Certificate Number: 1449-02

MOTOROLA

ACCREDITED

**CGISS EME Test Laboratory**
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Fort Lauderdale, FL. 33322

# S.A.R. EME Compliance Test Report (Part 1 of 2)

| | |
|---|---|
| **Attention:** | Federal Communication Commission |
| **Date of Report:** | July 3, 2002 |
| **Report Revision:** | Rev. O |
| **Device Manufacturer:** | Motorola |
| **Device Model:** | H58XAH6RR7AN; i88s & i58sr |
| **Device Description:** | 1:6, 2:6, 81:120 TDM; 64 QAM, 16 QAM & QPSK Modulation; 0.6Watt Pulse Average; GPS Capability |
| **FCC ID:** | **AZ489FT5815** |

| | |
|---|---|
| **Test Period:** | 5/22/02 – 6/25/02 |
| **Test Engineer:** | Kim Uong<br>Lead Test Engineer |
| **Author:** | Michael Sailsman<br>EME Regulatory Affairs Liaison |

**Note: Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 2.0 of this report.**

| | |
|---|---|
| /s/ Ken Enger | 7/03/02 |
| Senior Resource Manager, Product Safety and EME Director | Date Approved |

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### REVISION HISTORY

| Date | Revision | Comments |
|---|---|---|
| 7/03/02 | O | Initial release |

## 1.0 Introduction

This report details the utilization, test setup, test equipment, and test results of the Specific Absorption Rate (S.A.R.) measurements performed at the CGISS EME Test Lab for FCC ID: AZ489FT5815.

The applicable exposure environment is General Population/Uncontrolled.

The test results included herein represent the highest S.A.R. levels applicable to this product and clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of 1.6 mW/g per the requirements of 47 CFR 2.1093(d).

## 2.0 Reference Standards and Guidelines

This product is designed to comply with the following national and international standards and guidelines.

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Terminal frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Terminal communications (Electromagnetic Radiation - Human Exposure) Standard 2001
- ANATEL, Brazil Regulatory Authority, Resolution 256 (April 11, 2001) "additional requirements for SMR, cellular and PCS product certification."

## 3.0 Description of Test Sample

**i88s** **i58sr**

FCC ID: AZ489FT5815, iDEN model H58XAH6RR7AN: i88s and i58sr digital multi-service data capable phone are derivatives of model H40XAH6RR1BN. The i88s and i58sr phones have different front housing variations, supported by a common back housing. Electrical operation is identical for both models as they share common circuit boards. The i88s and i58sr operates using 1:6, 2:6, 81:120 TDM; 64 QAM, 16 QAM & QPSK modulation with GPS capability. Transmission employs time division multiplexing with a duty cycle ranging from 16.67% to 33.33% using 16-QAM for voice or circuit data transmissions. Packet data transmission is also supported up to a maximum duty cycle of 67.5% depending on the modulation used. The intended functional use is by the general population handheld at the head or by two-way PTT operation 1 to 2 inches in front of the face. The phone may also be mounted to a person or vehicle with the offered options and accessories. In addition, the phone may also be connected to a personal computer or digital assistant using a data cable interface.

FCC ID: AZ489FT5815 is capable of operating in the 806-825 MHz and 896-901 MHz bands. The rated power is 0.60 watts with a maximum output capability of 0.70 watts as defined by the upper limit of the production line final test station.

FCC ID: AZ489FT5815 is offered with the following options and accessories:

| KIT NUMBER | DESCRIPTION |
|---|---|
| **BATTERIES:** | |
| SNN5705B | 750 mAH Lithium Ion (High Performance) |
| SNN5716A | 1300 mAH Lithium Ion (Maximum Capacity) |
| SNN5717C | 450 mAH Lithium Ion (Slim Battery) |
| SNN5706A | 1050 mAH Lithium Ion (Extra Capacity) |
| **BATTERY COVER:** | |
| NTN9344A | High Performance Battery Cover |
| NTN9343A | Maximum Capacity Battery Cover |
| NTN9346A | Extra Capacity Battery Cover |
| NTN9345A | Slim Battery Cover |
| **BATTERY & COVER SETS**: | |
| NTN1792A | Slim Battery and Cover (SNN5717C Battery, NTN9345A Cover) |
| NTN1793A | High Performance Battery and Cover (SNN5705B Battery, NTN9344A Cover) |
| NTN1794A | Extra Capacity Battery and Cover (SNN5706A Battery, NTN9346A Cover) |
| NTN1795A | Maximum Capacity Battery and Cover (SNN5716A Battery, NTN9343A Cover) |
| **ACCESSORIES:** | |
| **BODY Worn** | |
| NTN9475A | Swivel Belt Carry System (NTN9544 = Belt Clip; NTN9545 = Radio swivel holder) |
| NTN9478A | Leather Carry Case (Open Key Pad) [NTN9544A = belt clip] |
| NTN9479A | Leather Carry Case (Plastic Widow) [NTN9544A = Belt clip] |
| **OTHER** | |
| NKN6544A | RS232 Data Cable |
| NKN6540A | Dual Port Adapter Cable |
| NNTN4007A | USB PC Data Cable |
| NKN6546A | Palm Pilot III/VII Adapter |
| NKN6547A | Palm Pilot V Adapter |
| NTN8993A | Generic PDA Adapter |
| NTN9476A | i85s Dash Mount Holder |
| NTN1796A | Easy install Hands Free Car Kit 9w/PTT and Visor Mic) |
| NTN9712A | Motorola iBOARD (include NTN9942A = Keyboard, NTN9854A = Case, NTN9855A = manual) |
| SYN8390B | Privacy Earpiece and Microphone with garment clip |
| NTN8496A | Light-weight Headset W/Mic |
| SYN7875B | Hearing Aid Neckloop (includes SJN9634A = manual, SPN4604A = charger, SPN4770A = charger base, SHN7497A = charger base adapter, SNN5536A = battery, SYN8608B = neckloop) |
| SYN7875C | Hearing Aid Neckloop (includes SJN9634A = manual, SPN4604A = charger, SPN4770A = charger base, SHN7497A = charger base adapter, SNN5536A = battery, SYN8608C = neckloop) |
| SYN8146C | Lightweight Over the Ear Headset W/ Boom Mic |

## 3.1 Test Signal

**Test Signal mode**

| Test Mode | X | Base Station | | Simulator | |
|---|---|---|---|---|---|

**Transmission Mode**

| | |
|---|---|
| **CW** | |
| **Native Transmission** | |
| **TDM 1:6, 1:3, 81:120;** | **X** |
| **EGSM, DCS, PCS** | |

## 3.2 Test Output Power

Output power was measured before and after each test. A characteristic power slump table is provided in Appendix A for the worst case battery offered for FCC ID: AZ489FT5815 in this report. Appendix A also presents a "shortened" S.A.R. cube scan performed with the configuration that produced the worst-case observed power slump.

Note that the results of the shortened cube scans presented in Appendix A demonstrate that the scaling methodology used to determine the calculated S.A.R. results presented herein are valid.

