| Prepared (also subject responsible if other) | | No. | | |
|---|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | | |
| Approved | Checked | | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 | B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |

T62u

SAM 1031(R) Phantom; Righ Hand Section; Position: (91°,299°); Frequency: 1850 MHz

Probe: ET3DV6 - SN1583; ConvF(5.32,5.32,5.32); Crest factor: 3.0; Head 1900 MHz: $\sigma = 1.41$ mho/m $\varepsilon_r = 39.6$ $\rho = 1.00$ g/cm$^3$

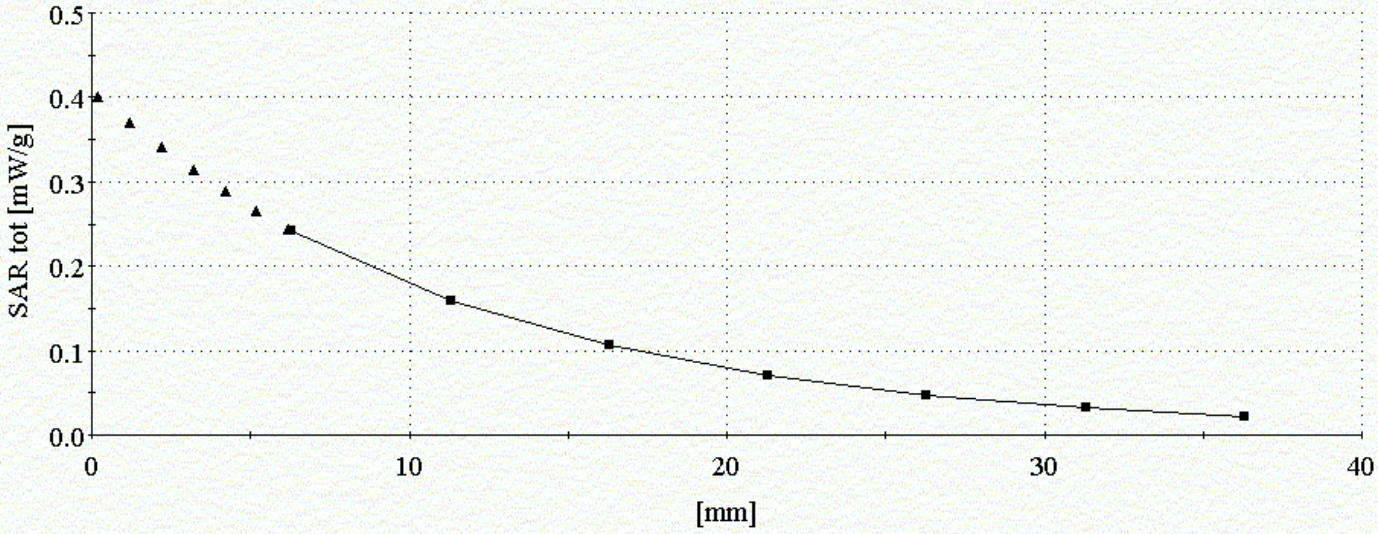
Cube 5x5x7: SAR (1g): 0.407 mW/g, SAR (10g): 0.249 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0

; Measured date: 05/28/02

FCC right T62u TDMA1900_MZVQ_CH0002_C01

SN: UA2020MZVQ Battery: BKB 193 1051




**SAR Extrapolation to the phantom inner surface. Measured for Maximum SAR in 1900 TDMA band, while phone is against the right hand side of head in the "cheek" position.**

| Prepared (also subject responsible if other) | | No. | |
|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | |
| Approved | Checked | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |

T62u

SAM 1031(R) Phantom; Righ Hand Section; Position: (106°,299°); Frequency: 1850 MHz

Probe: ET3DV6 - SN1583; ConvF(5.32,5.32,5.32); Crest factor: 3.0; Head 1900 MHz: $\sigma = 1.41$ mho/m $\varepsilon_r = 39.6$ $\rho = 1.00$ g/cm$^3$

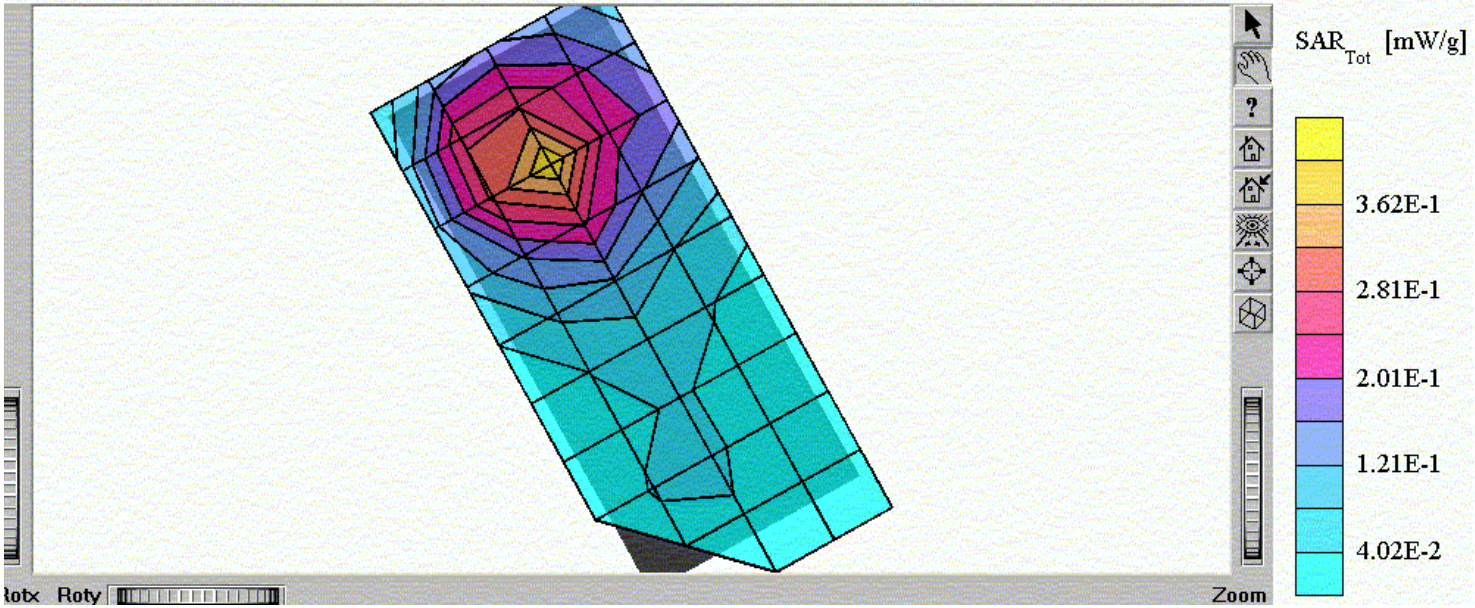
Cube 5x5x7: SAR (1g): 0.467 mW/g, SAR (10g): 0.278 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Powerdrift: 0.10 dB; Measured date: 05/28/02

