

**Sony Ericsson**

REPORT

18(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

Appendix 2**SAR distribution plots for Phantom Head Adjacent Use**



Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

800 GSM Band: SAR Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022UQJL with Standard Battery: BST-37****Right Side, Cheek/Touch Position.**

Date/Time: 8/13/2005 4:22:12 PM Date/Time: 8/13/2005 4:27:45 PM

File Name: [13Aug05_Z520i_GSM850_UQJL_RC01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 49.7% Ambient Temp: 23 Simulant Temp: 23.9

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.901$ mho/m ; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 1.59 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.5 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 2.34 W/kg

SAR(1 g) = 1.49 mW/g; SAR(10 g) = 0.962 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 1.57 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.5 V/m; Power Drift = -0.079 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

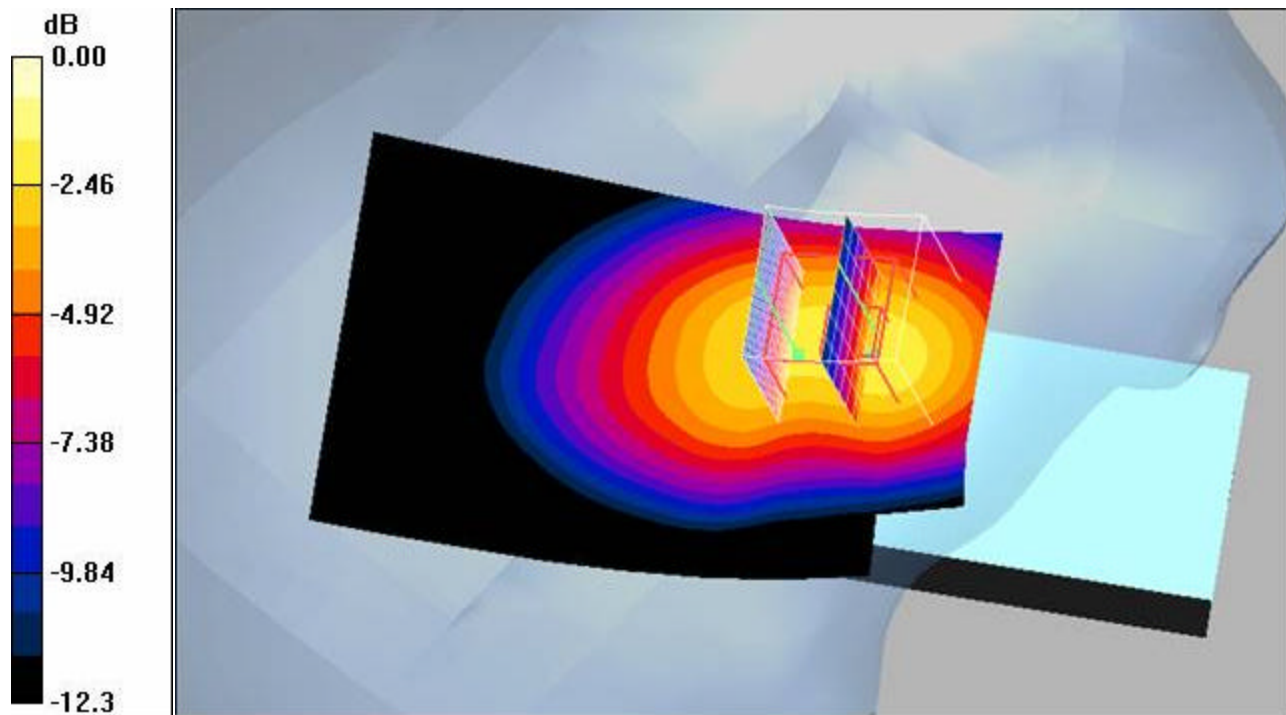
Maximum value of SAR (interpolated) = 2.34 mW/g



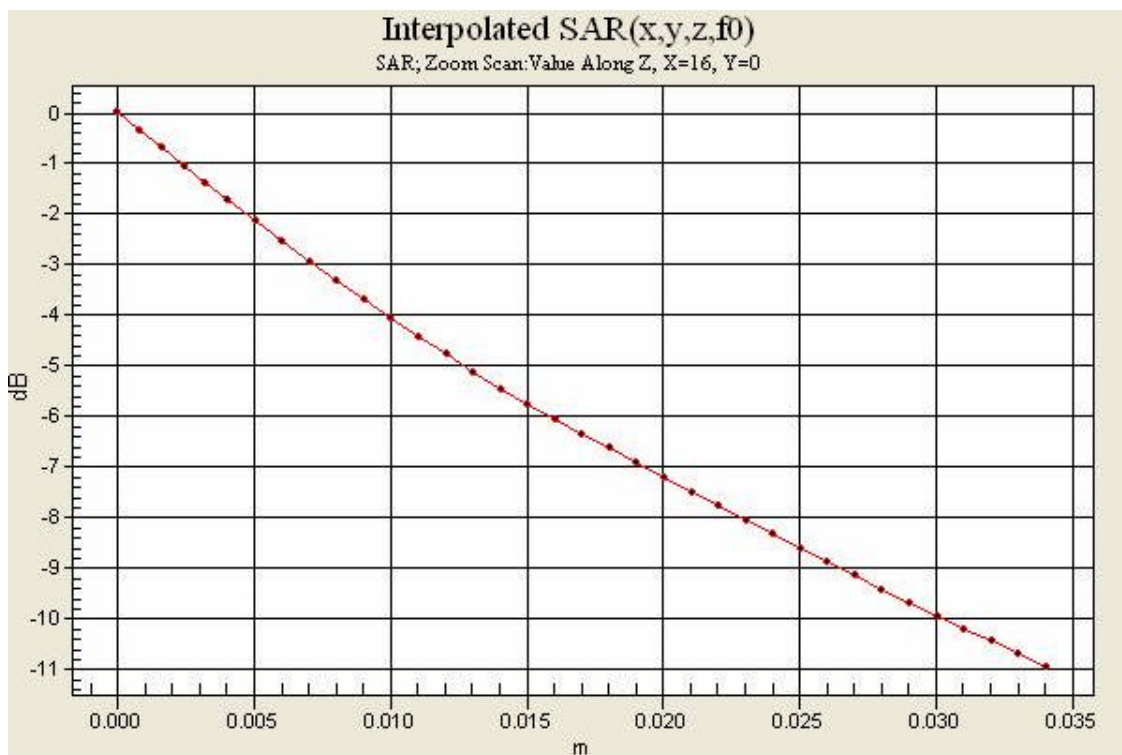
REPORT

20(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 2.34mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

800 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022UQJL with Standard Battery: BST-37****Right Side, Tilt Position.**

Date/Time: 8/13/2005 3:16:52 PM Date/Time: 8/13/2005 3:22:27 PM

File Name: [13Aug05_Z520i_GSM850_UQJL_RT01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 49.5% Ambient Temp: 23.1 Simulant Temp: 23.9

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.901$ mho/m ; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.386 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.5 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.268 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.385 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.5 V/m; Power Drift = -0.060 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.469 mW/g

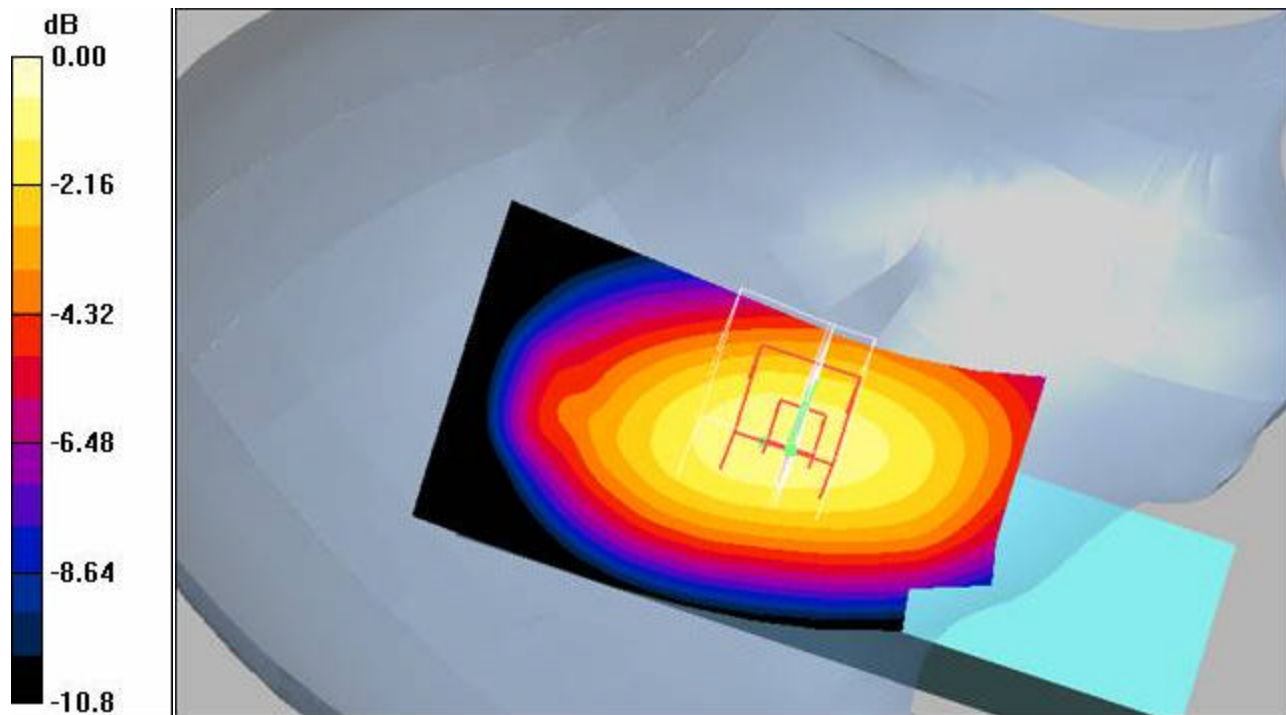


Sony Ericsson

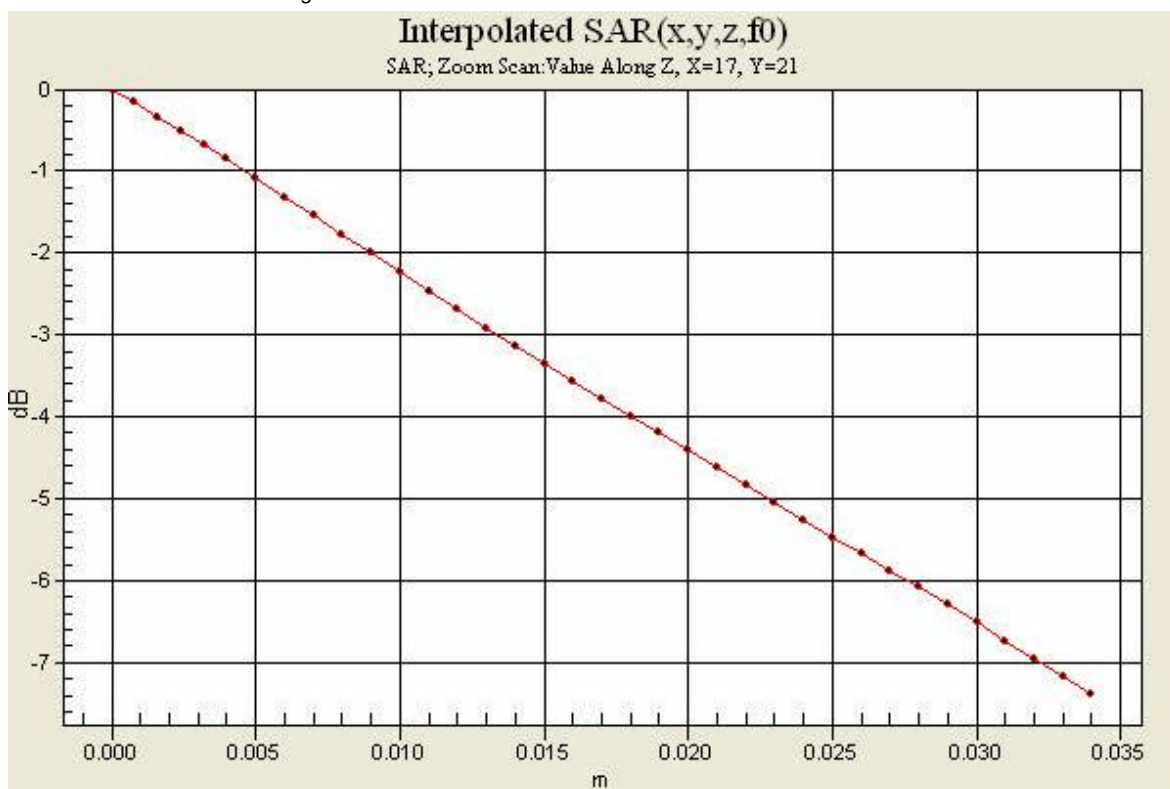
REPORT

22(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 0.469mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

800 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022UQJL with Standard Battery: BST-37****Left Side, Cheek/Touch Position.**

Date/Time: 8/13/2005 12:28:38 PM Date/Time: 8/13/2005 12:34:16 PM

File Name: [13Aug05_Z520i_GSM850_UQJL_LC01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 52.1% Ambient Temp: 22.2 Simulant Temp: 23.2

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.901$ mho/m ; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 1.52 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.6 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 2.10 W/kg

SAR(1 g) = 1.41 mW/g; SAR(10 g) = 0.908 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 1.49 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.6 V/m; Power Drift = -0.084 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 2.10 mW/g