## 4.0 Description of Test Equipment

### 4.1 Descriptions of SAR Measurement System

The CGISS EME laboratory utilizes a Dosimetric Assessment System (DASY3™) S.A.R. measurement system manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The measurement setup and procedures are consistent with the guidelines recommended by SPEAG. The test system consists of a Stäubli RX90L robot with an ET3DV6 E-Field probe. Please reference the following website URLs for detailed specifications of the robot and E-Field probe: http://www.speag.com/robot_acc.html, http://www.speag.com/probes.html. The S.A.R. measurements were conducted with probe model/serial number ET3DV6/SN1383. The system performance check was conducted daily and within 24 hours prior to testing. A copy of the DASY output files of the system performance test results and the probe calibration certificates are included in APPENDIX C and D respectively. The table below summarizes the system performance check results normalized to 1W.

| Probe Serial # | Tissue Type | Probe Cal Date | Dipole Kit / Serial # | System Perf. Result when normalized to 1W (mW/g) | Reference SAR @ 1W (mW/g) | Test Date |
|---|---|---|---|---|---|---|
| 1383 | FCC Body | 02/21/02 | D835V2 SN426 | 10.895 +/- 0.285 | 10.65 +/- 10% | 5/22/02 to 6/25/02 |
| 1383 | IEEE Head | 02/21/02 | D835V2 SN426 | 10.29 +/- 0.33 | 10.04 +/- 10% | 5/22/02 to 6/25/02 |

The DASY3™ system is operated per the instructions in the DASY3™ Users Manual. The complete manual is available directly from SPEAG™.

All measurement equipment used to assess EME S.A.R. compliance was calibrated according to 17025 A2LA guidelines.

## 4.2 Description of Phantoms

### 4.2.1 Abdomen

**Flat Phantom**

The flat phantom used to assess S.A.R. performance was a rectangular shaped box made from acrylic material. The flat phantom is mounted on a wooden supporting structure that has a loss tangent of < 0.05. The structure has a 60.96 cm x 15.24 cm opening at its center to allow positioning the DUT to the phantom's surface. The supporting structure is assembled with wooden pegs and glue. The table below shows the flat phantom dimensions.

| | |
|---|---|
| Length | 40cm |
| Width | 23cm |
| Height | 20cm |
| Surface Thickness | 0.2cm |

### 4.2.2 Head

**SAM Phantom**

A SAM TP1079 phantom supplied by SPEAG was used to assess S.A.R. performance at the head.

## 4.3 Simulated Tissue Properties

### 4.3.1 Type of Simulated Tissue

The simulated tissue used is compliant to that specified in FCC Supplement C (Edition 01 - 01) to OET Bulletin 65 (Edition 97 - 01).

| Simulated Tissue | Body Position |
|---|---|
| Body | Abdomen |
| Head | Head/Face |

### 4.3.2 Simulated Tissue Composition

| | | Ingredient % | | | | |
|---|---|---|---|---|---|---|
| **Tissue type** | **Frequency (MHz)** | **Sugar** | **Water** | **Salt** | **HEC** | **Bact.** |
| FCC Body | 806-902 | 44.9 | 53.06 | 0.94 | 1 | 0.1 |
| IEEE Head | 806-902 | 57 | 40.45 | 1.45 | 1 | 0.1 |

**Characterization of Simulated tissue materials and ambient conditions:**

Simulated tissue prepared for S.A.R. measurements is measured daily and within 24 hours prior to actual S.A.R. testing to verify that the tissue is within 5% of target parameters at the center of the transmit band. This measurement is done using the Agilent (HP) probe kit model 85070C and a HP8753D Network Analyzer.

**Target tissue parameters**

| | FCC Body | |
|---|---|---|
| **Frequency (MHz)** | **Di-electric Constant** | **Conductivity – S/m** |
| 813 | 55.3 | 0.97 |
| 835 | 55.2 | 0.97 |
| 899 | 55.0 | 1.05 |

| | IEEE Head | |
|---|---|---|
| **Frequency (MHz)** | **Di-electric Constant** | **Conductivity – S/m** |
| 813 | 41.6 | 0.90 |
| 835 | 41.5 | 0.90 |
| 899 | 41.5 | 0.97 |

### 4.4 Test conditions

The EME Laboratory ambient environment is well controlled resulting in very stable simulated tissue temperature and therefore stable dielectric properties. Simulated tissue temperature is measured prior to each scan to insure it is within +/ - 2°C of the temperature at which the dielectric properties were determined. The liquid depth in the phantom used for measurements was 15cm +/- 0.5cm. Additional precautions are routinely taken to ensure the stability of the simulated tissue such as covering the phantoms when scans are not actively in process in order to minimize evaporation. The lab environment is continuously monitored. The table below represents the average environmental conditions during the S.A.R. tests reported herein:

| | |
|---|---|
| **Ambient Temperature** | 23.1 °C |
| **Relative Humidity** | 49.1 % |
| **Tissue Temperature** | 21.7 °C |

The EME Lab RF environment uses a Spectrum Analyzer to monitor for extraneous large signal RF contaminants that could possibly affect the test results. If such unwanted signals are discovered the S.A.R. scans are repeated. However, the lab environment is sufficiently protected such that no S.A.R. impacting interference has been experienced to date.

## 5.0 Description of Test Procedure

All options and accessories listed in section 3.0 were considered in the test matrix in order to assess the highest S.A.R. levels. The transmit power was set to the stated maximum power output +/- 5% for all tests. Initial and end power was measured before and after each test. Measured S.A.R. results were scaled to account for maximum power and drift. All test were done in the phone's native transmission mode relative to the user position. Each test was commenced with a fully charged battery. S.A.R. compliance assessment of FC ID: AZ489FT5815 was performed within the following categories:

**i88s**

- 900MHz band S.A.R. assessment at the left ear in phone mode (1:3)
- 900MHz band S.A.R. assessment at the right ear in phone mode (1:3)
- 900MHz band S.A.R. assessment in PTT mode (1:6) at the Face.
- 900MHz band S.A.R. assessment in phone mode (1:3) at the abdomen.
- 800MHz band S.A.R. assessment in phone mode (1:3) at the left ear.
- 800MHz band S.A.R. assessment in phone mode (1:3) at the right ear.
- 800MHz band S.A.R. assessment in PTT mode (1:6) at the Face..
- 800MHz band S.A.R. assessment in data mode (81:120) at the abdomen.
- 800MHz band S.A.R. assessment in phone mode (1:3) at the abdomen.

**i58sr**

- 900 MHz band S.A.R. assessment at the left ear in phone mode (1:3).
- 900 MHz band S.A.R. assessment at the right ear in phone mode (1:3).
- 900 MHz band S.A.R. assessment at the abdomen in phone mode (1:3)
- 900 MHZ band S.A.R. assessment at the face in PTT mode (1:6).
- 800 MHz band S.A.R. assessment at the left ear in phone mode (1:3).
- 800 MHz band S.A.R. assessment at the right ear in phone mode (1:3).
- 800 MHZ band S.A.R. assessment at the face in PTT mode (1:6).
- 800 MHz band S.A.R. assessment at the abdomen in data mode (81:120).

