiFi 5.2GHz; Frequency: 5200 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5200 MHz; $\sigma$ = 5.3 S/m; $\varepsilon_r$ = 49.73; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH40(5200MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0496 W/kg

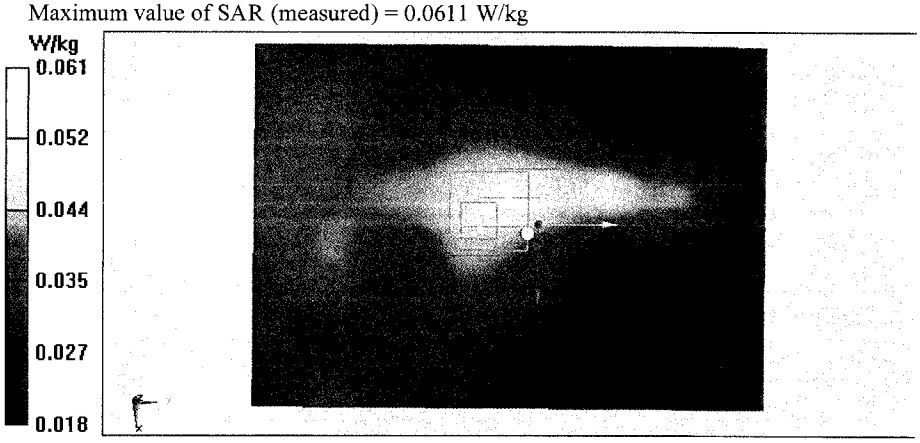
**Configuration/CH40(5200MHz Top)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.872 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.110 W/kg

**SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.035 W/kg**

Maximum value of SAR (measured) = 0.0611 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11ac40 CH46(5230MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11ac WiFi 5.2GHz (0); Communication System Band: IEEE 802.11ac WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; $\sigma$ = 5.33 S/m; $\varepsilon_r$ = 49.4; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH46(5230MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.484 W/kg

**Configuration/CH46(5230MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

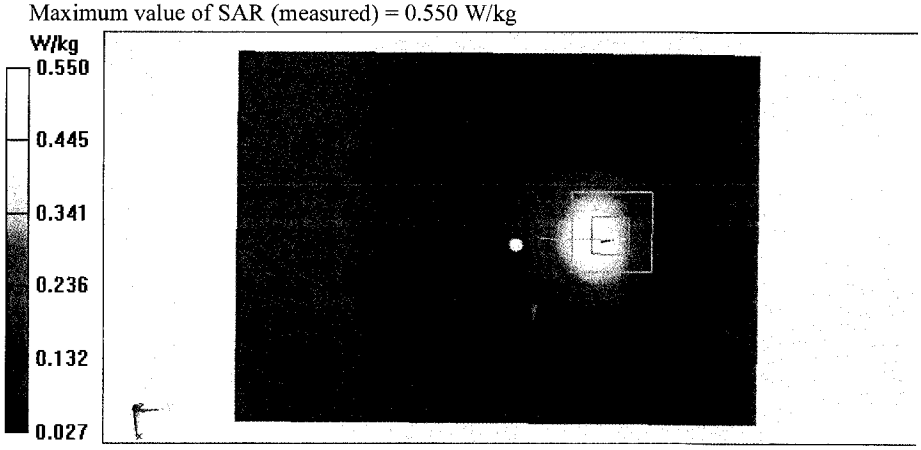
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.295 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.31 W/kg

**SAR(1 g) = 0.467 W/kg; SAR(10 g) = 0.209 W/kg**

Maximum value of SAR (measured) = 0.550 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11ac40 CH46(5230MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11ac WiFi 5.2GHz (0); Communication System Band: IEEE 802.11ac WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; $\sigma$ = 5.33 S/m; $\varepsilon_r$ = 49.4; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH46(5230MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.231 W/kg

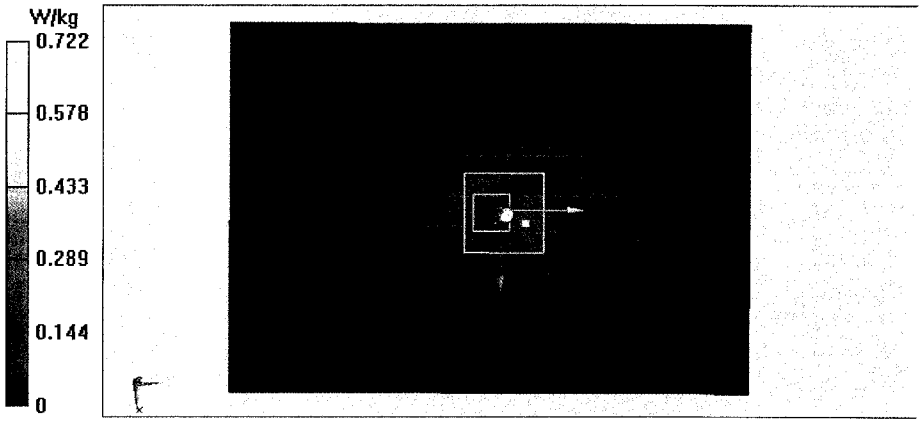
**Configuration/CH46(5230MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.29 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.70 W/kg

**SAR(1 g) = 0.532 W/kg; SAR(10 g) = 0.152 W/kg**

Maximum value of SAR (measured) = 0.722 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11ac40 CH46(5230MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11ac WiFi 5.2GHz (0); Communication System Band: IEEE 802.11ac WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; $\sigma$ = 5.33 S/m; $\varepsilon_r$ = 49.4; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH46(5230MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0715 W/kg

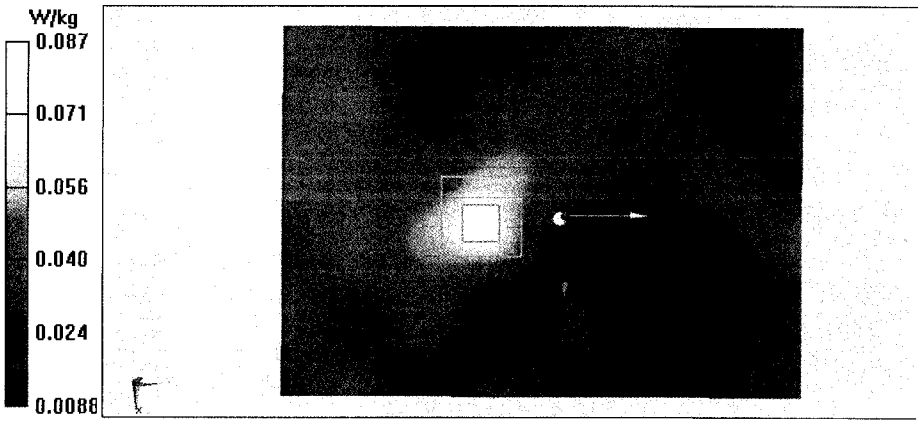
**Configuration/CH46(5230MHz Top)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.140 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.169 W/kg

**SAR(1 g) = 0.073 W/kg; SAR(10 g) = 0.042 W/kg**

Maximum value of SAR (measured) = 0.0871 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH60(5300MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.3GHz (0); Communication System Band: IEEE 802.11a WiFi 5.3GHz ; Frequency: 5300 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5300 MHz; $\sigma$ = 5.41 S/m; $\varepsilon_r$ = 49.31; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH60(5300MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.847 W/kg

**Configuration/CH60(5300MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

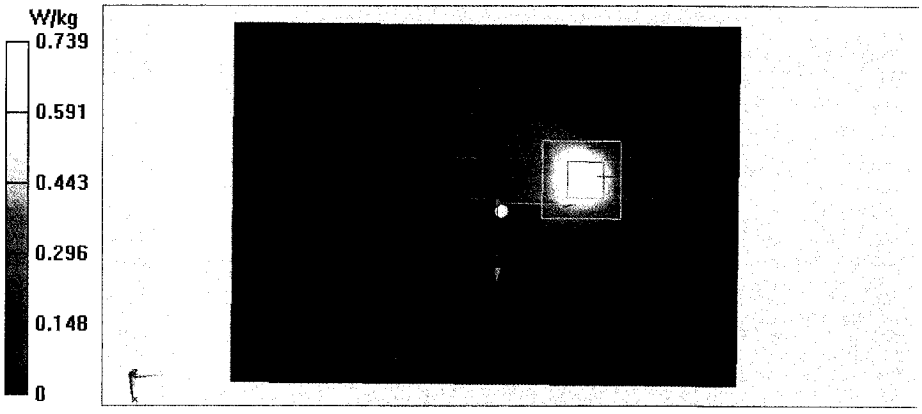
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.975 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.85 W/kg

**SAR(1 g) = 0.594 W/kg; SAR(10 g) = 0.188 W/kg**

Maximum value of SAR (measured) = 0.739 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH60(5300MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.3GHz (0); Communication System Band: IEEE 802.11a WiFi 5.3GHz ; Frequency: 5300 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5300 MHz; $\sigma$ = 5.41 S/m; $\varepsilon_r$ = 49.31; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH60(5300MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 1.09 W/kg

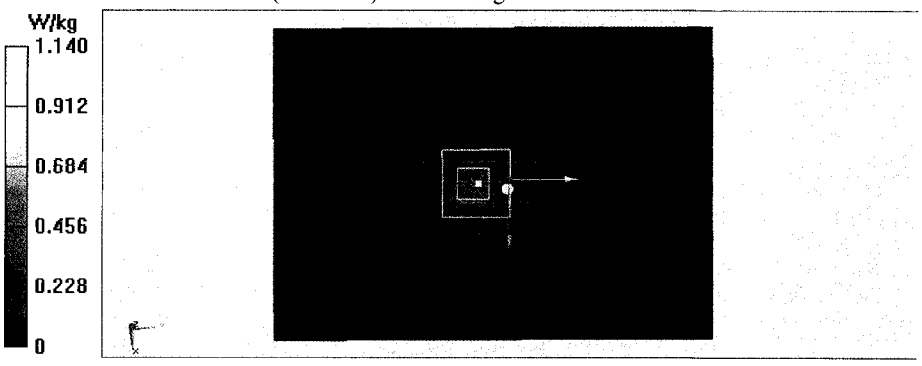
**Configuration/CH60(5300MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.605 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.48 W/kg

**SAR(1 g) = 0.668 W/kg; SAR(10 g) = 0.211 W/kg**

Maximum value of SAR (measured) = 1.14 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH60(5300MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.3GHz (0); Communication System Band: IEEE 802.11a WiFi 5.3GHz ; Frequency: 5300 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5300 MHz; $\sigma$ = 5.41 S/m; $\varepsilon_r$ = 49.31; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH60(5300MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0478 W/kg

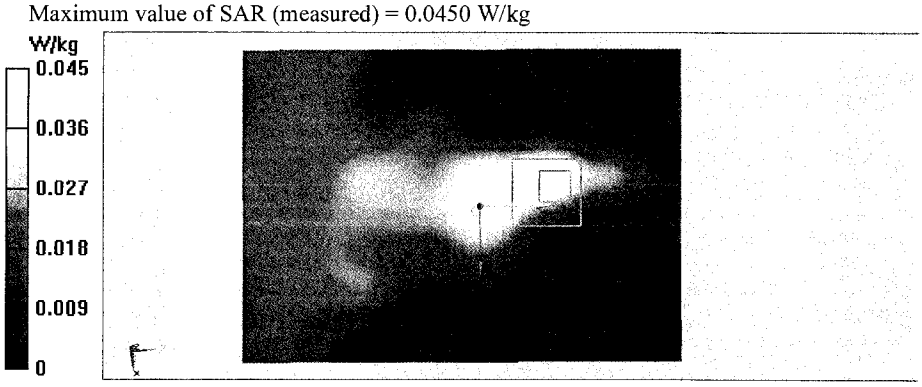
**Configuration/CH60(5300MHz Top)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.378 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.139 W/kg

**SAR(1 g) = 0.040 W/kg; SAR(10 g) = 0.013 W/kg**

Maximum value of SAR (measured) = 0.0450 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH54(5270MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.3GHz (0); Communication System Band: IEEE 802.11n WiFi 5.3GHz ; Frequency: 5270 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5270 MHz; $\sigma$ = 5.38 S/m; $\varepsilon_r$ = 49.36; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH54(5270MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.433 W/kg

**Configuration/CH54(5270MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

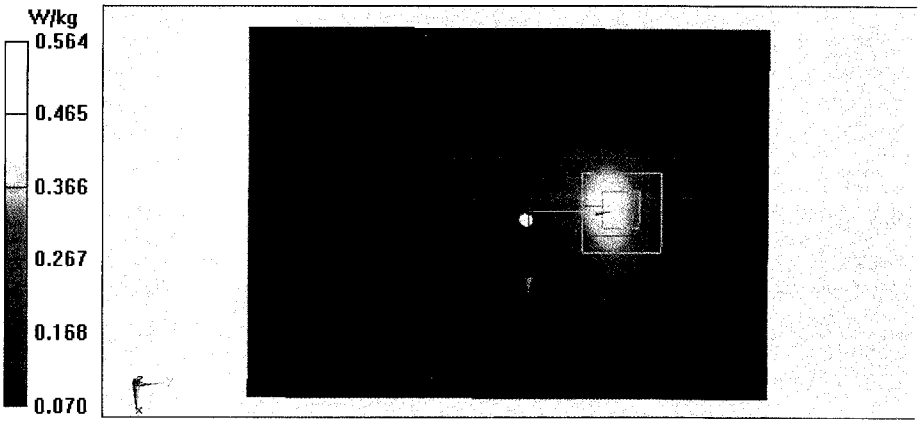
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.492 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.28 W/kg

**SAR(1 g) = 0.473 W/kg; SAR(10 g) = 0.214 W/kg**

Maximum value of SAR (measured) = 0.564 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH54(5270MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.3GHz (0); Communication System Band: IEEE 802.11n WiFi 5.3GHz ; Frequency: 5270 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5270 MHz; $\sigma$ = 5.38 S/m; $\varepsilon_r$ = 49.36; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH54(5270MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.241 W/kg

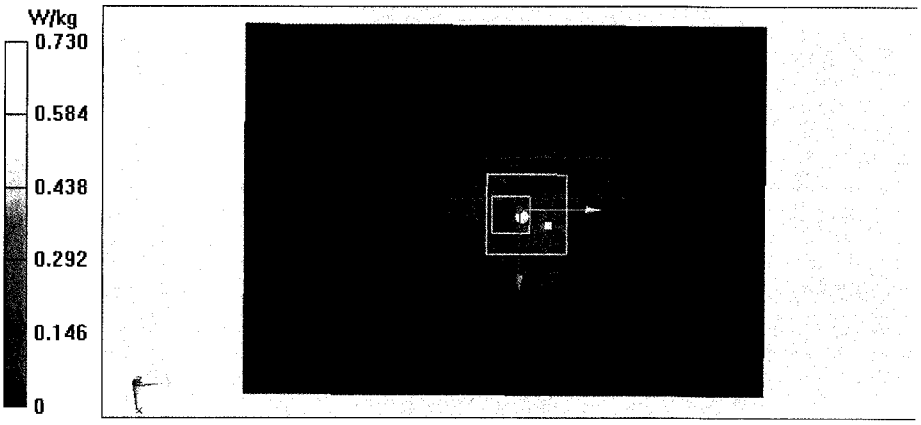
**Configuration/CH54(5270MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.09 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.77 W/kg

**SAR(1 g) = 0.550 W/kg; SAR(10 g) = 0.153 W/kg**

Maximum value of SAR (measured) = 0.730 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH54(5270MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.3GHz (0); Communication System Band: IEEE 802.11n WiFi 5.3GHz ; Frequency: 5270 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5270 MHz; $\sigma$ = 5.38 S/m; $\varepsilon_r$ = 49.36; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH54(5270MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0652 W/kg

