

## 12. SYSTEM VERIFICATION

### Tissue Verification

Table 12.1 Simulated Tissue Verification [5]

MEASURED TISSUE PARAMETERS					
Date(s)	07/16/2004 – 07/19/2004	1900MHz Brain		1900MHz Muscle	
Liquid Temperature (°C)	20.1	Target	Measured	Target	Measured
Dielectric Constant: $\epsilon$		40.00	40.42	53.30	51.28
Conductivity: $\sigma$		1.400	1.380	1.520	1.580

Prior to assessment, the system is verified to the  $\pm 10\%$  of the specifications at 1900MHz by using the system validation kit(s). (Graphic Plots Attached)

Table 12.2 System Validation [5]

System Validation TARGET & MEASURED							
Date:	Amb. Temp (°C)	Liquid Temp(°C)	Input Power (W)	Tissue	Targeted SAR <sub>1g</sub> (mW/g)	Measured SAR <sub>1g</sub> (mW/g)	Deviation (%)
07/16/2004	23.8	21.3	0.100	1900MHz Brain	3.970	3.84	-3.27
07/19/2004	23.9	21.5				3.87	-2.52

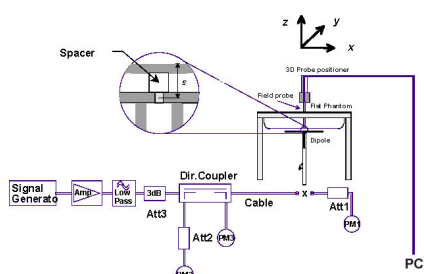


Figure 12.1 Dipole Validation Test Setup

PCTEST™ SAR REPORT	FCC CERTIFICATION		Reviewed by: Quality Manager	
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## 13. SAR TEST DATA SUMMARY

See Measurement Result Data Pages

### Procedures Used To Establish Test Signal

The handset was placed into simulated call mode (GSM & PCS GSM modes) using manufacturers test codes. Such test signals offer a consistent means for testing SAR and are recommended for evaluating SAR [4]. When test modes are not available or inappropriate for testing a handset, the actual transmission is activated through a base station simulator or similar equipment. See data pages for actual procedure used in measurement.

### Device Test Conditions

The handset is battery operated. Each SAR measurement was taken with a fully charged battery. In order to verify that the device was tested at full power, conducted output power measurements were performed before and after each SAR measurement to confirm the output power. If a conducted power deviation of more than 5% occurred, the test was repeated.

### EUT Handset Reference Points



**Figure 13.1 Handset Reference Points**

<b>PCTEST™ SAR REPORT</b>	<b>PCTEST</b> Complete Wireless Lab www.pctestlab.com	<b>FCC CERTIFICATION</b>		<b>Reviewed by:</b> Quality Manager
<b>SAR Filename:</b> SAR-240608425.BEJ	<b>Test Dates:</b> July 16-19, 2004	<b>Phone Type:</b> Single-Band GSM	<b>FCC ID:</b> BEJF7250	Page 17 of 30

## 14. SAR DATA SUMMARY

Mixture Type: 1900MHz Brain

### 14.1 MEASUREMENT RESULTS (GSM1900 Right Head SAR Touch - Slide In)

FREQUENCY		Modulation	Begin / End POWER*			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1850.20	512	PCS GSM	30.00	29.78	Standard	Cheek / Touch	Fixed	0.129
1880.00	661	PCS GSM	30.00	29.96	Standard	Cheek / Touch	Fixed	0.170
1909.80	810	PCS GSM	30.00	29.54	Standard	Cheek / Touch	Fixed	0.168
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

#### NOTES:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured
- |   |                              |                               |
|---|------------------------------|-------------------------------|
| <input checked="" type="checkbox"/> Conducted | <input type="checkbox"/> ERP | <input type="checkbox"/> EIRP |
|---|------------------------------|-------------------------------|
- SAR Measurement System
 