FCC right T62u TDMA1900_MZVQ_CH0002_T01

SN:UA2020MZVQ Battery:BKB 193 1051




**Distribution of maximum SAR in 1900 TDMA band. Measured against the right hand side of the head in the "Tilt" position.**

| Prepared (also subject responsible if other) | | No. | | |
|---|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | | |
| Approved | Checked | | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 | B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |

T62u

SAM 1031(R) Phantom; Righ Hand Section; Position: (106°,299°); Frequency: 1850 MHz

Probe: ET3DV6 - SN1583; ConvF(5.32,5.32,5.32); Crest factor: 3.0; Head 1900 MHz: $\sigma$ = 1.41 mho/m $\varepsilon_r$ = 39.6 $\rho$ = 1.00 g/cm$^3$

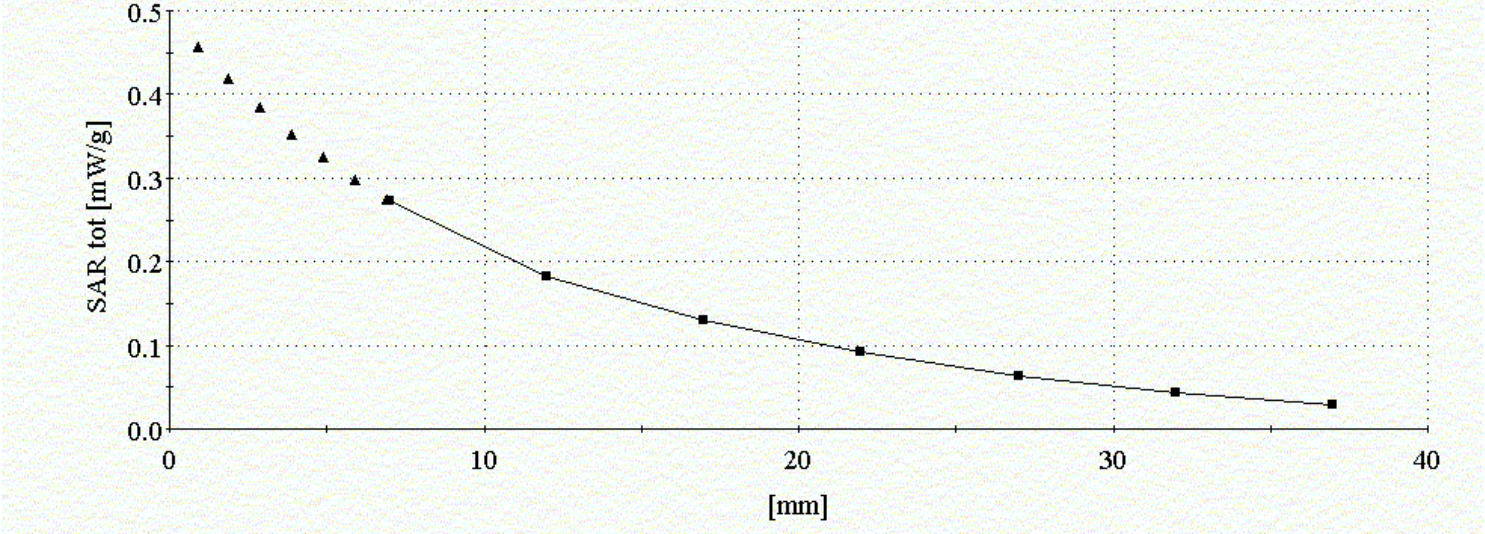
Cube 5x5x7: SAR (1g): 0.467 mW/g, SAR (10g): 0.278 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0

; Measured date: 05/28/02

FCC right T62u TDMA1900_MZVQ_CH0002_T01

SN:UA2020MZVQ Battery:BKB 193 1051




**SAR Extrapolation to the phantom inner surface. Measured for Maximum SAR in 1900 TDMA band, while phone is against the right hand side of head in the "tilt" position.**

| Prepared (also subject responsible if other) | | No. | | |
|---|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | | |
| Approved | Checked | | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 | B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |

T62u

SAM 1031(R) Phantom; Righ Hand Section; Position: (91°,299°); Frequency: 1850 MHz

Probe: ET3DV6 - SN1583; ConvF(5.32,5.32,5.32); Crest factor: 8.0; Head 1900 MHz: $\sigma = 1.41$ mho/m $\varepsilon_r = 39.6$ $\rho = 1.00$ g/cm$^3$