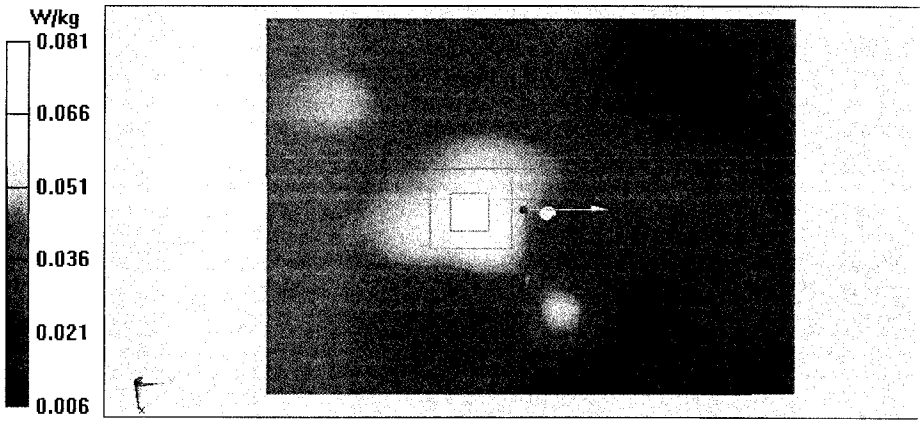
**Configuration/CH54(5270MHz Top)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.025 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.161 W/kg

**SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.044 W/kg**

Maximum value of SAR (measured) = 0.0809 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH112(5560MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5560 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5560 MHz; $\sigma$ = 5.68 S/m; $\varepsilon_r$ = 49.10; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH112(5560MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.384 W/kg

**Configuration/CH112(5560MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

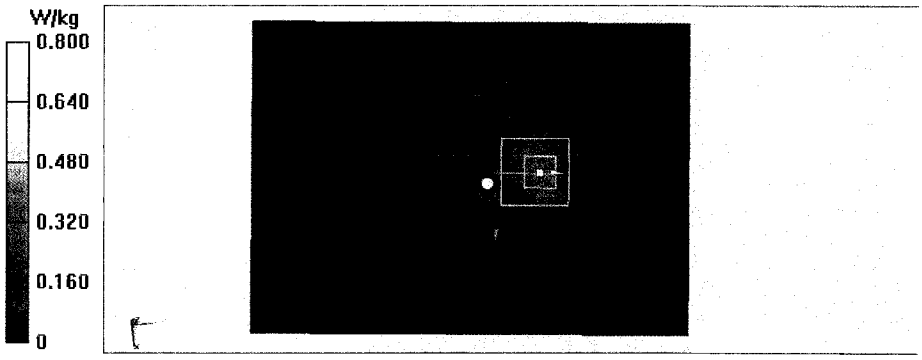
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.216 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.92 W/kg

**SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.182 W/kg**

Maximum value of SAR (measured) = 0.800 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH112(5560MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5560 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5560 MHz; $\sigma$ = 5.68 S/m; $\varepsilon_r$ = 49.10; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH112(5560MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.546 W/kg

**Configuration/CH112(5560MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

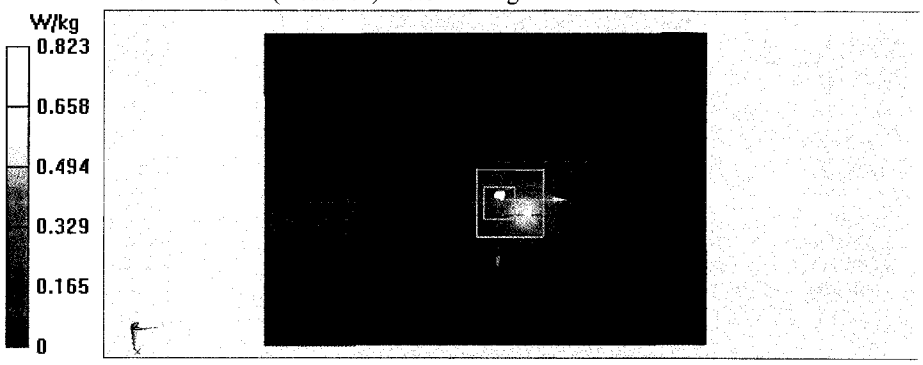
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.90 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 2.05 W/kg

**SAR(1 g) = 0.647 W/kg; SAR(10 g) = 0.183 W/kg**

Maximum value of SAR (measured) = 0.823 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

## 11a CH112(5560MHz Top)

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5560 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5560 MHz; $\sigma$ = 5.68 S/m; $\varepsilon_r$ = 49.10; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH112(5560MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0527 W/kg

**Configuration/CH112(5560MHz Top)/Zoom Scan (5x5x7)/Cube 0:**

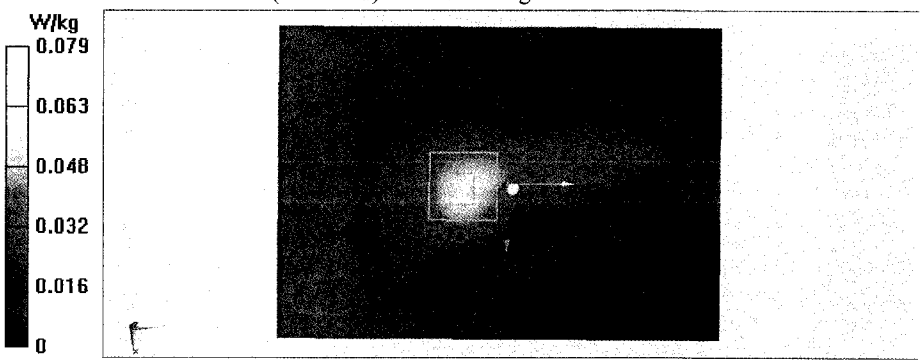
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.929 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.228 W/kg

**SAR(1 g) = 0.069 W/kg; SAR(10 g) = 0.025 W/kg**

Maximum value of SAR (measured) = 0.0792 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH120(5600MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5600 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5600 MHz; $\sigma$ = 5.79 S/m; $\varepsilon_r$ = 48.98; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH120(5600MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.507 W/kg

**Configuration/CH120(5600MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

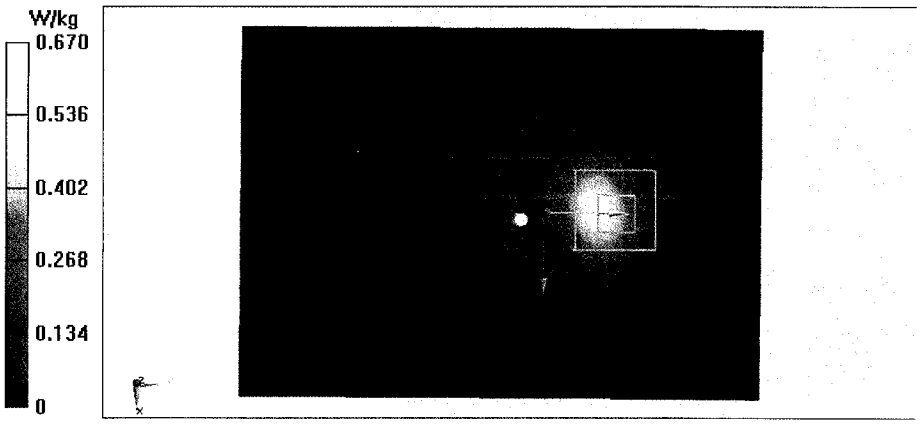
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.122 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.21 W/kg

**SAR(1 g) = 0.599 W/kg; SAR(10 g) = 0.196 W/kg**

Maximum value of SAR (measured) = 0.670 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH120(5600MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5600 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5600 MHz; $\sigma$ = 5.79 S/m; $\varepsilon_r$ = 48.98; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH120(5600MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.460 W/kg

**Configuration/CH120(5600MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

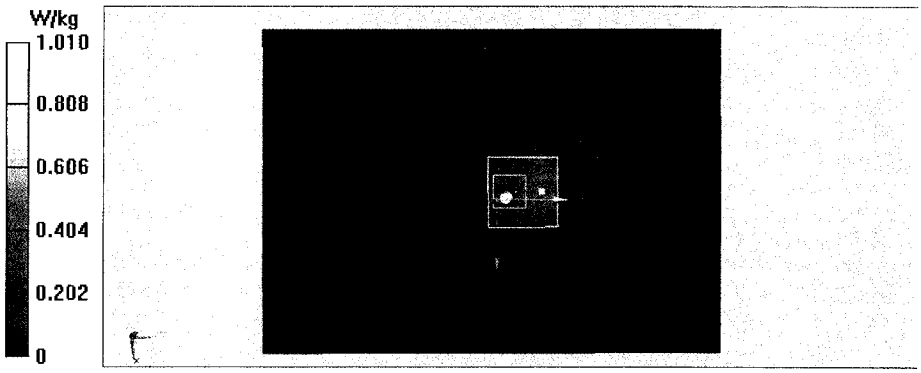
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.13 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 2.33 W/kg

**SAR(1 g) = 0.698 W/kg; SAR(10 g) = 0.193 W/kg**

Maximum value of SAR (measured) = 1.01 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH120(5600MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5600 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5600 MHz; $\sigma$ = 5.79 S/m; $\varepsilon_r$ = 48.98; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH120(5600MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0653 W/kg

**Configuration/CH120(5600MHz Top)/Zoom Scan (5x5x7)/Cube 0:**

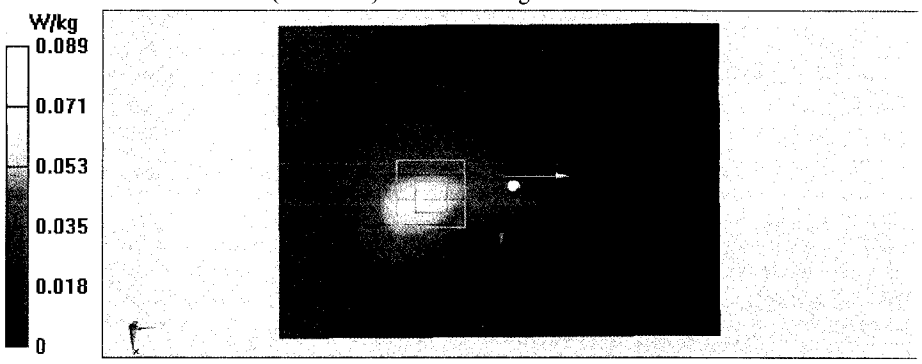
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.990 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.298 W/kg

**SAR(1 g) = 0.082 W/kg; SAR(10 g) = 0.029 W/kg**

Maximum value of SAR (measured) = 0.0886 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH118(5590MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.5GHz (0); Communication System Band: IEEE 802.11n WiFi 5.5GHz; Frequency: 5590 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5590 MHz; $\sigma$ = 5.70 S/m; $\varepsilon_r$ = 49.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25);Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH118(5590MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.570 W/kg

**Configuration/CH118(5590MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

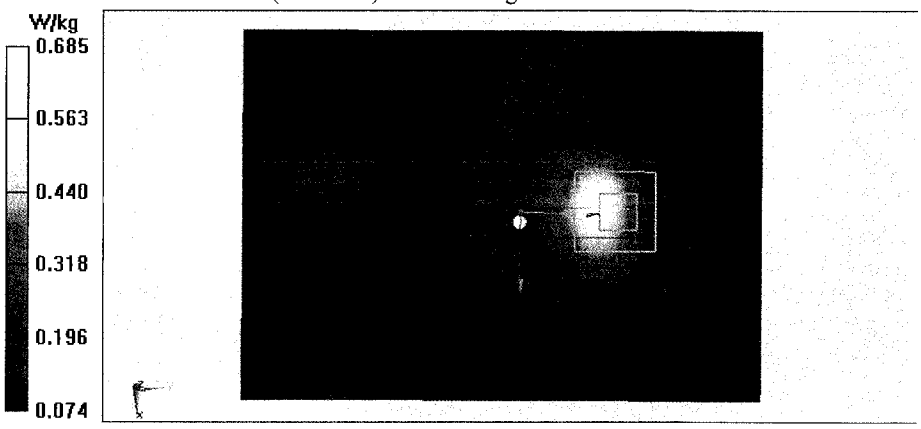
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.899 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.54 W/kg

**SAR(1 g) = 0.564 W/kg; SAR(10 g) = 0.249 W/kg**

Maximum value of SAR (measured) = 0.685 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH118(5590MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.5GHz (0); Communication System Band: IEEE 802.11n WiFi 5.5GHz; Frequency: 5590 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5590 MHz; $\sigma$ = 5.70 S/m; $\varepsilon_r$ = 49.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH118(5590MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.310 W/kg

**Configuration/CH118(5590MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

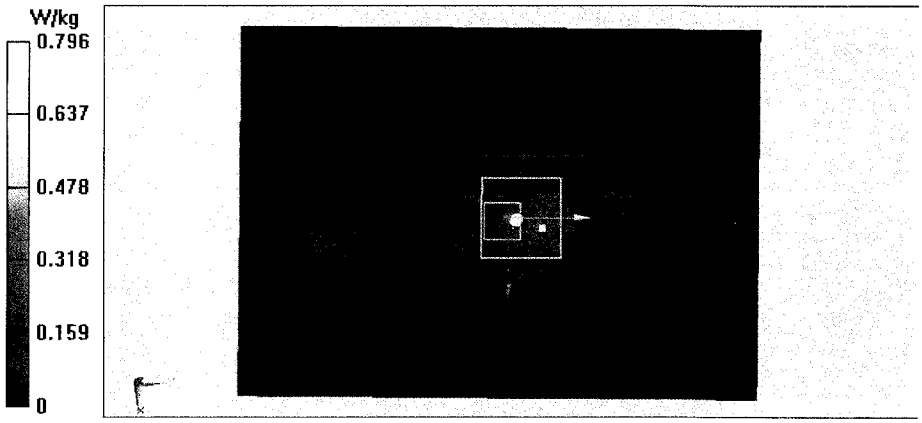
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.03 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.05 W/kg

**SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.176 W/kg**

Maximum value of SAR (measured) = 0.796 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH118(5590MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.5GHz (0); Communication System Band: IEEE 802.11n WiFi 5.5GHz; Frequency: 5590 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5590 MHz; $\sigma$ = 5.70 S/m; $\varepsilon_r$ = 49.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH118(5590MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0769 W/kg

**Configuration/CH118(5590MHz Top)/Zoom Scan (5x5x7)/Cube 0:**

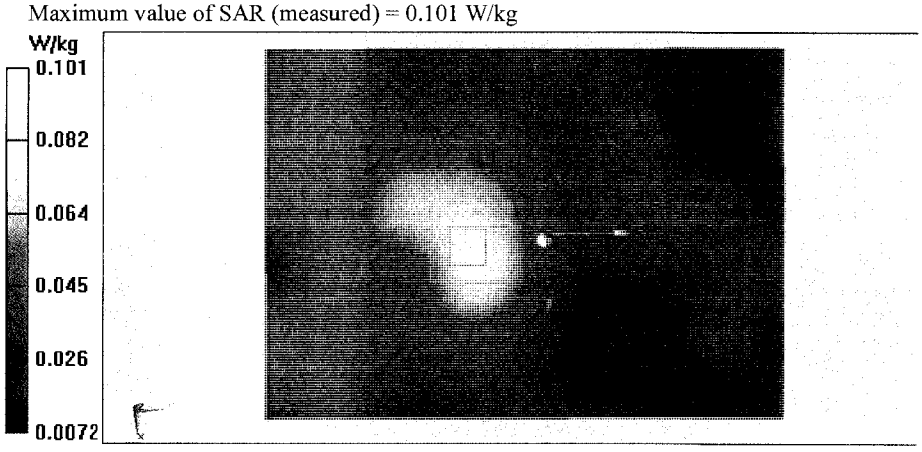
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.548 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.211 W/kg

**SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.052 W/kg**

Maximum value of SAR (measured) = 0.101 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11a CH165(5825MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz ; Frequency: 5825 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5825 MHz; $\sigma$ = 6.011 S/m; $\varepsilon_r$ = 47.87; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH165(5825MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.718 W/kg