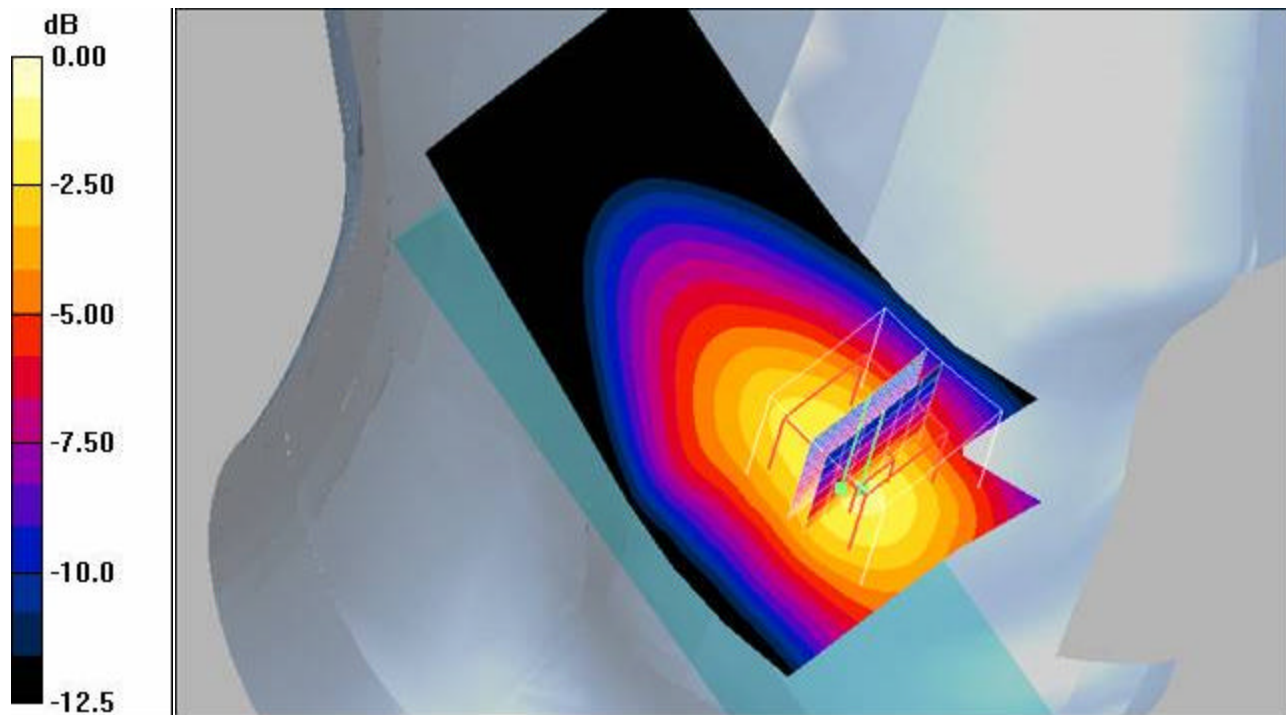


Sony Ericsson

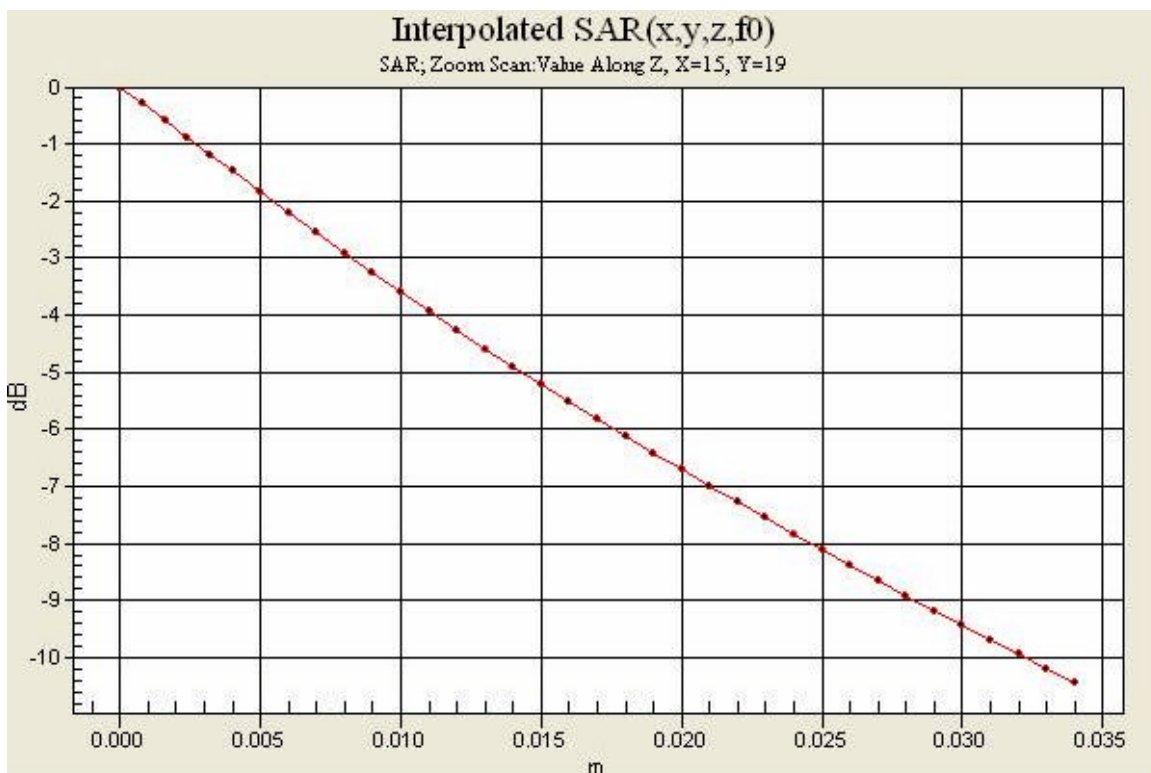
REPORT

24(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 2.10mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

800 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022UQJL with Standard Battery: BST-37****Left Side, Tilt Position.**

Date/Time: 8/13/2005 12:59:29 PM Date/Time: 8/13/2005 1:05:06 PM

File Name: [13Aug05_Z520i_GSM850_UQJL_LT01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 48.9% Ambient Temp: 22.5 Simulant Temp: 23.3

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.901$ mho/m ; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.402 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.7 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 0.484 W/kg

SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.275 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.393 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.7 V/m; Power Drift = -0.074 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.484 mW/g

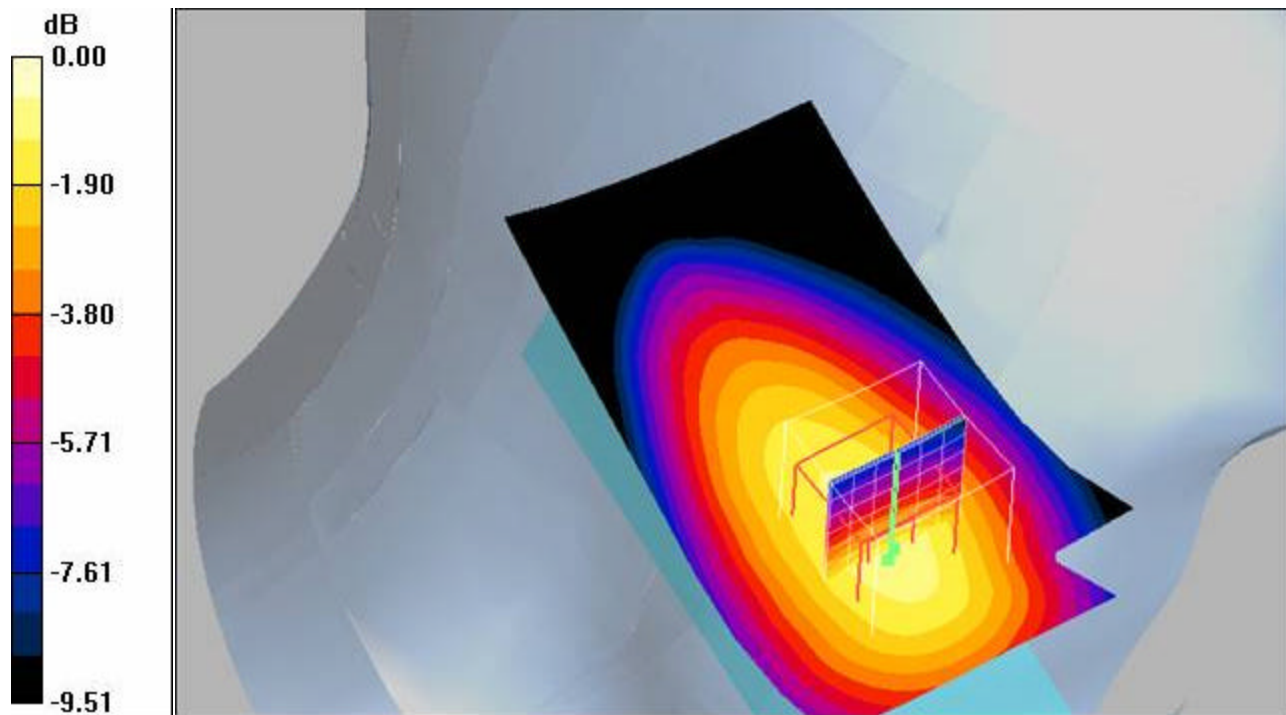


Sony Ericsson

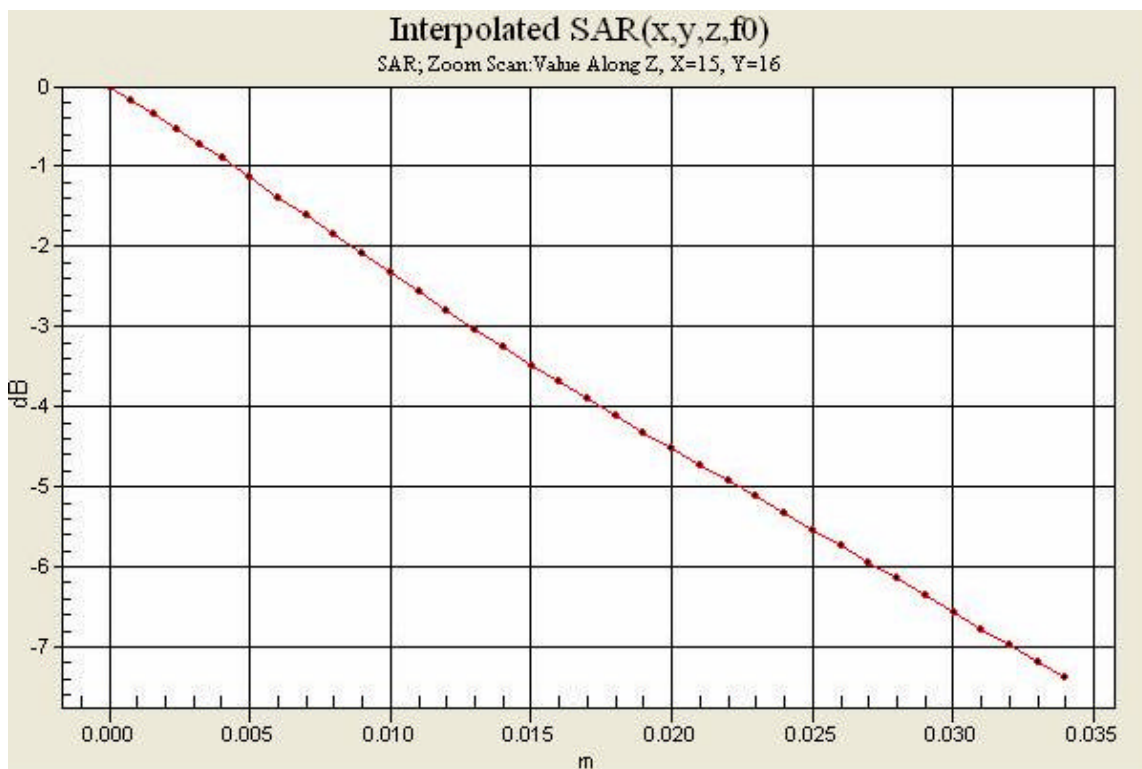
REPORT

26(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 0.484mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

800 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022UQJL with Standard Battery: BST-37****Right Side, Cheek/Touch Position with Blue Tooth.**

Date/Time: 8/13/2005 6:40:12 PM Date/Time: 8/13/2005 6:45:44 PM

File Name: [13Aug05_Z520i_GSM850_UQJL_BT_RC01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 48.3% Ambient Temp: 22.9 Simulant Temp: 23.4

Communication System: GSM 850; Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: Head 835/900 MHz Medium parameters used (interpolated): $f = 849 \text{ MHz}$; $s = 0.901 \text{ mho/m}$; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1586; ConvF(6.58, 6.58, 6.58); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn417; Calibrated: 11/11/2004
- Phantom: SAM with CRP (Low Band Head); Type: SAM; Serial: 1251
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 1.54 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.9 V/m; Power Drift = -0.090 dB

Peak SAR (extrapolated) = 2.23 W/kg

SAR(1 g) = 1.41 mW/g; SAR(10 g) = 0.917 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 1.55 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