## 5.1 Device Test Positions

Note: Figure 1 presents the highest S.A.R. test configuration. Figure 4 depicts an overall perspective of the system setup and support structure.

### 5.1.1 Abdomen

A flat phantom containing simulated FCC body tissue consistent with applicable standards was used to assess S.A.R. performance of the device at the abdomen.

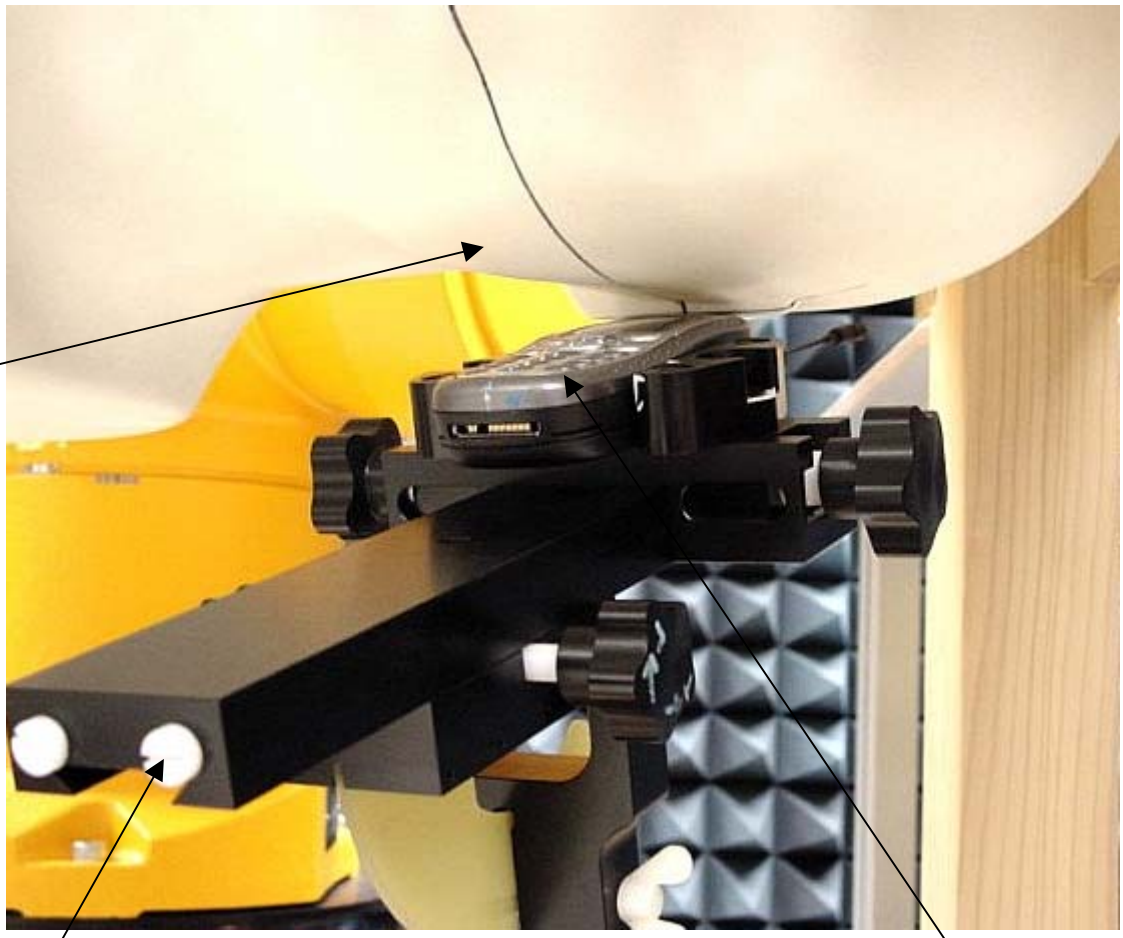
### 5.1.2 2.5cm Face and Abdomen

A flat phantom containing simulated FCC body tissue and a SAM phantom containing IEEE head tissue consistent with applicable standards was used to assess S.A.R. performance of the device at 2.5cm for abdomen and face.

### 5.1.3 Head

A SAM phantom containing simulated IEEE head tissue consistent with applicable standards was used to assess S.A.R. performance of the device at the head.