**Configuration/CH165(5825MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

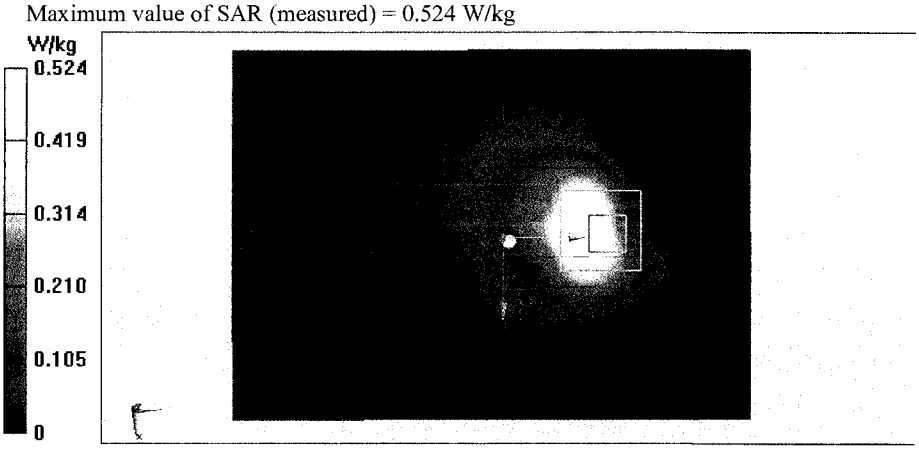
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.935 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.43 W/kg

**SAR(1 g) = 0.459 W/kg; SAR(10 g) = 0.160 W/kg**

Maximum value of SAR (measured) = 0.524 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11a CH165(5825MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz ; Frequency: 5825 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5825 MHz; $\sigma$ = 6.011 S/m; $\varepsilon_r$ = 47.87; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH165(5825MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.464 W/kg

**Configuration/CH165(5825MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

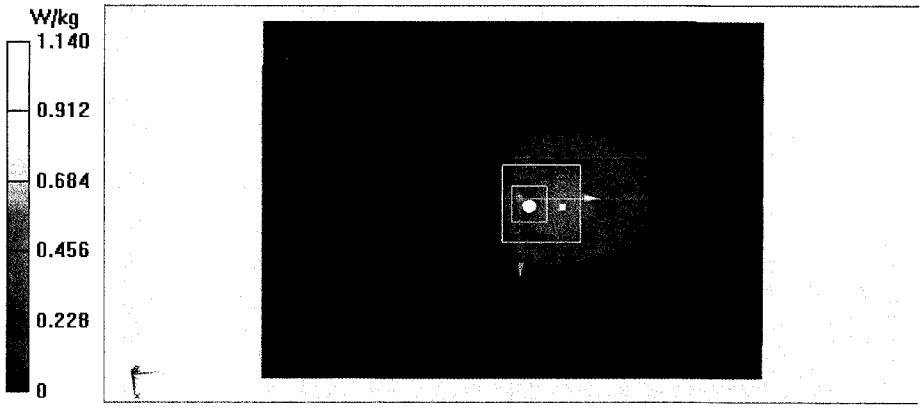
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.93 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.49 W/kg

**SAR(1 g) = 0.669 W/kg; SAR(10 g) = 0.215 W/kg**

Maximum value of SAR (measured) = 1.14 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

### 11a CH165(5825MHz Top)

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz ; Frequency: 5825 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5825 MHz; $\sigma$ = 6.011 S/m; $\varepsilon_r$ = 47.87; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH165(5825MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0552 W/kg

**Configuration/CH165(5825MHz Top)/Zoom Scan (5x5x7)/Cube 0:**

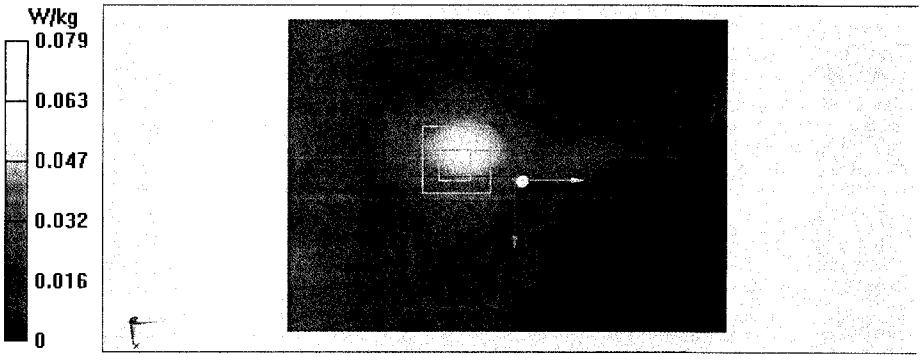
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.413 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.228 W/kg

**SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.028 W/kg**

Maximum value of SAR (measured) = 0.0789 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11n40 CH151(5755MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.8GHz (0); Communication System Band: IEEE 802.11n WiFi 5.8GHz ; Frequency: 5755 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; $\sigma$ = 5.918 S/m; $\varepsilon_r$ = 48.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH151(5755MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.532 W/kg

**Configuration/CH151(5755MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

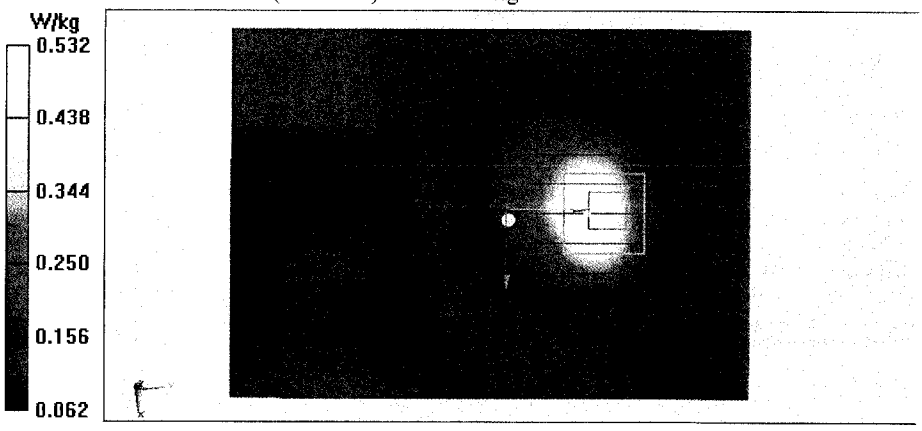
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.635 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.68 W/kg

**SAR(1 g) = 0.605 W/kg; SAR(10 g) = 0.271 W/kg**

Maximum value of SAR (measured) = 0.724 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11n40 CH151(5755MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz ; Frequency: 5755 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; $\sigma$ = 5.918 S/m; $\varepsilon_r$ = 48.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH151(5755MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.284 W/kg

**Configuration/CH151(5755MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

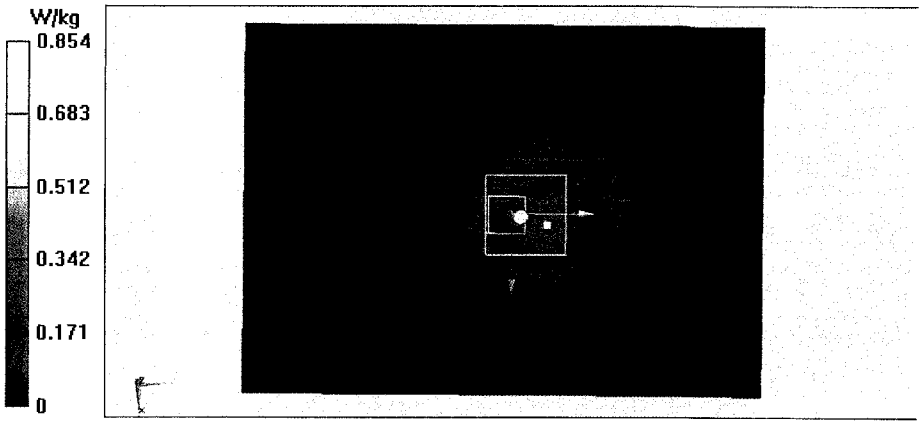
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.10 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.20 W/kg

**SAR(1 g) = 0.683 W/kg; SAR(10 g) = 0.190 W/kg**

Maximum value of SAR (measured) = 0.854 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11n40 CH151(5755MHz Top)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz ; Frequency: 5755 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; $\sigma$ = 5.918 S/m; $\varepsilon_r$ = 48.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH151(5755MHz Top)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0771 W/kg

**Configuration/CH151(5755MHz Top)/Zoom Scan (5x5x7)/Cube 0:**

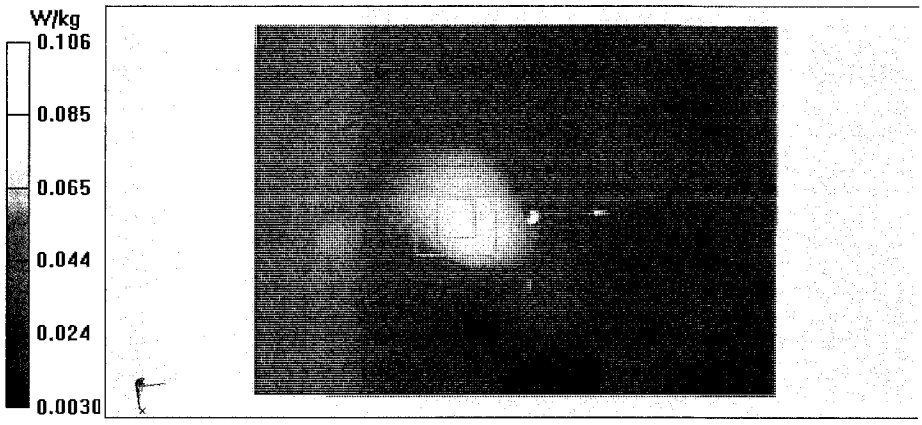
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.276 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.583 W/kg

**SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.060 W/kg**

Maximum value of SAR (measured) = 0.106 W/kg



Test result of 5GHz, ANT 2:

**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11a CH40(5200MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.2GHz (0); Communication System Band: IEEE 802.11a WiFi 5.2GHz; Frequency: 5200 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5200 MHz; $\sigma$ = 5.3 S/m; $\varepsilon_r$ = 49.73; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH40(5200MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.757 W/kg

**Configuration/CH40(5200MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

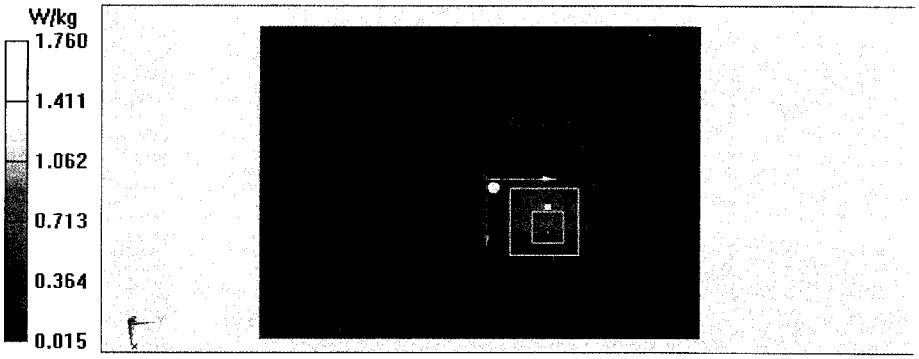
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.043 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 3.82 W/kg

**SAR(1 g) = 0.625 W/kg; SAR(10 g) = 0.414 W/kg**

Maximum value of SAR (measured) = 1.76 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11a CH40(5200MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.2GHz (0); Communication System Band: IEEE 802.11a WiFi 5.2GHz; Frequency: 5200 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5200 MHz; $\sigma$ = 5.3 S/m; $\varepsilon_r$ = 49.73; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH40(5200MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.400 W/kg

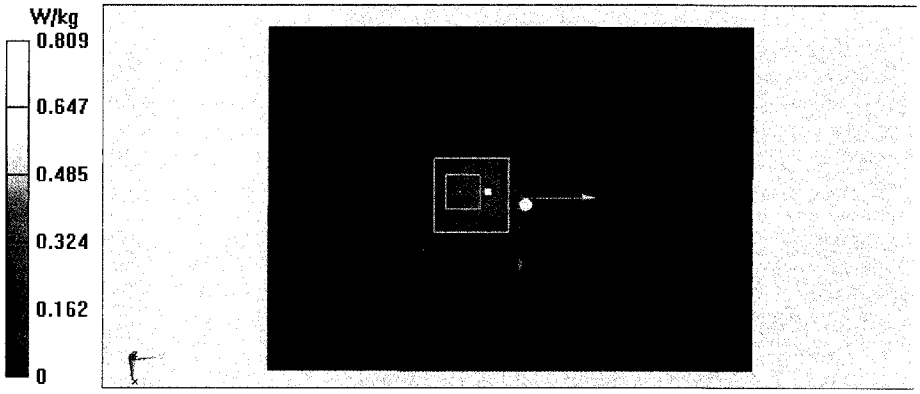
**Configuration/CH40(5200MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.555 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.74 W/kg

**SAR(1 g) = 0.555 W/kg; SAR(10 g) = 0.168 W/kg**

Maximum value of SAR (measured) = 0.809 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11n40 CH46(5230MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.2GHz (0); Communication System Band: IEEE 802.11n WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; $\sigma$ = 5.33 S/m; $\varepsilon_r$ = 49.4; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH46(5230MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.579 W/kg

**Configuration/CH46(5230MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

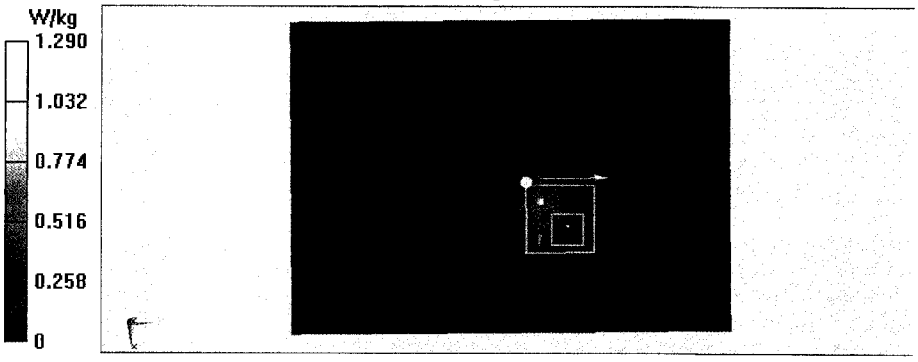
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.803 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.97 W/kg

**SAR(1 g) = 0.592 W/kg; SAR(10 g) = 0.257 W/kg**

Maximum value of SAR (measured) = 1.29 W/kg



**Test Laboratory: Audix SAR Lab** Date: 30/6/2016

**11n40 CH46(5230MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.2GHz (0); Communication System Band: IEEE 802.11n WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; $\sigma$ = 5.33 S/m; $\varepsilon_r$ = 49.4; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.98, 4.98, 4.98); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH46(5230MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.402 W/kg

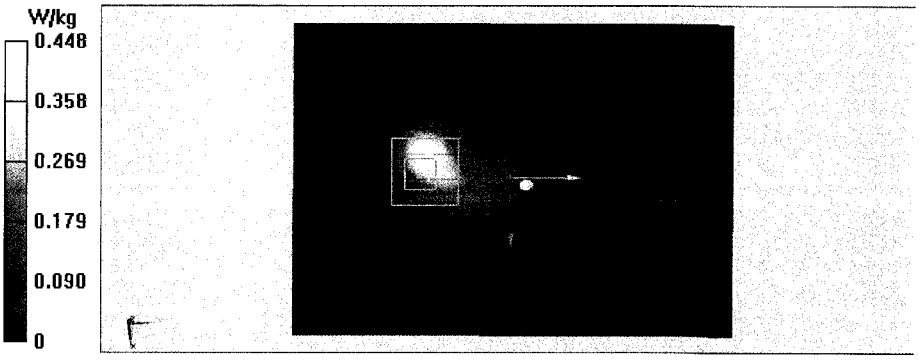
**Configuration/CH46(5230MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.273 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.19 W/kg

**SAR(1 g) = 0.367 W/kg; SAR(10 g) = 0.118 W/kg**

Maximum value of SAR (measured) = 0.448 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH60(5300MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.3GHz (0); Communication System Band: IEEE 802.11a WiFi 5.3GHz ; Frequency: 5300 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5300 MHz; $\sigma$ = 5.41 S/m; $\varepsilon_r$ = 49.31; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH60(5300MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 1.19 W/kg