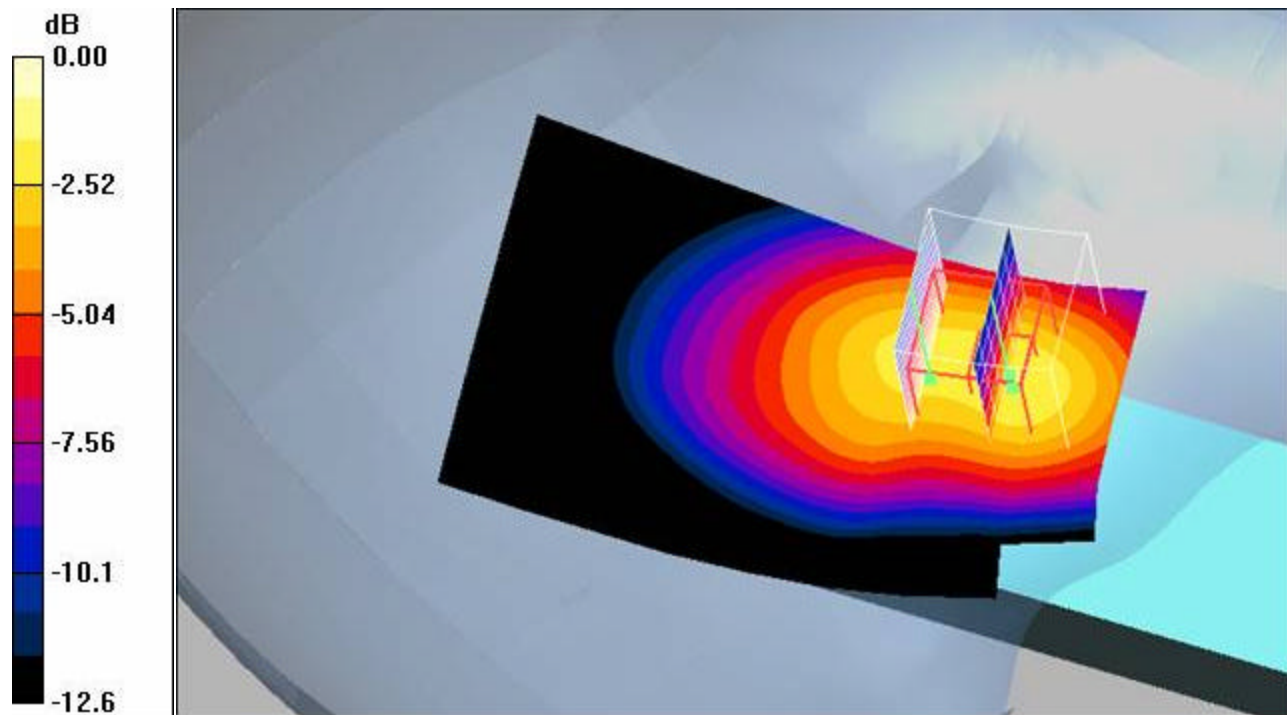
Reference Value = 11.9 V/m; Power Drift = -0.090 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

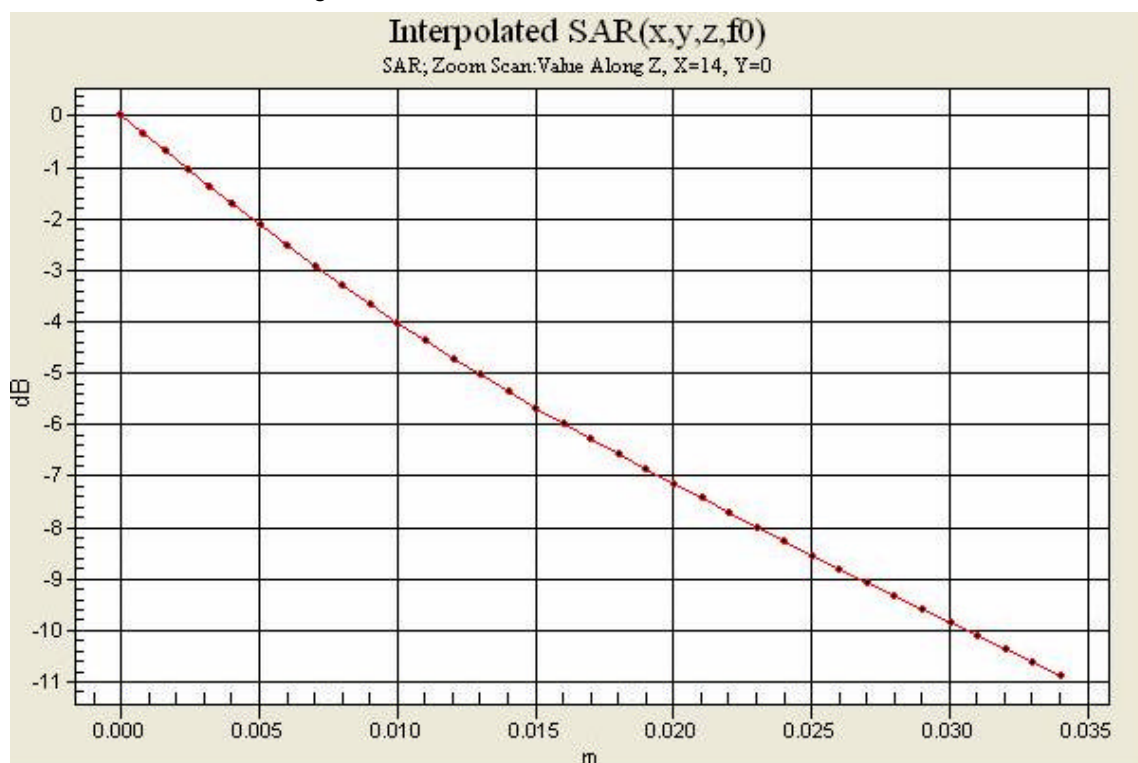
Maximum value of SAR (interpolated) = 2.23 mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 2.23mW/g



1900 GSM Band: Distribution and Extrapolation of Maximum SAR



Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

Model: Z520i SN: BD3022SBPV with Standard Battery: BST-37

Right Side, Cheek/Touch Position.

Date/Time: 8/15/2005 12:45:32 PM Date/Time: 8/15/2005 12:50:48 PM

File Name: [15Aug05_Z520i_GSM1900_SBPV_RC01.da4](#)

DUT: Model: Z520i

Program Notes: Battery BST-37 Humidity: 49.8 Ambient Temp: 22.4 Simulant Temp: 21.8

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used (interpolated): $f = 1909.8 \text{ MHz}$; $s = 1.46 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(5.11, 5.11, 5.11); Calibrated: 5/27/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/12/2004
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.352 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.1 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 0.734 W/kg

SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.177 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.406 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.1 V/m; Power Drift = -0.017 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

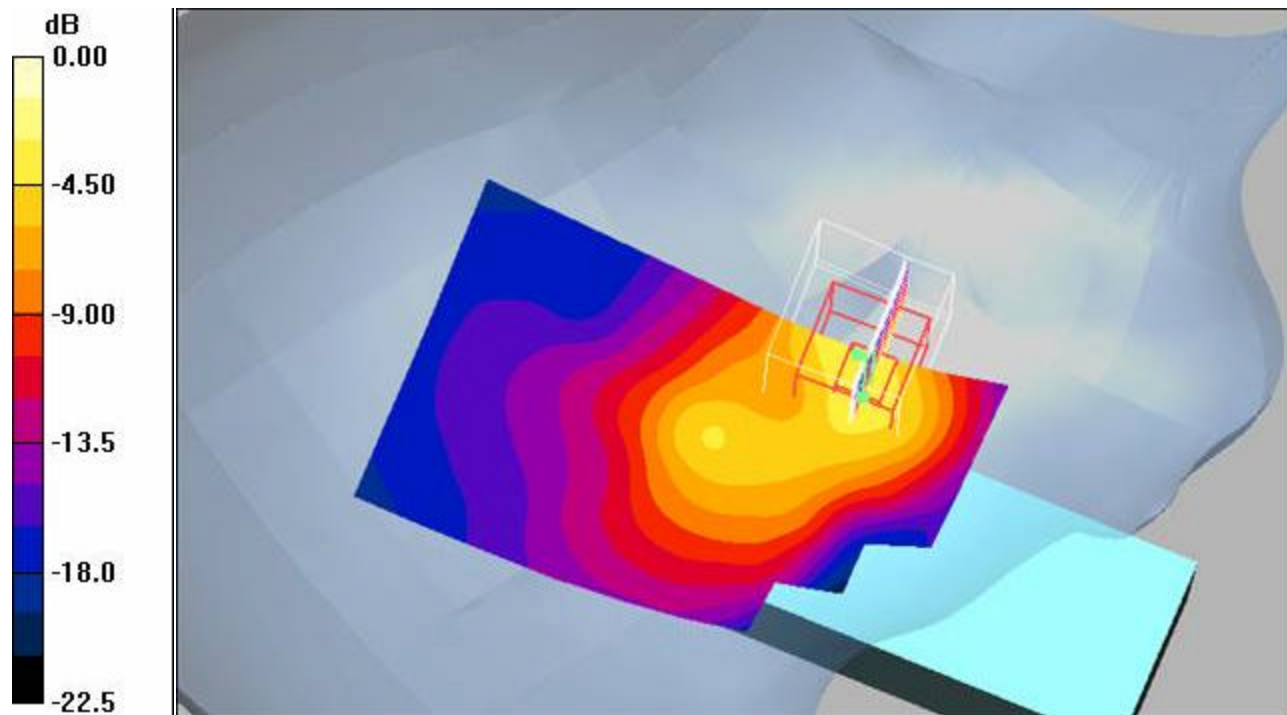
Maximum value of SAR (interpolated) = 0.734 mW/g

**Sony Ericsson**

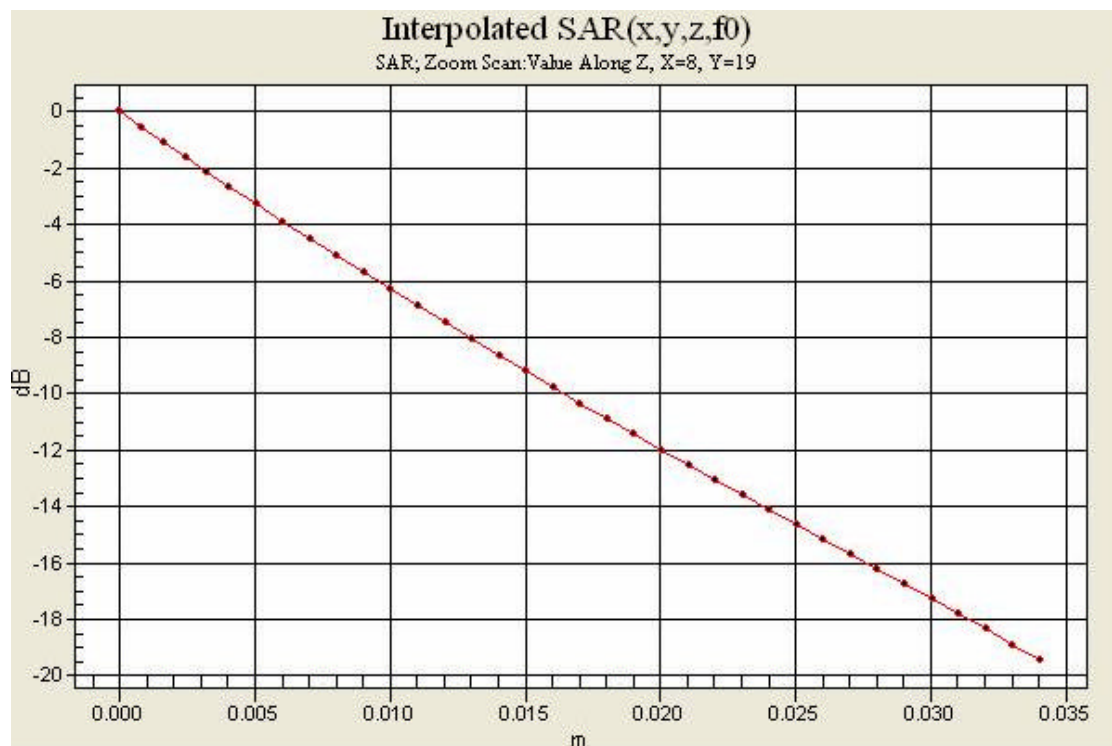
REPORT

30(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 0.734mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

1900 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022SBPV with Standard Battery: BST-37****Right Side, Tilt Position.**

Date/Time: 8/15/2005 12:23:53 PM Date/Time: 8/15/2005 12:29:12 PM

File Name: [15Aug05_Z520i_GSM1900_SBPV_RT01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 53.2% Ambient Temp: 23.2 Simulant Temp: 22.2

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used (interpolated): $f = 1909.8 \text{ MHz}$; $s = 1.46 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(5.11, 5.11, 5.11); Calibrated: 5/27/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/12/2004
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.084 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.75 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 0.111 W/kg

SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.047 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.081 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.75 V/m; Power Drift = 0.019 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.111 mW/g