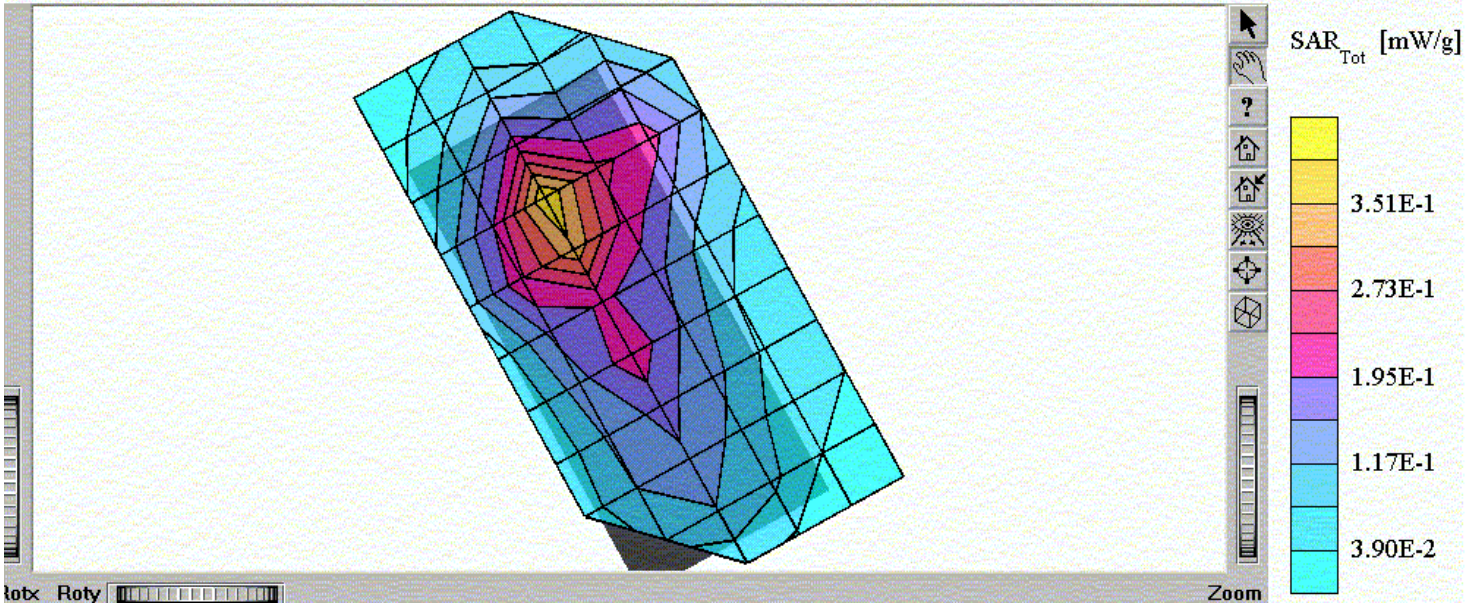
Cube 5x5x7: SAR (1g): 0.395 mW/g, SAR (10g): 0.243 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Powerdrift: 0.02 dB; Measured date: 05/28/02