**Configuration/CH60(5300MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

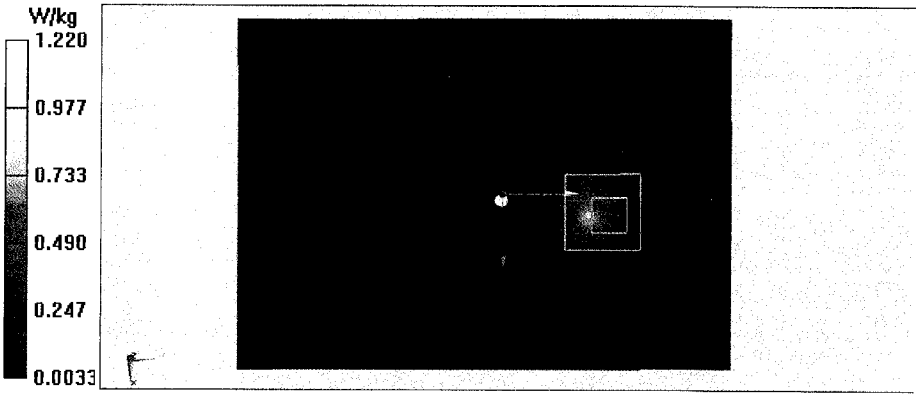
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.063 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 4.50 W/kg

**SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.478 W/kg**

Maximum value of SAR (measured) = 1.22 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH60(5300MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.3GHz (0); Communication System Band: IEEE 802.11a WiFi 5.3GHz ; Frequency: 5300 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5300 MHz; $\sigma$ = 5.41 S/m; $\varepsilon_r$ = 49.31; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH60(5300MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.618 W/kg

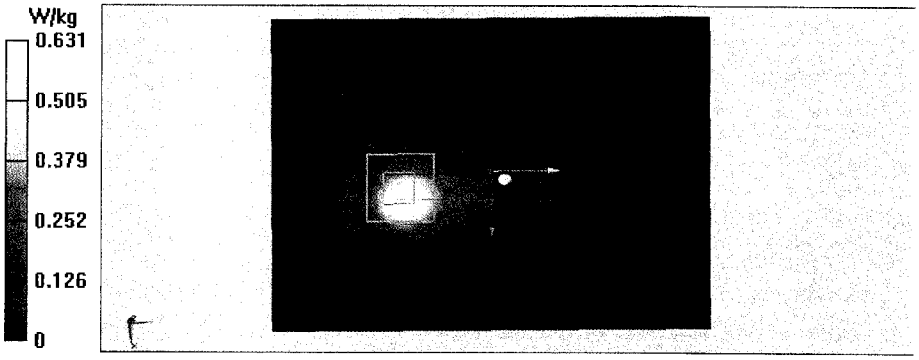
**Configuration/CH60(5300MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.713 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 1.79 W/kg

**SAR(1 g) = 0.570 W/kg; SAR(10 g) = 0.181 W/kg**

Maximum value of SAR (measured) = 0.631 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH54(5270MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.3GHz (0); Communication System Band: IEEE 802.11n WiFi 5.3GHz ; Frequency: 5270 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5270 MHz; $\sigma$ = 5.38 S/m; $\varepsilon_r$ = 49.36; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH54(5270MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.594 W/kg

**Configuration/CH54(5270MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

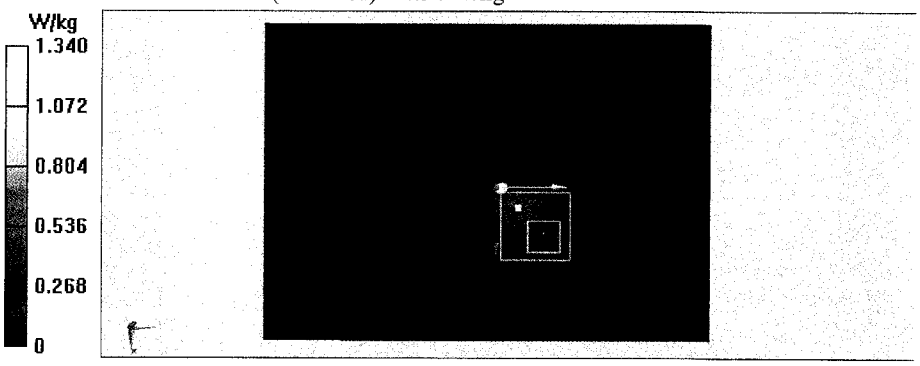
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.984 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.20 W/kg

**SAR(1 g) = 0.546 W/kg; SAR(10 g) = 0.277 W/kg**

Maximum value of SAR (measured) = 1.34 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH54(5270MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.3GHz (0); Communication System Band: IEEE 802.11n WiFi 5.3GHz ; Frequency: 5270 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5270 MHz; $\sigma$ = 5.38 S/m; $\varepsilon_r$ = 49.36; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH54(5270MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.410 W/kg

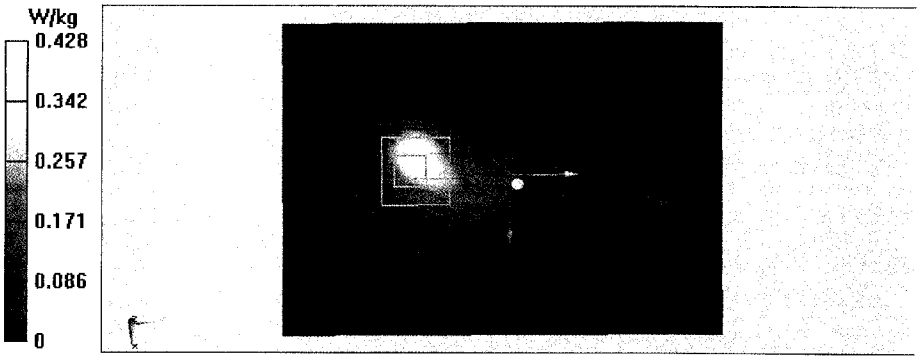
**Configuration/CH54(5270MHz Left)/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.000 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.25 W/kg

**SAR(1 g) = 0.373 W/kg; SAR(10 g) = 0.119 W/kg**

Maximum value of SAR (measured) = 0.428 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH112(5560MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5560 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5560 MHz; $\sigma$ = 5.68 S/m; $\varepsilon_r$ = 49.10; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH112(5560MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 1.56 W/kg

**Configuration/CH112(5560MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

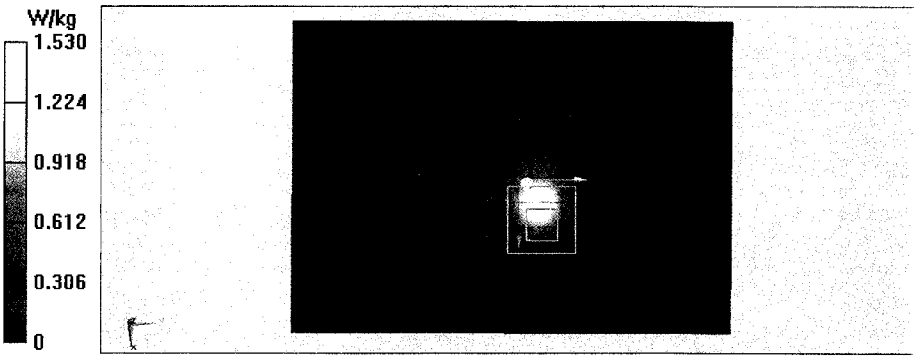
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.28 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 3.81 W/kg

**SAR(1 g) = 0.518 W/kg; SAR(10 g) = 0.354 W/kg**

Maximum value of SAR (measured) = 1.53 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH112(5560MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5560 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5560 MHz; $\sigma$ = 5.68 S/m; $\varepsilon_r$ = 49.10; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH112(5560MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.405 W/kg

**Configuration/CH112(5560MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.782 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.49 W/kg

**SAR(1 g) = 0.480 W/kg; SAR(10 g) = 0.153 W/kg**

Maximum value of SAR (measured) = 0.555 W/kg

**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH120(5600MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5600 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5600 MHz; $\sigma$ = 5.79 S/m; $\varepsilon_r$ = 48.98; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH120(5600MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.675 W/kg

**Configuration/CH120(5600MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

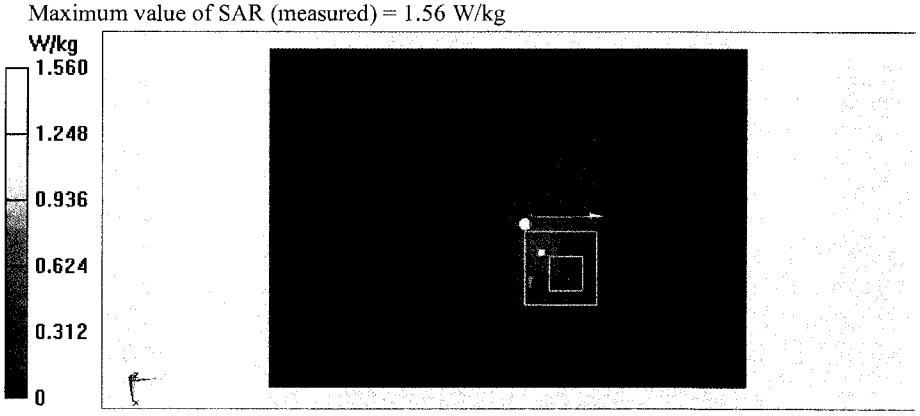
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.272 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.65 W/kg

**SAR(1 g) = 0.609 W/kg; SAR(10 g) = 0.324 W/kg**

Maximum value of SAR (measured) = 1.56 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11a CH120(5600MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5600 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5600 MHz; $\sigma$ = 5.79 S/m; $\varepsilon_r$ = 48.98; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH120(5600MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.245 W/kg

**Configuration/CH120(5600MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

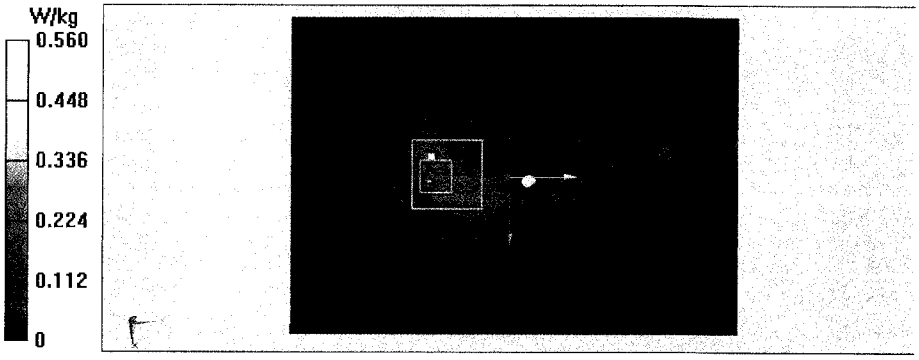
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.266 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 1.47 W/kg

**SAR(1 g) = 0.449 W/kg; SAR(10 g) = 0.144 W/kg**

Maximum value of SAR (measured) = 0.560 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH118(5590MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.5GHz (0); Communication System Band: IEEE 802.11n WiFi 5.5GHz; Frequency: 5590 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5590 MHz; $\sigma$ = 5.70 S/m; $\varepsilon_r$ = 49.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH118(5590MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.712 W/kg

**Configuration/CH118(5590MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

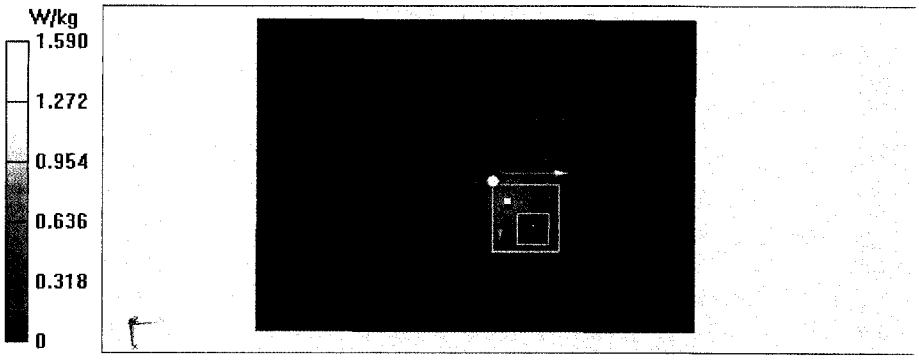
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.427 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 3.73 W/kg

**SAR(1 g) = 0.612 W/kg; SAR(10 g) = 0.328 W/kg**

Maximum value of SAR (measured) = 1.59 W/kg



**Test Laboratory: Audix SAR Lab** Date: 1/7/2016

**11n40 CH118(5590MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11n WiFi 5.5GHz (0); Communication System Band: IEEE 802.11n WiFi 5.5GHz; Frequency: 5590 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5590 MHz; $\sigma$ = 5.70 S/m; $\varepsilon_r$ = 49.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.25, 4.25, 4.25); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH118(5590MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.408 W/kg

**Configuration/CH118(5590MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

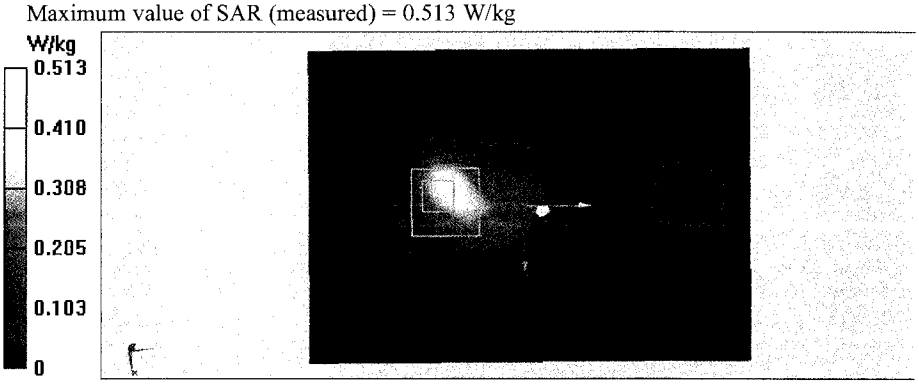
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.851 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.54 W/kg

**SAR(1 g) = 0.461 W/kg; SAR(10 g) = 0.148 W/kg**

Maximum value of SAR (measured) = 0.513 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11a CH165(5825MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz ; Frequency: 5825 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5825 MHz; $\sigma$ = 6.011 S/m; $\varepsilon_r$ = 47.87; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH165(5825MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 1.63 W/kg

**Configuration/CH165(5825MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

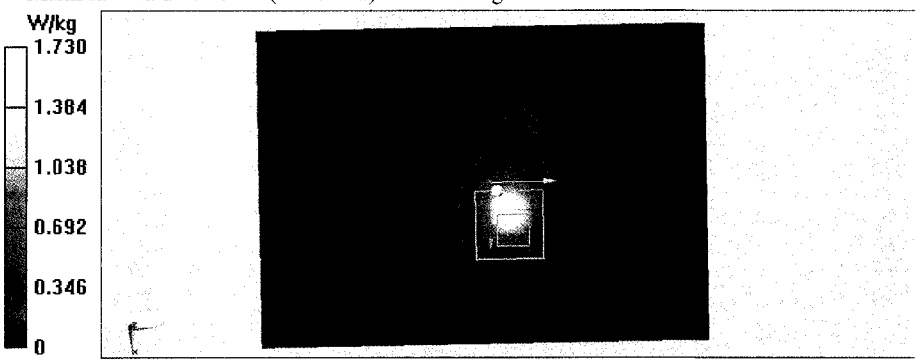
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.28 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 4.21 W/kg

**SAR(1 g) = 0.629 W/kg; SAR(10 g) = 0.383 W/kg**

Maximum value of SAR (measured) = 1.73 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11a CH165(5825MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz ; Frequency: 5825 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5825 MHz; $\sigma$ = 6.011 S/m; $\varepsilon_r$ = 47.87; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH165(5825MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.288 W/kg