**Figure 1: Highest S.A.R. Test Configuration Left ear SAM Phantom 15 degree tilt**



# Additional Test Position Photos

**Figure 2: Abdomen Test Position with Data cable connected**

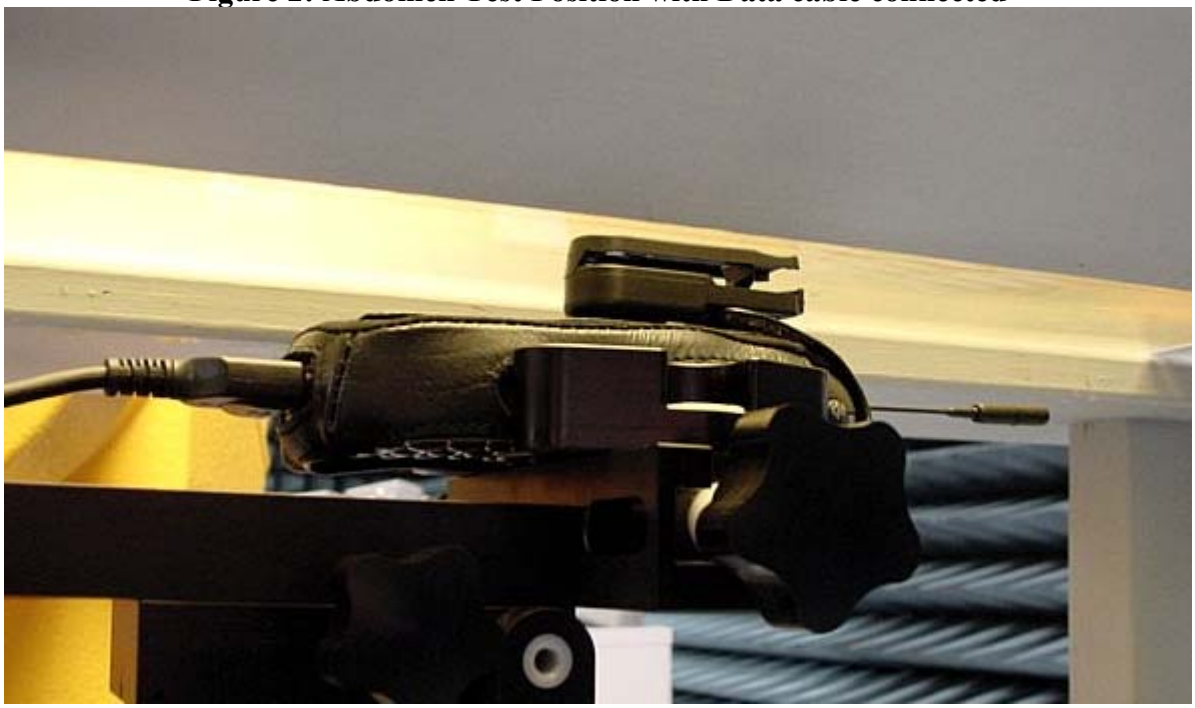


**Figure 3: Face Test Position with 2.5 cm separation**

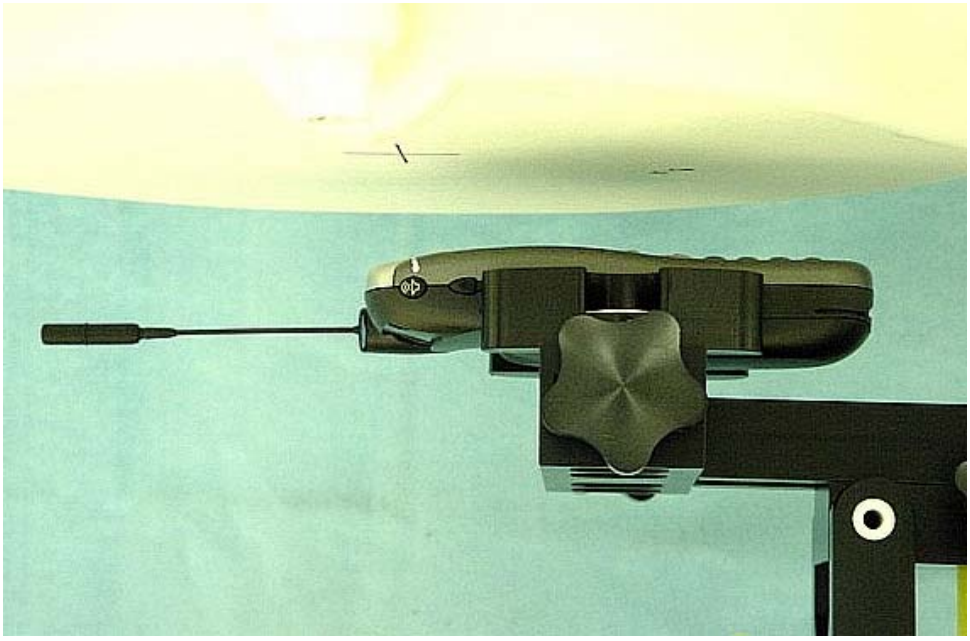
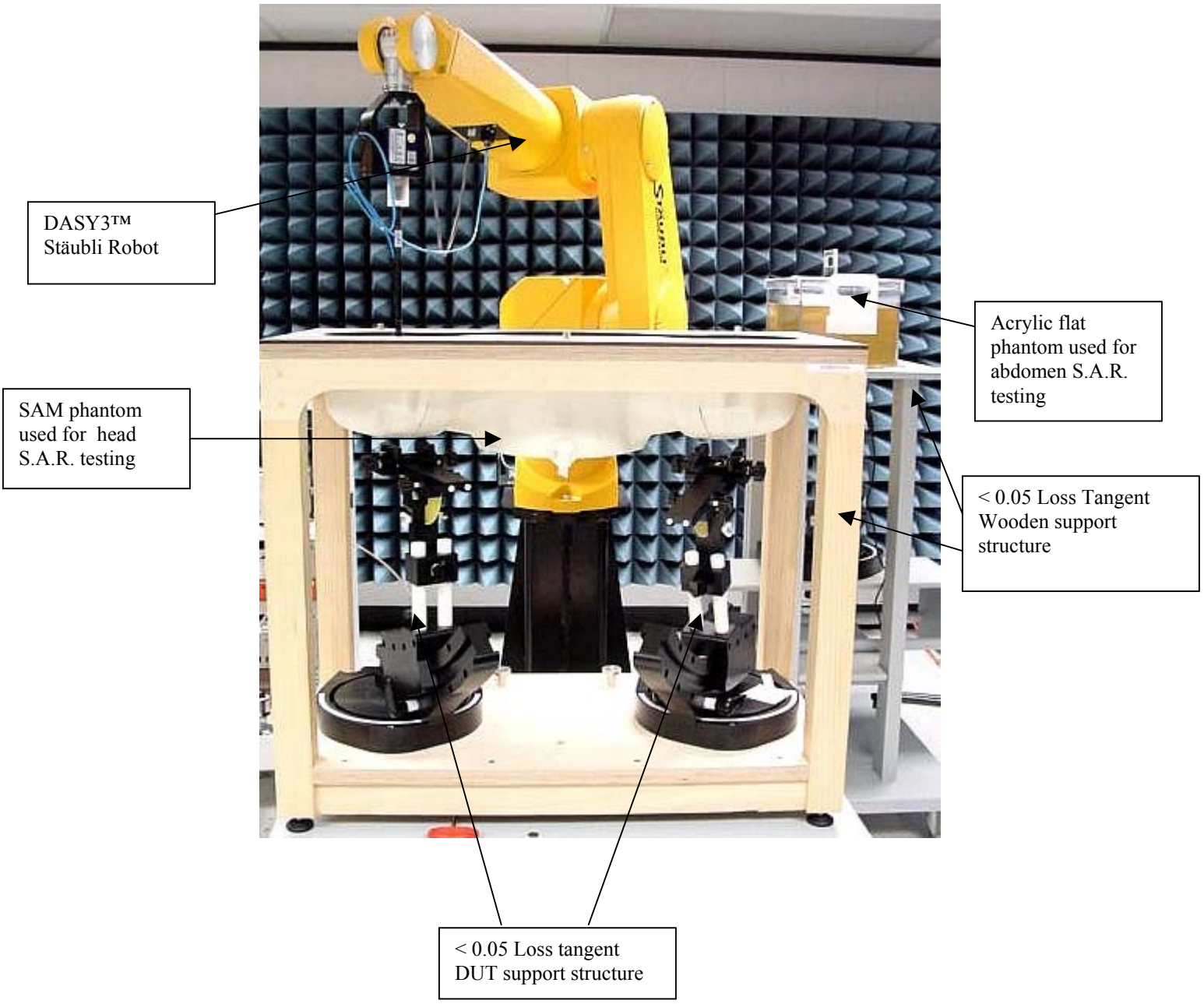


**Figure 4: Robot Test System**



## 5.2 Probe Scan Procedures

The E-field probe is first scanned in a coarse grid over a large area inside the phantom in order to locate the interpolated maximum S.A.R. distribution. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The subsequent scan can directly use this position as reference for the cube evaluations.