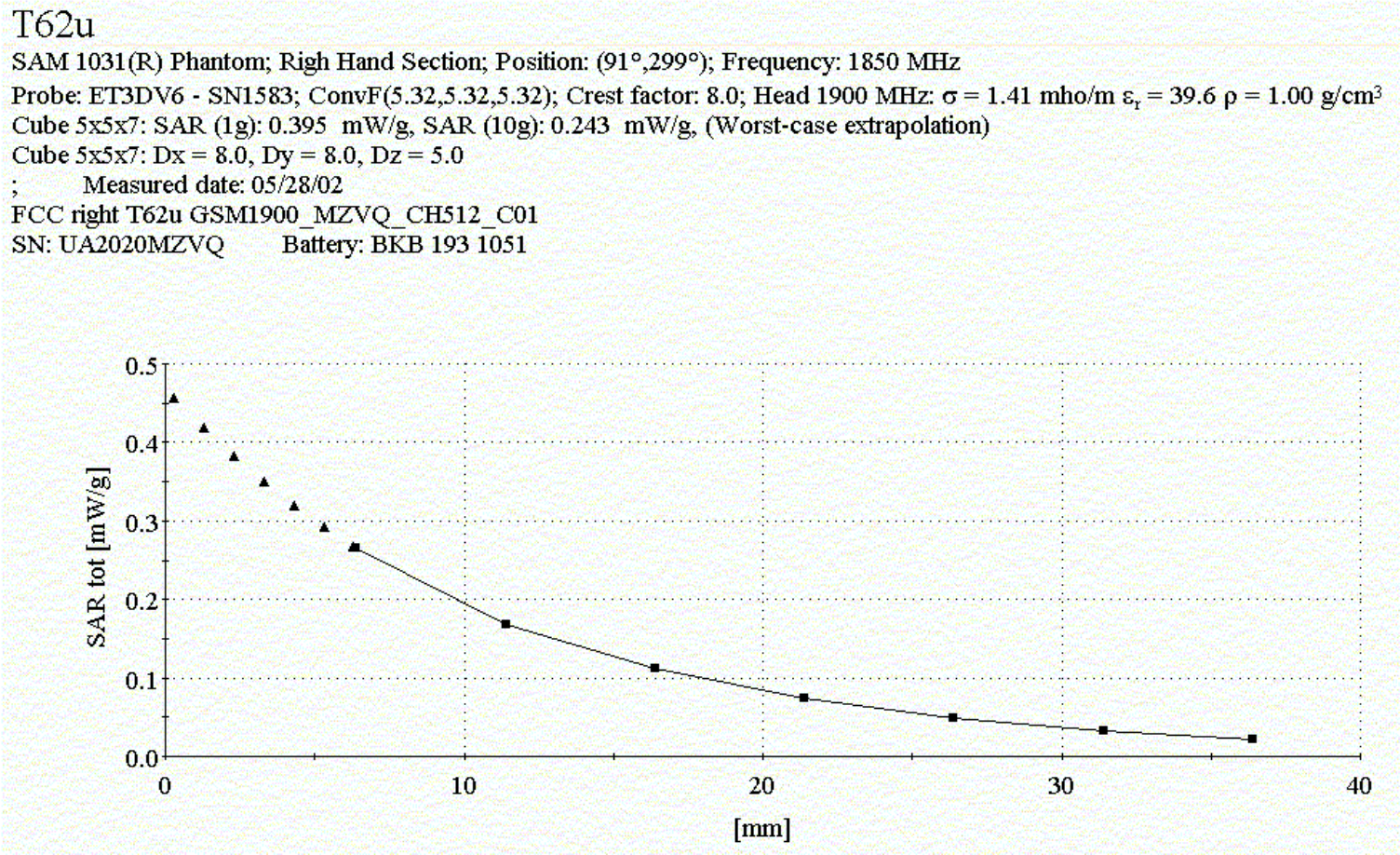
FCC right T62u GSM1900_MZVQ_CH512_C01

SN: UA2020MZVQ Battery: BKB 193 1051



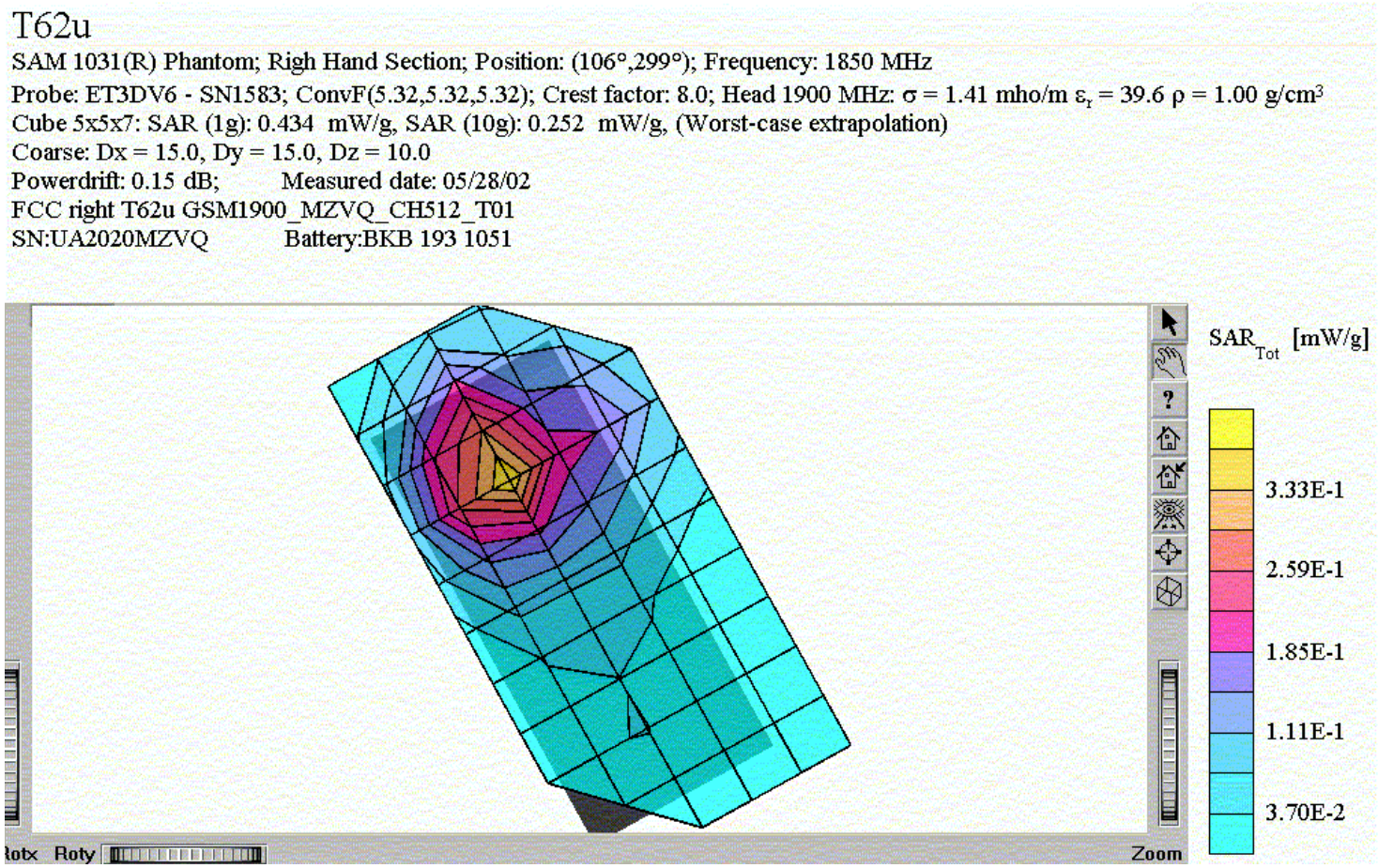

**Distribution of maximum SAR in 1900 GSM band. Measured against the right hand side of the head in the "Cheek" position.**

| Prepared (also subject responsible if other) | | No. | | |
|---|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | | |
| Approved | Checked | | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 | B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |




**SAR Extrapolation to the phantom inner surface. Measured for Maximum SAR in 1900 GSM band, while phone is against the right hand side of the head in the "cheek" position.**

| Prepared (also subject responsible if other) | | No. | | |
|---|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | | |
| Approved | Checked | | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 | B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |




**Distribution of maximum SAR in 1900 GSM band. Measured against the right hand side of the head in the "Tilt" position.**

| Prepared (also subject responsible if other) | | No. | | |
|---|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | | |
| Approved | Checked | | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 | B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |

T62u

SAM 1031(R) Phantom; Righ Hand Section; Position: (106°,299°); Frequency: 1850 MHz