**Configuration/CH165(5825MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

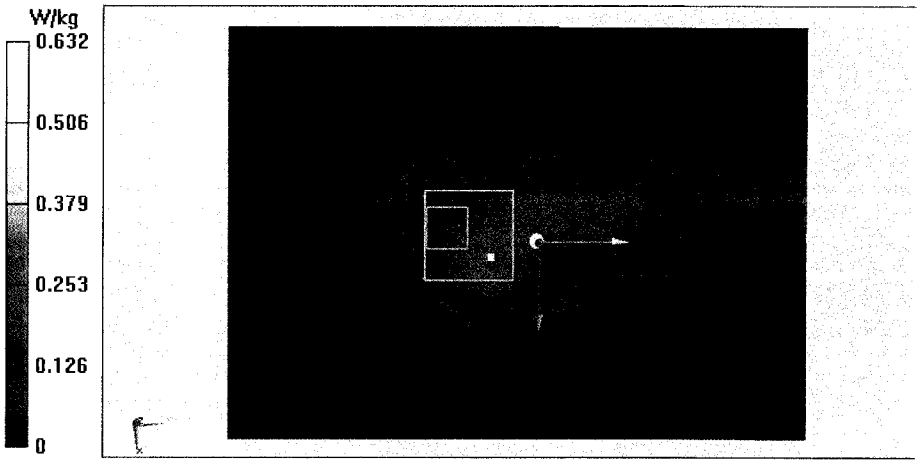
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.348 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.71 W/kg

**SAR(1 g) = 0.533 W/kg; SAR(10 g) = 0.164 W/kg**

Maximum value of SAR (measured) = 0.632 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11ac40 CH151(5755MHz Back)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11ac WiFi 5.8GHz (0); Communication System Band: IEEE 802.11ac WiFi 5.8GHz ; Frequency: 5755 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; $\sigma$ = 5.918 S/m; $\varepsilon_r$ = 48.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH151(5755MHz Back)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.749 W/kg

**Configuration/CH151(5755MHz Back)/Zoom Scan (5x5x7)/Cube 0:**

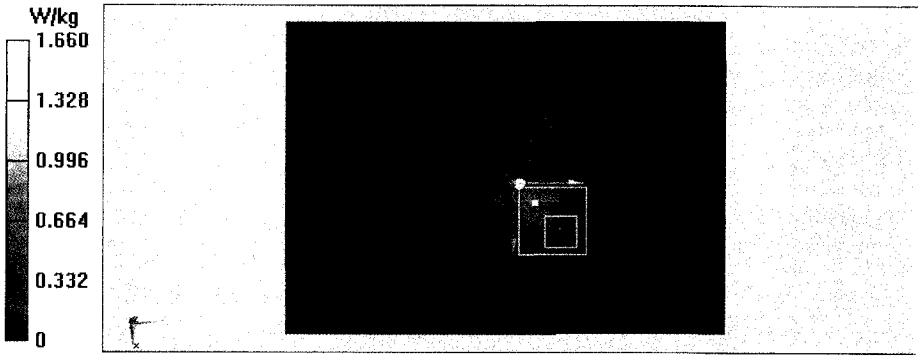
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.372 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 3.90 W/kg

**SAR(1 g) = 0.617 W/kg; SAR(10 g) = 0.338 W/kg**

Maximum value of SAR (measured) = 1.66 W/kg



**Test Laboratory: Audix SAR Lab** Date: 4/7/2016

**11ac40 CH151(5755MHz Left)**

**DUT: 11.6''windows tablet; M/N: NS-P11W7100**

Communication System: UID 0, IEEE 802.11ac WiFi 5.8GHz (0); Communication System Band: IEEE 802.11ac WiFi 5.8GHz ; Frequency: 5755 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; $\sigma$ = 5.918 S/m; $\varepsilon_r$ = 48.05; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.33, 4.33, 4.33); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn889; Calibrated: 02/02/2016
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1112
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Configuration/CH151(5755MHz Left)/Area Scan (51x71x1):** Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.510 W/kg

**Configuration/CH151(5755MHz Left)/Zoom Scan (5x5x7)/Cube 0:**

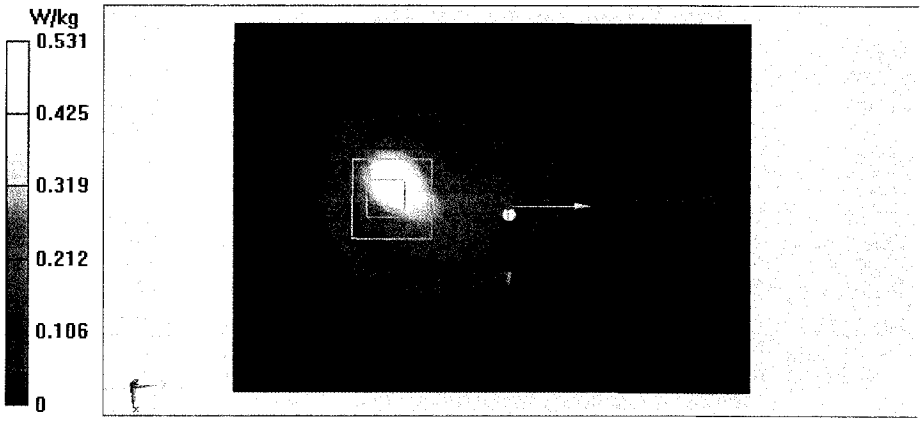
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.431 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.51 W/kg

**SAR(1 g) = 0.462 W/kg; SAR(10 g) = 0.147 W/kg**

Maximum value of SAR (measured) = 0.531 W/kg



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# IMPORTANT NOTICE

## USAGE OF THE DAE 4

The DAE unit is a delicate, high precision instrument and requires careful treatment by the user. There are no serviceable parts inside the DAE. Special attention shall be given to the following points:

**Battery Exchange**: The battery cover of the DAE4 unit is closed using a screw, over tightening the screw may cause the threads inside the DAE to wear out.

**Shipping of the DAE**: Before shipping the DAE to SPEAG for calibration, remove the batteries and pack the DAE in an antistatic bag. This antistatic bag shall then be packed into a larger box or container which protects the DAE from impacts during transportation. The package shall be marked to indicate that a fragile instrument is inside.

**E-Stop Failures**: Touch detection may be malfunctioning due to broken magnets in the E-stop. Rough handling of the E-stop may lead to damage of these magnets. Touch and collision errors are often caused by dust and dirt accumulated in the E-stop. To prevent E-stop failure, the customer shall always mount the probe to the DAE carefully and keep the DAE unit in a non-dusty environment if not used for measurements.

**Repair**: Minor repairs are performed at no extra cost during the annual calibration. However, SPEAG reserves the right to charge for any repair especially if rough unprofessional handling caused the defect.

**DASY Configuration Files:** Since the exact values of the DAE input resistances, as measured during the calibration procedure of a DAE unit, are not used by the DASY software, a nominal value of 200 MOhm is given in the correspoeding configuration file.

**Important Note:**
**Warranty and calibration is void if the DAE unit is disassembled partly or fully by the Customer.**

**Important Note:**
**Never attempt to grease or oil the E-stop assembly. Cleaning and readjusting of the E-stop assembly is allowed by certified SPEAG personnel only and is part of the annual calibration procedure.**

**Important Note:**
**To prevent damage of the DAE probe connector pins, use great care when installing the probe to the DAE. Carefully connect the probe with the connector notch oriented in the mating position. Avoid any rotational movement of the probe body versus the DAE while turning the locking nut of the connector. The same care shall be used when disconnecting the probe from the DAE.**

In Collaboration with
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CNAS L0570

Client : Audix Certificate No: Z16-97013

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | DAE4 - SN: 899 |
| Calibration Procedure(s) | FD-Z11-2-002-01<br>Calibration Procedure for the Data Acquisition Electronics (DAEx) |
| Calibration date: | February 02, 2016 |

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date(Calibrated by, Certificate No.) | Scheduled Calibration |
|---|---|---|---|
| Process Calibrator 753 | 1971018 | 06-July-15 (CTTL, No:J15X04257) | July-16 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Yu Zongying | SAR Test Engineer | |
| Reviewed by: | Qi Dianyuan | SAR Project Leader | |
| Approved by: | Lu Bingsong | Deputy Director of the laboratory | |

Issued: February 03, 2016

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**Glossary:**

| | |
|---|---|
| DAE | data acquisition electronics |
| Connector angle | information used in DASY system to align probe sensor X to the robot coordinate system. |

**Methods Applied and Interpretation of Parameters:**

- *DC Voltage Measurement*: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle*: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The report provide only calibration results for DAE, it does not contain other performance test results.

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## DC Voltage Measurement

A/D - Converter Resolution nominal
High Range: 1LSB = 6.1μV , full range = -100...+300 mV
Low Range: 1LSB = 61nV , full range = -1.....+3mV
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

| Calibration Factors | X | Y | Z |
|---|---|---|---|
| High Range | 402.452 ± 0.15% (k=2) | 403.036 ± 0.15% (k=2) | 403.026 ± 0.15% (k=2) |
| Low Range | 3.98069 ± 0.7% (k=2) | 3.97751 ± 0.7% (k=2) | 3.98419 ± 0.7% (k=2) |

## Connector Angle

| | |
|---|---|
| **Connector Angle** to be used in DASY system | 352.5° ± 1 ° |

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CALIBRATION
No. L0570

Client **Audix** **Certificate No: Z15-97001**

# CALIBRATION CERTIFICATE

Object EX3DV4 - SN:3767

Calibration Procedure(s) FD-Z11-2-004-01
Calibration Procedures for Dosimetric E-field Probes

Calibration date: January 30, 2015

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date(Calibrated by, Certificate No.) | Scheduled Calibration |
|---|---|---|---|
| Power Meter NRP2 | 101919 | 01-Jul-14 (CTTL, No.J14X02146) | Jun-15 |
| Power sensor NRP-Z91 | 101547 | 01-Jul-14 (CTTL, No.J14X02146) | Jun-15 |
| Power sensor NRP-Z91 | 101548 | 01-Jul-14 (CTTL, No.J14X02146) | Jun-15 |
| Reference10dBAttenuator | 18N50W-10dB | 13-Mar-14(TMC,No.JZ14-1103) | Mar-16 |
| Reference20dBAttenuator | 18N50W-20dB | 13-Mar-14(TMC,No.JZ14-1104) | Mar-16 |
| Reference Probe EX3DV4 | SN 3617 | 28-Aug-14(SPEAG,No.EX3-3617_Aug14) | Aug-15 |
| DAE4 | SN 777 | 17-Sep-14 (SPEAG, DAE4-777_Sep14) | Sep -15 |
| Secondary Standards | ID # | Cal Date(Calibrated by, Certificate No.) | Scheduled Calibration |
| SignalGeneratorMG3700A | 6201052605 | 01-Jul-14 (CTTL, No.J14X02145) | Jun-15 |
| Network Analyzer E5071C | MY46110673 | 15-Feb-14 (TMC, No.JZ14-781) | Feb-15 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Yu Zongying | SAR Test Engineer | |
| Reviewed by: | Qi Dianyuan | SAR Project Leader | |
| Approved by: | Lu Bingsong | Deputy Director of the laboratory | |

Issued: January 31, 2015

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**Glossary:**

| | |
|---|---|
| TSL | tissue simulating liquid |
| NORMx,y,z | sensitivity in free space |
| ConvF | sensitivity in TSL / NORMx,y,z |
| DCP | diode compression point |
| CF | crest factor (1/duty_cycle) of the RF signal |
| A,B,C,D | modulation dependent linearization parameters |
| Polarization Φ | Φ rotation around probe axis |
| Polarization θ | θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i θ=0 is normal to probe axis |
| Connector Angle | information used in DASY system to align probe sensor X to the robot coordinate system |

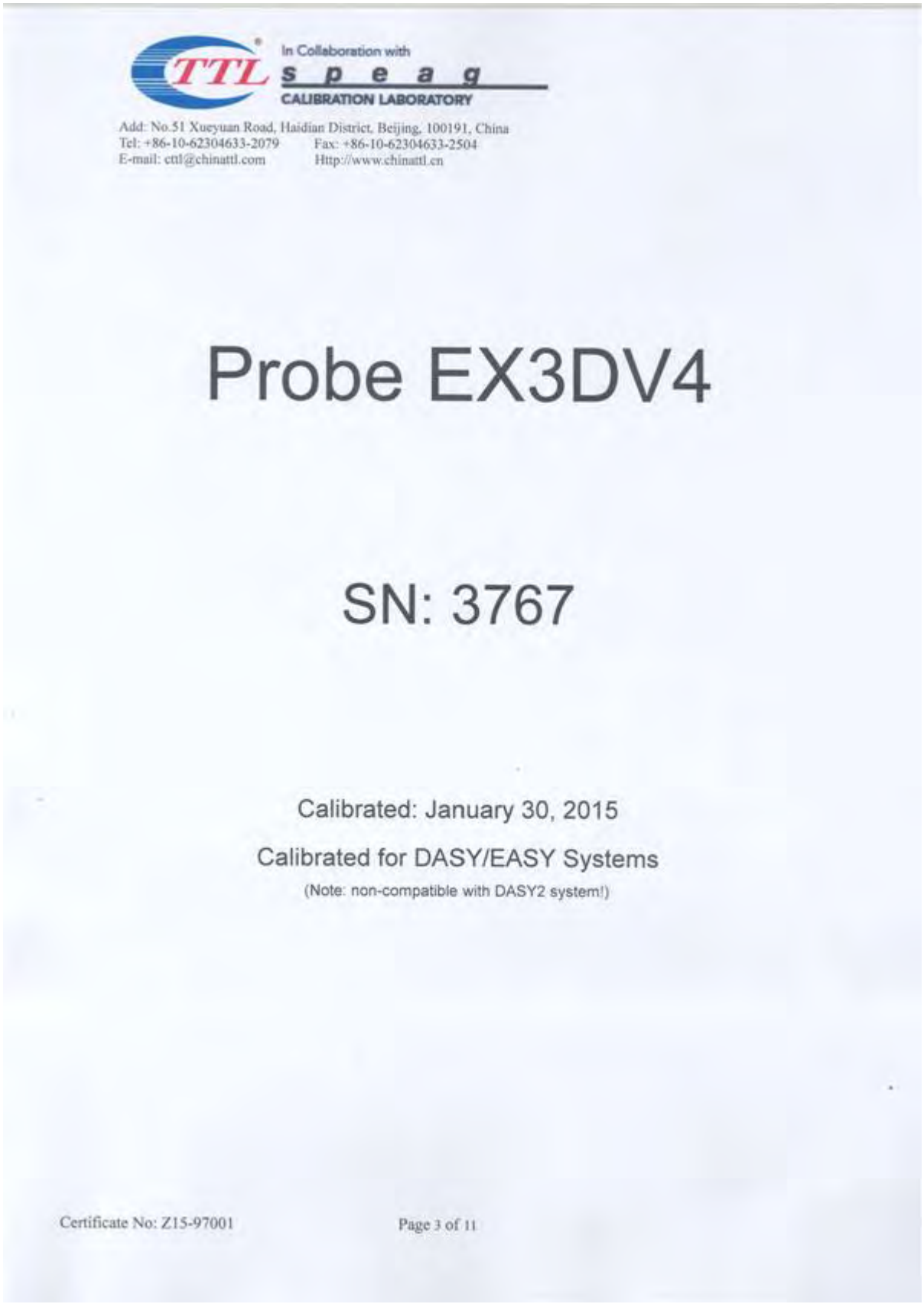
**Calibration is Performed According to the Following Standards:**

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005

**Methods Applied and Interpretation of Parameters:**

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the $E^2$-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z;VRx,y,z:*A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).