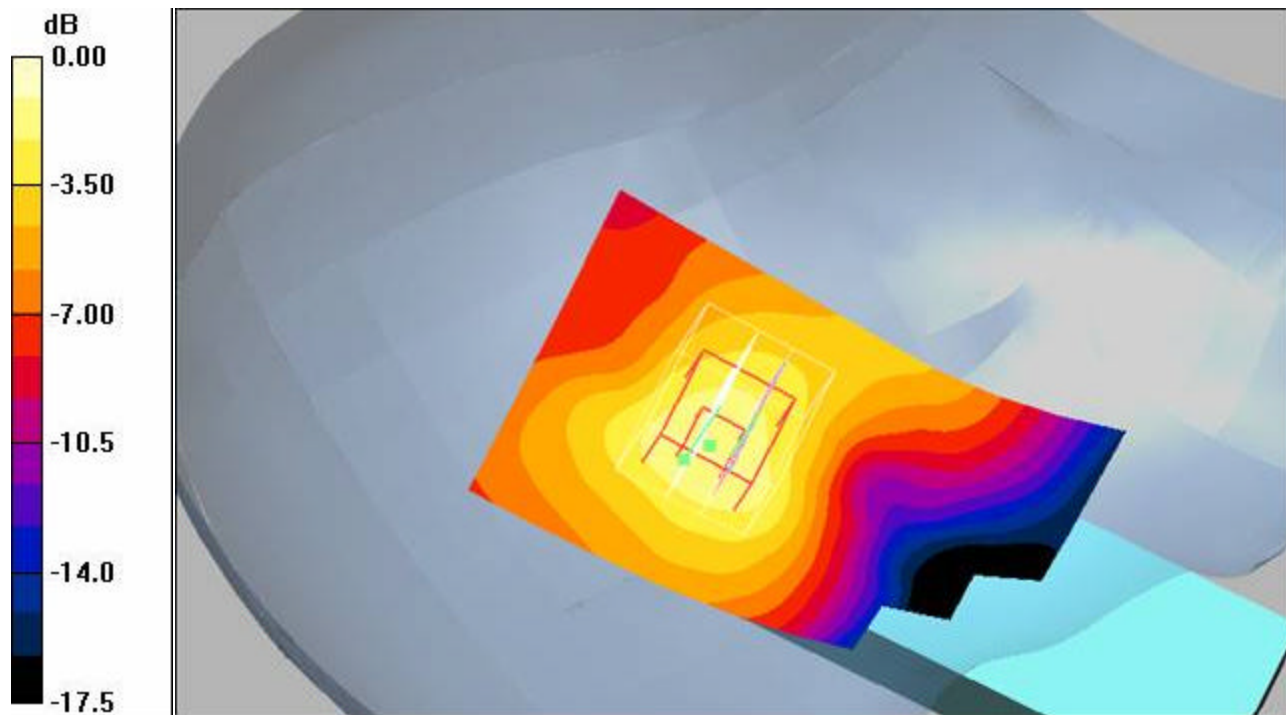


Sony Ericsson

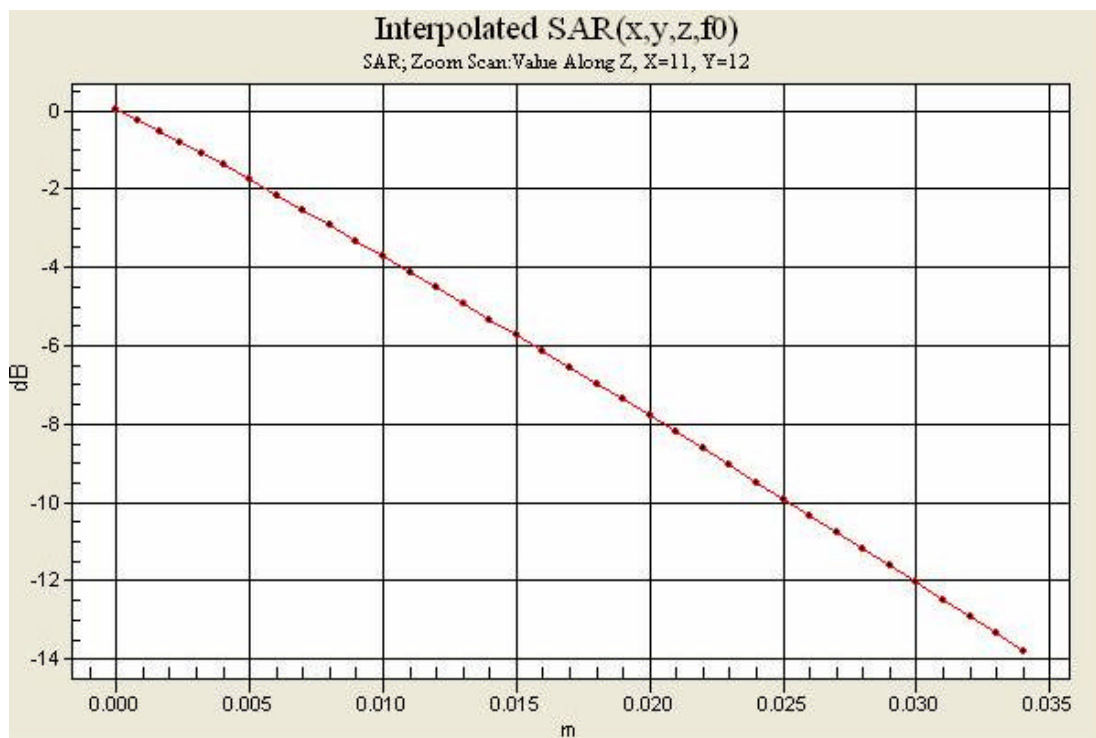
REPORT

32(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 0.111mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

1900 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022SBPV with Standard Battery: BST-37****Left Side, Cheek/Touch Position.**

Date/Time: 8/15/2005 9:08:13 AM Date/Time: 8/15/2005 9:13:43 AM

File Name: [15Aug05_Z520i_GSM1900_SBPV_LC01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 48.8 Ambient Temp: 23.3 Simulant Temp: 22.2

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used (interpolated): $f = 1909.8 \text{ MHz}$; $s = 1.46 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(5.05, 5.05, 5.05); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/12/2004
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.245 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.0 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 0.355 W/kg

SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.116 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.240 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.0 V/m; Power Drift = -0.054 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.355 mW/g

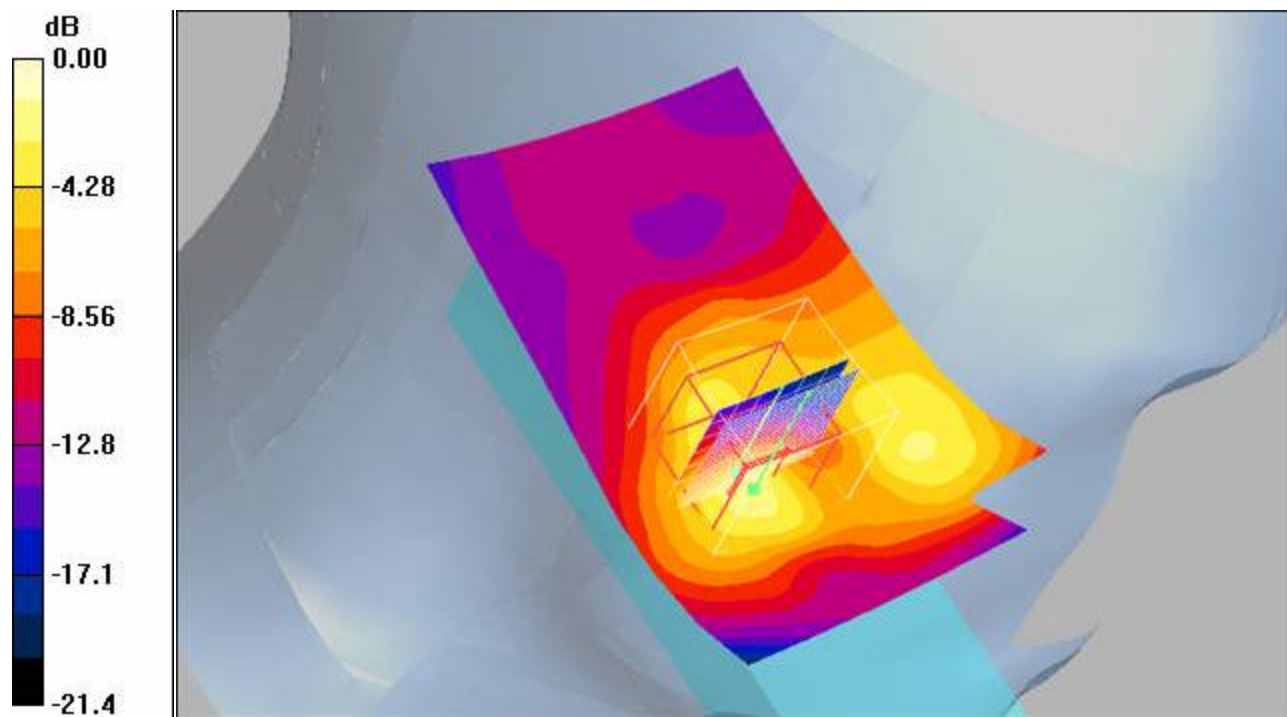


Sony Ericsson

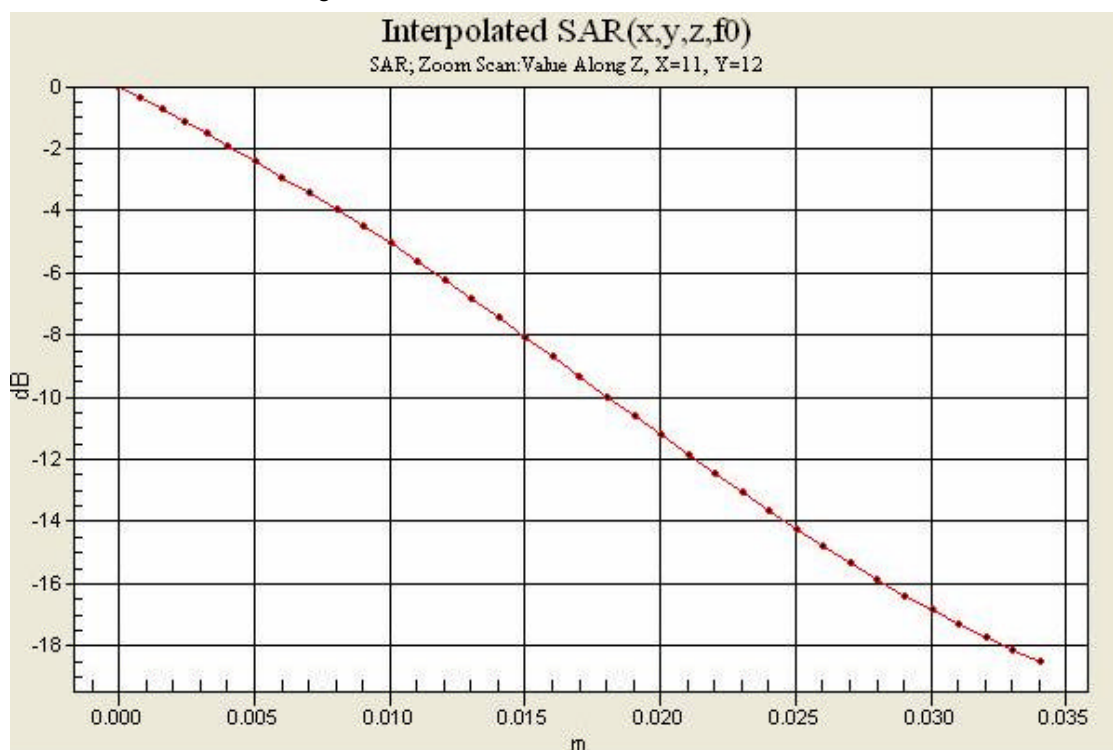
REPORT

34(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 0.355mW/g





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

1900 GSM Band: Distribution and Extrapolation of Maximum SAR**Model: Z520i SN: BD3022SBPV with Standard Battery: BST-37****Left Side, Tilt Position.**

Date/Time: 8/15/2005 9:30:50 AM Date/Time: 8/15/2005 9:36:16 AM

File Name: [15Aug05_Z520i_GSM1900_SBPV_LT01.da4](#)**DUT: Model: Z520i**

Program Notes: Battery BST-37 Humidity: 53.9 Ambient Temp: 24.1 Simulant Temp: 21.6

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used (interpolated): $f = 1909.8 \text{ MHz}$; $s = 1.46 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(5.05, 5.05, 5.05); Calibrated: 5/26/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/12/2004
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ [Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.077 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.20 V/m; Power Drift = -0.126 dB

Peak SAR (extrapolated) = 0.105 W/kg

SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.044 mW/g[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.076 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

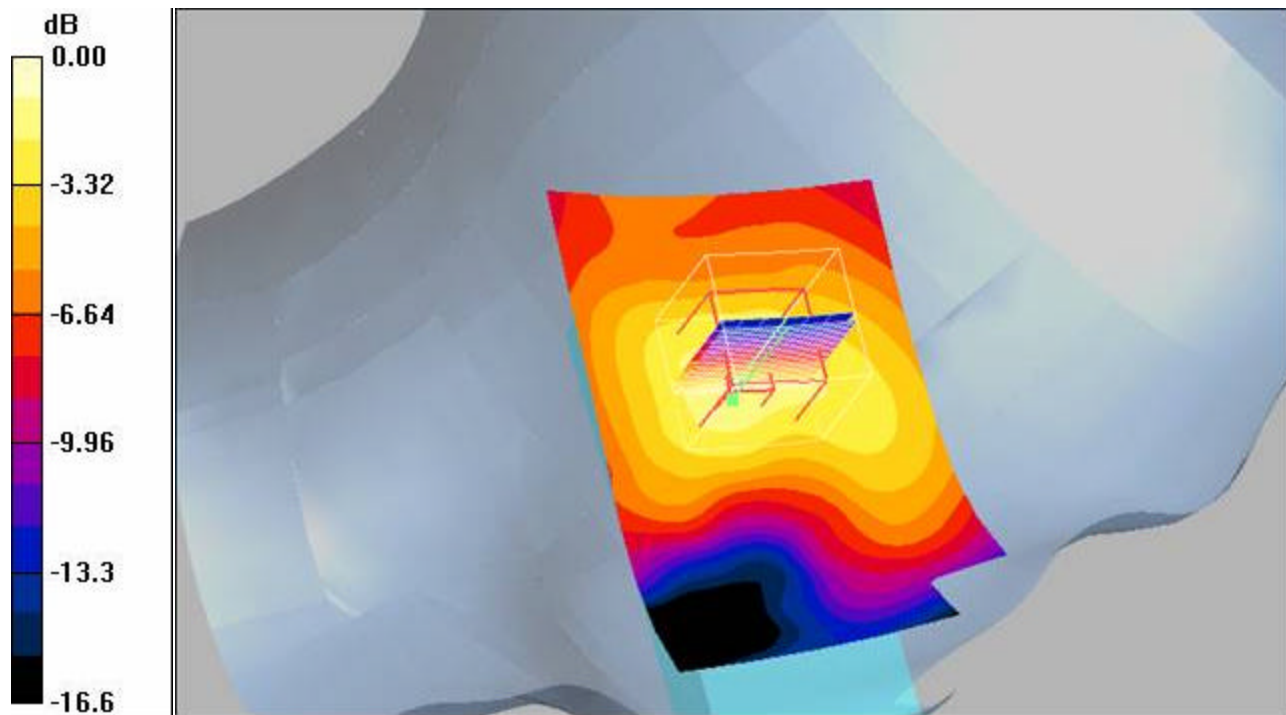
Reference Value = 2.20 V/m; Power Drift = -0.126 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