Probe: ET3DV6 - SN1583; ConvF(5.32,5.32,5.32); Crest factor: 8.0; Head 1900 MHz: $\sigma$ = 1.41 mho/m $\varepsilon_r$ = 39.6 $\rho$ = 1.00 g/cm$^3$

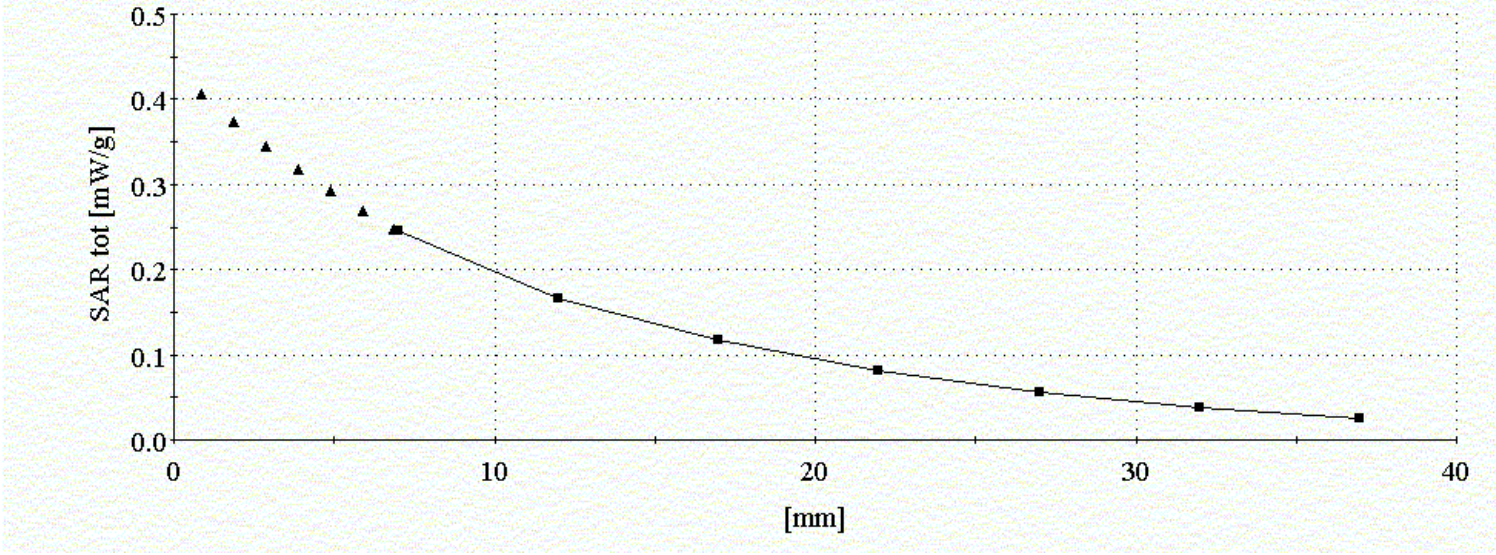
Cube 5x5x7: SAR (1g): 0.434 mW/g, SAR (10g): 0.252 mW/g, (Worst-case extrapolation)

Cube 5x5x7: Dx = 8.0, Dy = 8.0, Dz = 5.0

; Measured date: 05/28/02

FCC right T62u GSM1900_MZVQ_CH512_T01

SN:UA2020MZVQ Battery:BKB 193 1051




**SAR Extrapolation to the phantom inner surface. Measured for Maximum SAR in 1900 GSM band, while phone is against the right hand side of the head in the "Tilt" position.**