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# Probe EX3DV4

## SN: 3767

Calibrated: January 30, 2015

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

Certificate No: Z15-97001 Page 3 of 11

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# DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

## Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|---|---|---|---|---|
| Norm(μV/(V/m)$^2$)$^A$ | 0.56 | 0.57 | 0.47 | ±10.8% |
| DCP(mV)$^B$ | 102.2 | 97.8 | 103.3 | |

## Modulation Calibration Parameters

| UID | Communication System Name | | A dB | B dB√μV | C | D dB | VR mV | Unc$^E$ (k=2) |
|---|---|---|---|---|---|---|---|---|
| 0 | CW | X | 0.0 | 0.0 | 1.0 | 0.00 | 202.6 | ±3.3% |
| | | Y | 0.0 | 0.0 | 1.0 | | 204.8 | |
| | | Z | 0.0 | 0.0 | 1.0 | | 187.8 | |

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

$^A$ The uncertainties of Norm X, Y, Z do not affect the $E^2$-field uncertainty inside TSL (see Page 5 and Page 6).
$^B$ Numerical linearization parameter: uncertainty not required.
$^E$ Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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# DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

## Calibration Parameter Determined in Head Tissue Simulating Media

| f [MHz][C] | Relative Permittivity[F] | Conductivity (S/m)[F] | ConvF X | ConvF Y | ConvF Z | Alpha[G] | Depth[G] (mm) | Unct. (k=2) |
|---|---|---|---|---|---|---|---|---|
| 750 | 41.9 | 0.89 | 9.79 | 9.79 | 9.79 | 0.22 | 0.99 | ±12% |
| 835 | 41.5 | 0.90 | 9.27 | 9.27 | 9.27 | 0.14 | 1.33 | ±12% |
| 900 | 41.5 | 0.97 | 9.13 | 9.13 | 9.13 | 0.16 | 1.22 | ±12% |
| 1450 | 40.5 | 1.20 | 8.77 | 8.77 | 8.77 | 0.58 | 0.70 | ±12% |
| 1750 | 40.1 | 1.37 | 8.20 | 8.20 | 8.20 | 0.25 | 0.98 | ±12% |
| 1900 | 40.0 | 1.40 | 7.91 | 7.91 | 7.91 | 0.17 | 1.30 | ±12% |
| 2000 | 40.0 | 1.40 | 7.65 | 7.65 | 7.65 | 0.15 | 1.80 | ±12% |
| 2450 | 39.2 | 1.80 | 7.18 | 7.18 | 7.18 | 0.53 | 0.71 | ±12% |
| 2600 | 39.0 | 1.96 | 7.02 | 7.02 | 7.02 | 0.69 | 0.63 | ±12% |
| 5200 | 36.0 | 4.66 | 5.44 | 5.44 | 5.44 | 0.50 | 1.00 | ±13% |
| 5300 | 35.9 | 4.76 | 5.09 | 5.09 | 5.09 | 0.43 | 1.08 | ±13% |
| 5500 | 35.6 | 4.96 | 4.83 | 4.83 | 4.83 | 0.55 | 1.03 | ±13% |
| 5600 | 35.5 | 5.07 | 4.73 | 4.73 | 4.73 | 0.52 | 1.09 | ±13% |
| 5800 | 35.3 | 5.27 | 4.65 | 4.65 | 4.65 | 0.50 | 1.15 | ±13% |

[C] Frequency validity of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.
[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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# DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

## Calibration Parameter Determined in Body Tissue Simulating Media

| f [MHz][C] | Relative Permittivity[F] | Conductivity (S/m)[F] | ConvF X | ConvF Y | ConvF Z | Alpha[G] | Depth[G] (mm) | Unct. (k=2) |
|---|---|---|---|---|---|---|---|---|
| 750 | 55.5 | 0.96 | 9.67 | 9.67 | 9.67 | 0.15 | 1.46 | ±12% |
| 835 | 55.2 | 0.97 | 9.66 | 9.66 | 9.66 | 0.18 | 1.35 | ±12% |
| 900 | 55.0 | 1.05 | 9.32 | 9.32 | 9.32 | 0.22 | 1.15 | ±12% |
| 1450 | 54.0 | 1.30 | 8.22 | 8.22 | 8.22 | 0.11 | 1.61 | ±12% |
| 1750 | 53.4 | 1.49 | 7.77 | 7.77 | 7.77 | 0.12 | 1.87 | ±12% |
| 1900 | 53.3 | 1.52 | 7.58 | 7.58 | 7.58 | 0.17 | 1.39 | ±12% |
| 2000 | 53.3 | 1.52 | 7.80 | 7.80 | 7.80 | 0.14 | 1.99 | ±12% |
| 2450 | 52.7 | 1.95 | 7.35 | 7.35 | 7.35 | 0.31 | 1.19 | ±12% |
| 2600 | 52.5 | 2.16 | 7.26 | 7.26 | 7.26 | 0.36 | 1.00 | ±12% |
| 5200 | 49.0 | 5.30 | 4.98 | 4.98 | 4.98 | 0.52 | 1.08 | ±13% |
| 5300 | 48.9 | 5.42 | 4.73 | 4.73 | 4.73 | 0.56 | 1.00 | ±13% |
| 5500 | 48.6 | 5.65 | 4.35 | 4.35 | 4.35 | 0.52 | 1.26 | ±13% |
| 5600 | 48.5 | 5.77 | 4.25 | 4.25 | 4.25 | 0.56 | 1.27 | ±13% |
| 5800 | 48.2 | 6.00 | 4.33 | 4.33 | 4.33 | 0.44 | 1.28 | ±13% |

[C] Frequency validity of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.
[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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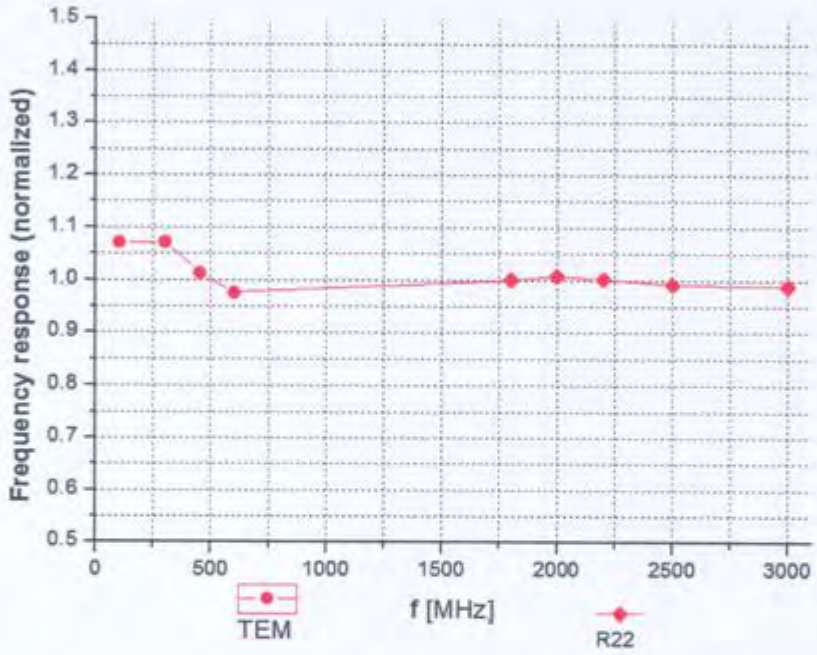
## Frequency Response of E-Field
## (TEM-Cell: ifi110 EXX, Waveguide: R22)




**Uncertainty of Frequency Response of E-field: ±7.5% (k=2)**

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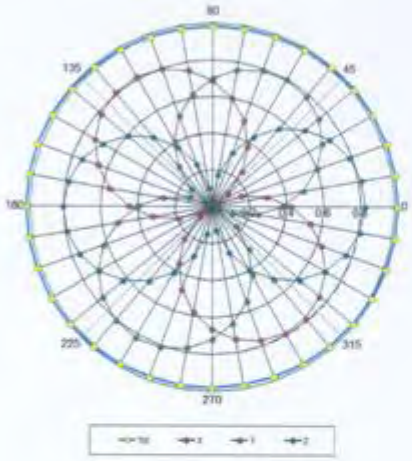
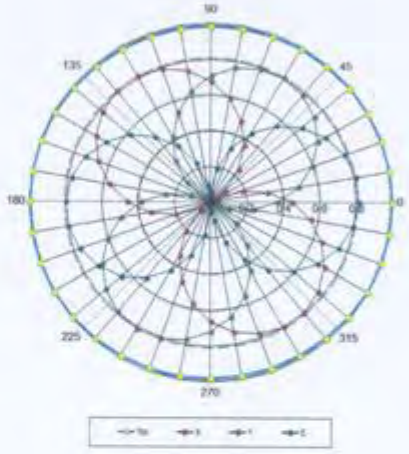
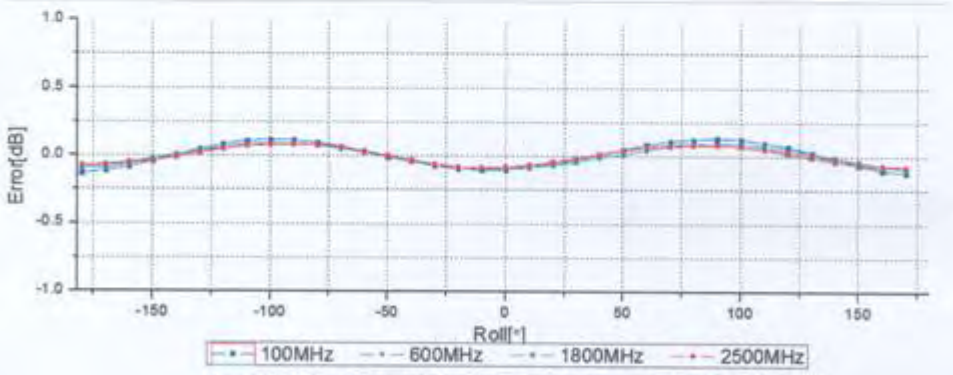
## Receiving Pattern (Φ), θ=0°

### f=600 MHz, TEM



### f=1800 MHz, R22






Uncertainty of Axial Isotropy Assessment: ±0.9% (k=2)

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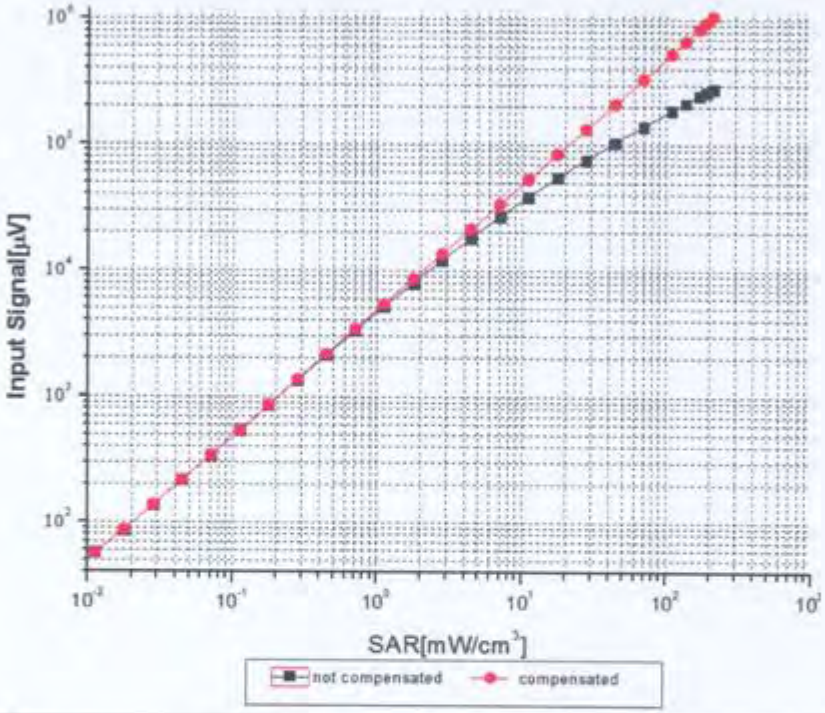
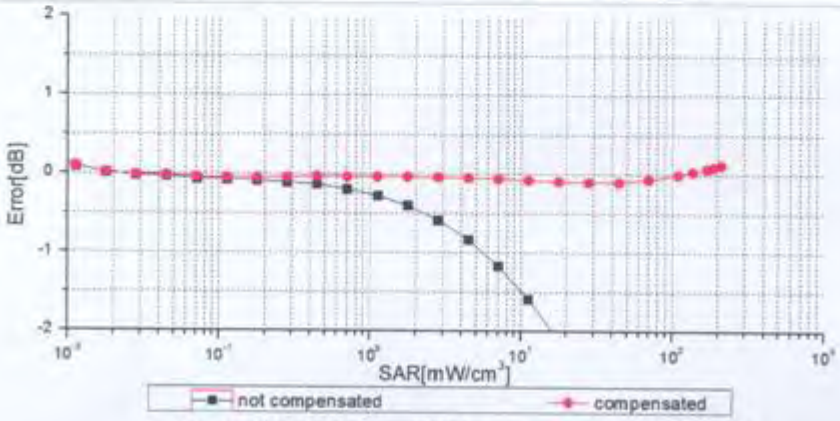
## Dynamic Range f($SAR_{head}$)
## (TEM cell, f = 900 MHz)




**Uncertainty of Linearity Assessment: ±0.9% (k=2)**

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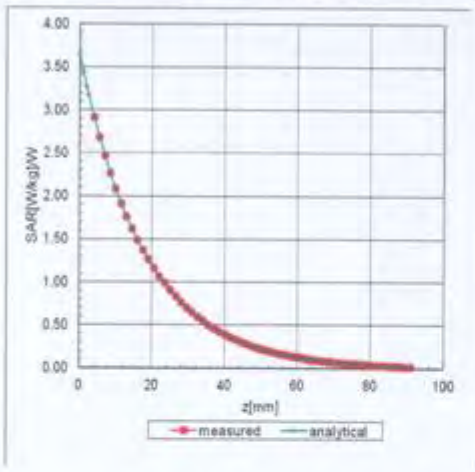
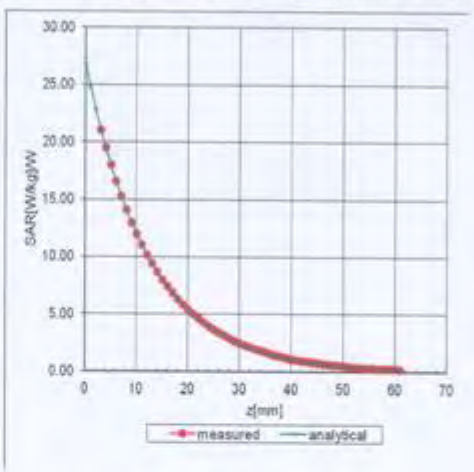
## Conversion Factor Assessment

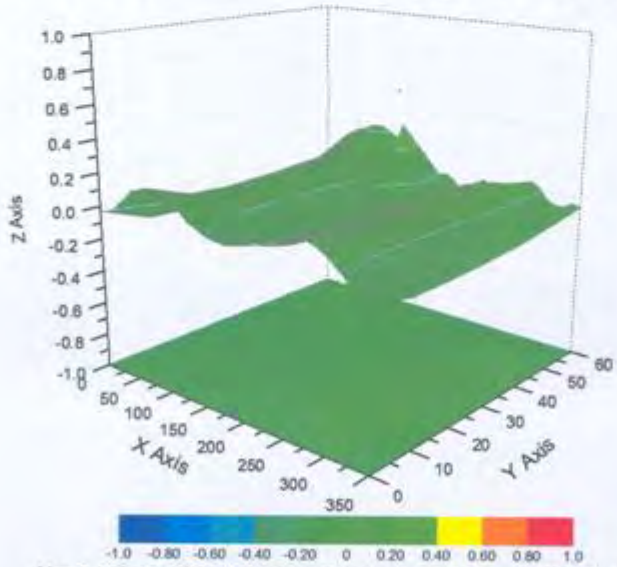
f=900 MHz, WGLS R9(H_convF)




f=1750 MHz, WGLS R22(H_convF)




## Deviation from Isotropy in Liquid




Uncertainty of Spherical Isotropy Assessment: ±2.8% (K=2)

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# DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

## Other Probe Parameters

| | |
|---|---|
| Sensor Arrangement | Triangular |
| Connector Angle (°) | 145.7 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disable |
| Probe Overall Length | 337mm |
| Probe Body Diameter | 10mm |
| Tip Length | 9mm |
| Tip Diameter | 2.5mm |
| Probe Tip to Sensor X Calibration Point | 1mm |
| Probe Tip to Sensor Y Calibration Point | 1mm |
| Probe Tip to Sensor Z Calibration Point | 1mm |
| Recommended Measurement Distance from Surface | 1.4mm |

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CNAS L0442

Client Auden Certificate No: Z14-97048

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D2450V2 - SN: 862 |
| Calibration Procedure(s) | TMC-OS-E-02-194<br>Calibration procedure for dipole validation kits |
| Calibration date: | May 29, 2014 |