<input checked="" type="checkbox"/> DASY4	<input type="checkbox"/> IDX
---	------------------------------
  - Phantom Configuration
 

<input type="checkbox"/> Left Head	<input type="checkbox"/> Flat Phantom	<input checked="" type="checkbox"/> Right Head
------------------------------------	---------------------------------------	--
  - SAR Configuration
 

<input checked="" type="checkbox"/> Head	<input type="checkbox"/> Body	<input type="checkbox"/> Hand
--	-------------------------------	-------------------------------
  - Test Signal Call Mode
 


<input type="checkbox"/> Manu. Test Codes	<input checked="" type="checkbox"/> Base Station Simulator
---	--
  - Tissue parameters and temperatures are listed on the SAR plots.
  - Liquid tissue depth is 15.1 cm. ± 0.1



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Vice President Engineering



**Figure 14.1 Right Head SAR Test Setup**  
-- Cheek / Touch Position -- Slide In--

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
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# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.2 MEASUREMENT RESULTS (GSM1900 Right Head SAR Tilt – Slide In)								
FREQUENCY		Modulation	Begin / End POWER*			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1850.20	512	PCS GSM	30.31	29.86	Standard	Ear / 15° Tilt	Fixed	0.159
1880.00	661	PCS GSM	30.19	29.94	Standard	Ear / 15° Tilt	Fixed	0.200
1909.80	810	PCS GSM	30.38	30.10	Standard	Ear / 15° Tilt	Fixed	0.198
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		



**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured                      ☒ Conducted                      ☐ ERP                      ☐ EIRP
4. SAR Measurement System                      ☒ DASY4                      ☐ IDX
- Phantom Configuration                      ☐ Left Head                      ☐ Flat Phantom                      ☒ Right Head
5. SAR Configuration                      ☒ Head                      ☐ Body                      ☐ Hand
6. Test Signal Call Mode                      ☐ Manu. Test Codes                      ☒ Base Station Simulator
7. Tissue parameters and temperatures are listed on the SAR plots.
8. Liquid tissue depth is 15.1 cm. ± 0.1

  
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**Figure 14.2 Right Head SAR Test Setup**  
-- Ear / Tilt Position – Slide In--

PCTEST™ SAR REPORT		FCC CERTIFICATION		Reviewed by: Quality Manager
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# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.3 MEASUREMENT RESULTS (GSM1900 Left Head SAR Touch – Slide In)								
FREQUENCY		Modulation	Begin / End POWER <sup>‡</sup>			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1850.20	512	PCS GSM	30.17	29.87	Standard	Cheek / Touch	Fixed	0.144
1880.00	661	PCS GSM	30.24	29.86	Standard	Cheek / Touch	Fixed	0.033
1909.80	810	PCS GSM	30.21	29.90	Standard	Cheek / Touch	Fixed	0.053
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
- All modes of operation were investigated, and worst-case results are reported.
- Battery is fully charged for all readings. Standard Batteries are the only options.

- \*Power Measured                      ☒ Conducted                      ☐ ERP                      ☐ EIRP
4. SAR Measurement System                      ☒ DASY4                      ☐ IDX
- Phantom Configuration                      ☒ Left Head                      ☐ Flat Phantom                      ☐ Right Head
5. SAR Configuration                      ☒ Head                      ☐ Body                      ☐ Hand
6. Test Signal Call Mode                      ☐ Manu. Test Codes                      ☒ Base Station Simulator
7. Tissue parameters and temperatures are listed on the SAR plots.
8. Liquid tissue depth is 15.1 cm. ± 0.1

  
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**Figure 14.3 Left Head SAR Test Setup  
-- Cheek / Touch Position – Slide In--**

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR-240608425.BEJ	Test Dates: July 16-19, 2004	Phone Type: Single-Band GSM	FCC ID: BEJF7250	Page 20 of 30

# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.4 MEASUREMENT RESULTS (GSM1900 Left Head SAR Tilt – Slide In)								
FREQUENCY		Modulation	Begin / End POWER*			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1850.20	512	PCS GSM	30.29	29.75	Standard	Ear / 15° Tilt	Fixed	0.045
1880.00	661	PCS GSM	30.31	30.05	Standard	Ear / 15° Tilt	Fixed	0.108
1909.80	810	PCS GSM	30.28	29.88	Standard	Ear / 15° Tilt	Fixed	0.057
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured                      ☒ Conducted                      ☐ ERP                      ☐ EIRP
4. SAR Measurement System                      ☒ DASY4                      ☐ IDX
- Phantom Configuration                      ☒ Left Head                      ☐ Flat Phantom                      ☐ Right Head
5. SAR Configuration                      ☒ Head                      ☐ Body                      ☐ Hand
6. Test Signal Call Mode                      ☐ Manu. Test Codes                      ☒ Base Station Simulator
7. Tissue parameters and temperatures are listed on the SAR plots.
8. Liquid tissue depth is 15.1 cm. ± 0.1

  
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**Figure 14.4 Left Head SAR Test Setup**  
-- Ear / Tilt Position- Slide In --

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR-240608425.BEJ	Test Dates: July 16-19, 2004	Phone Type: Single-Band GSM	FCC ID: BEJF7250	Page 21 of 30

# SAR DATA SUMMARY

Mixture Type: 1900MHz Brain

14.5 MEASUREMENT RESULTS (PCS GSM Right Head SAR Touch - Slide Out)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1880.00	661	PCS GSM	30.32	29.94	Standard	Cheek / Touch	Fixed	0.055
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		


**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured                      ☒ Conducted                      ☐ ERP                      ☐ EIRP
4. SAR Measurement System                      ☒ DASY4                      ☐ IDX
- Phantom Configuration                      ☐ Left Head                      ☐ Flat Phantom                      ☒ Right Head
5. SAR Configuration                      ☒ Head                      ☐ Body                      ☐ Hand
6. Test Signal Call Mode                      ☐ Manu. Test Codes                      ☒ Base Station Simulator
- Tissue parameters and temperatures are listed on the SAR plots.
  - Liquid tissue depth is 15.1 cm. ± 0.1
  - Justification for reduced test configurations: Per FCC/OET Bulletin 65 Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

  
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**Figure 14.1 Right Head SAR Test Setup  
-- Cheek / Touch Position -- Slide Out --**

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
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# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.6 MEASUREMENT RESULTS (PCS GSM Right Head SAR Tilt – Slide Out)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1880.00	661	PCS GSM	30.26	29.70	Standard	Ear / 15° Tilt	Fixed	0.031
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		



**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured                      ☒ Conducted                      ☐ ERP                      ☐ EIRP
4. SAR Measurement System                      ☒ DASY4                      ☐ IDX
- Phantom Configuration                      ☐ Left Head                      ☐ Flat Phantom                      ☒ Right Head
5. SAR Configuration                      ☒ Head                      ☐ Body                      ☐ Hand
6. Test Signal Call Mode                      ☐ Manu. Test Codes                      ☒ Base Station Simulator
- Tissue parameters and temperatures are listed on the SAR plots.
  - Liquid tissue depth is 15.1 cm. ± 0.1
  - Justification for reduced test configurations: Per FCC/OET Bulletin 65 Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

  
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**Figure 14.2 Right Head SAR Test Setup**  
-- Ear / Tilt Position – Slide Out--

PCTEST™ SAR REPORT		FCC CERTIFICATION		Reviewed by: Quality Manager
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# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.7 MEASUREMENT RESULTS (PCS GSM Left Head SAR Touch – Slide Out)								
FREQUENCY		Modulation	Begin / End POWER <sup>‡</sup>			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1880.00	661	PCS GSM	30.33	29.92	Standard	Cheek / Touch	Fixed	0.061
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured                      ☒ Conducted                      ☐ ERP                      ☐ EIRP
4. SAR Measurement System                      ☒ DASY4                      ☐ IDX
- Phantom Configuration                      ☒ Left Head                      ☐ Flat Phantom                      ☐ Right Head
5. SAR Configuration                      ☒ Head                      ☐ Body                      ☐ Hand
6. Test Signal Call Mode                      ☐ Manu. Test Codes                      ☒ Base Station Simulator
7. Tissue parameters and temperatures are listed on the SAR plots.
8. Liquid tissue depth is 15.1 cm. ± 0.1