## Appendix 3: Photographs of Device Under Test


**Front view of device**

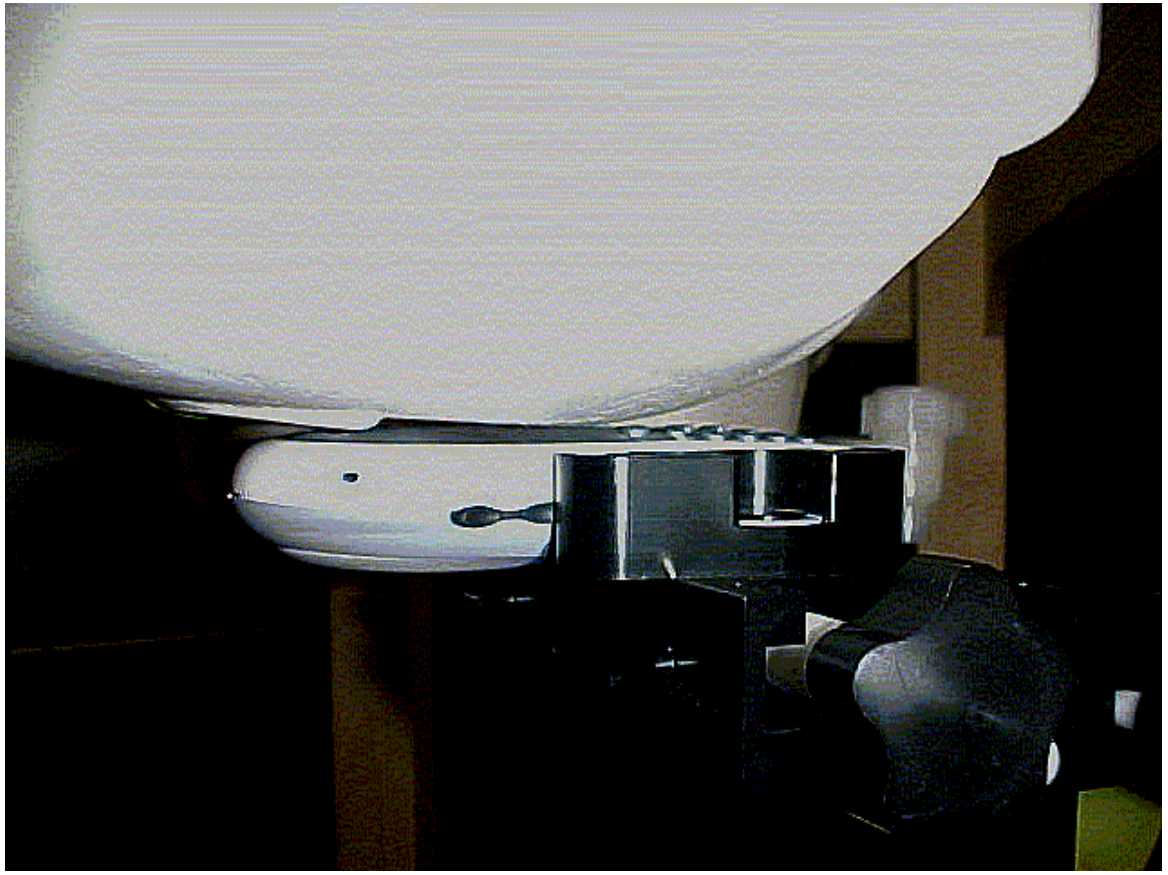
**Back view of device**

| Prepared (also subject responsible if other) | | No. | |
|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | |
| Approved | Checked | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |

**Side view of device.**

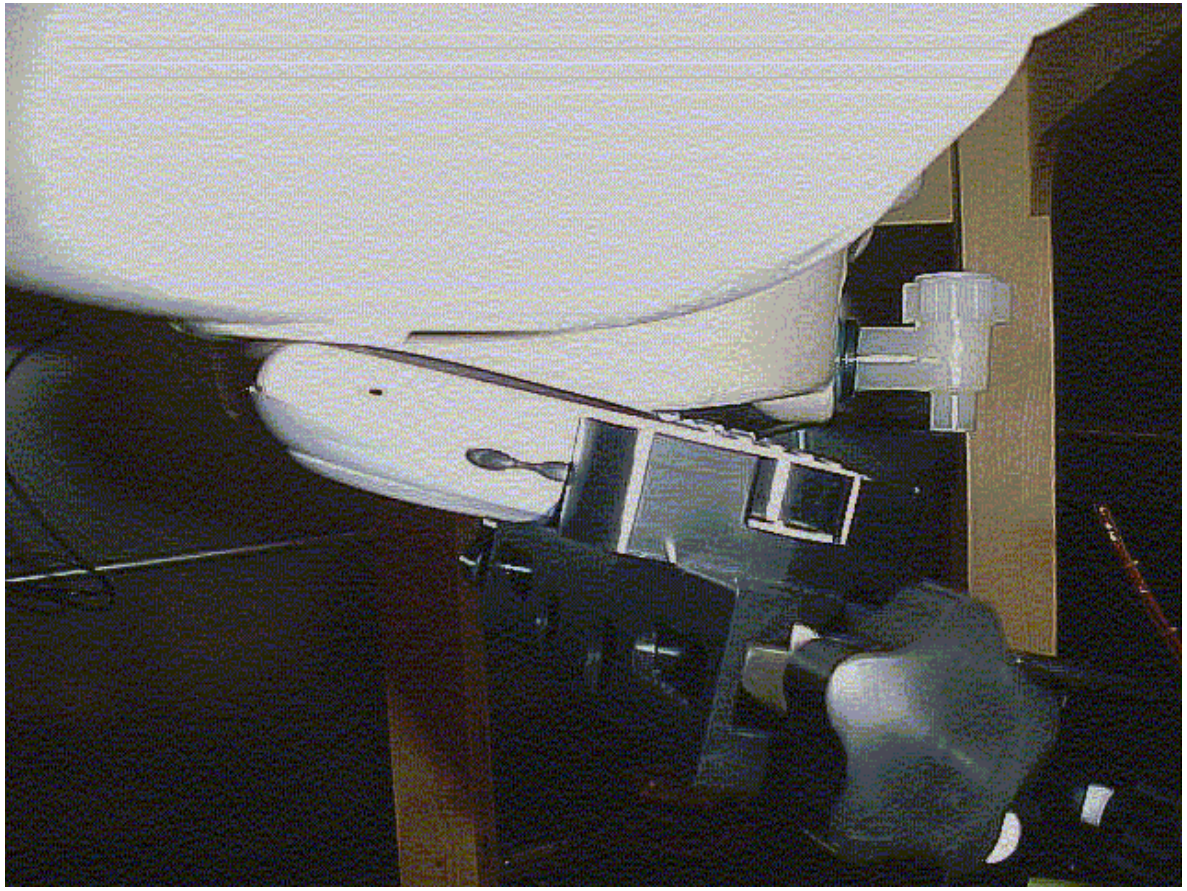
| Prepared (also subject responsible if other) | | No. | |
|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | |
| Approved | Checked | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |

## Appendix 4: Position of Device on Phantom



**Position of device against head phantom using the "cheek" position**

| Prepared (also subject responsible if other) | | No. | |
|---|---|---|---|
| SEM/CV/PF/P William Stewart | | SEM/CV/P-02:0591/REP | |
| Approved | Checked | Rev. | |
| SEM/CV/PF/P Dulce Altabella | DA | 2002-6-5 B | U:\FCC Submittals\Fcc_502 gerri anna nicole\XHIBIT11\Source\502-11 head.doc |



**Position of device against head phantom using the “tilt” position**

## Appendix 5: Probe calibration parameters

**ET3DV5 SN:1324**

# DASY3 - Parameters of Probe: ET3DV5 SN:1324

### Sensitivity in Free Space

### Diode Compression

| | | | |
|---|---|---|---|
| NormX | **1.52** $\mu V/(V/m)^2$ | DCP X | **103** mV |
| NormY | **1.73** $\mu V/(V/m)^2$ | DCP Y | **103** mV |
| NormZ | **1.53** $\mu V/(V/m)^2$ | DCP Z | **103** mV |