## 6.0 Measurement Uncertainty

The table below lists the uncertainty estimate of the possible errors that are associated with the measurement system.

| Uncertainty Description | Standard Uncertainty |
|---|---|
| | |
| **Probe Uncertainty** | |
| - Axial Isotropy | ± 2.4 % |
| - Spherical Isotropy | ± 4.8 % |
| - Spatial Resolution | ± 0.5 % |
| - Linearity Error | ± 2.7 % |
| - Calibration Error | ± 8 % |
| | |
| **Evaluation Uncertainty** | |
| - Data Acquisition Error | ± 0.60 % |
| - ELF and RF Disturbances | ± 0.25 % |
| - Conductivity Assessment | ± 5 % |
| | |
| **Spatial Peak S.A.R. Evaluation Uncertainty** | |
| - Extrapolation and boundary effects | ± 3% |
| - Probe positioning | ± 1 % |
| - Integration and cube orientation | ± 3 % |
| - Cube shape inaccuracies | ± 1.2 % |
| - Device positioning | ± 1.0 % |

The Total Measurement Uncertainty (k=1) is ± 12.1 %. The Expanded Measurement Uncertainty (k=2) is ± 24.2 %

**Note: Per item #13 of the *OET 65 Supplement C EAB Part 22/24 S.A.R. Review Reminder Sheet 01/2002* handed out during the February and April, 2002 TCB council meeting the tabulated total measurement uncertainty is nominal until the IEEE Std 1528 is completed. Much of the required information has to be supplied by the equipment manufacturer, which has not yet been officially supplied. Other items are based on results of studies currently underway. Our work is scheduled to be complete by the time IEEE P1528 is ratified.**

## 7.0 S.A.R. Test Results

All S.A.R. results obtained by the tests described in Section 5.0 are listed in section 7.1 below. The bolded result indicates the highest observed S.A.R. performance for each test configuration. DASY3™ S.A.R. measurement scans are provided in APPENDIX B for the highest observed S.A.R. results for each test configuration.

### 7.1 i88s results

| 900MHz S.A.R. assessment at the head; left ear; in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Battery Assessment** | | | | | | | | | |
| R2-02052203-KU 919ACJ031Q | 899 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.681 | 0.687 | 0.293 | 0.30 |
| R2-02052808-KU 919ACJ031Q | 899 | IN | SNN5717C NTN9345A | NONE | NONE | 0.678 | 0.682 | **1.070** | **1.10** |
| R2-02052802-KU 919ACJ031Q | 899 | IN | SNN5705B NTN9344A | NONE | NONE | 0.67 | 0.677 | 1.060 | 1.10 |
| R2-02052803-KU 919ACJ031Q | 899 | OUT | SNN5705B NTN9344A | NONE | NONE | 0.675 | 0.68 | 0.299 | 0.31 |
| R2-02052804-KU 919ACJ031Q | 899 | IN | SNN5706A NTN9346A | NONE | NONE | 0.672 | 0.682 | 1.050 | 1.08 |
| R2-02052805-KU 919ACJ031Q | 899 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.673 | 0.683 | 0.305 | 0.31 |
| R2-02052806-KU 919ACJ031Q | 899 | IN | SNN5716A NTN9343A | NONE | NONE | 0.68 | 0.684 | 1.050 | 1.07 |
| R2-02052807-KU 919ACJ031Q | 899 | OUT | SNN5716A NTN9343A | NONE | NONE | 0.68 | 0.684 | 0.308 | 0.32 |
| **Band edge assessment** | | | | | | | | | |
| R2-02052809-KU 919ACJ031Q | 896 | IN | SNN5717C NTN9345A | NONE | NONE | 0.674 | 0.68 | 1.060 | 1.09 |
| R2-02052810-KU 919ACJ031Q | 902 | IN | SNN5717C NTN9345A | NONE | NONE | 0.669 | 0.672 | 1.040 | 1.08 |
| R2-02052902-KU 919ACJ031Q | 896 | OUT | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.669 | 0.68 | 1.100 | 1.13 |
| R2-02052903-KU 919ACJ031Q | 902 | OUT | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.67 | 0.674 | **1.120** | **1.16** |
| **Tilt position assessment** | | | | | | | | | |
| R2-02052206a-KU 919ACJ031Q | 899 | OUT | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.674 | 0.682 | **1.140** | **1.17** |
| R2-02052308-KU 919ACJ031Q | 899 | IN | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.672 | 0.68 | 0.727 | 0.75 |
| R2-02061906-KU 919ACJ031H | 896 | OUT | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.665 | 0.667 | 1.130 | 1.19 |

| 900MHz S.A.R. assessment at the head; right ear; in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Battery Assessment** | | | | | | | | | |
| R2-02052904-KU 919ACJ031Q | 899 | IN | SNN5717C NTN9345A | NONE | NONE | 0.673 | 0.681 | **1.030** | **1.06** |
| R2-02052905-KU 919ACJ031Q | 899 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.673 | 0.684 | 0.228 | 0.23 |
| R2-02052906-KU 919ACJ031Q | 899 | IN | SNN5705B NTN9344A | NONE | NONE | 0.677 | 0.684 | 1.020 | 1.04 |
| R2-02052907-KU 919ACJ031Q | 899 | OUT | SNN5705B NTN9344A | NONE | NONE | 0.673 | 0.681 | 0.230 | 0.24 |
| R2-02052908-KU 919ACJ031Q | 899 | IN | SNN5706A NTN9346A | NONE | NONE | 0.681 | 0.678 | 0.976 | 1.01 |
| R2-02052909-KU 919ACJ031Q | 899 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.68 | 0.687 | 0.231 | 0.24 |
| R2-02052910-KU 919ACJ031Q | 899 | IN | SNN5716A NTN9343A | NONE | NONE | 0.685 | 0.687 | 0.980 | 1.00 |
| R2-02052911-KU 919ACJ031Q | 899 | OUT | SNN5716A NTN9343A | NONE | NONE | 0.682 | 0.685 | 0.231 | 0.24 |
| **Band edge assessment** | | | | | | | | | |
| R2-02053003-KU 919ACJ031Q | 896 | IN | SNN5717C NTN9345A | NONE | NONE | 0.67 | 0.669 | **1.020** | **1.07** |
| R2-02053004-KU 919ACJ031Q | 902 | IN | SNN5717C NTN9345A | NONE | NONE | 0.668 | 0.668 | 0.993 | 1.04 |
| R2-02053005-KU 919ACJ031Q | 896 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.67 | 0.676 | 0.241 | 0.25 |
| R2-02053006-KU 919ACJ031Q | 902 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.665 | 0.668 | 0.232 | 0.24 |
| **Tilt position assessment** | | | | | | | | | |
| R2-02052912-KU 919ACJ031Q | 899 | IN | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.675 | 0.682 | 0.641 | 0.66 |
| R2-02053002-KU 919ACJ031Q | 899 | OUT | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.672 | 0.679 | **0.657** | **0.68** |