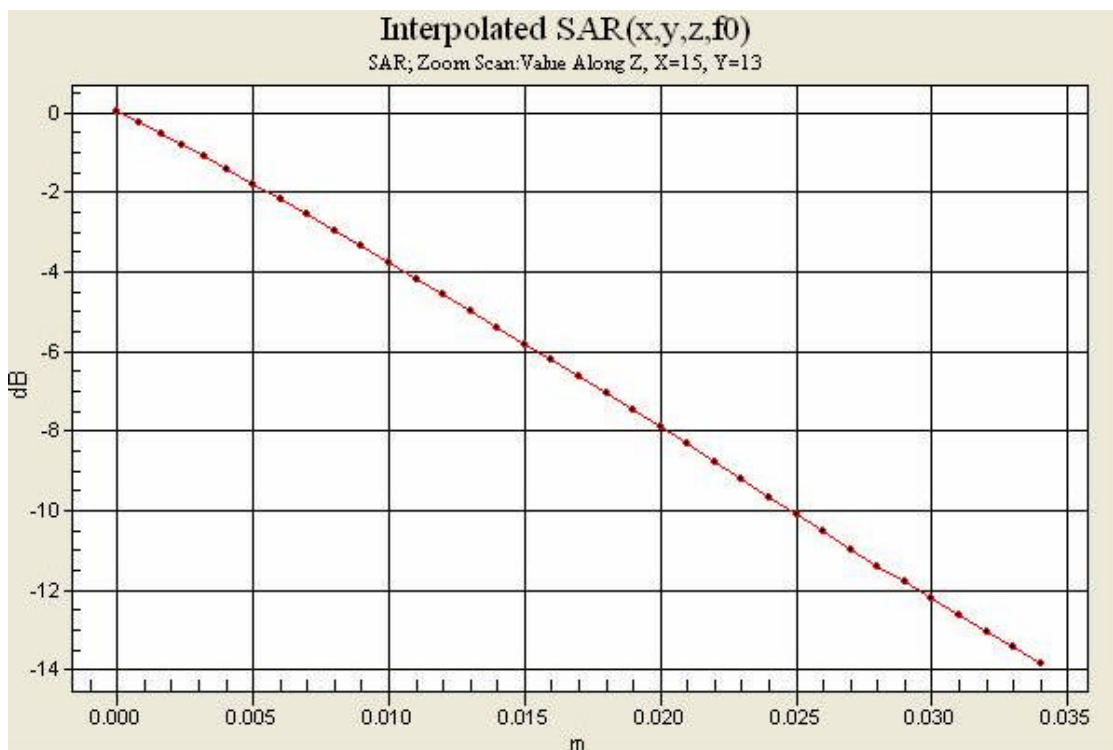
Maximum value of SAR (interpolated) = 0.105 mW/g



Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 0.105mW/g



1900 GSM Band: Distribution and Extrapolation of Maximum SAR



Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

Model: Z520i SN: BD3022SBPV with Standard Battery: BST-37

Right Side, Cheek/Touch Position with Blue Tooth.

Date/Time: 8/15/2005 2:32:43 PM Date/Time: 8/15/2005 2:38:02 PM

File Name: [15Aug05_Z520i_GSM1900_SBPV_BT_RC01.da4](#)

DUT: Model: Z520i

Program Notes: Battery BST-37 Humidity: 51.2 Ambient Temp: 23.3 Simulant Temp: 21.9

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1800/1900 MHz Medium parameters used (interpolated): $f = 1909.8 \text{ MHz}$; $s = 1.46 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1587; ConvF(5.11, 5.11, 5.11); Calibrated: 5/27/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn345; Calibrated: 11/12/2004
- Phantom: SAM with CRP (High Band Head); Type: SAM; Serial: TP: 1054
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Unnamed procedure 3/Area Scan (51x81x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.344 mW/g

Unnamed procedure 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.4 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 0.739 W/kg

SAR(1 g) = 0.350 mW/g; SAR(10 g) = 0.174 mW/g

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (measured) = 0.392 mW/g

Unnamed procedure 3/Zoom Scan (31x31x36)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.4 V/m; Power Drift = -0.039 dB

[Info: Interpolated medium parameters used for SAR evaluation!](#)