### Sensitivity in Tissue Simulating Liquid

**Head** **450 MHz** $\varepsilon_r$ **= 43.5 ± 5%** $\sigma$ **= 0.87 ± 10% mho/m**

| | | | |
|---|---|---|---|
| ConvF X | **5.23** extrapolated | Boundary effect: | |
| ConvF Y | **5.23** extrapolated | Alpha | **0.65** |
| ConvF Z | **5.23** extrapolated | Depth | **1.63** |

**Head** **700 - 950 MHz** $\varepsilon_r$ **= 39.4 - 43.6** $\sigma$ **= 0.75 - 0.99 mho/m**

| | | | |
|---|---|---|---|
| ConvF X | **4.89** ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | **4.89** ± 9.5% (k=2) | Alpha | **0.67** |
| ConvF Z | **4.89** ± 9.5% (k=2) | Depth | **1.71** |

**Brain** **1500 MHz** $\varepsilon_r$ **= 41 ± 5%** $\sigma$ **= 1.32 ± 10% mho/m**

| | | | |
|---|---|---|---|
| ConvF X | **4.43** interpolated | Boundary effect: | |
| ConvF Y | **4.43** interpolated | Alpha | **0.70** |
| ConvF Z | **4.43** interpolated | Depth | **1.82** |

**Brain** **1700 - 1910 MHz** $\varepsilon_r$ **= 39.3 - 41.6** $\sigma$ **= 1.53 - 1.90 mho/m**

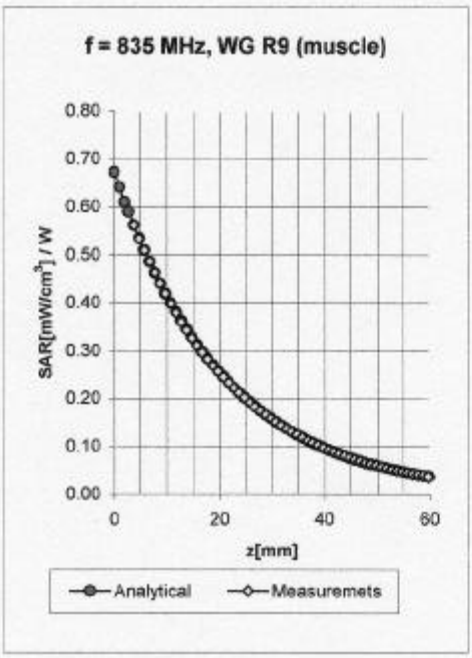
| | | | |
|---|---|---|---|
| ConvF X | **4.21** ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | **4.21** ± 9.5% (k=2) | Alpha | **0.72** |
| ConvF Z | **4.21** ± 9.5% (k=2) | Depth | **1.88** |

### Sensor Offset

| | | |
|---|---|---|
| Probe Tip to Sensor Center | **2.7** | mm |
| Optical Surface Detection | **1.8 ± 0.2** | mm |

**ET3DV5 SN:1324**

## Conversion Factor Assessment




**Muscle** **750 - 950** **MHz** $\varepsilon_r$ = **52.4 - 58.0** $\sigma$ = **0.90 - 1.05 mho/m**

| | | | |
|---|---|---|---|
| ConvF X | **4.72** ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | **4.72** ± 9.5% (k=2) | Alpha | **0.69** |
| ConvF Z | **4.72** ± 9.5% (k=2) | Depth | **1.70** |

**ET3DV6 SN:1583**

# DASY3 - Parameters of Probe: ET3DV6 SN:1583

## Sensitivity in Free Space

| | | | |
|---|---|---|---|
| NormX | 1.78 $\mu V/(V/m)^2$ | DCP X | 100 mV |
| NormY | 1.96 $\mu V/(V/m)^2$ | DCP Y | 100 mV |
| NormZ | 1.89 $\mu V/(V/m)^2$ | DCP Z | 100 mV |

## Sensitivity in Tissue Simulating Liquid

**Head** **450 MHz** $\varepsilon_r$ = 43.5 ± 5% $\sigma$ = 0.87 ± 10% mho/m

| | | | |
|---|---|---|---|
| ConvF X | 7.77 extrapolated | Boundary effect: | |
| ConvF Y | 7.77 extrapolated | Alpha | 0.30 |
| ConvF Z | 7.77 extrapolated | Depth | 2.30 |

**Head** **700 - 950 MHz** $\varepsilon_r$ = 39.4 - 43.6 $\sigma$ = 0.75 - 0.99 mho/m

| | | | |
|---|---|---|---|
| ConvF X | 6.95 ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | 6.95 ± 9.5% (k=2) | Alpha | 0.38 |
| ConvF Z | 6.95 ± 9.5% (k=2) | Depth | 2.28 |

**Head** **1500 MHz** $\varepsilon_r$ = 40.4 ± 5% $\sigma$ = 1.23 ± 10% mho/m

| | | | |
|---|---|---|---|
| ConvF X | 5.87 interpolated | Boundary effect: | |
| ConvF Y | 5.87 interpolated | Alpha | 0.48 |
| ConvF Z | 5.87 interpolated | Depth | 2.25 |