| 900MHz S.A.R. assessment at the Face PTT in phone mode 1:6 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Frequency assessment with battery producing highest S.A.R. at the head** | | | | | | | | | |
| R2-02062503-KU 919ACJ031Q | 899 | IN | SNN5717C NTN9345A | NONE | NONE | 0.665 | 0.665 | **0.115** | **0.12** |
| R2-02062505-KU 919ACJ031Q | 899 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.665 | 0.667 | 0.053 | 0.06 |
| R2-02062506-KU 919ACJ031Q | 896 | IN | SNN5717C NTN9345A | NONE | NONE | 0.67 | 0.665 | 0.114 | 0.12 |
| R2-02062507-KU 919ACJ031Q | 896 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.66 | 0.661 | 0.051 | 0.05 |
| R2-02062508-KU 919ACJ031Q | 902 | IN | SNN5717C NTN9345A | NONE | NONE | 0.66 | 0.662 | 0.113 | 0.12 |
| R2-02062509-KU 919ACJ031Q | 902 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.665 | 0.653 | 0.055 | 0.06 |

| 900MHz S.A.R. assessment at the abdomen in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Battery Assessment** | | | | | | | | | |
| R2-02053102-KU 919ACJ031Q | 899 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | NTN8496A | 0.668 | 0.675 | 0.291 | 0.30 |
| R2-02053103-KU 919ACJ031Q | 899 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | NTN8496A | 0.672 | 0.683 | 0.216 | 0.22 |
| R2-02053104-KU 919ACJ031Q | 899 | IN | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.672 | 0.678 | **0.298** | **0.31** |
| R2-02053105-KU 919ACJ031Q | 899 | OUT | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.678 | 0.682 | 0.173 | 0.18 |
| R2-02053106-KU 919ACJ031Q | 899 | IN | SNN5706A NTN9346A | NTN9478A NTN9544A | NTN8496A | 0.672 | 0.682 | 0.220 | 0.23 |
| R2-02053107-KU 919ACJ031Q | 899 | OUT | SNN5706A NTN9346A | NTN9478A NTN9544A | NTN8496A | 0.67 | 0.68 | 0.164 | 0.17 |
| R2-02053108-KU 919ACJ031Q | 899 | IN | SNN5716A NTN9343A | NTN9478A NTN9544A | NTN8496A | 0.677 | 0.681 | 0.188 | 0.19 |
| R2-02053109-KU 919ACJ031Q | 899 | OUT | SNN5716A NTN9343A | NTN9478A NTN9544A | NTN8496A | 0.675 | 0.681 | 0.128 | 0.13 |
| **Body Worn Accessory assessment with worst case configuration from above** | | | | | | | | | |
| R2-02053110-KU 919ACJ031Q | 899 | IN | SNN5705B NTN9344A | NTN9475A | NTN8496A | 0.669 | 0.675 | **0.296** | **0.31** |
| R2-02053111-KU 919ACJ031Q | 899 | OUT | SNN5705B NTN9344A | NTN9475A | NTN8496A | 0.667 | 0.676 | 0.171 | 0.18 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Audio Accessory assessment** | | | | | | | | | |
| R2-02053112-KU 919ACJ031Q | 899 | IN | SNN5705B NTN9344A | NTN9478A NTN9544A | SYN8608B | 0.675 | 0.678 | 0.261 | 0.27 |
| R2-02053113-KU 919ACJ031Q | 899 | OUT | SNN5705B NTN9344A | NTN9478A NTN9544A | SYN8608B | 0.67 | 0.677 | 0.186 | 0.19 |
| R2-02053114-KU 919ACJ031Q | 899 | IN | SNN5705B NTN9344A | NTN9478A NTN9544A | SYN8390B | 0.668 | 0.676 | **0.273** | **0.28** |
| R2-02060302-KU 919ACJ031Q | 899 | OUT | SNN5705B NTN9344A | NTN9478A NTN9544A | SYN8390B | 0.665 | 0.679 | 0.164 | 0.17 |
| **Band edge assessment** | | | | | | | | | |
| R2-02060303-KU 919ACJ031Q | 896 | IN | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.673 | 0.679 | 0.284 | 0.29 |
| R2-02060304-KU 919ACJ031Q | 902 | IN | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.666 | 0.671 | **0.296** | **0.31** |
| R2-02060305-KU 919ACJ031Q | 896 | OUT | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.674 | 0.67 | 0.177 | 0.18 |
| R2-02060306-KU 919ACJ031Q | 902 | OUT | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.665 | 0.669 | 0.188 | 0.20 |

| **800MHz S.A.R. assessment at the head; left ear; in phone mode 1:3** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Battery Assessment** | | | | | | | | | |
| R2-02060308-KU 919ACJ031Q | 814 | IN | SNN5716A NTN9343A | NONE | NONE | 0.672 | 0.606 | 0.986 | 1.14 |
| R2-02060309-KU 919ACJ031Q | 814 | OUT | SNN5716A NTN9343A | NONE | NONE | 0.68 | 0.609 | 0.817 | 0.94 |
| R2-02060310-KU 919ACJ031Q | 814 | IN | SNN5706A NTN9346A | NONE | NONE | 0.693 | 0.620 | **1.070** | **1.21** |
| R2-02060311-KU 919ACJ031Q | 814 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.693 | 0.630 | 0.876 | 0.97 |
| R2-02060312-KU 919ACJ031Q | 814 | IN | SNN5705B NTN9344A | NONE | NONE | 0.676 | 0.639 | 1.060 | 1.16 |
| R2-02060313-KU 919ACJ031Q | 814 | OUT | SNN5705B NTN9344A | NONE | NONE | 0.681 | 0.638 | 0.887 | 0.97 |
| **Band edge assessment** | | | | | | | | | |
| R2-02060403-KU 919ACJ031Q | 806 | IN | SNN5706A NTN9346A | NONE | NONE | 0.68 | 0.540 | **0.866** | **1.12** |
| R2-02060404-KU 919ACJ031Q | 806 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.68 | 0.572 | 0.835 | 1.02 |
| R2-02060405-KU 919ACJ031Q | 825 | IN | SNN5706A NTN9346A | NONE | NONE | 0.683 | 0.684 | 1.070 | 1.10 |
| R2-02060406-KU 919ACJ031Q | 825 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.667 | 0.687 | 0.782 | 0.80 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Tilt position assessment** | | | | | | | | | |
| R2-02060314-KU 919ACJ031Q | 814 | IN | SNN5706A NTN9346A | 15 Degree Tilted | NONE | 0.682 | 0.603 | 0.602 | 0.70 |
| R2-02060402-KU 919ACJ031Q | 814 | OUT | SNN5706A NTN9346A | 15 Degree Tilted | NONE | 0.68 | 0.603 | **0.790** | **0.92** |