Maximum value of SAR (interpolated) = 0.739 mW/g

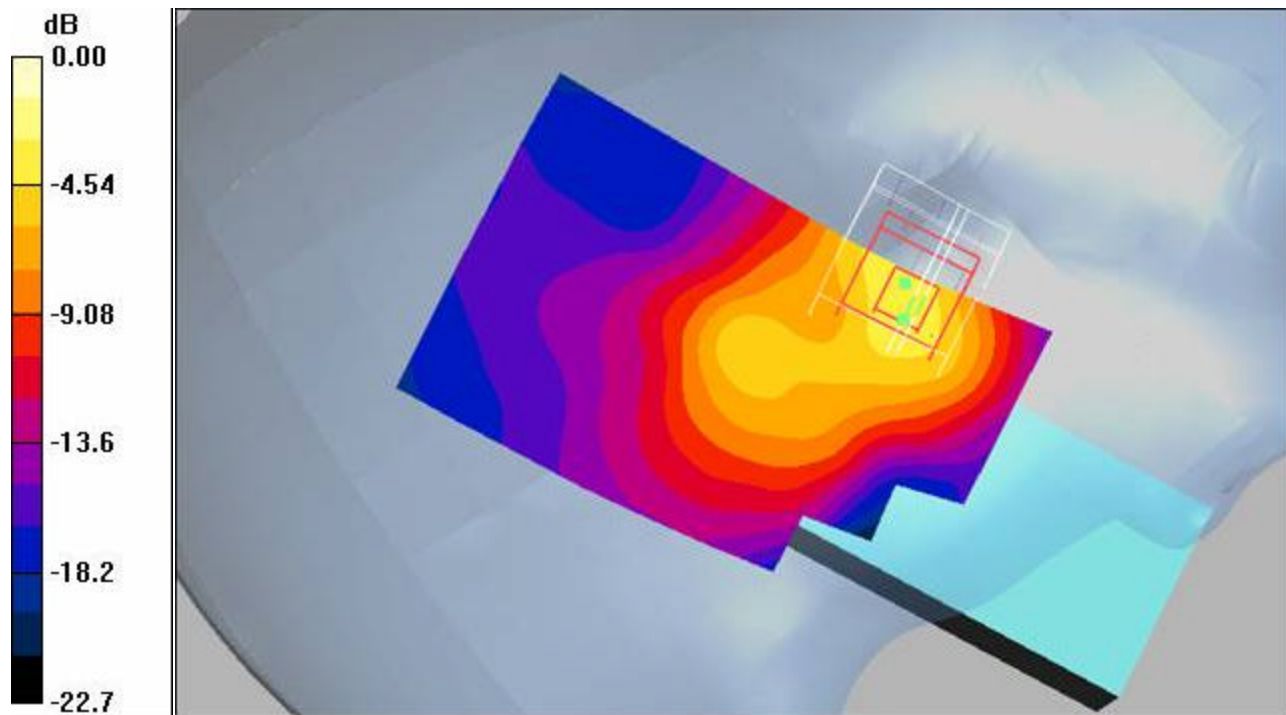


Sony Ericsson

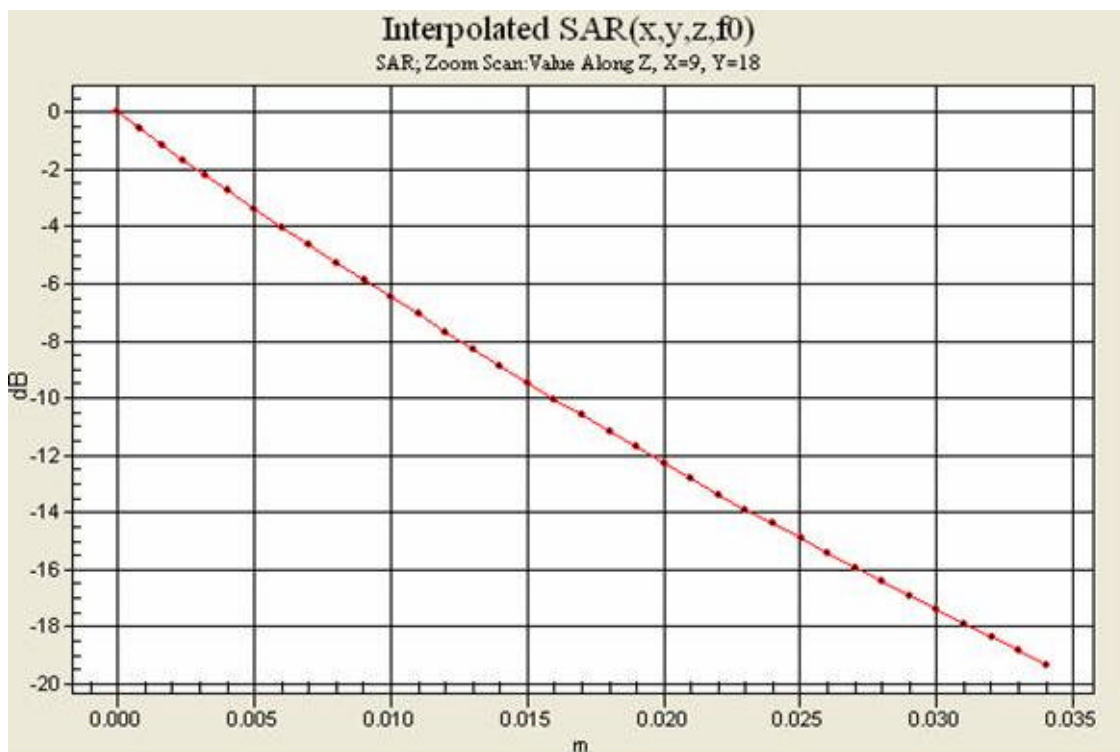
REPORT

38(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc



0 dB = 0.739mW/g



Appendix 3

Exhibit 11

**Sony Ericsson**

REPORT

39(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

SAR distribution plots for Body Worn Configuration



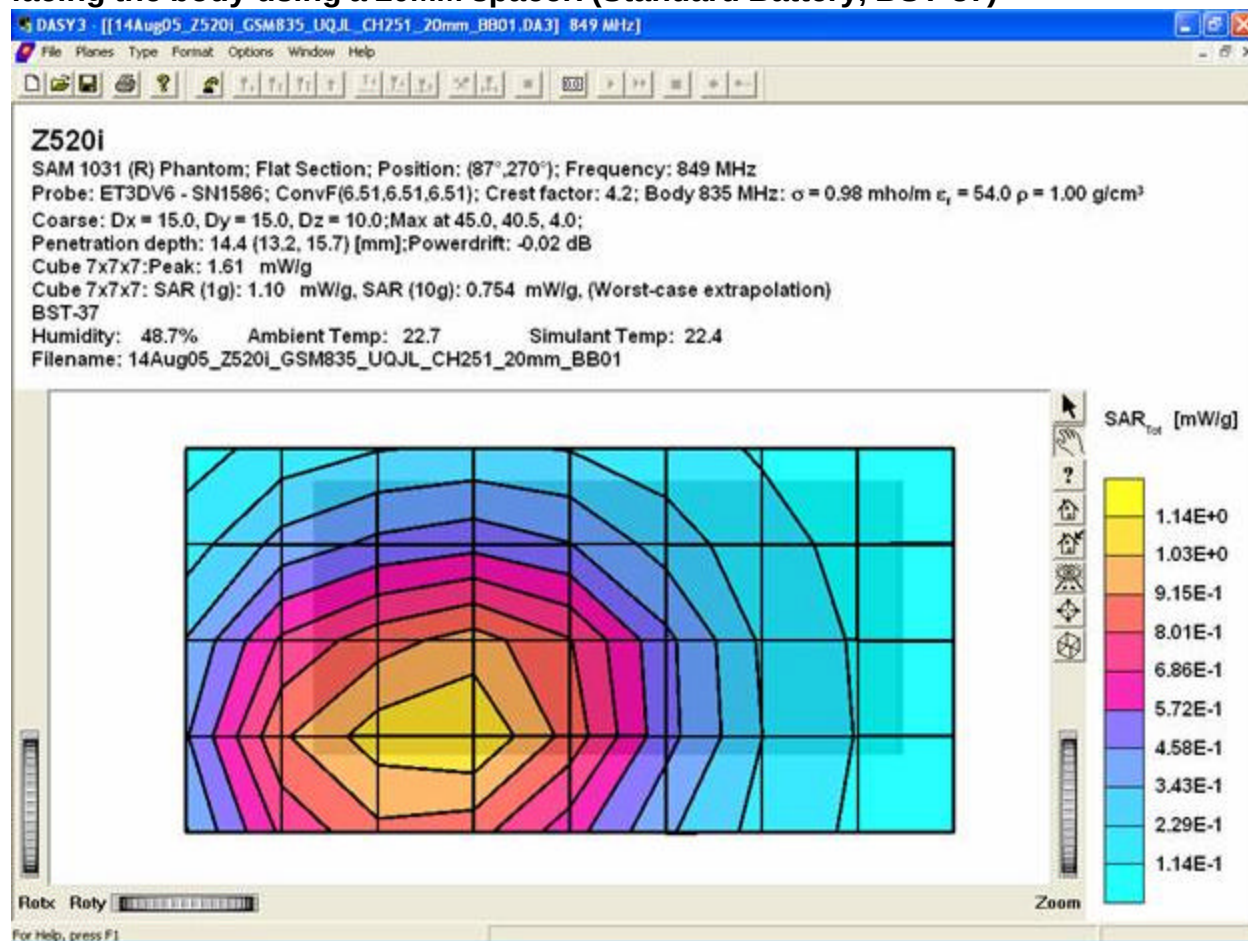
Sony Ericsson

REPORT

40(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

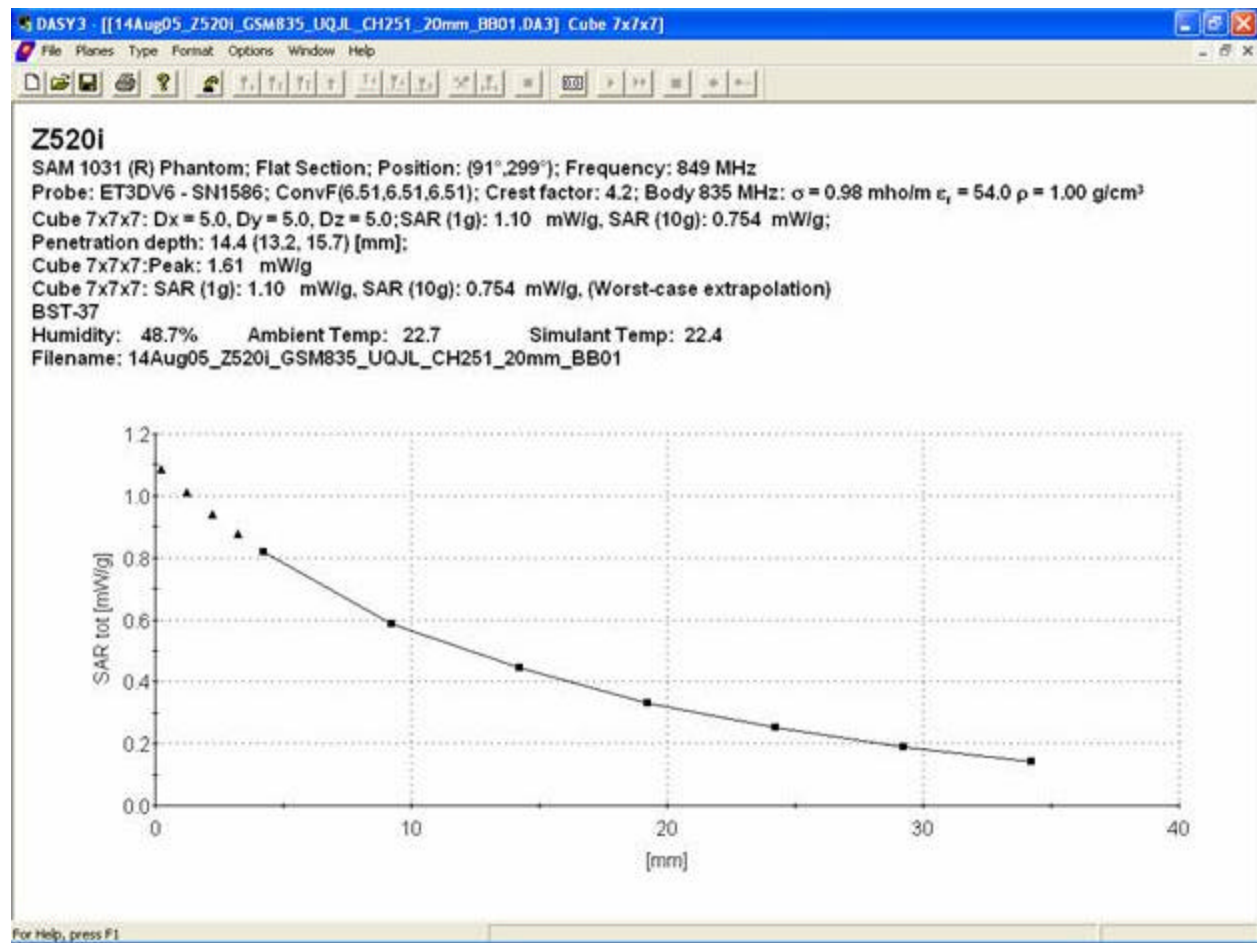
Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 20MM spacer. (Standard Battery, BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while back of the phone is against the body using a 20MM Spacer. (Standard Battery, BST-37)





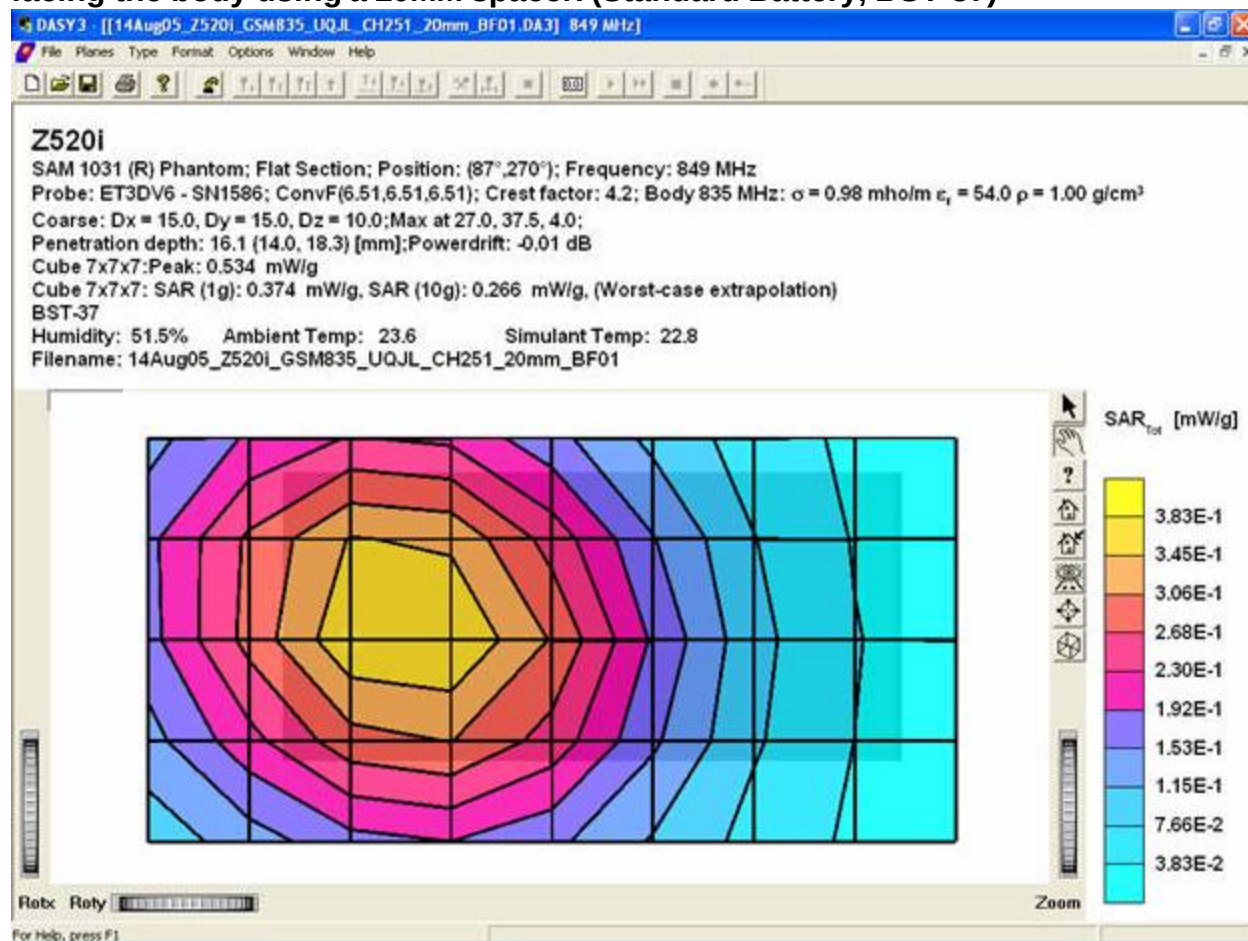
Sony Ericsson

REPORT

42(74)

Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

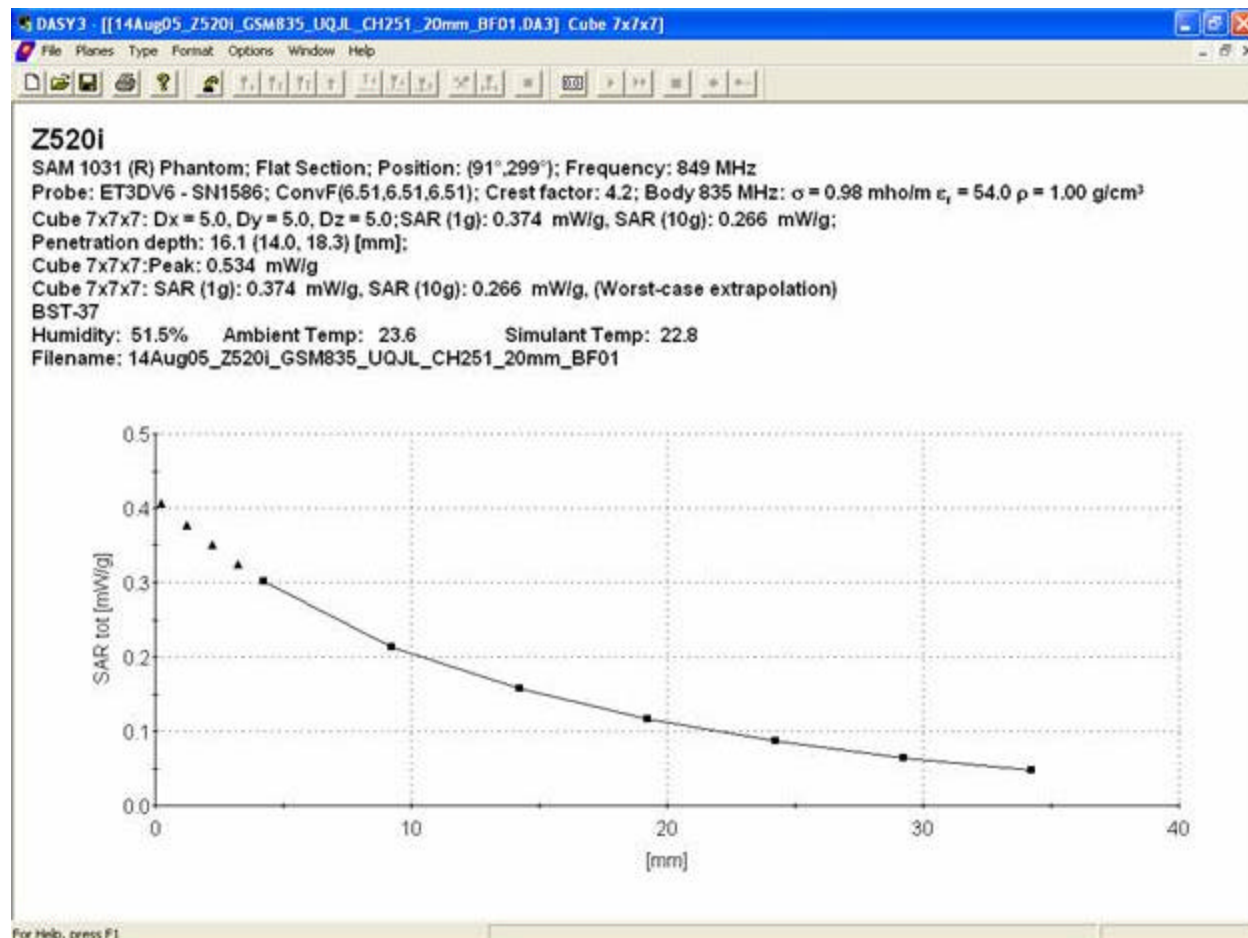
Distribution of maximum SAR in 800 GSM band. Measured with front of device facing the body using a 20MM spacer. (Standard Battery, BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02
Approved SEM/CV/PF/P Gerard Hayes	Checked A X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