**Head** **1800 - 2000 MHz** $\varepsilon_r$ = 38.0 - 42.0 $\sigma$ = 1.20 - 1.55 mho/m

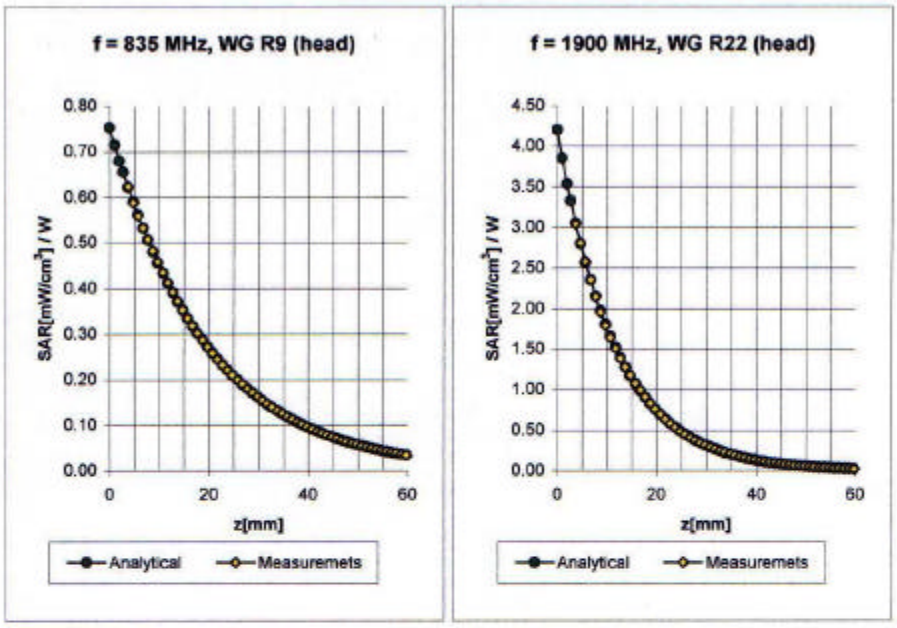
| | | | |
|---|---|---|---|
| ConvF X | 5.32 ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | 5.32 ± 9.5% (k=2) | Alpha | 0.53 |
| ConvF Z | 5.32 ± 9.5% (k=2) | Depth | 2.24 |

## Sensor Offset

| | | |
|---|---|---|
| Probe Tip to Sensor Center | 2.7 | mm |
| Optical Surface Detection | 1.6 ± 0.2 | mm |

**ET3DV6 SN:1583**

## Conversion Factor Assessment




**Head** **700 - 950 MHz** **$\varepsilon_r$ = 39.4 - 43.6** **$\sigma$ = 0.75 - 0.99 mho/m**

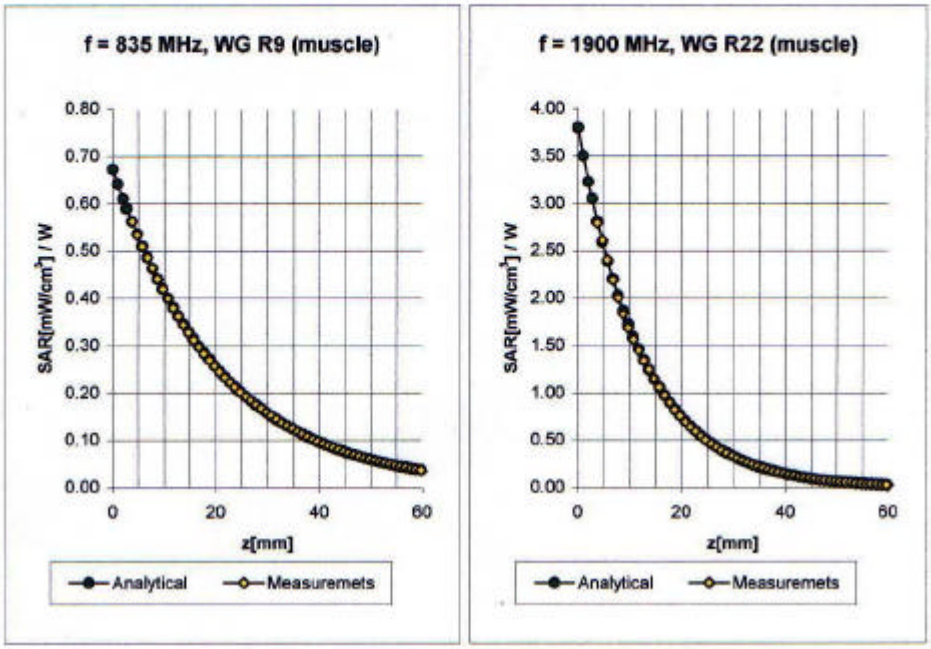
| | | | |
|---|---|---|---|
| ConvF X | **6.95** ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | **6.95** ± 9.5% (k=2) | Alpha | **0.38** |
| ConvF Z | **6.95** ± 9.5% (k=2) | Depth | **2.28** |

**Head** **1800 - 2000 MHz** **$\varepsilon_r$ = 38.0 - 42.0** **$\sigma$ = 1.20 - 1.55 mho/m**

| | | | |
|---|---|---|---|
| ConvF X | **5.32** ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | **5.32** ± 9.5% (k=2) | Alpha | **0.53** |
| ConvF Z | **5.32** ± 9.5% (k=2) | Depth | **2.24** |

**ET3DV6 SN:1583**

# Conversion Factor Assessment




**Muscle** **750 - 950 MHz** $\varepsilon_r$ **= 52.4 - 58.0** $\sigma$ **= 0.90 - 1.05 mho/m**

| | | | |
|---|---|---|---|
| ConvF X | **6.65** ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | **6.65** ± 9.5% (k=2) | Alpha | **0.49** |
| ConvF Z | **6.65** ± 9.5% (k=2) | Depth | **1.97** |

**Muscle** **1800 - 2050 MHz** $\varepsilon_r$ **= 50.6 - 56.0** $\sigma$ **= 1.40 - 1.60 mho/m**

| | | | |
|---|---|---|---|
| ConvF X | **4.91** ± 9.5% (k=2) | Boundary effect: | |
| ConvF Y | **4.91** ± 9.5% (k=2) | Alpha | **0.69** |
| ConvF Z | **4.91** ± 9.5% (k=2) | Depth | **2.10** |