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date(Calibrated by, Certificate No.) | Scheduled Calibration |
|---|---|---|---|
| Power Meter NRVD | 102083 | 11-Sep-13 (TMC, No.JZ13-443) | Sep-14 |
| Power sensor NRV-Z5 | 100595 | 11-Sep-13 (TMC, No. JZ13-443) | Sep -14 |
| Reference Probe EX3DV4 | SN 3846 | 3- Sep-13 (SPEAG, No.EX3-3846_Sep13) | Sep-14 |
| DAE4 | SN 1331 | 23-Jan-14 (SPEAG, DAE4-1331_Jan14) | Jan -15 |
| Signal Generator E4438C | MY49070393 | 13-Nov-13 (TMC, No.JZ13-394) | Nov-14 |
| Network Analyzer E8362B | MY43021135 | 19-Oct-13 (TMC, No.JZ13-278) | Oct-14 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Yu Zongying | SAR Test Engineer | |
| Reviewed by: | Qi Dianyuan | SAR Project Leader | |
| Approved by: | Lu Bingsong | Deputy Director of the laboratory | |

Issued: May 30, 2014

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**Glossary:**

| | |
|---|---|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORMx,y,z |
| N/A | not applicable or not measured |

**Calibration is Performed According to the Following Standards:**

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005
c) KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

**Additional Documentation:**

d) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions*: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL*: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss*: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay*: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured*: SAR measured at the stated antenna input power.
- *SAR normalized*: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters*: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

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## Measurement Conditions

DASY system configuration, as far as not given on page 1.

| | | |
|---|---|---|
| DASY Version | DASY52 | 52.8.8.1222 |
| Extrapolation | Advanced Extrapolation | |
| Phantom | Twin Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | |
| Frequency | 2450 MHz ± 1 MHz | |

## Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| Nominal Head TSL parameters | 22.0 °C | 39.2 | 1.8 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 38.5 ± 6 % | 1.82 mho/m ± 6 % |
| Head TSL temperature change during test | <1.0 °C | --- | --- |

## SAR result with Head TSL

| | | |
|---|---|---|
| SAR averaged over 1 $cm^3$ (1 g) of Head TSL | Condition | |
| SAR measured | 250 mW input power | 13.4 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **53.1 mW /g ± 20.8 % (k=2)** |
| SAR averaged over 10 $cm^3$ (10 g) of Head TSL | Condition | |
| SAR measured | 250 mW input power | 8.35 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **25.3 mW /g ± 20.4 % (k=2)** |

## Body TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| Nominal Body TSL parameters | 22.0 °C | 52.7 | 1.95 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 52.2 ± 6 % | 1.94 mho/m ± 6 % |
| Body TSL temperature change during test | <1.0 °C | --- | --- |

## SAR result with Body TSL

| | | |
|---|---|---|
| SAR averaged over 1 $cm^3$ (1 g) of Body TSL | Condition | |
| SAR measured | 250 mW input power | 12.6 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **50.4 mW /g ± 20.8 % (k=2)** |
| SAR averaged over 10 $cm^3$ (10 g) of Body TSL | Condition | |
| SAR measured | 250 mW input power | 5.99 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **24.0 mW /g ± 20.4 % (k=2)** |

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## Appendix

### Antenna Parameters with Head TSL

| | |
|---|---|
| Impedance, transformed to feed point | 48.6Ω- 6.0jΩ |
| Return Loss | - 24.0dB |

### Antenna Parameters with Body TSL

| | |
|---|---|
| Impedance, transformed to feed point | 52.1Ω- 6.0jΩ |
| Return Loss | - 24.9dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.346 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |

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**DASY5 Validation Report for Head TSL** Date: 27.05.2014

Test Laboratory: TMC, Beijing, China

**DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN: 862**

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; $\sigma$ = 1.819 S/m; $\varepsilon_r$ = 38.51; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(6.78, 6.78, 6.78); Calibrated: 2013-09-03;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

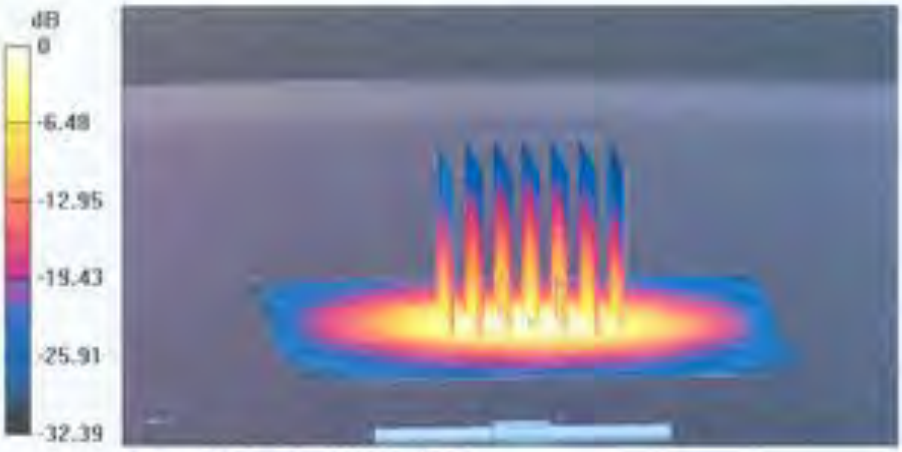
**System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=xx mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.6 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 26.8 W/kg

**SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.35 W/kg**

Maximum value of SAR (measured) = 20.1 W/kg




0 dB = 19.6 W/kg = 12.93 dBW/kg

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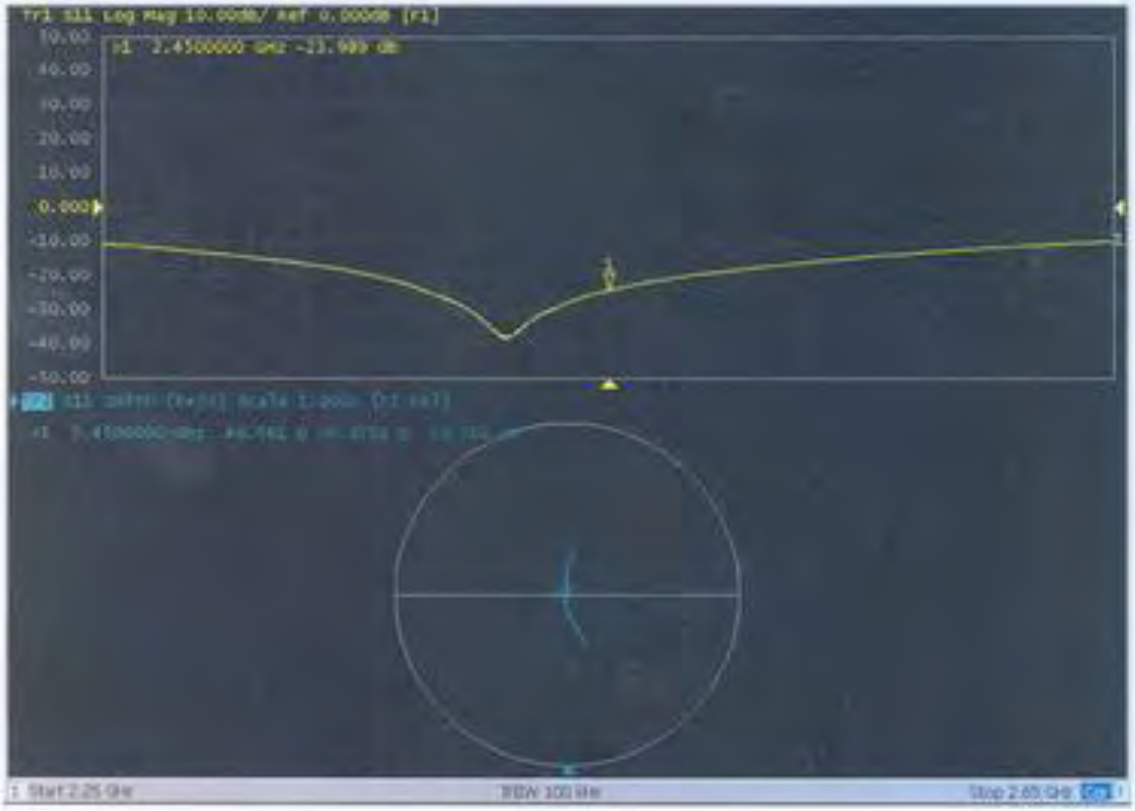
**Impedance Measurement Plot for Head TSL**



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**DASY5 Validation Report for Body TSL** Date: 28.05.2014

Test Laboratory: TMC, Beijing, China

**DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN: 862**

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; $\sigma$ = 1.94 S/m; $\varepsilon_r$ = 52.5; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(6.73, 6.73, 6.73); Calibrated: 2013-09-03;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

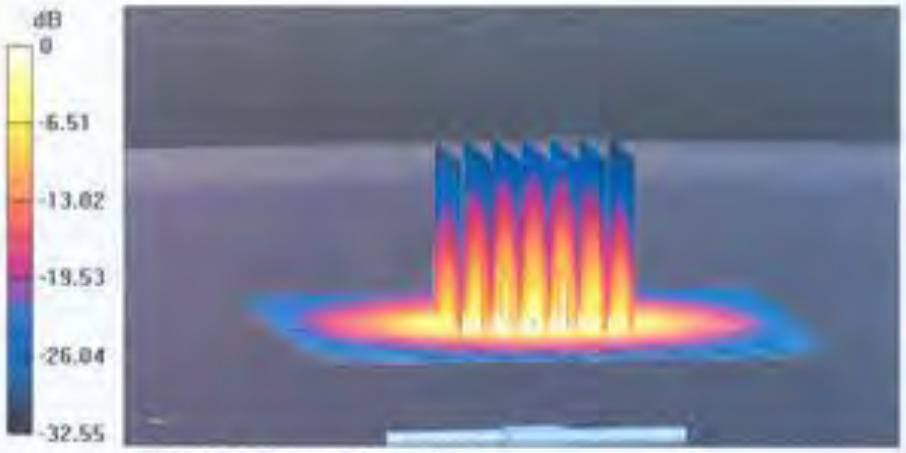
**System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=xx mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.55 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 25.2 W/kg

**SAR(1 g) = 12.6 W/kg; SAR(10 g) = 5.99 W/kg**

Maximum value of SAR (measured) = 19.0 W/kg




0 dB = 18.1 W/kg = 12.58 dBW/kg

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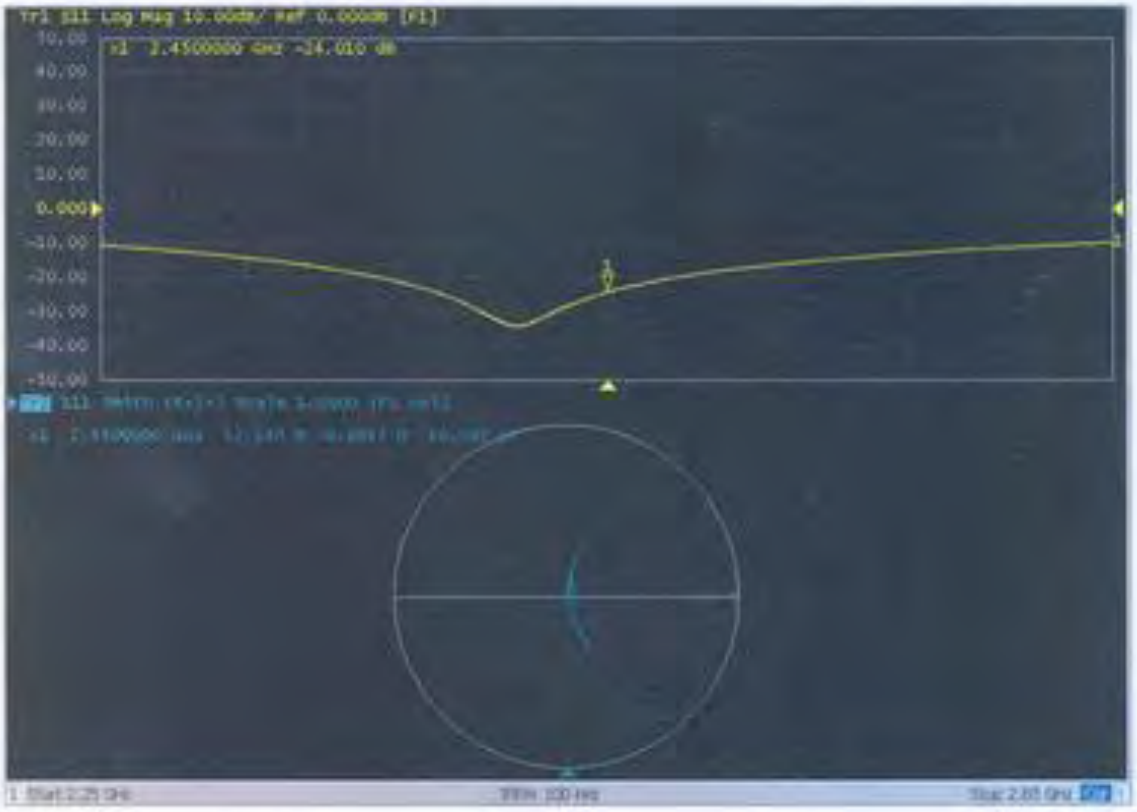
## Impedance Measurement Plot for Body TSL



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CNAS 校准 CNAS L0442

Client Auden Certificate No: Z14-97049

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D5GHzV2 - SN:1102 |
| Calibration Procedure(s) | TMC-OS-E-02-194<br>Calibration procedure for dipole validation kits |
| Calibration date: | June 16, 2014 |

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID # | Cal Date(Calibrated by, Certificate No.) | Scheduled Calibration |
|---|---|---|---|
| Power Meter NRVD | 102083 | 11-Sep-13 (TMC, No.JZ13-443) | Sep-14 |
| Power sensor NRV-Z5 | 100595 | 11-Sep-13 (TMC, No. JZ13-443) | Sep -14 |
| Reference Probe EX3DV4 | SN 3846 | 3- Sep-13 (SPEAG, No.EX3-3846_Sep13) | Sep-14 |
| DAE4 | SN 1331 | 23-Jan-14 (SPEAG, DAE4-1331_Jan14) | Jan -15 |
| Signal Generator E4438C | MY49070393 | 13-Nov-13 (TMC, No.JZ13-394) | Nov-14 |
| Network Analyzer E8362B | MY43021135 | 19-Oct-13 (TMC, No.JZ13-278) | Oct-14 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Yu Zongying | SAR Test Engineer | |
| Reviewed by: | Qi Dianyuan | SAR Project Leader | |
| Approved by: | Lu Bingsong | Deputy Director of the laboratory | |

Issued: June 17, 2014

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**Glossary:**

| | |
|---|---|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORMx,y,z |
| N/A | not applicable or not measured |

**Calibration is Performed According to the Following Standards:**

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005
c) KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

**Additional Documentation:**

d) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

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## Measurement Conditions

DASY system configuration, as far as not given on page 1.

| | | |
|---|---|---|
| **DASY Version** | DASY52 | 52.8.8.1222 |
| **Extrapolation** | Advanced Extrapolation | |
| **Phantom** | Flat Phantom | |
| **Distance Dipole Center - TSL** | 10 mm | with Spacer |
| **Zoom Scan Resolution** | dx, dy = 4.0 mm, dz = 1.4 mm | |
| **Frequency** | 5200 MHz ± 1 MHz<br>5500 MHz ± 1 MHz<br>5800 MHz ± 1 MHz | |

## Head TSL parameters at 5200MHz

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 36.0 | 4.66 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 36.3 ± 6 % | 4.62 mho/m ± 6 % |
| **Head TSL temperature change during test** | <1.0 °C | ---- | ---- |

## SAR result with Head TSL at 5200MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 7.81 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **78.2 mW /g ± 23.0 % (k=2)** |
| **SAR averaged over 10 $cm^3$ (10 g) of Head TSL** | Condition | |
| SAR measured | 250 mW input power | 2.23 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **22.3 mW /g ± 22.2 % (k=2)** |

## Head TSL parameters at 5500MHz

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 35.6 | 4.96 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 35.2 ± 6 % | 5.04 mho/m ± 6 % |
| **Head TSL temperature change during test** | <1.0 °C | ---- | ---- |