| **800MHz S.A.R. assessment at the head; right ear; in phone mode 1:3** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Battery Assessment** | | | | | | | | | |
| R2-02060407-KU 919ACJ031Q | 814 | IN | SNN5717C NTN9345A | NONE | NONE | 0.673 | 0.591 | 0.948 | 1.12 |
| R2-02061002-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.67 | 0.592 | 0.763 | 0.90 |
| R2-02061003-KU 919ACJ031Q | 814 | IN | SNN5705B NTN9344A | NONE | NONE | 0.679 | 0.593 | **0.980** | **1.16** |
| R2-02061004-KU 919ACJ031Q | 814 | OUT | SNN5705B NTN9344A | NONE | NONE | 0.685 | 0.642 | 0.819 | 0.89 |
| R2-02061005-KU 919ACJ031Q | 814 | IN | SNN5706A NTN9346A | NONE | NONE | 0.7 | 0.605 | 0.961 | 1.11 |
| R2-02061006-KU 919ACJ031Q | 814 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.69 | 0.617 | 0.788 | 0.89 |
| R2-02061007-KU 919ACJ031Q | 814 | IN | SNN5716A NTN9343A | NONE | NONE | 0.675 | 0.600 | 0.918 | 1.07 |
| R2-02061008-KU 919ACJ031Q | 814 | OUT | SNN5716A NTN9343A | NONE | NONE | 0.68 | 0.600 | 0.750 | 0.88 |
| **Band edge assessment** | | | | | | | | | |
| R2-02061011-KU 919ACJ031Q | 806 | IN | SNN5705B NTN9344A | NONE | NONE | 0.68 | 0.540 | 0.827 | 1.07 |
| R2-02061012-KU 919ACJ031Q | 806 | OUT | SNN5705B NTN9344A | NONE | NONE | 0.67 | 0.577 | 0.798 | 0.97 |
| R2-02061013-KU 919ACJ031Q | 825 | IN | SNN5705B NTN9344A | NONE | NONE | 0.672 | 0.648 | **1.050** | **1.13** |
| R2-02061102-KU 919ACJ031Q | 825 | OUT | SNN5705B NTN9344A | NONE | NONE | 0.667 | 0.680 | 0.710 | 0.73 |
| **Tilt position assessment** | | | | | | | | | |
| R2-02061009-KU 919ACJ031Q | 814 | IN | SNN5705B NTN9344A | 15 Degree Tilted | NONE | 0.678 | 0.590 | 0.543 | 0.64 |
| R2-02061010-KU 919ACJ031Q | 814 | OUT | SNN5705B NTN9344A | 15 Degree Tilted | NONE | 0.675 | 0.604 | **0.550** | **0.64** |

| 800MHz S.A.R. assessment at the Face PTT in phone mode 1:6 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Frequency assessment with battery producing highest S.A.R. at the head** | | | | | | | | | |
| R2-02061104-KU 919ACJ031Q | 806 | IN | SNN5706A NTN9346A | NONE | NONE | 0.68 | 0.610 | **0.148** | **0.17** |
| R2-02061105-KU 919ACJ031Q | 806 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.683 | 0.612 | 0.111 | 0.13 |
| R2-02061106-KU 919ACJ031Q | 814 | IN | SNN5706A NTN9346A | NONE | NONE | 0.683 | 0.665 | 0.145 | 0.15 |
| R2-02061107-KU 919ACJ031Q | 814 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.677 | 0.656 | 0.106 | 0.11 |
| R2-02061108-KU 919ACJ031Q | 825 | IN | SNN5706A NTN9346A | NONE | NONE | 0.68 | 0.679 | 0.132 | 0.14 |
| R2-02061109-KU 919ACJ031Q | 825 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.678 | 0.680 | 0.091 | 0.09 |

| 800MHz S.A.R. assessment at the abdomen in data mode 81:120 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| **Battery assessment** | | | | | | | | | |
| R2-02061203-KU 919ACJ031Q | 814 | OUT | SNN5705B NTN9344A | NTN9478A NTN9544A | NKN6540A | 0.67 | 0.568 | **0.348** | **0.43** |
| R2-02061204-KU 919ACJ031Q | 814 | IN | SNN5705B NTN9344A | NTN9478A NTN9544A | NKN6540A | 0.68 | 0.525 | 0.138 | 0.18 |
| R2-02061205-KU 919ACJ031Q | 814 | OUT | SNN5706A NTN9346A | NTN9478A NTN9544A | NKN6540A | 0.68 | 0.539 | 0.286 | 0.37 |
| R2-02061206-KU 919ACJ031Q | 814 | IN | SNN5706A NTN9346A | NTN9478A NTN9544A | NKN6540A | 0.684 | 0.544 | 0.133 | 0.17 |
| R2-02061207-KU 919ACJ031Q | 814 | OUT | SNN5716A NTN9343A | NTN9478A NTN9544A | NKN6540A | 0.65 | 0.520 | 0.251 | 0.34 |
| R2-02061208-KU 919ACJ031Q | 814 | IN | SNN5716A NTN9343A | NTN9478A NTN9544A | NKN6540A | 0.658 | 0.522 | 0.119 | 0.16 |
| **Body Worn assessment** | | | | | | | | | |
| R2-02061302-KU 919ACJ031Q | 814 | IN | SNN5717C NTN9345A | NTN9475A | NKN6540A | 0.672 | 0.523 | 0.179 | 0.24 |
| R2-02061303-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NTN9475A | NKN6540A | 0.68 | 0.534 | **0.366** | **0.48** |
| **Data cable assessment** | | | | | | | | | |
| R2-02061304-KU 919ACJ031Q | 814 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | NKN6544A | 0.673 | 0.536 | 0.354 | 0.46 |
| R2-02061305-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | NKN6544A | 0.675 | 0.537 | **0.438** | **0.57** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| R2-02061306-KU 919ACJ031Q | 814 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | NNTN4007A | 0.674 | 0.536 | 0.287 | 0.37 |
| R2-02061307-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | NNTN4007A | 0.672 | 0.535 | 0.348 | 0.46 |
| **Band edge assessment** | | | | | | | | | |
| R2-02061308-KU 919ACJ031Q | 806 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | NKN6544A | 0.666 | 0.509 | 0.327 | 0.45 |
| R2-02061309-KU 919ACJ031Q | 806 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | NKN6544A | 0.67 | 0.499 | **0.365** | **0.51** |
| R2-02061402-KU 919ACJ031Q | 825 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | NKN6544A | 0.68 | 0.580 | 0.338 | 0.41 |
| R2-02061403-KU 919ACJ031Q | 825 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | NKN6544A | 0.682 | 0.600 | 0.398 | 0.46 |

**800MHz S.A.R. assessment 2.5cm separation at the abdomen in data mode 81:120**

| Run Number Unit S/N | Freq. (MHz) | Fixed Antenna Position In/out | Battery | Carry Case | Audio Acc. | Initial Power (mW) | End Power (mW) | Meas. 1g S.A.R. | Max. Calc. 1g-S.A.R. (mW/g) |
|---|---|---|---|---|---|---|---|---|---|
| R2-02061411-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NONE, Phone Back Radio @ 2.5cm separation | NKN6544A | 0.68 | 0.558 | 0.276 | 0.35 |
| R2-02061702-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NONE, Phone Front radio @ 2.5cm separation | NKN6544A | 0.684 | 0.546 | 0.287 | 0.37 |
| R2-02061704-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NONE, Phone Back radio @ 2.5cm separation | NONE | 0.67 | 0.530 | **0.429** | **0.57** |
| R2-02061703-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NONE, Phone Front radio @ 2.5cm separation | NONE | 0.675 | 0.538 | 0.329 | 0.43 |