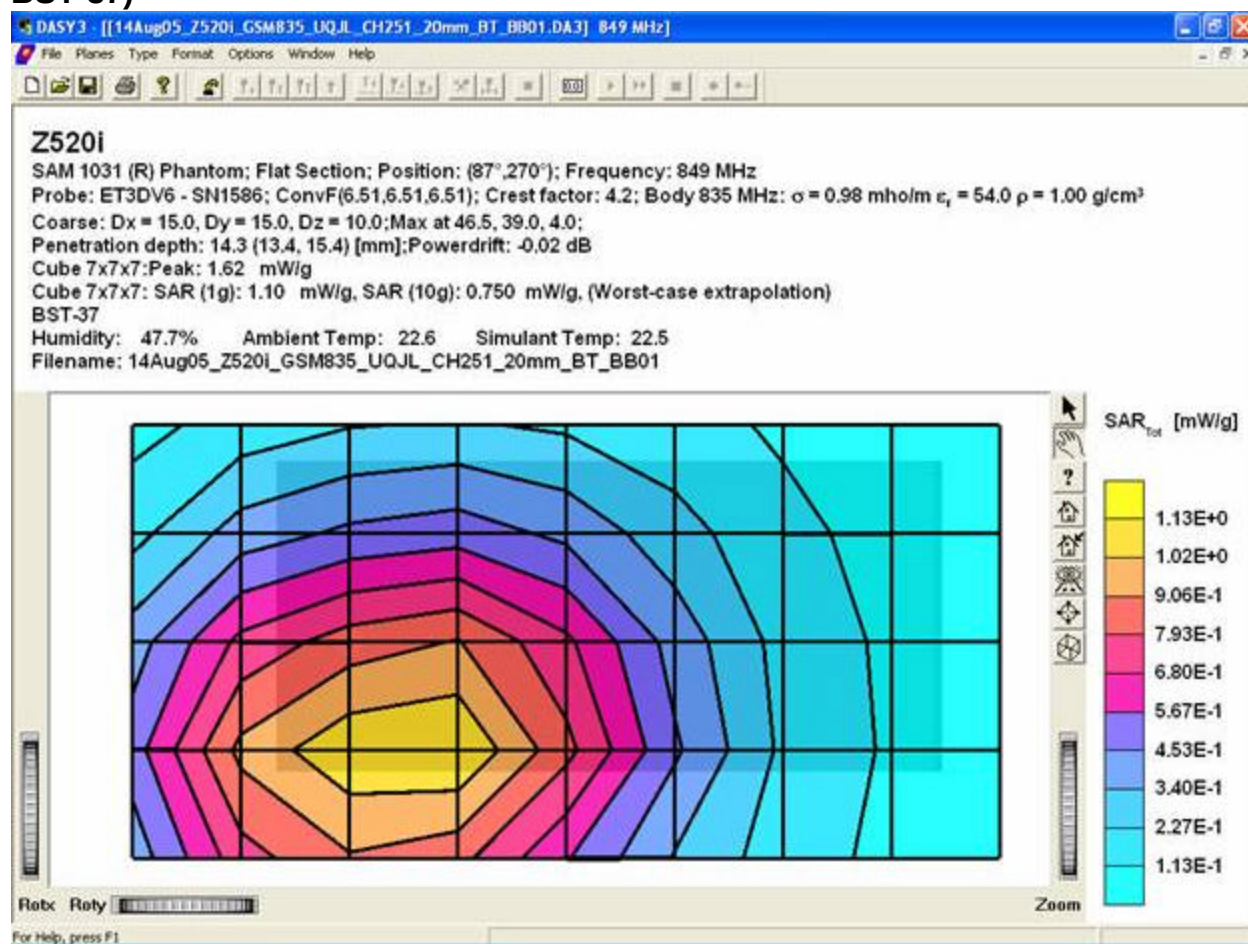
SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while front of the phone is against the body using a 20MM SPACER. (Standard Battery, BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

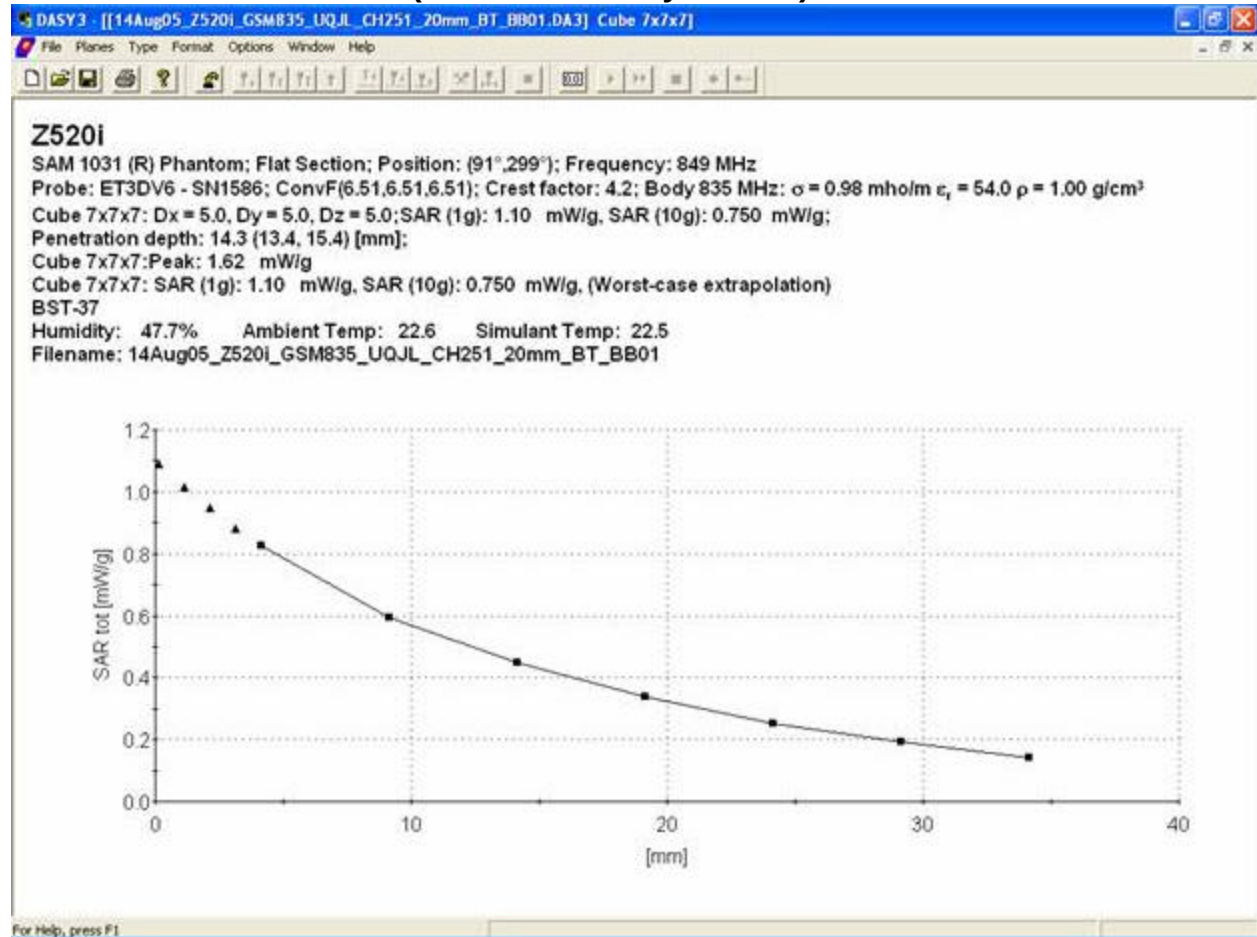
Distribution of maximum SAR in 800 GSM band. Measured with back of device facing the body using a 20MM SPACER with Blue Tooth. (Standard Battery BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

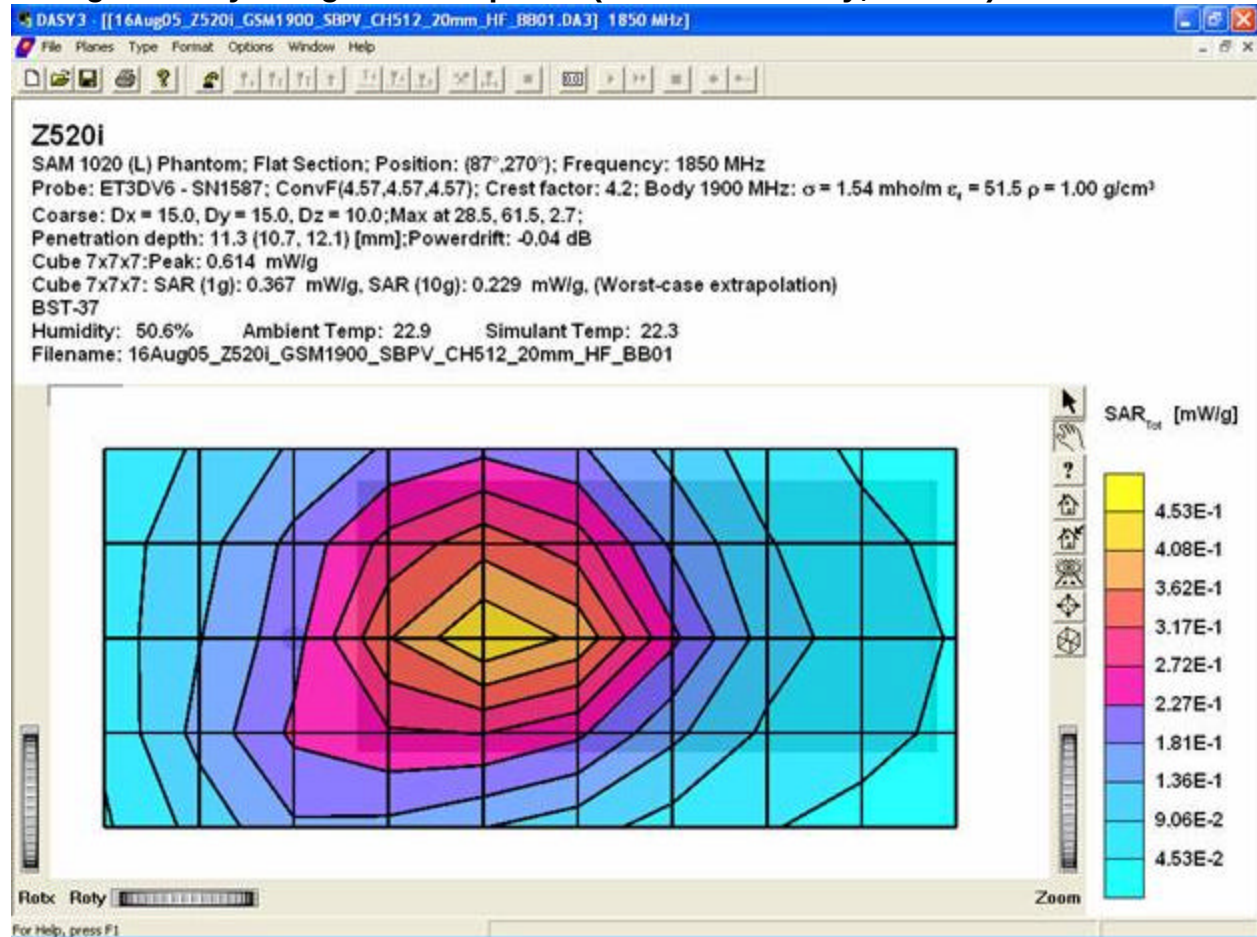
SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 800 GSM band, while back of the phone is against the body using a 20MM SPACER with Blue Tooth. (Standard Battery BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

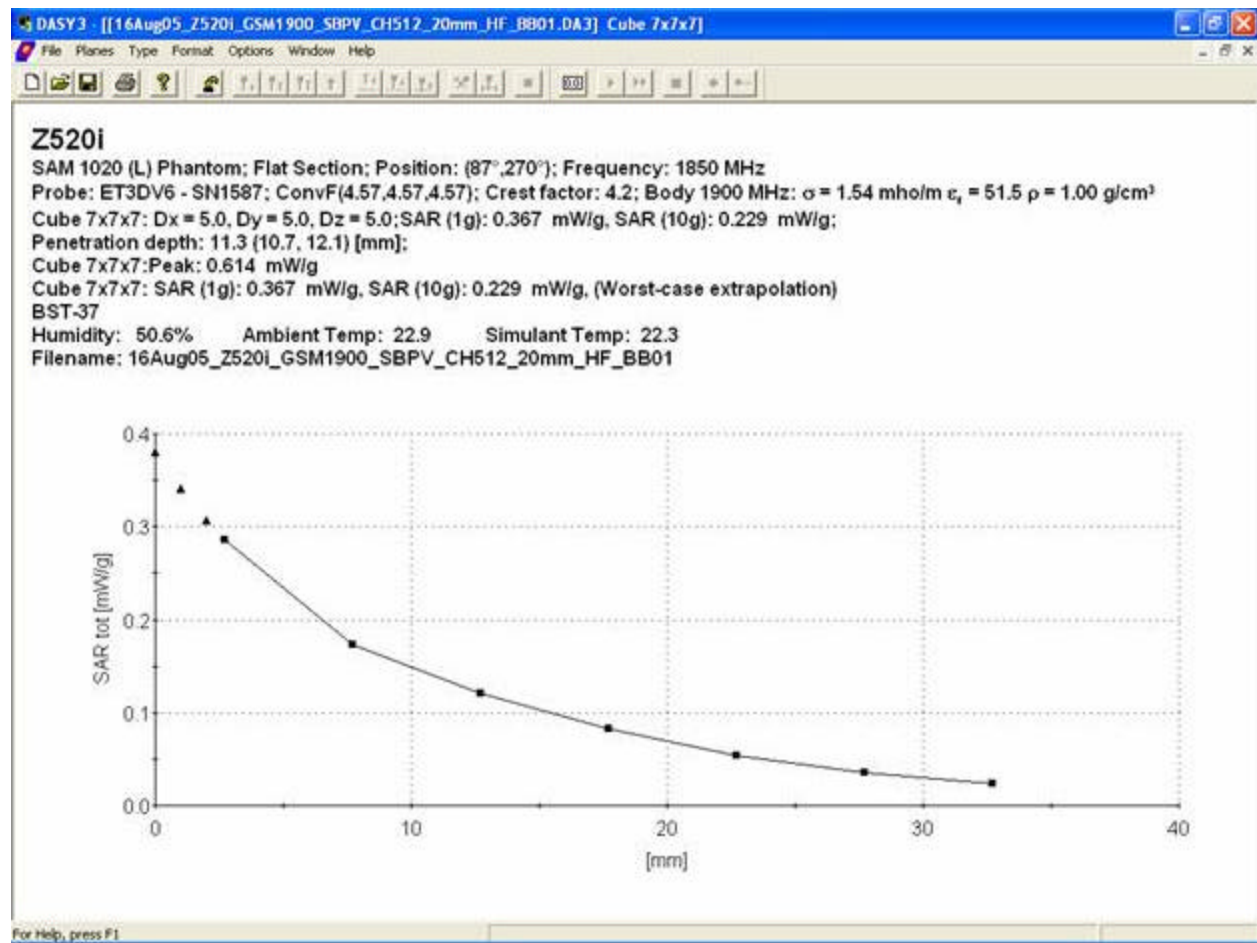
Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 20MM spacer. (Standard Battery, BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon		No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