  
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**Figure 14.3 Left Head SAR Test Setup  
-- Cheek / Touch Position – Slide Out --**

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
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# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.8 MEASUREMENT RESULTS (PCS GSM Left Head SAR Tilt – Slide Out)								
FREQUENCY		Modulation	Begin / End POWER*			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1880.00	661	PCS GSM	30.22	29.67	Standard	Ear / 15° Tilt	Fixed	0.031
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured                      ☒ Conducted                      ☐ ERP                      ☐ EIRP
4. SAR Measurement System                      ☒ DASY4                      ☐ IDX
- Phantom Configuration                      ☒ Left Head                      ☐ Flat Phantom                      ☐ Right Head
5. SAR Configuration                      ☒ Head                      ☐ Body                      ☐ Hand
6. Test Signal Call Mode                      ☐ Manu. Test Codes                      ☒ Base Station Simulator
- Tissue parameters and temperatures are listed on the SAR plots.
  - Liquid tissue depth is 15.1 cm. ± 0.1
  - Justification for reduced test configurations: Per FCC/OET Bulletin 65 Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).

  
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**Figure 14.4 Left Head SAR Test Setup  
-- Ear / Tilt Position – Slide Out --**

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
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# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Muscle

14.9 MEASUREMENT RESULTS (PCS GSM Body SAR – Slide In)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>			Separation Distance (cm) <sup>**</sup>	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1850.20	512	PCS GSM	30.34	29.90	Standard	1.5	Fixed	0.399
1880.00	661	PCS GSM	30.27	29.95	Standard	1.5	Fixed	0.522
1909.80	810	PCS GSM	30.31	29.88	Standard	1.5	Fixed	0.509
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Muscle 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value.  
Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
- All modes of operation were investigated, and worst-case results are reported.
- Battery is fully charged for all readings. Standard Batteries are the only options.  

\*Power Measured

☒ Conducted
☐ ERP
☐ EIRP
- SAR Measurement System

☒ DASY4
☐ IDX
- Phantom Configuration

☐ Left Head
☒ Flat Phantom
☐ Right Head
- SAR Configuration

☐ Head
☒ Body
☐ Hand
- \*\*Test Configuration

☐ Manu. Test Codes
☒ Base Station Simulator
- Tissue parameters and temperatures are listed on the SAR plots.
- Both sides of the phone were tested and the worst-case side is reported.
- Both single slot and dual slot modes were tested and the worst case data was reported.
- Liquid tissue depth is 15.1 cm. ± 0.1

  
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**Figure 14.5 Body SAR Test Setup**  
-- w/o Belt-clip – Slide In --

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
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# SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Muscle

14.10 MEASUREMENT RESULTS (PCS GSM Body SAR – Slide Out)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>			Separation Distance (cm) <sup>**</sup>	Antenna Position	SAR (W/kg)
MHz	Ch.		dBm		Battery			
1850.20	512	PCS GSM	30.30	29.91	Standard	1.5	Fixed	0.252
1880.00	661	PCS GSM	30.22	29.95	Standard	1.5	Fixed	0.386
1909.80	810	PCS GSM	30.26	29.99	Standard	1.5	Fixed	0.360
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Muscle 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value.  
Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
- All modes of operation were investigated, and worst-case results are reported.
- Battery is fully charged for all readings. Standard Batteries are the only options.
- \*Power Measured
 

<input checked="" type="checkbox"/> Conducted	<input type="checkbox"/> ERP	<input type="checkbox"/> EIRP
---	------------------------------	-------------------------------
- SAR Measurement System
 