**800MHz S.A.R. assessment antenna position at the abdomen in phone mode 1:3**

| Run Number Unit S/N | Freq. (MHz) | Fixed Antenna Position In/out | Battery | Carry Case | Audio Acc. | Initial Power (mW) | End Power (mW) | Meas. 1g S.A.R. | Max. Calc. 1g-S.A.R. (mW/g) |
|---|---|---|---|---|---|---|---|---|---|
| R2-02061404-KU 919ACJ031Q | 814 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | SYN8390B | 0.669 | 0.600 | **0.342** | **0.40** |
| R2-02061405-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | SYN8390B | 0.677 | 0.608 | 0.262 | 0.30 |
| R2-02061406-KU 919ACJ031Q | 814 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | NTN8496A | 0.68 | 0.595 | 0.255 | 0.30 |
| R2-02061407-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | NTN8496A | 0.685 | 0.609 | 0.279 | 0.32 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| R2-02061408-KU 919ACJ031Q | 814 | IN | SNN5717C NTN9345A | NTN9478A NTN9544A | SYN8608B | 0.68 | 0.644 | 0.231 | 0.25 |
| R2-02061409-KU 919ACJ031Q | 814 | OUT | SNN5717C NTN9345A | NTN9478A NTN9544A | SYN8608B | 0.71 | 0.631 | 0.212 | 0.24 |

## 7.2 i58sr results

| 900MHz S.A.R. assessment at the head; left ear; in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062002-KU 919ACJ033Z | 899 | IN | SNN5717C NTN9345A | NONE | NONE | 0.665 | 0.654 | **0.936** | **1.00** |
| R2-02062003-KU 919ACJ033Z | 899 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.665 | 0.662 | 0.236 | 0.25 |
| R2-02062004-KU 919ACJ033Z | 899 | IN | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.665 | 0.673 | 0.510 | 0.53 |
| R2-02052411-KU 919ACJ033Z | 899 | OUT | SNN5717C NTN9345A | 15degree | NONE | 0.666 | 0.678 | 0.780 | 0.81 |

| 900MHz S.A.R. assessment at the head; right ear; in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062005-KU 919ACJ033Z | 899 | IN | SNN5717C NTN9345A | NONE | NONE | 0.665 | 0.674 | **0.910** | **0.95** |
| R2-02062006-KU 919ACJ033Z | 899 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.669 | 0.675 | 0.205 | 0.21 |
| R2-02062007-KU 919ACJ033Z | 899 | IN | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.67 | 0.673 | 0.448 | 0.47 |
| R2-02062008-KU 919ACJ033Z | 899 | OUT | SNN5717C NTN9345A | 15 Degree Tilted | NONE | 0.668 | 0.65 | 0.521 | 0.56 |

| 900MHz S.A.R. assessment at the face PTT mode 1:6 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062502-KU 919ACJ033Z | 899 | IN | SNN5717C NTN9345A | NONE | NONE | 0.655 | 0.66 | **0.098** | **0.10** |
| R2-02062403-KU 919ACJ033Z | 899 | OUT | SNN5717C NTN9345A | NONE | NONE | 0.658 | 0.66 | 0.054 | 0.06 |

| 900MHz S.A.R. assessment at the abdomen in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062408-KU 919ACJ033Z | 899 | IN | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.665 | 0.675 | **0.257** | **0.27** |
| R2-02062409-KU 919ACJ033Z | 899 | OUT | SNN5705B NTN9344A | NTN9478A NTN9544A | NTN8496A | 0.664 | 0.665 | 0.142 | 0.15 |

| 800MHz S.A.R. assessment at the head; left ear; in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062102-KU 919ACJ033Z | 814 | IN | SNN5706A NTN9346A | NONE | NONE | 0.687 | 0.619 | **0.918** | **1.04** |
| R2-02062103-KU 919ACJ033Z | 814 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.693 | 0.618 | 0.915 | 1.04 |
| R2-02062104-KU 919ACJ033Z | 814 | IN | SNN5706A NTN9346A | 15 Degree Tilted | NONE | 0.689 | 0.604 | 0.478 | 0.55 |
| R2-02062105-KU 919ACJ033Z | 814 | OUT | SNN5706A NTN9346A | 15 Degree Tilted | NONE | 0.688 | 0.606 | 0.490 | 0.57 |

| 800MHz S.A.R. assessment at the head; right ear; in phone mode 1:3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062106-KU 919ACJ033Z | 814 | IN | SNN5705B NTN9344A | NONE | NONE | 0.677 | 0.632 | **0.907** | **1.00** |
| R2-02062107-KU 919ACJ033Z | 814 | OUT | SNN5705B NTN9344A | NONE | NONE | 0.684 | 0.611 | 0.788 | 0.90 |
| R2-02062108-KU 919ACJ033Z | 814 | IN | SNN5705B NTN9344A | 15 Degree Tilted | NONE | 0.678 | 0.591 | 0.474 | 0.56 |
| R2-02062109-KU 919ACJ033Z | 814 | OUT | SNN5705B NTN9344A | 15 Degree Tilted | NONE | 0.679 | 0.64 | 0.522 | 0.57 |

| 800MHz S.A.R. assessment at the face PTT mode 1:6 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062405-KU 919ACJ033Z | 806 | IN | SNN5706A NTN9346A | NONE | NONE | 0.7 | 0.689 | **0.128** | **0.13** |
| R2-02062406-KU 919ACJ033Z | 806 | OUT | SNN5706A NTN9346A | NONE | NONE | 0.683 | 0.68 | 0.108 | 0.11 |

| 800MHz S.A.R. assessment at the abdomen in Data mode 81:120 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Run Number Unit S/N** | **Freq. (MHz)** | **Fixed Antenna Position In/out** | **Battery** | **Carry Case** | **Audio Acc.** | **Initial Power (mW)** | **End Power (mW)** | **Meas. 1g S.A.R.** | **Max. Calc. 1g-S.A.R. (mW/g)** |
| R2-02062410-KU 919ACJ033Z | 814 | IN | SNN5717C NTN9345A | NTN9478A | NKN6544A | 0.69 | 0.506 | 0.252 | 0.35 |
| R2-02062411-KU 919ACJ033Z | 814 | OUT | SNN5717C NTN9345A | NTN9478A | NKN6544A | 0.693 | 0.504 | 0.378 | 0.53 |
| R2-02062412-KU 919ACJ033Z | 814 | OUT | SNN5717C NTN9345A | NONE, Phone Back Radio 2.5cm separation | NONE | 0.688 | 0.502 | **0.425** | **0.59** |

## 8.0 Conclusion

The highest Operational calculated 1-gram average S.A.R. values found for model number H58XAH6RR7AN were **0.59 mW/g** at the abdomen, **0.17 mW/g** at the face, and **1.21 mW/g** at the head. The following formulas where used:

**Max. Calc. 1g S.A.R. = (Max Power/End Power) * meas. 1g S.A.R.**
**Maximum power = 0.70 Watts**

The test results clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of **1.6 mW/g** per the requirements of 47 CFR 2.1093(d)