## SAR result with Head TSL at 5500MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 8.30 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **82.9 mW /g ± 23.0 % (k=2)** |
| **SAR averaged over 10 $cm^3$ (10 g) of Head TSL** | Condition | |
| SAR measured | 250 mW input power | 2.38 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **23.8 mW /g ± 22.2 % (k=2)** |

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## Head TSL parameters at 5800MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 35.3 | 5.27 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 34.9 ± 6 % | 5.28 mho/m ± 6 % |
| **Head TSL temperature change during test** | <1.0 °C | ---- | ---- |

## SAR result with Head TSL at 5800MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 7.57 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **75.5 mW /g ± 23.0 % (k=2)** |
| **SAR averaged over 10 $cm^3$ (10 g) of Head TSL** | Condition | |
| SAR measured | 250 mW input power | 2.15 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **21.4 mW /g ± 22.2 % (k=2)** |

## Body TSL parameters at 5200MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 49.0 | 5.30 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 48.1 ± 6 % | 5.32 mho/m ± 6 % |
| **Body TSL temperature change during test** | <1.0 °C | ---- | ---- |

## SAR result with Body TSL at 5200MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 7.55 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **75.2 mW /g ± 23.0 % (k=2)** |
| **SAR averaged over 10 $cm^3$ (10 g) of Body TSL** | Condition | |
| SAR measured | 250 mW input power | 2.18 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **21.7 mW /g ± 22.2 % (k=2)** |

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## Body TSL parameters at 5500MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 48.6 | 5.65 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 47.5 ± 6 % | 5.62 mho/m ± 6 % |
| **Body TSL temperature change during test** | <1.0 °C | ---- | ---- |

## SAR result with Body TSL at 5500MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 8.05 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **80.1 mW /g ± 23.0 % (k=2)** |
| **SAR averaged over 10 $cm^3$ (10 g) of Body TSL** | Condition | |
| SAR measured | 250 mW input power | 2.30 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **22.9 mW /g ± 22.2 % (k=2)** |

## Body TSL parameters at 5800MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 48.2 | 6.00 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 47.2 ± 6 % | 6.05 mho/m ± 6 % |
| **Body TSL temperature change during test** | <1.0 °C | ---- | ---- |

## SAR result with Body TSL at 5800MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 7.23 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **72.0 mW /g ± 23.0 % (k=2)** |
| **SAR averaged over 10 $cm^3$ (10 g) of Body TSL** | Condition | |
| SAR measured | 250 mW input power | 2.05 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **20.4 mW /g ± 22.2 % (k=2)** |

## Appendix

## Antenna Parameters with Head TSL at 5200MHz

| Impedance, transformed to feed point | 50.2Ω-8.19jΩ |
|---|---|
| Return Loss | - 21.8dB |

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### Antenna Parameters with Head TSL at 5500MHz

| | |
|---|---|
| Impedance, transformed to feed point | 52.0Ω- 4.65jΩ |
| Return Loss | - 26.0dB |

### Antenna Parameters with Head TSL at 5800MHz

| | |
|---|---|
| Impedance, transformed to feed point | 54.7Ω- 1.58jΩ |
| Return Loss | - 26.5dB |

### Antenna Parameters with Body TSL at 5200MHz

| | |
|---|---|
| Impedance, transformed to feed point | 51.6Ω- 7.57jΩ |
| Return Loss | - 22.4dB |

### Antenna Parameters with Body TSL at 5500MHz

| | |
|---|---|
| Impedance, transformed to feed point | 51.1Ω- 5.61jΩ |
| Return Loss | - 25.0dB |

### Antenna Parameters with Body TSL at 5800MHz

| | |
|---|---|
| Impedance, transformed to feed point | 54.5Ω- 0.89jΩ |
| Return Loss | - 27.2dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.183 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph, The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |

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**DASY5 Validation Report for Head TSL** Date: 16.06.2014

Test Laboratory: TMC, Beijing, China

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW; Frequency: 5200 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5200 MHz: $\sigma$ = 4.62 S/m; $\varepsilon_r$ = 36.3; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(5.25, 5.25, 5.25); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

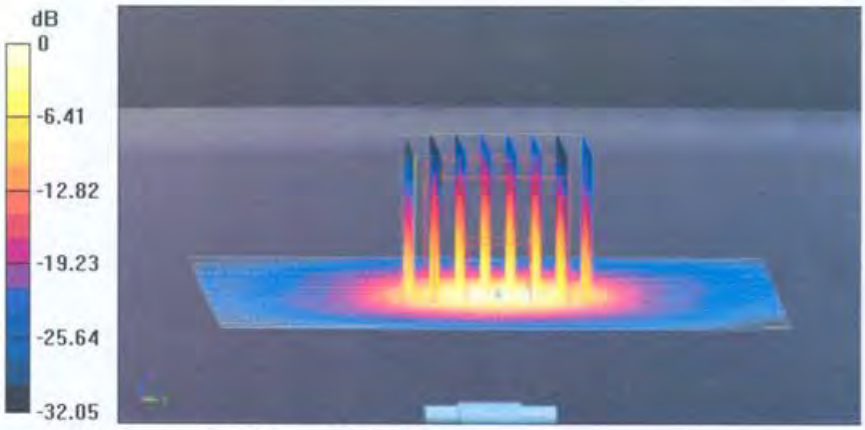
**System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5200 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.42 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 36.0 W/kg

**SAR(1 g) = 7.81 W/kg; SAR(10 g) = 2.23 W/kg**

Maximum value of SAR (measured) = 18.5 W/kg




0 dB = 19.1 W/kg = 12.81 dBW/kg

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**DASY5 Validation Report for Head TSL** Date: 16.06.2014

Test Laboratory: TMC, Beijing, China

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW; Frequency: 5500 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5500 MHz; $\sigma$ = 5.04 S/m; $\varepsilon_r$ = 35.2; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(4.8, 4.8, 4.8); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

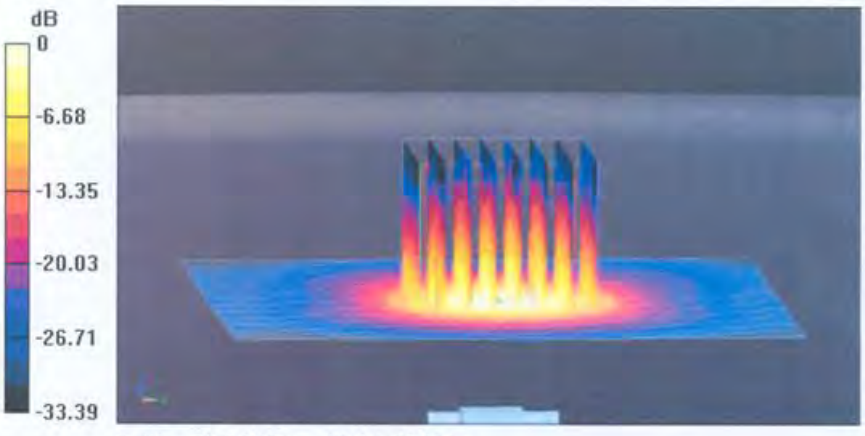
**System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5500 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.93 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 40.2 W/kg

**SAR(1 g) = 8.3 W/kg; SAR(10 g) = 2.38 W/kg**

Maximum value of SAR (measured) = 20.5 W/kg




0 dB = 20.5 W/kg = 13.13 dBW/kg

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**DASY5 Validation Report for Head TSL** Date: 16.06.2014

Test Laboratory: TMC, Beijing, China

**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW; Frequency: 5800 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5800 MHz; $\sigma$ = 5.28 S/m; $\varepsilon_r$ = 34.9; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(4.51, 4.51, 4.51); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

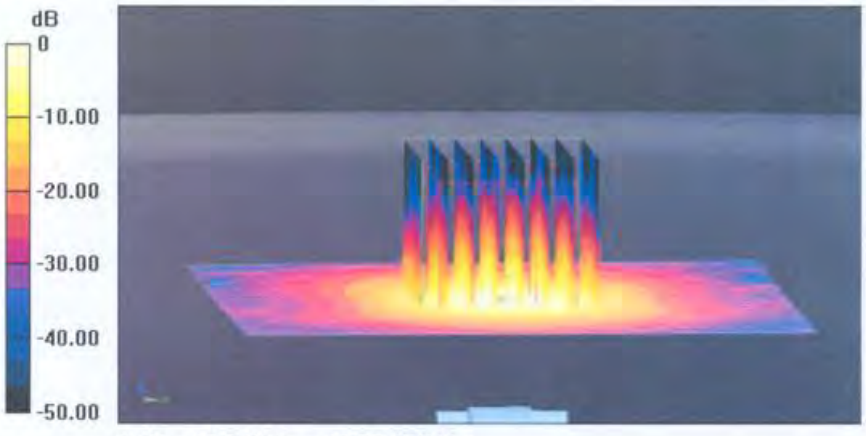
**System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5800 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.33 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 37.9 W/kg

**SAR(1 g) = 7.57 W/kg; SAR(10 g) = 2.15 W/kg**

Maximum value of SAR (measured) = 19.2 W/kg




0 dB = 18.9 W/kg = 12.77 dBW/kg

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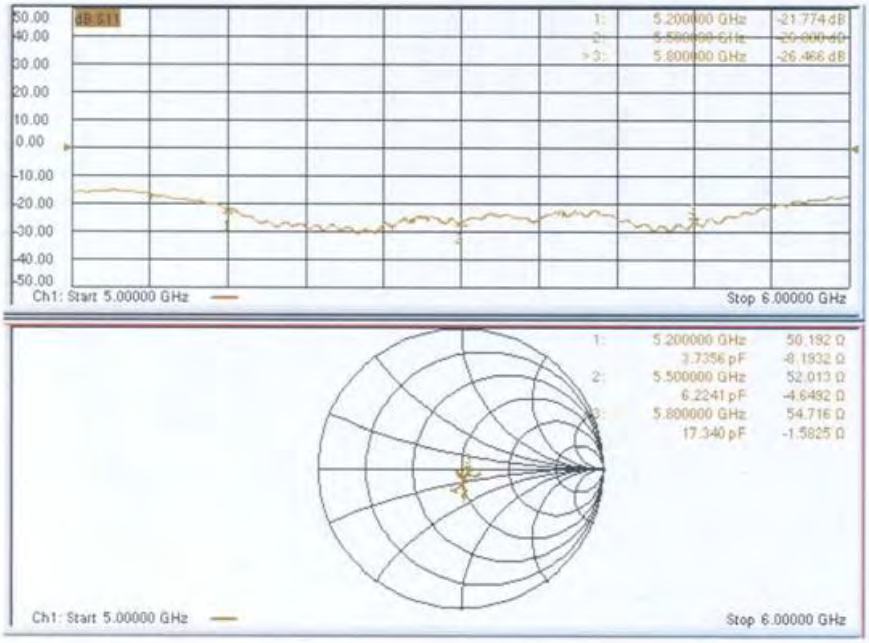
**Impedance Measurement Plot for Head TSL**



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**DASY5 Validation Report for Body TSL** Date: 13.06.2014

Test Laboratory: TMC, Beijing, China

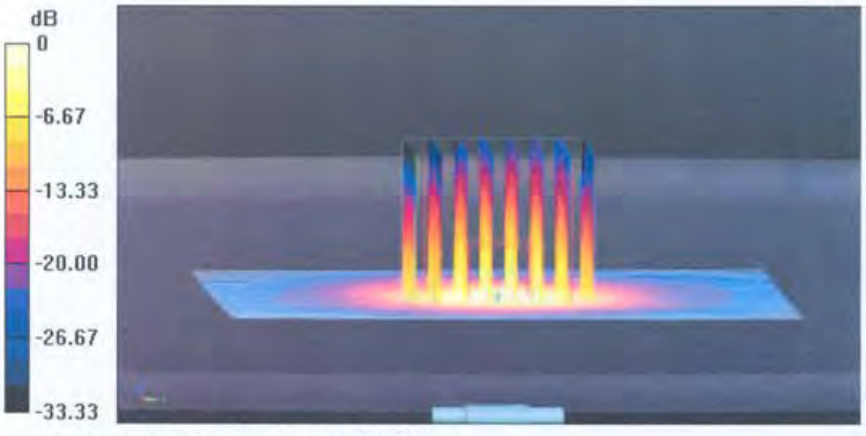
**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; $\sigma$ = 5.32 S/m; $\varepsilon_r$ = 48.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(4.36, 4.36, 4.36); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5200 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 65.52 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 29.4 W/kg
**SAR(1 g) = 7.55 W/kg; SAR(10 g) = 2.18 W/kg**
Maximum value of SAR (measured) = 17.2 W/kg




0 dB = 17.3 W/kg = 12.38 dBW/kg

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**DASY5 Validation Report for Body TSL** Date: 13.06.2014

Test Laboratory: TMC, Beijing, China

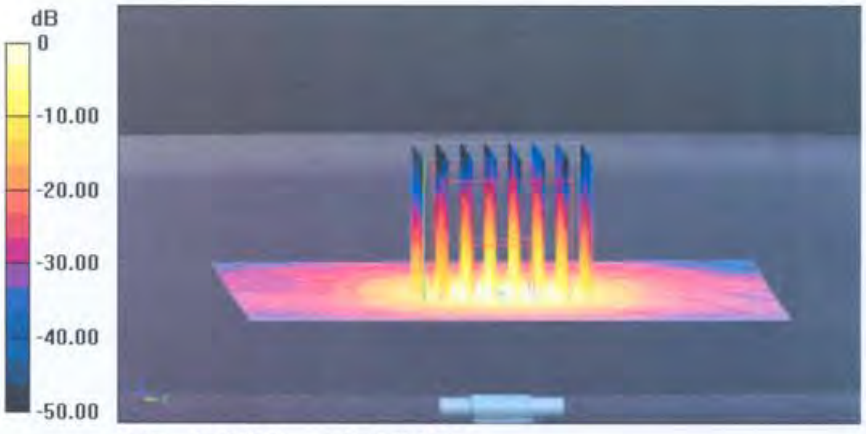
**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW; Frequency: 5500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5500 MHz; $\sigma$ = 5.62 S/m; $\varepsilon_r$ = 47.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(3.81, 3.81, 3.81); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5500 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 68.16 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 33.5 W/kg
**SAR(1 g) = 8.05 W/kg; SAR(10 g) = 2.3 W/kg**
Maximum value of SAR (measured) = 18.8 W/kg




0 dB = 18.9 W/kg = 12.76 dBW/kg

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**DASY5 Validation Report for Body TSL** Date: 13.06.2014

Test Laboratory: TMC, Beijing, China

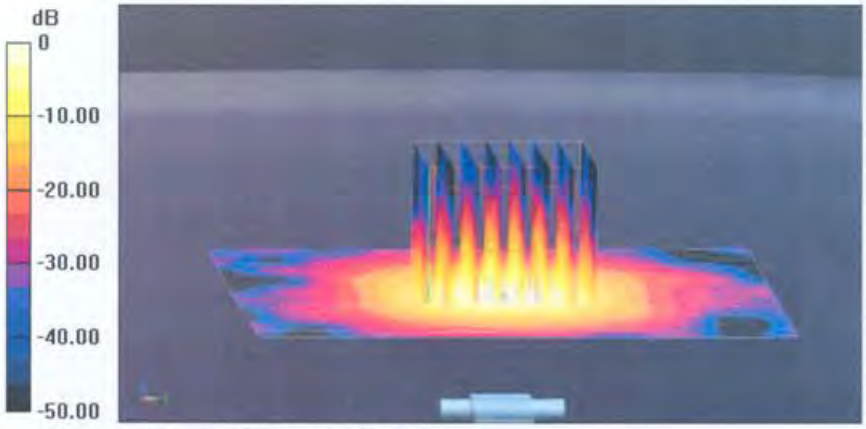
**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102**

Communication System: UID 0, CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; $\sigma$ = 6.05 S/m; $\varepsilon_r$ = 47.2; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(3.94, 3.94, 3.94); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5800 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.52 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 33.4 W/kg
**SAR(1 g) = 7.23 W/kg; SAR(10 g) = 2.05 W/kg**
Maximum value of SAR (measured) = 17.4 W/kg




0 dB = 17.6 W/kg = 12.45 dBW/kg

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## Impedance Measurement Plot for Body TSL