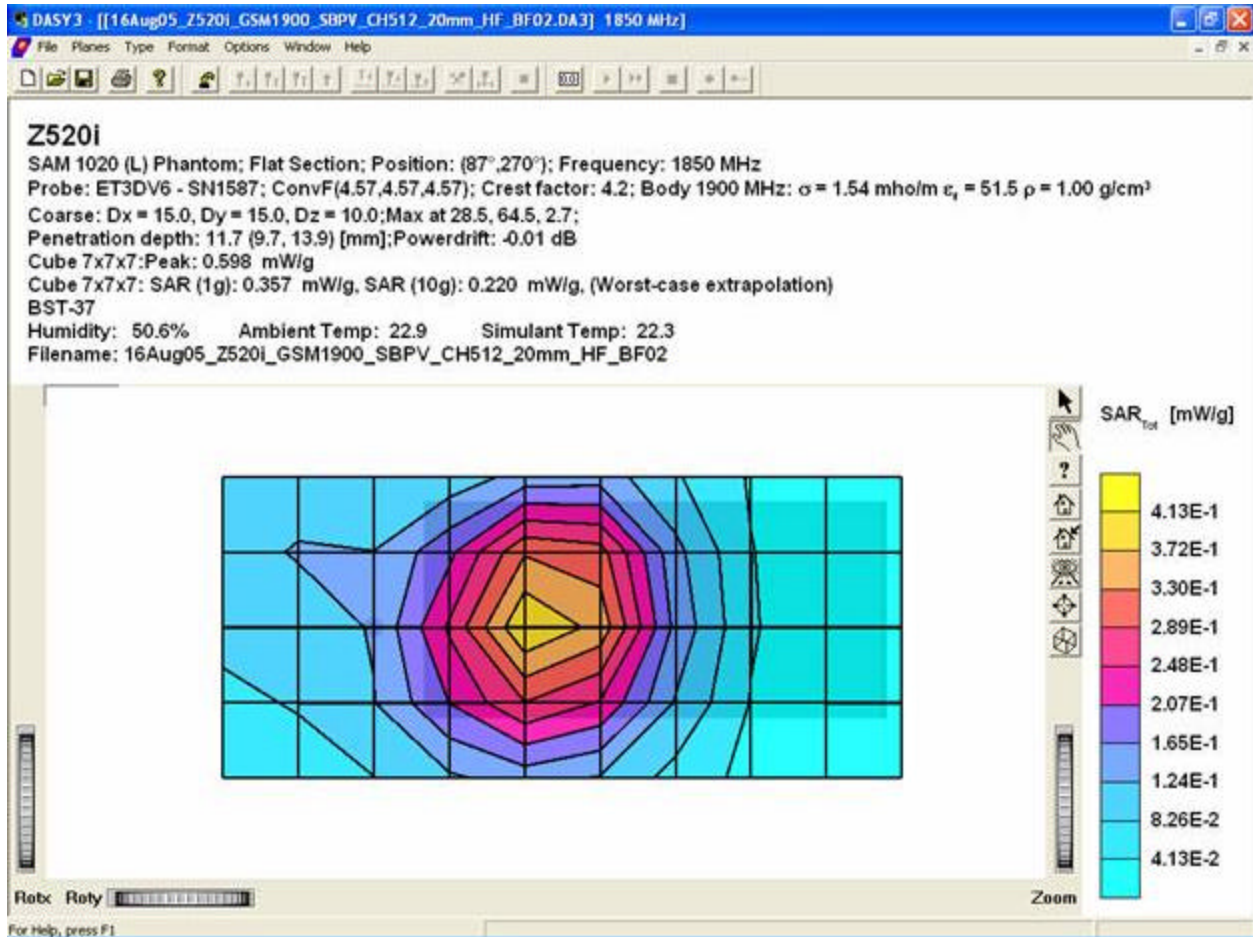
SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while back of the phone is against the body using a 20MM Spacer. (Standard Battery, BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

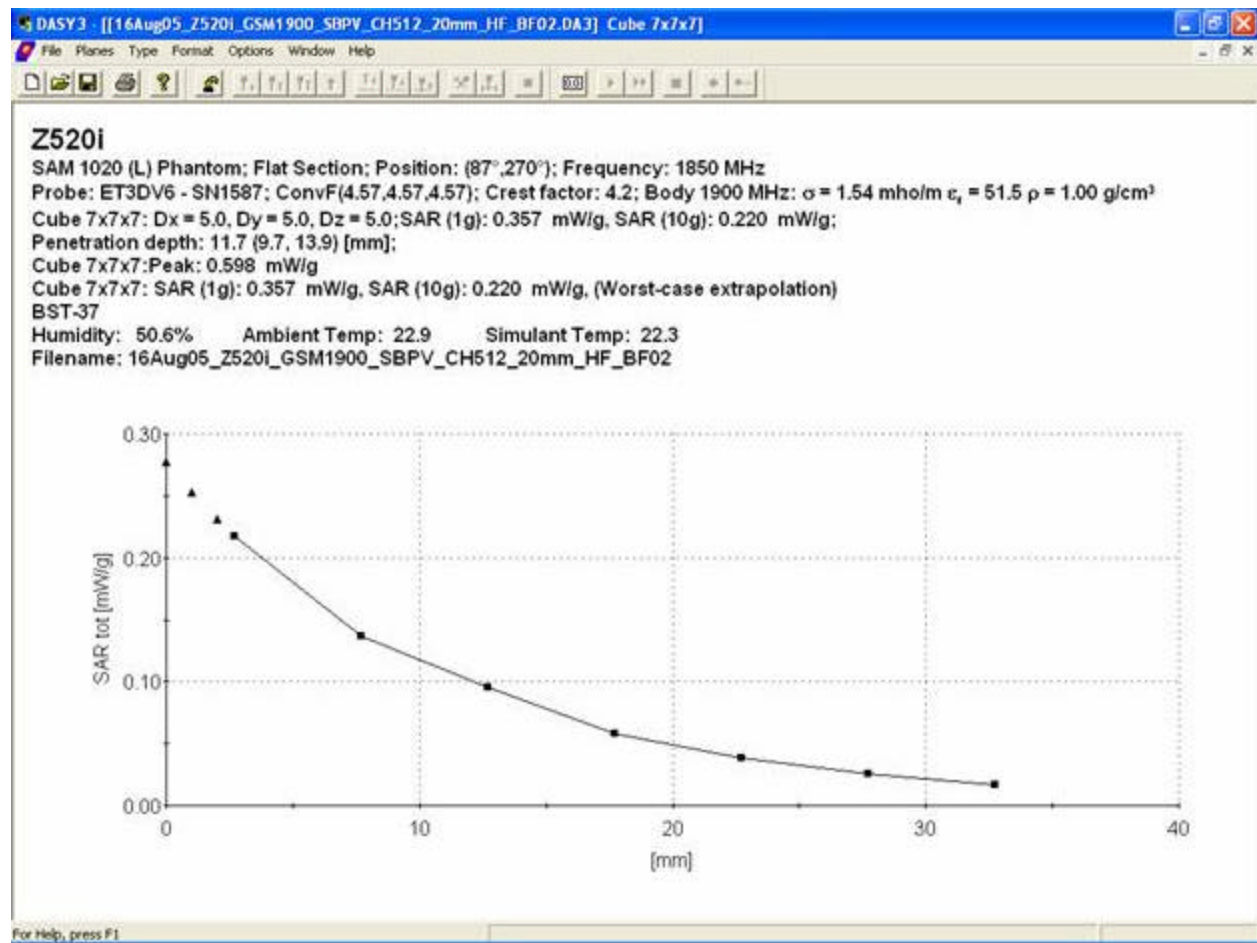
Distribution of maximum SAR in 1900 GSM band. Measured with front of device facing the body using a 20MM spacer. (Standard Battery, BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

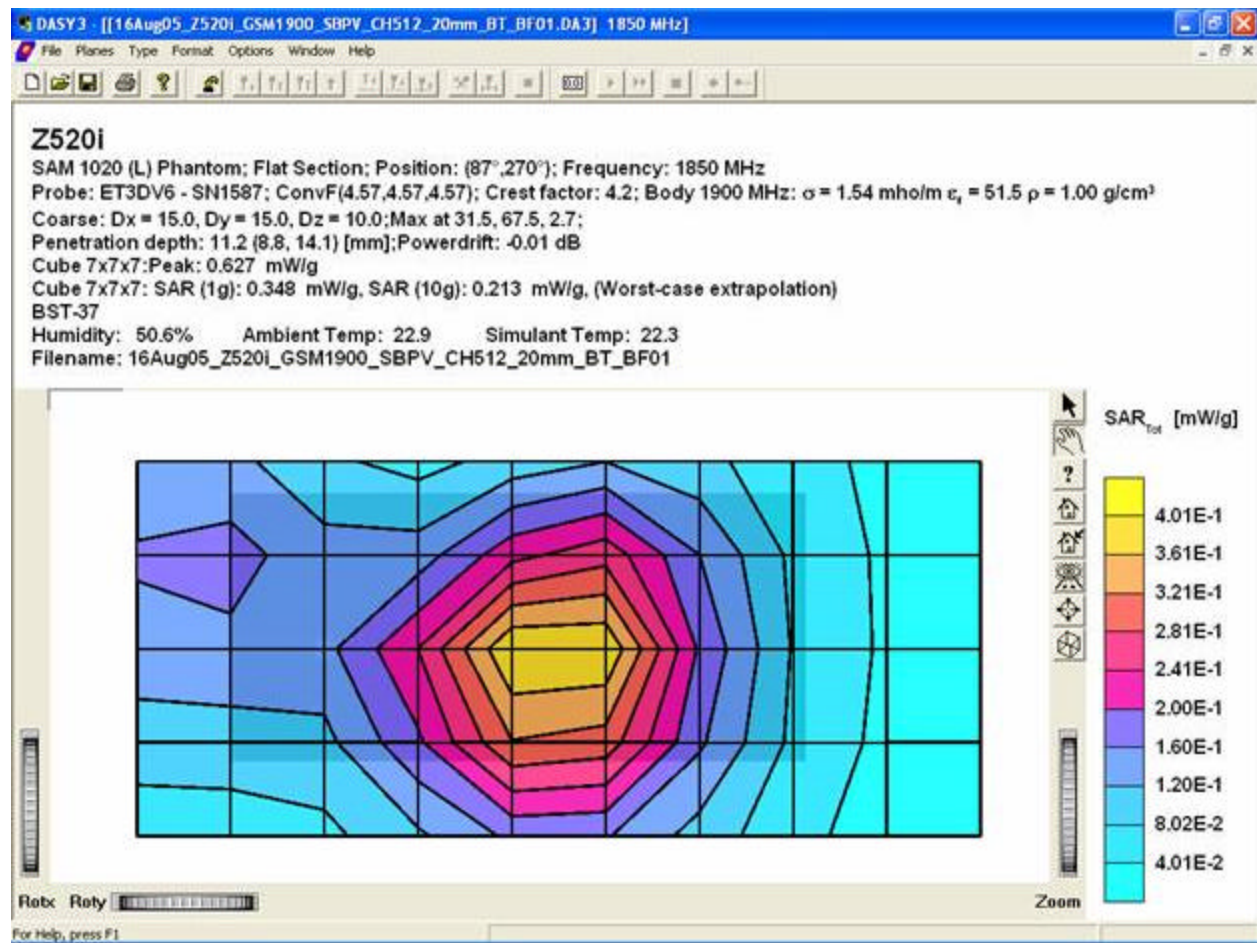
SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while front of the phone is against the body using a 20MM SPACER. (Standard Battery, BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked	A X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

Distribution of maximum SAR in 1900 GSM band. Measured with back of device facing the body using a 20MM SPACER with Blue Tooth. (Standard Battery BST-37)





Prepared (also subject responsible if other) SEM/CV/PF/P Gerard Hayes and Rodney Dixon	No. REP 2005 006 Z520i 02	
Approved SEM/CV/PF/P Gerard Hayes	Checked A	X:\SAR Chamber\FCC reports\Z520i\Final Reports\FCCZ520i.doc

SAR Extrapolation to the phantom inner surface. Measured for maximum SAR in 1900 GSM band, while back of the phone is against the body using a 20MM SPACER with Blue Tooth. (Standard Battery BST-37)