<input checked="" type="checkbox"/> DASY4	<input type="checkbox"/> IDX	
---	------------------------------	--
- Phantom Configuration
 

<input type="checkbox"/> Left Head	<input checked="" type="checkbox"/> Flat Phantom	<input type="checkbox"/> Right Head
------------------------------------	--	-------------------------------------
- SAR Configuration
 



<input type="checkbox"/> Head	<input checked="" type="checkbox"/> Body	<input type="checkbox"/> Hand
-------------------------------	--	-------------------------------
- \*\*Test Configuration
 

<input type="checkbox"/> Manu. Test Codes	<input checked="" type="checkbox"/> Base Station Simulator	
---	--	--
- Tissue parameters and temperatures are listed on the SAR plots.
- Both sides of the phone were tested and the worst-case side is reported.
- Both single slot and dual slot modes were tested and the worst case data was reported.
- Liquid tissue depth is 15.1 cm. ± 0.1

  
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**Figure 14.5 Body SAR Test Setup  
-- w/o Belt-clip – Slide Out --**

PCTEST™ SAR REPORT	 <b>FCC CERTIFICATION</b> 		Reviewed by: Quality Manager	
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## 15. SAR TEST EQUIPMENT


### Equipment Calibration

Table 15.1 Test Equipment Calibration

EQUIPMENT SPECIFICATIONS			
Type		Calibration Date	Serial Number
Stäubli Robot RX60L		February 2004	599131-01
Stäubli Robot Controller		February 2004	PCT592
Stäubli Teach Pendant (Joystick)		February 2004	3323-00161
Micron Computer, 450 MHz Pentium III, Windows NT		February 2004	PCT577
SPEAG EDC3		February 2004	321
SPEAG DAE3		January 2004	330
SPEAG E-Field Probe ES3DV2		September 2003	3022
SPEAG Dummy Probe		February 2004	PCT583
SPEAG SAM Twin Phantom V4.0		February 2004	PCT666
SPEAG Light Alignment Sensor		February 2004	205
PCTEST Validation Dipole D300V2		September 2003	PCT301
SPEAG Validation Dipole D835V2		January 2004	PCT512
SPEAG Validation Dipole D1900V2		January 2004	PCT613
Brain Equivalent Matter (300MHz)		July 2004	PCTBEM601
Brain Equivalent Matter (835MHz)		July 2004	PCTBEM101
Brain Equivalent Matter (1900MHz)		July 2004	PCTBEM301
Muscle Equivalent Matter (300MHz)		July 2004	PCTMEM701
Muscle Equivalent Matter (835MHz)		July 2004	PCTMEM201
Muscle Equivalent Matter (1900MHz)		July 2004	PCTMEM401
Microwave Amp. Model: 5S1G4, (800MHz - 4.2GHz)		January 2004	22332
Gigatronics 8651A Power Meter		January 2004	1835299
HP-8648D (9kHz ~ 4GHz) Signal Generator		January 2004	PCT530
Amplifier Research 5S1G4 Power Amp		January 2004	PCT540
HP-8753E (30kHz ~ 3GHz) Network Analyzer		January 2004	PCT552
HP85070B Dielectric Probe Kit		January 2004	PCT501
Ambient Noise/Reflection, etc.	<12mW/kg/<3%of SAR	January 2004	Anechoic Room PCT01

**NOTE:**

The E-field probe was calibrated by SPEAG, by waveguide technique procedure. Dipole Validation measurement is performed by PCTEST Lab. before each test. The brain simulating material is calibrated by PCTEST using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the brain-equivalent material.



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## 16. CONCLUSION

### Measurement Conclusion



The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the FCC. These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The tested device complies with the requirements in respect to all parameters subject to the test. The test results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because innumerable factors may interact to determine the specific biological outcome of an exposure to electromagnetic fields, any protection guide shall consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.[3]

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